



iSeries

Operating System/400 Commands  
Starting with CPYIGCTBL (Copy DBCS Font Table)

*Version 5 Release 3*







@server

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**Note**

Before using this information and the product it supports, be sure to read the information in "Notices," on page 941.

**First Edition (May 2004)**

This edition applies to version 5, release 3, modification 0 of Operating System/400 (product number 5722-SS1) and to all subsequent releases and modifications until otherwise indicated in new editions. This version does not run on all reduced instruction set computer (RISC) models nor does it run on CICS models.

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# Copy DBCS Font Table (CPYIGCTBL)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Copy DBCS Font Table (CPYIGCTBL) command copies part or all of a double-byte character set (DBCS) font table from system storage to tape, diskette, or physical file; or from tape, diskette, or physical file into the font table. Copying a DBCS font table from tape, diskette, or physical file into a font table also puts its definition in the system. DBCS font tables are objects and can be saved and restored.

DBCS font tables contain the images, in a given dot matrix, of the double-byte extension characters used on the system. The system refers to the tables when printing and displaying these characters. There are separate tables for each character image matrix used by devices attached to the system.

Consider the following before entering this command:

- The diskette used in the copy operation must be in the \*DATA format. The iSeries Information Center at <http://www.ibm.com/eserver/series/infocenter> has instructions on initializing diskettes in the \*DATA format.
- The system creates the DBCS font table in addition to copying it when you specify OPTION(\*IN), if the following is true:
  - The specified table does not already exist in the system.
  - The tape or diskette that you are copying the table from contains all of the DBCS characters supplied with your system.
  - SELECT(\*ALL) or SELECT(\*SYS) was specified.
- Consider copying a DBCS font table to tape or diskette before deleting that table from the system.

**Restriction:** A physical file used to save and restore table information must have a minimum record length of 74 bytes.

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## Parameters

Keyword	Description	Choices	Notes
IGCTBL	DBCS font table	Name, QIGC2424, QIGC2424K, QIGC2424C, QIGC2424S, QIGC3232, QIGC3232S	Required, Positional 1
OPTION	Copy option	*OUT, *IN	Required, Positional 2
DEV	Device	Name, *FILE	Required, Positional 3
LABEL	File label	Name, <u>*IGCTBL</u>	Optional
SELECT	Select images	<u>*ALL</u> , *SYS, *USER, *RANGE	Optional
RANGE	Range of images	Element list	Optional
	Element 1: From user code	Character value, <u>*FIRST</u>	
	Element 2: To user code	Character value, <u>*LAST</u>	
RPLIMG	Replace user images	<u>*NO</u> , *YES	Optional
VOL	Volume identifier	Values (up to 10 repetitions): Character value, <u>*MOUNTED</u>	Optional
EXPDATE	File expiration date	Date, <u>*PERM</u>	Optional

Keyword	Description	Choices	Notes
SEQNBR	Sequence number	1-9999, *SEARCH, *END	Optional
ENDOPT	End of tape option	*REWIND, *LEAVE, *UNLOAD	Optional
FILE	File	<i>Qualified object name</i>	Optional
	Qualifier 1: File	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i>	
MBR	Member	<i>Name</i>	Optional

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---

## DBCS font table (IGCTBL)

Specifies the name of the double-byte character set (DBCS) font table being copied. Choose one of the following table names:

### QIGC2424

The Japanese DBCS font table is used for displaying and printing extension characters in a 24 by 24 dot matrix image.

### QIGC2424C

The Traditional Chinese DBCS font table is used for printing extension characters in a 24 by 24 dot matrix image.

### QIGC2424K

The Korean DBCS font table is used for printing extension characters in a 24 by 24 dot matrix image.

### QIGC2424S

The Simplified Chinese DBCS font table is used for printing extension characters in a 24 by 24 dot matrix image.

### QIGC3232

The Japanese DBCS font table is used for displaying and printing extension characters in a 32 by 32 dot matrix image.

### QIGC3232S

The Simplified Chinese DBCS font table is used for printing extension characters in a 32 by 32 dot matrix image.

### QIGCrrccl

Specify the name of the DBCS font table to be copied. The name must always be in the format QIGCrrccl, where *rr* is the table row matrix size, *cc* is the table column matrix size, and the letter *l* is an optional language identifier.

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## Copy option (OPTION)

Specifies how to copy the double-byte character set (DBCS) font tables, either from the system to diskette, tape, or physical file; or from diskette, tape, or physical file into the system.

\*OUT The specified DBCS font table is copied to diskette, tape, or physical file.

\*IN The specified DBCS font table is copied from diskette, tape, or physical file to the system.

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## Device (DEV)

Specifies the name of the diskette or tape device or physical file used for the copy function.

**\*FILE** Specifies that the DBCS font table is saved to or restored from a physical file.

**\*device-name**

Specifies the name of the diskette or tape that the table is saved to or restored from. The device name must already be known on the system by a device description.

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---

## File label (LABEL)

Specifies the name of the data file on diskette or tape that contains (or will contain) the double-byte character set (DBCS) font table. When copying the table into the system, the label identifies the file that exists on diskette or tape. When copying the table to diskette or tape, the label identifies the file that is created on diskette or tape.

**\*IGCTBL**

The diskette or tape data file name is the same as the DBCS font table name (without the first character).

***data-file-identifier***

Specify the name (8 characters maximum for diskette and 17 maximum for tape, starting with an alphabetic character) of the data file.

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---

## Select images (SELECT)

Specifies which portion of the double-byte character set (DBCS) font table is copied.

**\*ALL** All IBM-supplied and user-defined double-byte characters are copied.

**\*SYS** Only IBM-supplied double-byte characters are copied.

**\*USER**

Only user-defined double-byte characters are copied.

**\*RANGE**

Only user-defined double-byte characters that fall within the range specified for the **Range of images (RANGE)** parameter are copied.

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## Range of images (RANGE)

Specifies the range of user-defined characters to be copied from.

The DBCS codes and numbers that can be specified for range values are listed in tables at the end of this parameter description. Tables are provided for the Japanese, Korean, traditional Chinese, and simplified Chinese languages.

The first value identifies the first character to be copied.

The possible Starting Character to be Copied values are:

### \*FIRST

The system starts copying with the first user-defined double-byte character in the table.

#### *from-user-character*

Specify the 4-character double-byte character set (DBCS) code, or the 5-character DBCS number.  
The system starts copying with the specified DBCS code or number.

The possible Ending Character to be Copied values are:

The second value identifies the last character to be copied.

### \*LAST

The system stops copying with the last user-defined character found.

#### *to-user-character*

Specify the 4-character DBCS code, or the 5-character DBCS number. This causes the system to stop copying with the specified DBCS code or number.

Following are tables that list the valid codes and numbers to specify for starting and ending values of user-defined character ranges.

### **Japanese DBCS Codes for User-Defined Characters**

6941 - 69FE	6A41 - 6AFE	6B41 - 6BFE
6C41 - 6CFE	6D41 - 6DFE	6E41 - 6EFE
6F41 - 6FFE	7041 - 70FE	7141 - 71FE
7241 - 72FE	7341 - 73FE	7441 - 74FE
7541 - 75FE	7641 - 76FE	7741 - 77FE
7841 - 78FE	7941 - 79FE	7A41 - 7AFE
7B41 - 7BFE	7C41 - 7CFE	7D41 - 7DFE
7E41 - 7EFE	7F41 - 7FFE	

### **Japanese DBCS Numbers for User-Defined Characters**

10561 through 10750	10817 through 11006
11073 through 11262	11329 through 11518
11585 through 11774	11841 through 12030
12097 through 12286	12353 through 12542
12609 through 12798	12865 through 13054
13121 through 13310	13377 through 13566
13633 through 13822	13889 through 14078
14145 through 14334	14401 through 14590
14657 through 14846	14913 through 15102
15169 through 15358	15425 through 15614
15681 through 15870	15937 through 16126
16193 through 16382	

### **Korean DBCS Codes for User-Defined Characters**

D441 - D4FE	D541 - D5FE	D641 - D6FE
D741 - D7FE	D841 - D8FE	D941 - D9FE
DA41 - DAFE	DB41 - DBFE	DC41 - DCFE
DD41 - DDFE		

### **Korean DBCS Numbers for User-Defined Characters**

37953 through 38142	38209 through 38393
38465 through 38654	38721 through 38910
38977 through 39166	39233 through 39422
39489 through 39678	39745 through 39934
40001 through 40190	40257 through 40446

### **Traditional Chinese DBCS Codes for User-Defined Characters**

D041 - D0FE	D141 - D1FE	D241 - D2FE
D341 - D3FE	D441 - D4FE	D541 - D5FE
D641 - D6FE	D741 - D7FE	D841 - D8FE
D941 - D9FE	DA41 - DAFE	DB41 - DBFE
DC41 - DCFE	DD41 - DDFE	

### Traditional Chinese DBCS Numbers for User-Defined Characters

36929 through 37118	37185 through 37374
37441 through 37630	37697 through 37886
37953 through 38142	38209 through 38398
38465 through 38654	38721 through 38910
38977 through 39166	39233 through 39422
39489 through 39678	39745 through 39934
40001 through 40190	40257 through 40446

### Simplified Chinese DBCS Codes for User-Defined Characters

7641 - 76FE	7741 - 77FE
7841 - 78FE	7941 - 79FE
7A41 - 7AFE	7B41 - 7BFE
7C41 - 7CFE	7D41 - 7DFE
7E41 - 7EFE	7F41 - 7FFE

### Simplified Chinese DBCS Numbers for User-Defined Characters

13889 through 14078	14145 through 14334
14401 through 14590	14657 through 14846
14913 through 15102	15169 through 15358
15425 through 15614	15681 through 15870
15937 through 16126	16193 through 16382

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## Replace user images (RPLIMG)

Specifies whether user-defined double-byte characters in the specified table are replaced with those found on tape or diskette. Specify this value only when copying from tape or diskette to the system.

- \*NO** The system does not replace user-defined double-byte characters in the table stored in the system with those found on tape or diskette.
- \*YES** The system replaces user-defined double-byte characters in the table stored in the system with those found on tape or diskette.

Top

---

## Volume identifier (VOL)

Specifies one or more volume identifiers used by the file.

You can enter multiple values for this parameter.

### **\*MOUNTED**

The volume currently placed in the device is used.

### *volume-identifier*

Specify the identifiers of one or more diskettes or tapes in the order in which they are placed in a tape or diskette unit and used in the copy operation.

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---

## File expiration date (EXPDATE)

Specifies the expiration date. The files cannot be overwritten until the expiration date. The expiration date must be later than or equal to the current date.

### \*PERM

The data file is protected permanently.

### *expiration-date*

Specify the date after which the file is no longer protected. The date must be specified in the job-date format.

Top

---

## Sequence number (SEQNBR)

Specifies (only when tape is used) which sequence number is used as the starting point for the copy operation.

**\*END** The system copies the table after the last sequence number on the tape when copying from the system to tape.

### **\*SEARCH**

The tape that is in the tape unit is searched for a data file with a name that compares with that specified for the **File label (LABEL)** parameter. When a match is found, the table is copied to the system. The file search starts with the first data file beyond the current tape position.

### *file-sequence-number*

Specify the sequence number of the file to be used for the copy operation.

Top

---

## End of tape option (ENDOPT)

Specifies the operation that is automatically performed on the tape volume after the operation ends. If more than one volume is included, this parameter applies only to the last tape volume used; all other tape volumes are rewound and unloaded when the end of the tape is reached.

### \*REWIND

The tape is automatically rewound, but not unloaded, after the operation has ended.

### **\*LEAVE**

The tape does not rewind or unload after the operation ends. It remains at the current position on the tape drive.

### **\*UNLOAD**

The tape is automatically rewound and unloaded after the operation ends.

Top

---

## File (FILE)

Specifies the name of the existing physical file that contains the (DBCS) font table.

The name of the physical file can be qualified by the following library value:

### *library-name*

Specify the name of the library to be used.

*physical-file-name*

Specify the name of the physical file.

Top

---

## Member (MEMBER)

Specifies the name of the existing physical file member that the table is saved to, or restored from.

Top

---

## Examples

```
CPYIGCTBL  IGCTBL(QIGC2424)  OPTION(*OUT)
           LABEL(*IGCTBL)  DEV(QDKT)
```

This command causes the system to copy the complete Japanese DBCS font table QIGC2424 from the system to the diskette. The name of the label on the diskette is IGC2424.

Top

---

## Error messages

### \*ESCAPE Messages

#### CPF8181

DBCS font table &4 damaged.

#### CPF8416

DBCS font table &1 not updated and no images copied.

#### CPF8417

Error found in RANGE keyword.

#### CPF8418

Data file &2 cannot be used to copy DBCS font table &1.

#### CPF8419

DBCS font table &1 not created and no images copied.

#### CPF8420

CPYIGCTBL command ended due to error.

#### CPF8421

DBCS font table &1 not found.

#### CPF8422

Not able to use DBCS font table &1.

#### CPF8423

Error found in keyword IGCTBL.

#### CPF8426

Device &1 either not found, or not valid for command.

#### CPF8427

DBCS font table &1 not migrated.

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---

## Copy Library (CPYLIB)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Copy Library (CPYLIB) command copies the contents of a library to a new library. If the new library does not exist, the command optionally creates it before the copy.

All copied objects are created in the same auxiliary storage pool (ASP) as the new library. Any objects that already exist in the new library remain in the new library after the new objects are copied.

**Note:** If the new library is created by this command:

- The new library is created in the same ASP as the existing library.
- The public authority of the new library is the same as the create authority for the QSYS library. The create authority for the QSYS library can be displayed by using the Display Library Description (DSPLIBD) command. If the create authority for the QSYS library is changed with the Change Library (CHGLIB) command after the new library is created, the new authority will not affect the public authority for the new library.
- The private authorities for the existing library are not copied to the new library.
- The owner of the new library is either the user profile of the user who issues the command or the group profile if the user profile of the user who issues the command is a member user profile that has specified that the group should be the owner.
- The new library is not secured by an authorization list even if the existing library was secured by an authorization list.
- You can use the Grant Object Authority (GRTOBJAUT) command specifying the existing library for the **Reference object (REFOBJ)** parameter to copy authorities from the existing library to the new library.

### Restrictions:

- Only object types supported by the Create Duplicate Object (CRTDUPOBJ) command can be copied. The restrictions for the CRTDUPOBJ command also apply to this command.
- If this command is interrupted prior to completion, the results are unpredictable.
- If another job is processing any of the objects in the library specified for the **Existing library (FROMLIB)** parameter, the results may be unpredictable. For example:
  - Objects created in the existing library after the copy starts are not copied.
  - If objects are deleted from the existing library after the copy starts, a user of this command gets an error message.
  - If objects in the existing library are in use or are locked by another job, the copy may not be successful.
- Other jobs should not attempt to use objects in the library specified for the **New library (TOLIB)** parameter until the copy is complete.

Top

---

## Parameters

Keyword	Description	Choices	Notes
FROMLIB	Existing library	<i>Name</i>	Required, Positional 1

Keyword	Description	Choices	Notes
TOLIB	New library	<i>Name</i>	Required, Positional 2
CRTLIB	Create library	<u>*YES</u> , *NO	Optional

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---

## Existing library (FROMLIB)

Specifies the existing library to be copied.

This is a required parameter.

*name* Specify the name of the existing library to be copied.

Top

---

## New library (TOLIB)

Specifies the new library to which objects will be copied from the existing library.

This is a required parameter.

*name* Specify the name of the library to which objects will be copied.

Top

---

## Create library (CRTLIB)

Specifies whether the new library should be created.

\*YES The new library will be created by this command before the contents of the existing library are copied to it. If the new library already exists, an error message will be issued.

\*NO The new library should not be created. If the new library does not exist, an error message will be issued.

Top

---

## Examples

```
CPYLIB FROMLIB(MYLIB) TOLIB(NEWLIB)
```

This command copies the contents of library MYLIB into library NEWLIB.

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---

## Error messages

### \*ESCAPE Messages

#### CPF2358

Library &1 not copied or partially copied.

**CPF2365**

FROMLIB and TOLIB parameters cannot specify the same library.

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## Copy Optical (CPYOPT)

Where allowed to run: All environments (\*ALL)  
 Threadsafes: No

Parameters  
 Examples  
 Error messages

The Copy Optical (CPYOPT) command copies a specific file, all files, new files, or changed files in a specified directory to another directory or to another optical volume. This command also allows you to:

- Create a directory in which to copy the files.
- Copy all subdirectories and their files for a specified directory.
- Replace an existing file with the same name.

If the from-volume or the to-volume is a backup optical volume, the names of the directories, the subdirectories, and the files do not change during the copy operation. The creation and modification dates and times of a directory, a subdirectory, or a file also do not change during the copy operation.

**Restriction:** To use this command you must have \*USE authority to the authorization list securing the volume being copied (FROMVOL) and \*CHANGE authority to the authorization list securing the new volume (TOVOL).

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### Parameters

Keyword	Description	Choices	Notes
FROMVOL	From volume identifier	<i>Element list</i>	Required, Positional 1
	Element 1: Volume	<i>Character value</i>	
	Element 2: Volume type	<b>*PRIMARY</b> , *BACKUP	
FROMPATH	From path	<i>Character value</i>	Required, Positional 2
TOVOL	To volume identifier	<i>Element list</i>	Required, Positional 3
	Element 1: Volume	<i>Character value</i> , *FROMVOL	
	Element 2: Volume type	<b>*PRIMARY</b> , *BACKUP	
TOPATH	To path	<i>Character value</i> , <b>*FROMPATH</b>	Optional
SLTFILE	Select files to copy	<b>*CHANGED</b> , *NEW, *ALL	Optional
CPYSUBDIR	Copy subdirectories	<b>*NO</b> , *YES	Optional
CRTDIR	Create directory	<b>*NO</b> , *YES	Optional
ALWCPYOPP	Allow copy to opposite side	<b>*NO</b> , *YES	Optional
COPYTYPE	Copy option	<b>*IOP</b> , *SYSTEM	Optional
FROMTIME	Starting date and time	<i>Element list</i>	Optional
	Element 1: Starting date	<i>Date</i> , <b>*BEGIN</b>	
	Element 2: Starting time	<i>Time</i> , <b>*AVAIL</b>	

Top

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## From volume identifier (FROMVOL)

Specifies the volume identifier and the type of the optical volume that contains the directories and the files being copied.

### Element 1: Volume

#### *volume-identifier*

Specify the identifier of the volume that contains the directories and files being copied.

### Element 2: Volume type

#### \*PRIMARY

The optical volume is a primary volume.

#### \*BACKUP

The optical volume is a backup volume.

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## From path (FROMPATH)

Specifies the path name of the directory or file being copied from the from-volume. If the path name is a directory, all files in the specified directory are copied. If the path name is a file, only that file is copied.

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## To volume identifier (TOVOL)

Specifies the volume identifier and the type of the optical volume to which the directories and the files are being copied.

### Element 1: Volume

#### \*FROMVOL

The volume identifier is the same as the identifier of the optical volume from which the the objects are copied.

#### *volume-identifier*

Specify the name of the optical volume to which the objects are copied.

### Element 2: Volume type

#### \*PRIMARY

The optical volume is a primary volume.

#### \*BACKUP

The optical volume is a backup volume. You can use a new backup volume or a backup volume which has previously been used as the volume to which objects are copied. For more information about backup volumes, refer to the Optical Support, SC41-4310 book.

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## To path (TOPATH)

Specifies the path name of the file to be written or the path name of the directory to receive the new file on the to-volume beginning with the root directory of the volume.

### \*FROMPATH

The path name is the same as the path name of the files or directories being copied from the from-volume.

### 'path-name'

Specify the path name of the directory to receive the copied files or the path name of the file to be written.

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---

## Select files to copy (SLTFILE)

Specifies how the files or directories are selected for copying. If files are not copied based on the SLTFILE value specified, it is not considered an error condition. The files will be considered 'not eligible to copy' in the completion message but the command may still complete without errors.

### \*CHANGED

The file is copied if the file on the from-volume has a changed date and time later than that of the file on the to-volume. Two sets of dates and times determine if a file has changed: either the date and time the file was last changed, or the date and time the file attributes were last changed. These dates and times can be displayed by specifying DATA(\*FILATR) on the Display Optical (DSPOPT) command.

**\*ALL** All files are copied. The files that exist on the to-volume are replaced even if the dates are the same.

**\*NEW** The files are copied only if they do not exist on the to-volume.

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## Copy subdirectories (CPYSUBDIR)

Specifies whether to copy the files in the subdirectories.

**\*NO** Subdirectories and files in any subdirectories are not copied.

**\*YES** The files in the subdirectories are copied. The subdirectories are created on the to-volume if they do not exist. The newly created subdirectories have the same name as they did on the from-volume, even though the parent directory name can be different.

A check is made prior to the copy operation to ensure that any resulting new path name does not exceed the maximum path name length. A check is also made to ensure that you do not attempt to copy all subdirectories of a directory to a subdirectory of that directory on the same volume.

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## Create directory (CRTDIR)

Specifies whether or not the last directory of the to-path is created if it does not exist on the to-volume. The existence of all elements of the to-path, except for the last element, are verified prior to the start of the CPYOPT request.

**Note:** If either the to-volume or from-volume was initialized as an optical volume whose type is backup, this parameter is ignored.

**\*NO** The last directory of the to-path will not be created if it does not exist on the to-volume.

**\*YES** The last directory of the to-path will be created if it does not exist on the to-volume. This

parameter refers only to the directory to which files or directories are copied and does not apply to subdirectories under that directory. The CPYSUBDIR parameter controls whether subdirectories are created.

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## Allow copy to opposite side (ALWCPYOPP)

Specifies whether to allow copying files or directories from a volume on one side of an optical cartridge to the opposite side of the optical cartridge.

**Note:** System performance is degraded when copying large amounts of data to the opposite side of an optical cartridge.

**\*NO** The copy operation is not attempted if the to-volume is on the opposite side of the from-volume. You can use this value to prevent inadvertent copying to the opposite side of an optical cartridge.

**\*YES** The copy operation is attempted if the to-volume is on the opposite side of the from-volume.

**Note:** This value is not valid if either the from-volume or to-volume optical cartridge was initialized as an optical volume whose type is backup.

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## Copy option (COPYTYPE)

Specifies the type of processing to be used for the copy request.

**\*IOP** The input/output processor (IOP) copies the data from one volume to another with minimal data movement. If two volumes are required, two drives in the optical media library are allocated for the duration of the copy operation.

**Note:** Specifying COPYTYPE(\*IOP) provides the best performance for the copy request; however, it can also adversely affect interactive performance of requests to other volumes in the optical media library because two optical drives in the optical media library are allocated for the duration of the copy.

**\*SYSTEM**

The system copies the data using available resources. This type of processing is automatically used when:

- Only one drive is operable
- The two volumes are in separate optical media libraries
- The two volumes are on the opposite side of the same optical cartridge
- The media format of either volume is Universal Disk Format (UDF)
- The coded character sets of the volumes are different

This option is recommended if interactive requests will be made to volumes in the optical media library during the copy operation.

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## Starting date and time (FROMTIME)

Specifies a starting date and time used to determine if a file or directory is selected for copying. All files or directories that have been created or changed, or whose attributes have changed, on or after the starting date and time are selected for copying. This parameter is ignored if copying a single file or when copying from a backup volume to a primary volume.

You can determine when a file was last created or changed by:

1. Specifying DATA(\*FILATR) on the Display Optical (DSPOPT) command.
2. Using the hierarchical file system (HFS) API program QHFRTVAT. The standard attribute, QWRDRTM, is the file last changed date and time. The extended attribute, OPT.CHGATDRTM, is the attribute last changed date and time.

### Element 1: Starting date

#### \*BEGIN

All dates found are used. All the files and directories are selected for copying.

#### *start-date*

Specify a date to be used as a starting point. All files created or modified on or after the start date are selected.

The date must be entered in the format specified by the system values, QDATFMT, and, if separators are used, QDATSEP.

### Element 2: Starting time

#### \*AVAIL

All available times for the starting date are used.

#### *start-time*

Specify a time to use as the starting time or the starting date. The time separator is defined by the system value QTIMSEP. separator as follows:

- With a time separator, specify a string of 5 or 8 digits, where the time separator for the job separates the hours, minutes, and seconds. If you issue this command from the command line, the string must be enclosed in apostrophes. If a time separator other than the separator specified for your job is used, this command fails.
- Without a time separator, specify a string of 4 or 6 digits (hhmm or hhmmss) where **hh** = hours, **mm** = minutes, and **ss** = seconds. Valid values for **hh** range from 00 through 23. Valid values for **mm** and **ss** range from 00 through 59.

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## Examples

### Example 1: Copying All Files in All Directories

```
CPYOPT FROMVOL(VOL01) FROMPATH('/') TOVOL(VOL02)
        CPYSUBDIR(*YES) SLTFILE(*ALL) CRTDIR(*YES)
```

This command copies all files in all directories and subdirectories from the optical volume VOL01 to the optical volume VOL02. Directories are created on volume VOL02 if they do not exist. If the files already exist on volume VOL02, they are replaced.

### Example 2: Copying Changed Files

```
CPYOPT FROMVOL(VOL01) FROMPATH('/DIR1/DIR2') TOVOL(VOL02)
```

This command copies all changed files in the directory /DIR1/DIR2 to the same files on the optical volume VOL02.

### Example 3: Copying Files From a Backup to a Primary Volume

```
CPYOPT FROMVOL(VOL01BACKUP *BACKUP) FROMPATH('/DIR1')  
TOVOL(VOL02) CPYSUBDIR(*YES)
```

This command copies all files and subdirectories in the directory /DIR1 on the optical backup volume VOL01BACKUP to the same files on the primary optical volume VOL02.

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## Error messages

### \*ESCAPE Messages

#### OPT0147

SLTFILE value not allowed for operation.

#### OPT0149

CPYSUBDIR(\*YES) not allowed with FROMPATH value.

#### OPT0152

Specified start time not allowed with FROMTIME(\*BEGIN).

#### OPT1105

File is read only.

#### OPT1115

File not found.

#### OPT1120

File already exists.

#### OPT1125

File is in use.

#### OPT1129

Operation not allowed to file opened for Expanding Buffer I/O.

#### OPT1130

File name specified is a reserved file name.

#### OPT1135

Request failed because number of open files is at the limit.

#### OPT1140

Unexpected error occurred during file processing.

#### OPT1185

Cannot access held optical file.

#### OPT1205

Directory not found.

#### OPT1212

Directory in use.

#### OPT1220

File or directory name already exists.

#### OPT1224

Path length exceeds the maximum of 256 bytes.

- OPT1255**  
File is corrupted.
- OPT1261**  
Active file found on volume &1.
- OPT1305**  
Optical volume &1 is read only.
- OPT1315**  
Optical volume &1 is write protected.
- OPT1317**  
Directory name is too long.
- OPT1320**  
Optical volume &1 in use.
- OPT1325**  
Optical volume format not recognized.
- OPT1330**  
Optical volume not found or not useable.
- OPT1331**  
Optical volume &1 not found.
- OPT1340**  
Optical volume &1 not initialized.
- OPT1344**  
Optical file name not valid.
- OPT1345**  
No free space available on media.
- OPT1346**  
Operation not allowed to volume located in a remote optical device.
- OPT1350**  
Write operation failed to optical volume &1.
- OPT1360**  
Media directory corrupted on optical volume &1.
- OPT1460**  
Optical volume &1 is not in an optical device.
- OPT1462**  
Operation not completed, optical volume is not a backup volume.
- OPT1463**  
Operation not completed, optical volume is not a primary volume.
- OPT1530**  
&1 does not represent a valid optical device.
- OPT1555**  
Optical device &1 in use.
- OPT1605**  
Media or device error occurred.
- OPT1640**  
Error occurred reading files or directories.

- OPT1790**  
Operation not allowed or conflicts with another request.
- OPT1795**  
Error accessing directory attributes.
- OPT1805**  
Error accessing optical volume index file.
- OPT1810**  
Error accessing optical directory index file.
- OPT1813**  
Unexpected error occurred.
- OPT1815**  
Internal program error occurred.
- OPT1820**  
Internal error occurred on optical device &1.
- OPT1821**  
Error occurred on optical device &1.
- OPT1825**  
Optical indexes are incorrect for optical device &1.
- OPT1860**  
Request to optical device &1 failed.
- OPT1861**  
No device description configured for resource &1.
- OPT1862**  
No active device description for resource &1.
- OPT1863**  
Optical libraries need to be reclaimed.
- OPT1872**  
Optical request timed out or was cancelled.
- OPT2001**  
&1 files copied; &2 files or directories failed; &8 files not eligible to copy.
- OPT2004**  
Copy request ended abnormally. &1 files copied.
- OPT2005**  
No files found in directory.
- OPT2006**  
Directory path length too long.
- OPT2007**  
TOVOL on opposite side of FROMVOL.
- OPT2008**  
Copy request is not allowed.
- OPT2009**  
Copy not permitted from backup volume.
- OPT2010**  
Copy not permitted to backup volume.

**OPT2015**

File failed to copy.

**OPT2028**

Copy to backup not allowed for optical volumes specified.

**OPT2029**

TOVOL on opposite side of FROMVOL

**OPT2040**

Error accessing backup control file.

**OPT2301**

Internal system object in use.

**OPT2420**

Not authorized to optical volume &2.

**OPT2422**

Not authorized to file or directory.

**OPT7740**

User not authorized to object &2 in library &3 type &4.

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# Copy Program Temporary Fix (CPYPTF)

Where allowed to run: All environments (\*ALL)  
 Threadsafte: No

Parameters  
 Examples  
 Error messages

The Copy Program Temporary Fix (CPYPTF) command copies specified program temporary fixes (PTFs) from tape, diskette, optical media, service, or save file to a tape, diskette, optical media, or save file. Each PTF contains one or more objects, including programs, which can be loaded by the Load Program Temporary Fix (LODPTF) command and applied to a product by the Apply Program Temporary Fix (APYPTF) command.

## Restrictions:

1. This command is shipped with public \*EXCLUDE authority and the QPGMR, QSYSOPR, QSRV, and QSRVBAS user profiles have private authorities to use the command.
2. If the PTF being copied does not have a target release or if the specified target release is not a valid save and restore release, the PTF will be copied to the earliest valid save and restore target release for the PTF objects.

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## Parameters

Keyword	Description	Choices	Notes
LICPGM	Product	<i>Character value</i>	Required, Positional 1
FROMDEV	From device	<i>Name</i> , *SERVICE, *SAVF	Required, Positional 2
TODEV	To device	<i>Name</i> , *SAVF	Required, Positional 3
SELECT	PTF numbers to select	Single values: *ALL Other values (up to 50 repetitions): <i>Character value</i>	Optional, Positional 4
OMIT	PTF numbers to omit	Values (up to 50 repetitions): <i>Character value</i>	Optional
RLS	Release	<i>Character value</i> , * <u>ONLY</u>	Optional
FROMSAVF	From save file	<i>Qualified object name</i>	Optional
	Qualifier 1: From save file	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , * <u>LIBL</u> , * <u>CURLIB</u>	
FROMSEQNBR	From tape sequence number	1-16777215, * <u>SEARCH</u>	Optional
FROMENDOPT	From end of media option	* <u>REWIND</u> , * <u>LEAVE</u> , * <u>UNLOAD</u>	Optional
FROMPATHID	From path identifier	1-9999, * <u>FIRST</u> , * <u>SELECT</u>	Optional
TOVOL	Volume identifier	<i>Character value</i> , * <u>MOUNTED</u>	Optional
TOSEQNBR	To tape sequence number	1-16777215, * <u>END</u>	Optional
TOENDOPT	To end of media option	* <u>REWIND</u> , * <u>LEAVE</u> , * <u>UNLOAD</u>	Optional
TOSAVF	To save file	<i>Qualified object name</i>	Optional
	Qualifier 1: To save file	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , * <u>LIBL</u> , * <u>CURLIB</u>	
CLEAR	Clear	* <u>NONE</u> , * <u>ALL</u>	Optional
COVER	Copy PTF cover letter	* <u>YES</u> , * <u>NO</u>	Optional

Keyword	Description	Choices	Notes
CVRLTRLNG	Cover letter language	<i>Character value, *ONLY</i>	Optional
DTACPR	Data compression	<i>*DEV, *NO, *YES</i>	Optional

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## Product (LICPGM)

Specifies the 7-character identifier of the product for which the PTFs are copied.

This is a required parameter.

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## From device (FROMDEV)

Specifies the name of the device from which the PTFs are copied.

This is a required parameter.

### \*SERVICE

The PTFs sent from the service support system are copied.

\*SAVF The PTFs are copied from a save file.

### *device-name*

Specify the name of the tape, diskette, or optical device from which the PTFs are copied.

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## To device (TODEV)

Specifies the device to which the PTFs are copied.

This is a required parameter.

\*SAVF The PTFs are copied to a save file.

### *device-name*

Specify the name of the tape, diskette, or optical device to which the PTFs are copied.

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## PTF numbers to select (SELECT)

Specifies which PTFs are copied. If individual PTFs are specified, a value cannot be specified for the **PTF numbers to omit** (OMIT) parameter.

You can enter multiple values for this parameter.

The possible values are:

\*ALL All the PTFs are copied. This parameter cannot be specified when a value of \*SERVICE is specified in the **From device** (FROMDEV) parameter.



### *PTF-number*

Specify the PTF number of each programming fix to be copied. A maximum of 50 PTF numbers can be specified.

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## **PTF numbers to omit (OMIT)**

Specifies that all PTFs except for those specified in this parameter are copied. Specify the PTF numbers of the programming fixes not copied when all the rest are copied. A maximum of 50 PTF numbers can be specified. This parameter cannot be specified if single PTF numbers are specified in the **PTF numbers to select** (SELECT) parameter.

You can enter multiple values for this parameter.

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## **Release (RLS)**

Specifies the release level of the software product.

The possible values are:

### \*ONLY

This value is valid only if one release is installed or supported on the system when FROMDEV(\*SERVICE) is specified or when the FROMDEV parameter is an optical device and only one release of the product exists on the media. If the FROMDEV parameter is a tape or diskette device, the release level of the software product on the media is ignored.

### *release-level*

Specify the release level in VxRyMz format where Vx is the version number, Ry is the release number, and Mz is the modification level. The variables x and y can be a number from 0 through 9, and the variable z can be a number from 0 through 9 or a letter from A through Z.

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## **From save file (FROMSAVF)**

Specifies the name and library of the save file from which the PTFs are copied.

**Note:** This parameter is valid only if \*SAVF is specified on the **From device** (FROMDEV) parameter.

The possible library values are:

\*LIBL All libraries in the library list for the current thread are searched until the first match is found.

### **\*CURLIB**

The current library for the job is used to locate the save file. If no library is specified as the current library for the job, the QGPL library is used.

### *library-name*

Specify the library where the save file is located.

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## From tape sequence number (FROMSEQNBR)

Specifies the sequence number on the tape volume from which the PTFs are copied.

**Note:** This parameter is valid only if a tape device name is specified on the **From device** (FROMDEV) parameter.

### **\*SEARCH**

The tape volume searches for the first PTF file for the licensed program, and then copies that PTF.

### *sequence-number*

Specify the sequence number where you want to begin to copy the PTF data. This sequence number must exist on the tape. Valid values range from 1 to 16777215.

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## From end of media option (FROMENDOPT)

Specifies the operation that is performed on the tape or optical volume after the copy PTF operation ends. If one or more volumes of tape are involved, this parameter applies only to the last volume.

**Note:** This parameter is only valid if a tape or optical device name is specified on the FROMDEV parameter. For optical devices, \*UNLOAD is the only special value supported, \*REWIND and \*LEAVE will be ignored.

The possible values are:

### **\*REWIND**

The tape is automatically rewound, but not unloaded, after the operation has ended.

### **\*LEAVE**

The tape does not rewind or unload after the operation ends. It remains at the current position on the tape drive.

### **\*UNLOAD**

The tape is automatically rewound and unloaded after the operation ends. Some optical devices will eject the volume after the operation ends.

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## From path identifier (FROMPATHID)

Specifies the number that identifies a file on the optical media that contains the PTFs to be copied. The PTF files for each product and release that exist on the optical media have a path identifier number to allow the files to be processed in a specific order. Only the PTFs from the specified path identifier are copied on your system.

**Note:** This parameter is valid only if an optical device name is specified on the **From device** (FROMDEV) parameter.

The possible values are:

### **\*FIRST**

The optical media is searched for the first PTF file for the specified product and release, according to the search dependency specified on the SELECT parameter.

- When a specific PTF identifier is specified on the SELECT parameter, the first occurrence of the specified PTF is copied.

- When \*ALL is specified on the SELECT parameter, the existing PTF file with the lowest path identifier is copied.

#### **\*SELECT**

A list of the PTF files that exist on the optical media that match the product and release is shown. You can select the specific file from which PTFs are copied. This value cannot be selected in a batch environment.

#### *path-identifier*

Specify the path identifier of the existing PTF file from which to copy the PTF data for the product and release.

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## **Volume identifier (TOVOL)**

Specifies the volume identifier of the tape, diskette or optical volume that receives the copied PTFs.

**Note:** This parameter is valid only if a tape, diskette, or optical device name is specified on the **To device** (TODEV) parameter.

#### **\*MOUNTED**

The volume currently placed in the device is used.

#### *volume-identifier*

Specify the volume identifier of the tape, diskette or optical volume.

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## **To tape sequence number (TOSEQNBR)**

Specifies the sequence number of the data file that receives the copied PTFs.

**Note:** This parameter is valid only if a tape device name is specified on the **To device** (TODEV) parameter.

**\*END** The PTFs are copied at the end of the tape.

#### *sequence-number*

Specify the sequence number of the data file that receives the copied PTFs. Valid values range from 1 through 16777215.

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## **To end of media option (TOENDOPT)**

Specifies the operation that is performed on the tape or optical volume after the copy PTF operation ends. If one or more volumes of tape are involved, this parameter applies only to the last volume.

**Note:** This parameter is only valid if a tape or optical device name is specified on the TODEV parameter. For optical devices, \*UNLOAD is the only special value supported, \*REWIND and \*LEAVE will be ignored.

The possible values are:

### **\*REWIND**

The tape is automatically rewound, but not unloaded, after the operation has ended.

### **\*LEAVE**

The tape does not rewind or unload after the operation ends. It remains at the current position on the tape drive.

### **\*UNLOAD**

The tape is automatically rewound and unloaded after the operation ends. Some optical devices will eject the volume after the operation ends.

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## **To save file (TOSAVF)**

Specifies the name and library of the save file to which the PTFs are copied.

The possible library values are:

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

### **\*CURLIB**

The current library for the job is used to locate the save file. If no current library entry exists in the library list, the QGPL library is used.

### ***library-name***

Specify the library where the save file is located.

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## **Clear (CLEAR)**

Specifies whether uncleared save files encountered while copying the PTFs are automatically cleared.

**Note:** This parameter is valid only if \*SAVF is specified on the **To device** (TODEV) parameter.

### **\*NONE**

An uncleared save file is not automatically cleared.

**\*ALL** An uncleared save file is automatically cleared so the operation can continue.

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## **Copy PTF cover letter (COVER)**

Specifies whether to copy the cover letter with the PTF. Cover letters will not be copied if the FROMDEV or TODEV parameter specifies a diskette device or if FROMDEV(\*SERVICE) is specified with more than 1 PTF (SELECT parameter).

**\*YES** The cover letter is copied.

**\*NO** The cover letter is not copied.

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## Cover letter language (CVRLTRLNG)

Specifies the cover letter language of the PTF to be copied. If FROMDEV(\*SERVICE) is specified and there are multiple cover letters for a PTF (multiple languages), specify the language feature code of the cover letter you want to copy.

**Note:** This parameter is valid only if \*YES is specified on the **Copy PTF cover letter** (COVER) parameter.

### \*ONLY

The only cover letter associated with the PTF is copied, regardless of the language feature code.

### *feature-code*

Specify the language feature code of the PTF cover letter you want to copy. A language feature code can be specified only when \*SERVICE is specified on the FROMDEV parameter.

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## Data compression (DTACPR)

Specifies whether data compression is used.

The possible values are:

**\*DEV** If the save is to tape and the target device supports compression, hardware compression is performed. Otherwise, no data compression is performed.

**\*NO** No data compression is performed.

**\*YES** If the save is to tape and the target device supports compression, hardware compression is performed. If compression is not supported, or if the save data is written to a diskette or save file, software compression is performed. If the save is running while other jobs on the system are active and software compression is used, the overall system performance may be affected.

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## Examples

### Example 1: Copying PTFs to a Save File

```
CPYPYTF LICPGM(5722SS1) FROMDEV(TAP01)
        TODEV(*SAVF) SELECT(*ALL) TOSAVF(MYLIB/PTFFILE)
```

This command copies all the PTFs from a tape named TAP01 into a save file named PTFFILE for the product 5722SS1.

### Example 2: Copying PTFs from an optical device

```
CPYPYTF LICPGM(5722SS1) FROMDEV(OPT01) TODEV(TAP01)
        SELECT(*ALL) FROMPATHID(2) RLS(*ONLY)
```

This command copies all the PTFs for product 5722SS1 that exist in the file with path identifier 0002 from the optical device named OPT01 to the tape device named TAP01.

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## Error messages

### \*ESCAPE Messages

**CPF35AE**  
Duplicate PTF &1 found.

**CPF35CC**  
Library required for PTF operation already exists.

**CPF35C2**  
PTF &1-&2 &3 cannot be included.

**CPF35C3**  
PTF &1-&2 cannot be included.

**CPF35C4**  
CPYPTF ended abnormally.

**CPF35C6**  
TOVOL parameter must be specified.

**CPF35C7**  
Volume name in FROMDEV device same as TOVOL parameter value.

**CPF35C8**  
PTF file to be copied is not valid.

**CPF35D5**  
Cover letter NLV not valid.

**CPF354C**  
Cannot process PTF files on optical volume.

**CPF354D**  
Device &1 not allowed.

**CPF354F**  
Required PTF file cannot be processed.

**CPF3558**  
Cannot allocate &1 in &3 type \*&2.

**CPF358A**  
Release not valid.

**CPF3586**  
List of PTFs not correct.

**CPF3598**  
PTF function already in process.

**CPF363A**  
Media type of volume not valid for operation.

**CPF363D**  
Multiple cover letters exist for PTF &2-&1 &3.

**CPF363E**  
Cannot write required PTF file to optical volume.

**CPF6602**  
PTF &1-&2 &3 not found.

**CPF9812**  
File &1 in library &2 not found.

**CPF9814**  
Device &1 not found.







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## Copy PTF Cover Letter (CPYPTFCVR)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Copy Program Temporary Fix Cover Letter (CPYPTFCVR) command copies program temporary fix (PTF) cover letters from tape or optical media into file QAPZCOVER in library QGPL. Each cover letter contains information such as problem description, correction, and special instructions. Cover letters can then be viewed using the Display PTF Cover Letter (DSPPTFCVR) and Display Program Temporary Fix (DSPPTF) commands.

**Restriction:** This command is shipped with public \*EXCLUDE authority and the QPGMR, QSYSOPR, QSRV, and QSRVBAS user profiles have private authorities to use the command.

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### Parameters

Keyword	Description	Choices	Notes
DEV	Device	<i>Character value</i>	Required, Positional 1
LICPGM	Product	<i>Character value</i> , *ALL, *SUPPTD	Optional, Positional 2
SELECT	PTF numbers to select	Single values: *NOTAPY, *ALL Other values (up to 300 repetitions): <i>Character value</i>	Optional
RLS	Release	<i>Character value</i> , *ALL	Optional
CVROPT	Cover letter option	*NEW, *ADD, *ALL	Optional
ENDOPT	End of media option	*REWIND, *LEAVE, *UNLOAD	Optional

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---

### Device (DEV)

Specifies the name of the device that contains the cover letters to be copied.

This is a required parameter.

*tape-device-name*

Specify the name of the tape device from which the cover letters are copied.

*optical-device-name*

Specify the name of the optical device from which the cover letters are copied.

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---

### Product (LICPGM)

Specifies the 7-character identifier of the product for which the cover letters are copied.

The possible values are:

**\*ALL** The cover letters for all installed or supported products are copied.

**\*SUPPTD**

The cover letters for all supported products are copied.

*licensed-program*

Specify the product identifier of the cover letters to be copied.

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---

## PTF numbers to select (SELECT)

Specifies which of the cover letters for the specified product are copied.

The possible values are:

**\*NOTAPY**

All the cover letters of the PTFs for the specified product that are not already applied or superseded are copied.

**\*ALL** All the cover letters for the specified product are copied.

*PTF-number*

Specify the PTF identification number of the cover letters to be copied. A maximum of 300 PTF numbers can be specified. Specific PTF identifiers can be used only if a specific product identifier is specified on the **Product** (LICPGM) parameter.

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## Release (RLS)

Specifies the release level of the software product.

The possible values are:

**\*ALL** Cover letters for all releases of the specified product will be copied.

*release-level*

Specify the release level in VxRyMz format where Vx is the version number, Ry is the release number, and Mz is the modification level. The variables x and y can be a number from 0 through 9, and the variable z can be a number from 0 through 9 or a letter from A through Z. A specific release can be used only if a specific product identifier is specified on the **Product** (LICPGM) parameter.

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---

## Cover letter option (CVROPT)

Specifies what to do if the cover letter being copied already exists on the system.

The possible values are:

**\*NEW** If a cover letter for the PTF already exists on the system in any language feature code, the cover letter will not be copied from the media. If no cover letter for the PTF exists on the system, the cover letter will be copied.

**\*ADD** If a cover letter for the PTF does not exist with the same language feature code, the cover letter will be copied from the media. Otherwise the cover letter will not be copied.

**\*ALL** If a cover letter with the same language feature code already exists on the system, it will be replaced. If no cover letter exists on the system for the language feature code, the cover letter will be copied.

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## End of media option (ENDOPT)

Specifies the operation that is automatically performed on the tape or optical volume after the PTF operation ends. If one or more volumes of media is involved, this parameter applies only to the last volume.

**Note:** For optical devices, \*UNLOAD is the only special value supported, \*REWIND and \*LEAVE will be ignored.

The possible values are:

### \*REWIND

The tape is automatically rewound, but not unloaded, after the operation has ended.

### \*LEAVE

The tape does not rewind or unload after the operation ends. It remains at the current position on the tape drive.

### \*UNLOAD

The tape is automatically rewound and unloaded after the operation ends. Some optical devices will eject the volume after the operation ends.

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## Examples

```
CPYPTFCVR  DEV(OPT01) LICPGM(5722SS1)  SELECT(*ALL)
           RLS(V5R3M0)
```

This command copies all cover letters for PTFs that are not applied to product 5722SS1 release V5R3M0 from device OPT01.

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## Error messages

### \*ESCAPE Messages

#### CPF354D

Device &1 not allowed.

#### CPF3586

List of PTFs not correct.

#### CPF358A

Release not valid.

#### CPF359D

No PTFs on device &3 met the selection criteria.

#### CPF35BE

Product &1 &3 not supported or installed.

**CPF35E0**

Error occurred copying PTF information.

**CPF35F1**

Cover letter file &1 in &2 not found.

**CPF363C**

No PTF cover letters copied from device &3.

**CPF9814**

Device &1 not found.

**CPF9822**

Not authorized to file &1 in library &2.

**CPF9825**

Not authorized to device &1.

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# Copy PTF Group (CPYPTFGRP)

Where allowed to run: All environments (\*ALL)  
 Threadsafes: No

Parameters  
 Examples  
 Error messages

The Copy Program Temporary Fix Group (CPYPTFGRP) command copies program temporary fix (PTF) groups from tape, optical, save file, or service, to tape, optical, save file, or service. The PTF group information is copied to the specified device. The PTFs named within the PTF group can also be copied using the CPYPTF parameter. The Work with PTF Groups (WRKPTFGRP) command can be used to display and work with a list of PTF groups on the system.

## Restrictions:

1. This command is shipped with public \*EXCLUDE authority and the QPGMR, QSYSOPR, QSRV, and QSRVBAS user profiles have private authorities to use the command.

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## Parameters

Keyword	Description	Choices	Notes
PTFGRP	PTF group	Character value, *ALL	Required, Positional 1
FROMDEV	From device	Name, *SERVICE, *SAVF	Required, Positional 2
TODEV	To device	Name, *SERVICE, *SAVF	Required, Positional 3
FROMSAVF	From save file	Qualified object name	Optional
	Qualifier 1: From save file	Name	
	Qualifier 2: Library	Name, *LIBL, *CURLIB	
FROMSEQNBR	From tape sequence number	1-16777215, *SEARCH	Optional
FROMENDOPT	From end of media option	*REWIND, *LEAVE, *UNLOAD	Optional
TOVOL	Volume identifier	Character value, *MOUNTED	Optional
TOSEQNBR	To tape sequence number	1-16777215, *END	Optional
TOENDOPT	To end of media option	*REWIND, *LEAVE, *UNLOAD	Optional
TOSAVF	To save file	Qualified object name	Optional
	Qualifier 1: To save file	Name	
	Qualifier 2: Library	Name, *LIBL, *CURLIB	
CLEAR	Clear	*NONE, *ALL	Optional
REPLACE	Replace	*LVLGT, *NO, *YES	Optional
RELPTFGRP	Copy related PTF groups	*NO, *YES	Optional
DTACPR	Data compression	*DEV, *NO, *YES	Optional
CPYPTF	Copy PTFs	*NO, *YES	Optional
RPLSPR	Replace superseded PTFs	*YES, *NO	Optional
COVER	Copy PTF cover letter	Character value, *DFT, *NONE	Optional

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---

## PTF group (PTFGRP)

Specifies the name of the PTF group(s) to be copied.

This is a required parameter.

### *PTF-group-name*

Specify the name of the PTF group to be copied.

**\*ALL** All PTF groups are copied. This value cannot be specified with `TODEV(*SAVF)`.

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## From device (FROMDEV)

Specifies the name of the device that contains the PTF groups to be copied.

This is a required parameter.

### **\*SERVICE**

The PTF groups are copied from the system. The Work with PTF Groups (WRKPTFGRP) command can be used to display the list of PTF groups on the system.

**\*SAVF** The PTF group is copied from a save file.

### *device-name*

Specify the name of the tape or optical device from which the PTF groups are copied.

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---

## To device (TODEV)

Specifies the device to which the PTF groups are copied.

This is a required parameter.

### **\*SERVICE**

The PTF groups are copied to the system. The Work with PTF Groups (WRKPTFGRP) command can be used to display the list of PTF groups on the system. `TODEV(*SERVICE)` cannot be specified when `FROMDEV(*SERVICE)` is specified.

**\*SAVF** The PTF group is copied to a save file.

### *device-name*

Specify the name of the tape or optical device to which the PTF groups are copied.

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---

## From save file (FROMSAVF)

Specifies the name and library of the save file from which the PTF group is copied.

**Note:** This parameter is valid only if **\*SAVF** is specified on the **From device** (FROMDEV) parameter.

The possible library values are:

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

### **\*CURLIB**

The current library for the job is used to locate the save file. If no library is specified as the current library for the job, the QGPL library is used.

#### *library-name*

Specify the library where the save file is located.

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---

## **From tape sequence number (FROMSEQNBR)**

Specifies the sequence number on the tape volume from which the PTF groups are copied.

**Note:** This parameter is valid only if a tape device name is specified on the **From device** (FROMDEV) parameter.

### **\*SEARCH**

The tape volume is searched for the first media file for the specified PTF group.

#### *sequence-number*

Specify the sequence number where you want to begin to copy the PTF data. This sequence number must exist on the tape. Valid values range from 1 to 16777215.

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## **From end of media option (FROMENDOPT)**

Specifies the operation that is performed on the tape or optical volume after the copy operation ends. If one or more volumes of tape are involved, this parameter applies only to the last volume.

**Note:** This parameter is only valid if a tape or optical device name is specified on the FROMDEV parameter. For optical devices, \*UNLOAD is the only special value supported, \*REWIND and \*LEAVE will be ignored.

The possible values are:

### **\*REWIND**

The tape is automatically rewound, but not unloaded, after the operation has ended.

### **\*LEAVE**

The tape does not rewind or unload after the operation ends. It remains at the current position on the tape drive.

### **\*UNLOAD**

The tape is automatically rewound and unloaded after the operation ends. Some optical devices will eject the volume after the operation ends.

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## **Volume identifier (TOVOL)**

Specifies the volume identifier of the tape or optical volume that receives the copied PTF groups.

### **\*MOUNTED**

The volume currently placed in the device is used.

### *volume-identifier*

Specify the volume identifier of the tape or optical volume.

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---

## To tape sequence number (TOSEQNBR)

Specifies the sequence number of the data file that receives the copied PTF group.

**Note:** This parameter is valid only if a tape device name is specified on the **To device** (TODEV) parameter.

**\*END** The PTF groups are copied starting at the end of the tape.

### *sequence-number*

Specify the sequence number of the data file that receives the first copied PTF group. Valid values range from 1 through 16777215.

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## To end of media option (TOENDOPT)

Specifies the operation that is performed on the tape or optical volume after the copy operation ends. If one or more volumes of tape are involved, this parameter applies only to the last volume.

**Note:** This parameter is only valid if a tape or optical device name is specified on the **To device** (TODEV) parameter. For optical devices, **\*UNLOAD** is the only special value supported, **\*REWIND** and **\*LEAVE** will be ignored.

The possible values are:

### **\*REWIND**

The tape is automatically rewound, but not unloaded, after the operation has ended.

### **\*LEAVE**

The tape does not rewind or unload after the operation ends. It remains at the current position on the tape drive.

### **\*UNLOAD**

The tape is automatically rewound and unloaded after the operation ends. Some optical devices will eject the volume after the operation ends.

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## To save file (TOSAVF)

Specifies the name and library of the save file to which the PTF group is copied.

**Note:** This parameter is valid only if **\*SAVF** is specified on the **To device** (TODEV) parameter.

The possible library values are:

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

### **\*CURLIB**

The current library for the job is used to locate the save file. If no current library entry exists in the library list, the QGPL library is used.



*library-name*

Specify the library where the save file is located.

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## Clear (CLEAR)

Specifies whether an uncleared save file encountered while copying the PTF group is automatically cleared. This parameter applies only when `TODEV(*SAVF)` is specified.

\*NONE

An uncleared save file is not automatically cleared.

**\*ALL** An uncleared save file is automatically cleared so the operation can continue.

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## Replace (REPLACE)

Specifies what to do if a PTF group being copied already exists on the system. If a PTF group does not already exist on the system, it will be copied. This parameter only applies when `TODEV(*SERVICE)` is specified.

\*LVLGT

Copy an existing PTF group of the same name only when the level of the PTF group being copied is greater than the level of the PTF group on the system.

**\*NO** Do not replace an existing PTF group of the same name. An error will occur if a PTF group of the same name already exists on the system and `PTFGRP(*ALL)` is not specified.

**\*YES** Replace an existing PTF group of the same name regardless of the level.

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## Copy related PTF groups (RELPTFGRP)

Specifies whether to copy related PTF groups. This parameter only applies when `FROMDEV(*SERVICE)` is specified and the `TODEV` parameter specifies a tape or optical device.

\*NO The related PTF groups named within the specified PTF group are not copied.

**\*YES** The related PTF groups named within the specified PTF group are copied. Any related PTF groups named within related PTF groups are also copied.

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## Data compression (DTACPR)

Specifies whether data compression is used.

The possible values are:

\*DEV If the save is to tape and the target device supports compression, hardware compression is performed. Otherwise, no data compression is performed.

**\*NO** No data compression is performed.

**\*YES** If the save is to tape and the target device supports compression, hardware compression is performed. If compression is not supported, or if the save data is written to a diskette or save

file, software compression is performed. If the save is running while other jobs on the system are active and software compression is used, the overall system performance may be affected.

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## Copy PTFs (CPYPTF)

Specifies whether to copy PTFs named within the specified PTF group in addition to the PTF group information. This parameter applies only when FROMDEV(\*SERVICE) is specified and a tape or optical device name is specified on the TODEV parameter.

- \*NO** The PTFs named within the specified PTF group are not copied.
- \*YES** The PTFs named within the specified PTF group are copied. All prerequisite, corequisite, and distribution requisite PTFs for PTFs named within the PTF group are also copied. A PTF is copied only if it is for a supported or installed product and a save file exists on the system for the PTF or a superseding PTF.

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## Replace superseded PTFs (RPLSPR)

Specifies whether to replace PTFs or requisites of PTFs named within the specified PTF group. A PTF can be replaced if a save file is not found and a superseding PTF with a save file exists on the system. This parameter applies only when CPYPTF(\*YES) is specified.

- \*YES** When copying PTFs, if a PTF or requisite of a PTF named within the specified PTF group does not have a save file, replace the PTF with the latest superseding PTF that has a save file. If a PTF or requisite of a PTF named within the PTF group has a save file, the PTF will be copied regardless of whether the PTF is superseded or has a later superseding PTF.
- \*NO** When copying PTFs, do not replace PTFs that do not have a save file on the system. Save files must exist for all PTFs and requisites of PTFs named within the specified PTF group.

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## Copy PTF cover letter (COVER)

Specifies whether to copy the cover letters with the PTFs. This parameter applies only when CPYPTF(\*YES) is specified.

- \*DFT** Cover letters are copied using the default language feature code. If there is only one cover letter for the PTF, it will be copied. If there is more than one cover letter for the PTF, the following criteria will be used to determine which cover letter to copy.

The language feature code that matches the service contact information (WRKCNTINF) will be used.

If no language feature code matches the service contact information, the language feature code that matches the primary language of the operating system will be used.

If no cover letters match the language feature code in the service contact information, or the language feature code of the operating system, no cover letter is copied for the PTF.

- \*NONE** No PTF cover letters are copied.

### *feature-code*

Specify the language feature code of the PTF cover letters you want to copy. If a cover letter for the selected language feature code is not available, no cover letter is copied for the PTF.

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## Examples

### Example 1: Copying a PTF Group to a Save File

```
CPYPTFGRP  PTFGRP(SF99100) FROMDEV(*SERVICE) TODEV(*SAVF)
           TOSAVF(MYLIB/MYSAVF)
```

This command copies the PTF group named SF99100 from the system to a save file named MYSAVF in library MYLIB. Related PTF groups named in SF99100 are not copied.

### Example 2: Copying a PTF Group to a Tape

```
CPYPTFGRP  PTFGRP(SF99200) FROMDEV(*SERVICE) TODEV(TAP01)
           TOSEQNBR(1) RELPTFGRP(*YES) CPYPTF(*YES)
```

This command copies the PTF group named SF99200 and all of its related PTF groups from the system to the tape mounted in device TAP01 beginning with sequence number 1. All PTFs named within the PTF groups are copied to the tape. Cover letters are copied for the PTFs using the default language feature code.

### Example 3: Copying All PTF Groups from Optical

```
CPYPTFGRP  PTFGRP(*ALL) FROMDEV(OPT01) TODEV(*SERVICE)
           REPLACE(*YES)
```

This command copies all the PTF groups from the volume mounted on optical device OPT01 to the system. Any PTF groups that already exist on the system are replaced.

### Example 4: Copying a PTF Group from Tape to Save File

```
CPYPTFGRP  PTFGRP(SF99300) FROMDEV(TAP01) TODEV(*SAVF)
           TOSAVF(MYLIB/MYSAVF)
```

This command searches the tape mounted on device TAP01 and copies PTF group SF99300 to save file MYSAVF in library MYLIB.

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## Error messages

### \*ESCAPE Messages

#### CPF35CC

Library required for PTF operation already exists.

#### CPF35D5

Cover letter NLV not valid.

#### CPF354C

Cannot process PTF files on optical volume.

#### CPF354D

Device &1 not allowed.

**CPF354F**  
Required PTF file cannot be processed.

**CPF355D**  
PTF group does not exist on save/restore media.

**CPF355E**  
CPYPTFGRP ended abnormally.

**CPF355F**  
TODEV and FROMDEV parameters cannot specify the same device.

**CPF3598**  
PTF function already in process.

**CPF36AB**  
No PTF groups found.

**CPF36A3**  
PTF group &1 already exists.

**CPF36A4**  
PTF group &1 not found.

**CPF36A5**  
Information for PTF group &1 not complete.

**CPF36A6**  
PTF group name &1 not valid.

**CPF36B8**  
PTF &2-&3 &4 cannot be copied without a save file.

**CPF363A**  
Media type of volume not valid for operation.

**CPF363E**  
Cannot write required PTF file to optical volume.

**CPF9812**  
File &1 in library &2 not found.

**CPF9814**  
Device &1 not found.

**OPT1660**  
Optical device &1 is empty.

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# Copy Spooled File (CPYSPLF)

Where allowed to run: All environments (\*ALL)  
 Threadsafte: No

Parameters  
 Examples  
 Error messages

The Copy Spooled File (CPYSPLF) command copies the data records in the specified spooled file to a user-defined physical database file. This conversion allows the use of spooled files in applications using microfiche, data communications, or data processing. Print lines that are all blank are not copied. When you copy a spooled file to a physical file, certain information is lost or changed. For example:

- Graphics data is lost.
- Bar code data is lost.

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## Parameters

Keyword	Description	Choices	Notes
FILE	Spooled file	<i>Name</i>	Required, Positional 1
TOFILE	To data base file	<i>Qualified object name</i>	Required, Positional 2
	Qualifier 1: To data base file	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
JOB	Job name	Single values: * Other values: <i>Qualified job name</i>	Optional
	Qualifier 1: Job name	<i>Name</i>	
	Qualifier 2: User	<i>Name</i>	
	Qualifier 3: Number	000000-999999	
SPLNBR	Spooled file number	1-999999, *ONLY, *LAST, *ANY	Optional
JOBSYSNAME	Job system name	<i>Name</i> , *ONLY, *CURRENT, *ANY	Optional
CRTDATE	Spooled file created	Single values: *ONLY, *LAST Other values: <i>Element list</i>	Optional
	Element 1: Creation date	<i>Date</i>	
	Element 2: Creation time	<i>Time</i> , *ONLY, *LAST	
TOMBR	To member	<i>Name</i> , *FIRST	Optional
MBROPT	Replace or add records	*REPLACE, *ADD	Optional
CTLCHAR	Control character	*NONE, *FCFC, *PRCTL, *S36FMT	Optional
CHLVAL	Channel values	Single values: *NORMAL Other values (up to 12 repetitions): <i>Element list</i>	Optional
	Element 1: Channel	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	
	Element 2: Line	1-255	

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## Spooled file (FILE)

This is a required parameter.

Specifies the name of the spooled file that is to be copied to a database file.

*spooled-file-name*

Specify the file name of the spooled file to be copied.

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## To data base file (TOFILE)

This is a required parameter.

Specifies a user-defined physical database file to which the spooled records will be copied. If this file does not exist at the time of the copy, the copy will fail.

The possible library values are:

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

**\*CURLIB**

The current library for the job is used to locate the file. If no current library entry exists in the library list, QGPL is used.

*library-name*

Specify the library where the file is located.

*data-base-file-name*

Specify the file name of the physical file to receive the copy.

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---

## Job name (JOB)

Specifies the name of the job that created the spooled file whose data records are to be copied.

The possible values are:

**\*** The job that issued this command is the job that created the spooled file.

*job-name*

Specify the name of the job that created the spooled file.

*user-name*

Specify the user name that identifies the user profile under which the job is run.

*job-number*

Specify the system-assigned job number.

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---

## Spooled file number (SPLNBR)

Specifies the number of the spooled file, from the job whose data records are to be copied.

The possible values are:

**\*ONLY**

Only one spooled file in the job has the specified file name; therefore, the number of the spooled file is not necessary.

**\*LAST**

The spooled file with the highest number and the specified file name is used.

**\*ANY** The spooled file number is not used to determine which spooled file is used. Use this value when the job system name parameter or the spooled file create date and time parameter is to take precedence over the spooled file number when selecting a spooled file.

***spooled-file-number***

Specify the number of the spooled file whose data records are to be copied.

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## Job system name (JOBSYSNAME)

Specifies the name of the system where the job that created the spooled file (JOB parameter) ran. This parameter is considered after the job name, user name, job number, spooled file name, and spooled file number parameter requirements have been met.

**\*ONLY**

There is one spooled file with the specified job name, user name, job number, spooled file name, spooled file number, and spooled file create date and time.

**\*CURRENT**

The spooled file created on the current system with the specified job name, user name, job number, spooled file name, spooled file number, and create date and time is used.

**\*ANY** The job system name is not used to determine which spooled file is used. Use this value when the spooled file create date and time parameter is to take precedence over the job system name when selecting a spooled file.

***job-system-name***

Specify the name of the system where the job that created the spooled file ran.

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## Spooled file created (CRTDATE)

Specifies the date and time the spooled file was created. This parameter is considered after the job name, user name, job number, spooled file name, spooled file number, and job system name parameter requirements have been met.

The possible single values are:

**\*ONLY**

There is one spooled file with the specified job name, user name, job number, spooled file name, spooled file number, and job system name.

**\*LAST**

The spooled file with the latest create date and time of the specified job name, user name, job number, spooled file name, spooled file number, and job system name is used.

The possible create date value is:

***spooled-file-create-date***

Specify the date the spooled file was created.

The possible create time values are:

**\*ONLY**

There is one spooled file with the specified job name, user name, job number, spooled file name, spooled file number, job system name, and spooled file create date.

**\*LAST**

The spooled file with the latest create time of the specified job name, user name, job number, spooled file name, spooled file number, job system name, and spooled file create date is used.

***spooled-file-create-time***

Specify the time the spooled file was created.

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## To member (TOMBR)

Specifies the name of the file member that receives the copied records.

The possible values are:

**\*FIRST**

The first member of the specified file is used.

***member-name***

Specify the member of the physical file. If this member does not exist, a member is created and the copy continues.

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## Replace or add records (MBROPT)

Specifies whether the new records replace or are added to the existing records.

The possible values are:

**\*REPLACE**

The system clears the existing member and adds the new records.

**\*ADD** The system adds the new records to the end of the existing records.

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## Control character (CTLCHAR)

Specifies which print control characters (if any) are to replace the spooled file's internal print control characters.

The possible values are:

**\*NONE**

No print control characters are created.

**\*FCFC** Specifies that the first character of every record contains one of the ANSI forms control codes listed in the CL Reference manual. This option may be useful for microfiche production.

**\*PRTCTL**

Specifies that the first four characters of every record contains skip- and space-before values



useful in high-level language programs. This code can be viewed as SSSL, where SSS is the skip-before line value and L is the space-before value.

#### **\*S36FMT**

Specifies that the format of the records to be copied to a database file is the same as that created on the IBM System/36 for COPYPRT. This value is not allowed for spooled files which exist on primary or secondary auxiliary storage pools.

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## **Channel values (CHLVAL)**

Specifies a list of channel numbers with their assigned line numbers. Specify this parameter only if \*FCFC is specified on the **Control character** prompt (CTLCHAR) parameter). Channel number refers to a method of determining skipping for reports. Each assigned channel must have a corresponding line number to provide the correct positioning on a report.

#### **\*NORMAL**

Indicates channel 1 is the only assigned channel number. The assigned line number for channel 1 is line 1.

#### **Element 1: Channel Numbers**

##### *channel-number*

Specify which channels are used to control skipping on a report. The only valid values for this parameter are 1 through 12. Each channel number can be specified only once per Copy Spooled File (CPYSPLF) command.

#### **Element 2: Line Numbers**

##### *line-number*

The line number assigned for the channel number in the same list. The range of valid line numbers is 1 through 255. Each line number can be specified only once per Copy Spooled File (CPYSPLF) command.

**Note:** You can enter multiple values for this parameter. If you are on an entry display and you need additional entry fields to enter these multiple values, type a plus sign (+) in the entry field opposite the phrase "+ for more" and press Enter.

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## **Examples**

### **Example 1: Replacing Data**

```
CPYSPLF FILE(QPRINT) JOB(PAYROLL01) SPLNBR(4)
        TOFILE(MYFILE) TOMBR(MYMBR) CTLCHAR(*PRTCTL)
```

In this example, file QPRINT (which is the fourth file produced by job PAYROLL01) is copied to member MYMBR of physical file MYFILE (which resides in a library found by searching the library list). The newly copied data replaces all old data in the member because all old records have been cleared. The 4-byte print control code is created.

### **Example 2: Adding Data**

```
CPYSPLF FILE(QPRINT) TOFILE(MYLIB/MYFILE) JOB(PAYROLL02)
        MBROPT(*ADD) CTLCHAR(*FCFC) CHLVAL((1 3) (4 15))
```

In this example, file QPRINT (the only file of that name left in job PAYROLL02) is copied to the first member of the physical file found in library MYLIB. The newly copied data is added to data existing in the member. The FCFC 1-byte print control character is used and takes advantage of the assigned channel values in formatting the output. The assigned channel values as specified on the command are as follows:

- Line 3 assigned to channel 1
- Line 15 assigned to channel 4

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## Error messages

### \*ESCAPE Messages

#### CPF2207

Not authorized to use object &1 in library &3 type \*&2.

#### CPF3207

Member not added. Errors occurred.

#### CPF3303

File &1 not found in job &5/&4/&3.

#### CPF3309

No files named &1 are active.

#### CPF3311

Copy request failed for file &6 in &7.

#### CPF3330

Necessary resource not available.

#### CPF3340

More than one file with specified name found in job &5/&4/&3.

#### CPF3342

Job &5/&4/&3 not found.

#### CPF3343

Duplicate job names found.

#### CPF3344

File &1 number &8 no longer in the system.

#### CPF338A

Control character \*S36FMT not allowed.

#### CPF3394

Cannot convert spooled file data.

#### CPF3429

File &1 number &7 cannot be displayed, copied, or sent.

#### CPF3482

Copy request failed. Spool file &1 is open.

#### CPF3483

Copy request failed for file &6 in &7.

#### CPF3486

CHLVAL parameter value not valid.

#### CPF3492

Not authorized to spooled file.

**CPF3493**

CTLCHAR parameter not correct for file &1.

**CPF3499**

Records in file &1 preceded all assigned channel values.

**CPF5812**

Member &3 already exists in file &1 in library &2.

**CPF9812**

File &1 in library &2 not found.

**CPF9837**

Attempt made to override file &1 to MBR(\*ALL).

**CPF9845**

Error occurred while opening file &1.

**CPF9846**

Error while processing file &1 in library &2.

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## Copy Source File (CPYSRCF)

**Where allowed to run:** All environments (\*ALL)  
**Threadsafe:** Conditional

Parameters  
Examples  
Error messages

The Copy Source File (CPYSRCF) command copies a database source file or DDM file to a source physical file or DDM file and converts the character data from the from-file CCSID to the to-file CCSID. If TOFILE(\*PRINT) is specified, a formatted printer file is created by using the IBM-supplied printer file QSYPRT (the file is changed for source records and is different from other copy command file formats). Any overrides issued for the from-file or to-file apply to the files used in the copy operation. Record data is copied from the from-file to the to-file, converting character data from the from-file CCSID to the to-file CCSID. Other differences in record formats (like that of the FMTOPT(\*NOCHK) parameter option on the CPYF command) are disregarded.

**Note:** For more information on DDM files, see the Distributed Data Management information in the iSeries Information Center at <http://www.ibm.com/eserver/series/infocenter>.

One member, all members, or a generic set of members can be copied each time the command is called. From-file members can be copied to like-named to-file members or to a single to-file member. Many members are copied and listed in alphabetical order. The to-file must exist when the CPYSRCF command is started. This command does not create the to-file, but it does add a member to an existing physical file if the member does not already exist in the to-file.

This command offers a subset of the parameters available on the CPYF command. Note that the default for the MBROPT parameter is \*REPLACE (unlike other copy commands), which clears existing records in the receiving member of the to-file before replacing them with records copied from the from-file. Also, the default for the TOMBR parameter is \*FROMMBR, which causes from-file members to be copied to like-named to-file members.

### Restrictions:

1. A file's open data path (ODP) cannot be shared with any other program in the job (routing step) during the copy operation.
2. In multithreaded jobs, this command is not threadsafe when copying from or to multiple database file members, device files (except SPOOL(\*YES) print files), distributed files, or DDM files of type \*SNA. This command fails for distributed files that use relational databases of type \*SNA and DDM files of type \*SNA. It is threadsafe ONLY when copying from and to single database file members (local or DDM of type \*IP) or SPOOL(\*YES) print files.

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## Parameters

Keyword	Description	Choices	Notes
FROMFILE	Data base source file	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Data base source file	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	

Keyword	Description	Choices	Notes
TOFILE	To file	Single values: *PRINT Other values: <i>Qualified object name</i>	Required, Positional 2
	Qualifier 1: To file	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
FROMMBR	From member	<i>Generic name, name, *FIRST, *ALL</i>	Required, Positional 3
TOMBR	To member or label	<i>Name, *FROMMBR, *FIRST</i>	Optional, Positional 4
MBROPT	Replace or add records	<b>*REPLACE</b> , *ADD	Optional, Positional 5
SRCOPT	Source update options	Single values: <b>*SAME</b> Other values (up to 2 repetitions): *SEQNBR, *DATE	Optional
SRCSEQ	Source sequence numbering	<i>Element list</i>	Optional
	Element 1: Starting sequence number	0.01-9999.99, <b>1.00</b>	
	Element 2: Increment number	0.01-9999.99, <b>1.00</b>	

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---

## Data base source file (FROMFILE)

Specifies the name and library of the database source file that contains the records copied.

The possible library values are:

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

**\*CURLIB**

The current library for the thread is searched. If no library is specified as the current library for the thread, the QGPL library is searched.

*name* Specify the name of the library to be searched.

The possible values are:

*database-source-file-name*

Specify the name of the database source file that contains records being copied.

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---

## To file (TOFILE)

Specifies the file that receives the copied records.

The possible values are:

**\*PRINT**

The records are copied to the IBM-supplied printer file QSYSPRT and listed in an SEU-type source file format. No CCSID conversions occur if \*PRINT is specified. The format includes no blank lines between records, source fields separated from the data, and members listed in alphabetic order. If the listing needs to be in hexadecimal format, use the Copy File (CPYF) command with the OUTFMT(\*HEX) parameter value. The IBM-supplied printer file QSYSPRT may not be overridden to a different file name, and it must have the RPLUNPRT(\*YES) and CTLCHAR(\*NONE) attributes.

The possible library values are:

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

**\*CURLIB**

The current library for the job is used to locate the source physical file. If no library is specified as the current library for the job, the QGPL library is used.

*library-name*

Specify the name of the library where the source physical file is located.

*to-file-name*

Specify the name of the source physical file that receives the copied records.

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---

## From member (FROMMBR)

Specifies the file member(s) copied from the from-file. A single member, a generic set of members, or all members in the from-file are copied. Members are copied and listed in alphabetical order.

The possible values are:

**\*ALL** All members in a database file are copied.

**\*FIRST**

The first member of the specified file is used.

*from-member-name*

Specify the name of the database file member that is copied.

*generic\*-member-name*

Specify the generic name of the group of members that are copied.

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---

## Member (TOMBR)

Specifies the name of the file member that receives the copied records.

If \*PRINT is specified for the **To file** prompt (TOFILE parameter), either \*FIRST or \*FROMMBR must be specified on this parameter.

The possible values are:

**\*FROMMBR**

Corresponding from-file and to-file member names or label identifiers are used. If a member with a corresponding name does not exist in the to-file, a member with that name is added to the to-file.

If a member name or \*FIRST was specified as a value for the FROMMBR parameter, then a member in the to-file with the same name receives the records copied. If \*ALL or a generic member name is specified as a value for the FROMMBR parameter, each member in the from-file is copied into a member with the same name in the to-file. Records from one or more members (specified by the FROMMBR parameter) in the from-file are copied to the first member in the to-file.

**\*FIRST**

The first member of the specified file is used.

*to-member-name*

Specify the name of the physical to-file member to receive the records. If a member with the specified name does not exist, one with the same name is added.

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## Replace or add records (MBROPT)

Specifies whether the new records replace or are added to the existing records.

The possible values are:

**\*REPLACE**

The system clears the existing member and adds the new records.

**\*ADD** The system adds the new records to the end of the existing records.

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---

## Source update options (SRCOPT)

Specifies whether new values are assigned to the source sequence number and date fields when records from the from-file are copied to the to-file. New values can be specified in either or both fields.

**\*SAME**

No new values are assigned to the source sequence number and date fields.

**\*SEQNBR**

Sequence number and values added for the sequence number are assigned as specified in the **Source sequence numbering** prompt (SRCSEQ parameter).

**\*DATE**

The date fields in the records being copied are set to six zeros.

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## Source sequence numbering (SRCSEQ)

Specifies, only when \*SEQNBR is also specified in the **Source update options** prompt (SRCOPT parameter), the starting and end values added for creating the first and subsequent of sequence number record copied to the to-file. The value added is used to renumber all other records that are copied. The maximum value for sequence number is 9999.99; if a value is larger than this limit, additional records in the member are assigned the sequence number 9999.99.

The possible values for sequence number are:

**1.00** The first source record copied to the to-file is to have a sequence number of 0001.00.

*starting-sequence-number*

Specify a value in the range of 0000.01 through 9999.99 that is the sequence number of the first source record copied to the to-file.

The possible values for **increment-number** are:



**1.00** The copied source records are renumbered in the to-file with whole number additions of 1.

***increment-number***

Specify a value in the range of 0000.01 through 9999.99 that is used as the value added for renumbering all source records copied after the first record. Any value in the range of 0.01 to 9999.99 may be specified. Once the maximum sequence number of 9999.99 is reached, the sequence number of additional records is 9999.99.

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## Examples

### Example 1: Replacing Existing Records

```
CPYSRCF FROMFILE(QGPL/QCLSRC) TOFILE(MYLIB/CLSRC)
        FROMMBR(PGMA)
```

This command copies records from member PGMA of database source file QCLSRC which is in the QGPL library. The defaults for the TOMBR and MBROPT parameters are taken so the records are copied to a like-named member (PGMA) of CLSRC in library MYLIB and replaces existing records in the member. If member PGMA does not exist in the to-file, it is added as part of the copy operation. If the CCSID of QGPL/QCLSRC is different from the CCSID of MYLIB/CLSRC, the character data is converted to the CCSID of CLSRC.

### Example 2: Printing Files

```
CPYSRCF FROMFILE(QRPG/QRPGSRC) TOFILE(*PRINT) FROMMBR(INV*)
```

This command copies from database source file QRPGSRC in library QRPG, all file members whose names start with the characters INV. Special value \*PRINT is specified for the to-file, so the records are copied to the printer and listed in a format tailored to source records, much like the printout created by SEU. Character data is not converted when specifying TOFILE(\*PRINT).

### Example 3: Changing the Increment Value

```
CPYSRCF FROMFILE(MYLIB/TXTSRC) TOFILE(QIDU/QTXTSRC)
        FROMMBR(*ALL) SRCOPT(*SEQNBR *DATE) SRCSEQ(1 .25)
```

This command copies all the members of database source file TXTSRC in library MYLIB. They are copied and replace (by using the default MBROPT(\*REPLACE)) the existing records in like-named members (by using default TOMBR(\*FROMMBR)) of data source file QTXTSRC in library QIDU. If the to-file members do not exist, they are added by the copy operation. For each member copied, the first record is numbered 1 and each following number is incremented by 0.25. Also, the source date field is set to zero in each record. If the CCSID of MYLIB/TXTSRC is different from the CCSID of QIDU/QTXTSRC, the character data is converted to the CCSID of QIDU/QTXTSRC.

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## Error messages

### \*ESCAPE Messages

#### CPF2816

File &1 in &2 not copied because of error.

#### CPF2817

Copy command ended because of error.

#### CPF2858

File attributes not valid for printed output.

**CPF2859**  
Shared open data path not allowed.

**CPF2864**  
Not authorized to file &1 in library &2.

**CPF2875**  
Wrong file member or label opened.

**CPF2888**  
Member &3 not added to file because of error.

**CPF2909**  
Error clearing member &3 in file &1 in &2.

**CPF2949**  
Error closing member &3 in file &1 in &2.

**CPF2952**  
Error opening file &1 in library &2.

**CPF2968**  
Position error occurred copying file &1 in &2.

**CPF2971**  
Error reading member &3 in file &1.

**CPF2972**  
Error writing to member &3 in file &1.

**CPF3140**  
Initialize or copy of member &2 canceled.

**CPF3143**  
Increments not allowed for member &2.

**CPF3148**  
New records need too much space for member &2.

**CPF3150**  
Data base copy failed for member &2.

**CPF9212**  
Cannot load or unload DDM file &2 in &3.

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## Copy To Directory (CPYTODIR)

**Where allowed to run:** All environments (\*ALL)  
**Threadsafe:** No

Parameters  
Examples  
Error messages

The Copy To Directory (CPYTODIR) command is used to copy system distribution directory data from a tape or diskette unit to the local system. The directory data that is copied to the local system is created by the Copy From Directory (CPYFRMDIR) command on a remote system. This function allows the local system to begin a directory shadowing environment with the remote system by shadowing changes made to the directory data from the remote system.

**Caution:** Do not use this command as a backup utility to save and restore directory data for data recovery purposes. Follow the normal backup and recovery procedure guidelines described in the Backup and Recovery book, SC41-5304.

**Restriction:** You must have security administrator (\*SECADM) authority to use this command.

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### Parameters

Keyword	Description	Choices	Notes
LABEL	File label	<i>Character value</i>	Required, Positional 1
DEV	Device	Values (up to 4 repetitions): <i>Name</i>	Required, Positional 2
AUTOINZ	Automatically initialize	*YES, *NO	Optional
RPLDTA	Replace data	*YES, *NO	Optional
VOL	Volume identifier	Single values: *NONE Other values (up to 50 repetitions): <i>Character value</i>	Optional
SEQNBR	Sequence number	1-9999, *NEXT	Optional
ENDOPT	End of tape option	*REWIND, *LEAVE, *UNLOAD	Optional

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### File label (LABEL)

Specifies the device file label on the tape or diskette used for the copy operation. A maximum of 17 characters can be specified for tape devices; a maximum of 8 characters can be specified for diskette unit.

This is a required parameter.

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### Device (DEV)

Specifies the names of the tape or diskette units used for the copy operation. Each tape or diskette unit name must already be known on the system by a device description.

### *tape-device-name*

Specify the names of one or more tape devices used for the copy operation. If more than one tape device is used, specify the names of the devices in the order in which they are used. When more than one tape volume is used, using more than one tape device permits one tape volume to be rewound or unloaded while another tape device processes the next tape volume.

### *diskette-device-name*

Specify the name of the diskette unit to be used for the copy operation.

This is a required parameter.

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---

## Automatically initialize (AUTOINZ)

Specifies whether to automatically pass the information copied to this system to other collector systems through directory shadowing.

**\*YES** The directory entries copied are automatically supplied to collector systems.

**\*NO** The directory entries copied are not supplied to other collector systems that have already been initialized.

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## Replace data (RPLDTA)

Specifies whether to replace a directory entry on the local system with directory data copied from tape or diskette.

**\*NO** Shadowed data is copied from tape or diskette, but directory entries are not replaced with copied directory data if the directory entry exists on the system.

**\*YES** All directory data is copied from tape or diskette. A directory entry replaces an entry for the same user that already exists on the system.

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## Volume identifier (VOL)

Specifies one or more volume identifiers used by the file.

### **\*NONE**

No volume identifiers are specified for the file. No volume identifiers are checked.

### *volume-identifier*

Specify the identifiers of one or more volumes in the order in which they are placed in a device and used for the copy operation.

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---

## Sequence number (SEQNBR)

Specifies the sequence number of the data file on the tape that is processed. The four-position file sequence number is read from the first header label of the data file.

### \*NEXT

The copy operation begins on the next file on the tape volume. If the tape is currently positioned before the first file, the first file from the tape is processed.

### *file-sequence-number*

Specify the sequence number of the file that is used. Valid values range from 1 through 9999.

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## End of tape option (ENDOPT)

Specifies the operation that is automatically performed on the tape volume after the operation ends. If more than one volume is included, this parameter applies only to the last tape volume used; all other tape volumes are rewound and unloaded when the end of the tape is reached.

### \*REWIND

The tape is automatically rewound, but not unloaded, after the operation has ended.

### \*LEAVE

The tape does not rewind or unload after the operation ends. It remains at the current position on the tape drive.

### \*UNLOAD

The tape is automatically rewound and unloaded after the operation ends.

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## Examples

```
CPYTODIR  DEV(DKT01)  AUTOINZ(*YES)  RPLDTA(*NO)
```

This command copies all of the directory data from diskette device DKT01 to the local system. Data that is copied to the local system is passed along to other systems that use communications to perform directory shadow initializing or normal directory shadowing. Local system data identified as being the same as diskette data is not replaced.

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## Error messages

### \*ESCAPE Messages

#### CPF90A8

\*SECADM special authority required to do requested operation.

#### CPF90FB

Directory data not copied because of errors.

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## Copy To Diskette (CPYTODKT)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Copy To Diskette (CPYTODKT) command copies a database or device file to a diskette file. The to-file must be a diskette file. The from-file can be a physical, logical, DDM, tape, or diskette file, or an inline data file.

**Note:** For more information on DDM files, see the Distributed Data Management information in the iSeries Information Center at <http://www.ibm.com/eserver/series/infocenter>.

This command offers a subset of the parameters available on the Copy File (CPYF) command, along with more specific diskette-oriented parameters. This should eliminate the need for a separate override command. If parameters are needed that are not available on the CPYTODKT command, either use overrides for the from-file or the to-file, use the CPYF command, or use a combination of file overrides with the CPYF command.

One label, a generic set, or all labels from the tape can be copied. A complete description of the combinations allowed and how to specify them is in the Files and file systems topic in the iSeries Information Center at <http://www.ibm.com/eserver/series/infocenter>.

**Restriction:** A file's open data path (ODP) cannot be shared with any other program in the job (routing step) during the copy operation.

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### Parameters

Keyword	Description	Choices	Notes
FROMFILE	From file	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: From file	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
TOFILE	Diskette file	<i>Qualified object name</i>	Required, Positional 2
	Qualifier 1: Diskette file	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
FROMMBR	From member	<i>Generic name, name, *FIRST, *ALL</i>	Optional, Positional 3
TOLABEL	Diskette label	<i>Character value, *FROMMBR, *DKTF</i>	Optional, Positional 4
TODEV	Diskette device	<i>Name, *DKTF</i>	Optional
TOVOL	Volume identifier	Single values: <i>*DKTF, *NONE</i> Other values (up to 50 repetitions): <i>Character value</i>	Optional
TOEXCHTYPE	Copy to exchange type	<i>*DKTF, *STD, *BASIC, *H, *I</i>	Optional
TOEXPDATE	File expiration date	<i>Date, *DKTF, *PERM</i>	Optional
NBRRCD5	Number of records to copy	<i>Unsigned integer, *END</i>	Optional

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---

## From file (FROMFILE)

Specifies the name and library of the physical, logical, diskette, tape, or spooled inline file that is being copied.

This is a required parameter.

The possible library values are:

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

**\*CURLIB**

The current library for the job is used to locate the physical, logical, diskette, or tape file. If no library is specified as the current library for the job, the QGPL library is used.

*library-name*

Specify the name of the library where the physical, logical, diskette, or tape file is located.

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---

## Diskette file (TOFILE)

Specifies the file that receives the copied records.

This is a required parameter.

The possible library values are:

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

**\*CURLIB**

The current library for the job is used to locate the diskette file. If no library is specified as the current library for the job, the QGPL library is used.

*library-name*

Specify the name of the library where the diskette file is located.

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## From member (FROMMBR)

Specifies the database members, or the identifiers of the disk data file, or the tape file members copied from the from-file. If the from-file is a spooled inline file, \*FIRST must be specified.

**\*FIRST**

The first member of the specified file is used.

**\*ALL** All members of a database from-file, or all file label identifiers for a diskette from-file are copied. FROMMBR(\*ALL) is not valid for a tape file or inline data file.

*from-member-name*

Specify the name of the database file member or the label of a tape or diskette data file that is being copied. If the tape label identifier contains special characters, or is greater than 10 characters in length, it must be specified on the Create Tape File (CRTTAPF), Change Tape File (CHGTAPF), or Override Tape File (OVRTAPF) command.

*generic\*-member-name*

Specify the generic name of the member name.



---

## Diskette label (TOLABEL)

Specifies the label identifiers of the diskette data files that receive the records that are copied from the from-file. The label identifiers can be no longer than 8 characters in length.

### \*FROMMBR

All members or label identifiers named in the **From member** prompt (FROMMBR parameter) are copied into data files with the same names in the diskette to-file.

If the from-file is a nonlabeled tape file, a label identifier is created for the diskette to-file in the form of CPYnnnnn, where nnnnn is the tape sequence number of the data file.

### \*DKTF

The value in the diskette file is used to identify the data file that receives the copied records.

### *data-file-identifier*

Specify the label identifier of the data file on the diskette to-file.

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---

## Diskette device (TODEV)

Specifies the name of the diskette unit used to copy the records to the diskette to-file.

### \*DKTF

The devices specified in the diskette file are used.

### *device-name*

Specify the name of the diskette unit used for copying records to the diskette to-file.

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## Volume identifier (TOVOL)

Specifies the diskettes used when copying records to the diskette to-file.

You can enter multiple values for this parameter. If you are on an entry display and you need additional entry fields to enter these multiple values, type a plus sign (+) in the entry field opposite the phrase "+ for more" and press the Enter key.

### \*DKTF

The diskette volume identifiers in the diskette file are used.

### \*NONE

No volume identifier checking is done.

### *volume-identifier*

Specify up to 50 volume identifiers used to identify the diskettes that receive the copied records. Each volume identifier can have up to 6 alphanumeric characters.

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## Copy to exchange type (TOEXCHTYPE)

Specifies the exchange type in which the diskette to-file is written.

#### \*DKTF

The value specified in the diskette file is used to determine the exchange type.

**\*STD** The BASIC exchange format is used for a type 1 or a type 2 diskette. The H exchange type is used for a type 2D diskette.

#### **\*BASIC**

The BASIC exchange type is used.

**\*H** The diskette to-file is written in H exchange format.

**\*I** The diskette to-file is written in I exchange format. This value is valid for diskette types 1, 2, or 2D, of any valid sector size (128, 256, 512, or 1024 bytes).

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## File expiration date (TOEXPDATE)

Specifies the expiration date for the diskette to-file. The file is protected and is not overwritten until the day after the expiration date.

#### \*DKTF

The expiration date specified in the diskette file is used.

#### **\*PERM**

The diskette to-file is protected permanently.

#### *file-expiration-date*

Specify the date of the last day the diskette is protected. The date must be specified in the format defined by the system values QDATFMT and, if separators are used, QDATSEP. The specified date is put in the diskette label as YYMMDD.

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## Number of records to copy (NBRRCD5)

Specifies the number of records copied to the to-file.

The possible values are:

**\*END** Records are copied until the end-of-file condition is indicated.

#### *number-of-records*

Specify a record number, ranging from 1 through 4294967288, that identifies the number of records copied to the to-file. Fewer records are copied if an end-of-file condition occurs before the specified number of records have been copied.

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## Examples

### Example 1: Copying 50 Records

```
CPYTODKT FROMFILE(PGMSRC) TOFILE(QDKT) FROMMBR(PGMA)
          TOLABEL(A) TOEXCHTYPE(*I) NBRRCD5(50)
```

This command copies 50 records to diskette using device file QDKT. The diskette device specified on the QDKTF file description is used. Member PGMA in database source file PGMSRC is copied. Since a library qualifier is not specified, \*LIBL is used to find the from-file. The records are copied to label A and are written in I exchange format.

### Example 2: Copying All Members

```
CPYTODKT  FROMFILE(QGPL/QCLSRC)  TOFILE(QDKT)  TODEV(DKT2)
          FROMMBR(*ALL)  TOEXPDATE(*PERM)
```

This command copies all the members in database source file QCLSRC in the QGPL library to diskette. The diskette device file QDKT, which is defined as FILETYPE(\*DATA), is used even though source records are copied to diskette. This is because source fields are always truncated when copying to a device and appended when copying back to the data base, and using a device file defined as file type \*DATA is more efficient than a device file defined as \*SRC. The diskette device DKT2 is used. The members are copied to like-named labels on the diskette because the default TOLABEL(\*FROMMBR) is taken. The volume and file expiration date are specified on the command, thus eliminating the need for a separate override command.

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---

## Error messages

### \*ESCAPE Messages

#### CPF2816

File &1 in &2 not copied because of error.

#### CPF2817

Copy command ended because of error.

#### CPF2857

Multiple member or label copy not allowed with override.

#### CPF2859

Shared open data path not allowed.

#### CPF2864

Not authorized to file &1 in library &2.

#### CPF2875

Wrong file member or label opened.

#### CPF2904

Diskette labels not valid for multiple label copy.

#### CPF2949

Error closing member &3 in file &1 in &2.

#### CPF2952

Error opening file &1 in library &2.

#### CPF2968

Position error occurred copying file &1 in &2.

#### CPF2971

Error reading member &3 in file &1.

#### CPF2972

Error writing to member &3 in file &1.

#### CPF9212

Cannot load or unload DDM file &2 in &3.



---

## Copy To Import File (CPYTOIMPF)

**Where allowed to run:** All environments (\*ALL)  
**Threadsafe:** No

Parameters  
Examples  
Error messages

The Copy To Import File (CPYTOIMPF) command copies an externally-described file to an import file. The term import file is used to describe a file created for purposes of copying data between heterogenous databases. The import file (TOSTMF or TOFILE parameter) will be called the to-file for this command.

Some of the specific functions that can be performed by the CPYTOIMPF command include the following:

- Copying from an externally described physical file to the to-file (TOFILE or TOSTMF parameter).
- Adding records to an existing to-file member or replace the contents of the to-file member (MBROPT parameter).

**Error Handling:** The escape message CPF2817 is sent for many different error conditions that can occur during a copy operation. At least one diagnostic message that indicates the specific error condition always comes before the escape message. More information on handling errors is in the Files and file systems topic in the iSeries Information Center at <http://www.ibm.com/eserver/series/infocenter>.

**Overrides:** All overrides are in affect for this command. The parameters of the overrides that are supported by CPYTOIMPF are:

- FILE
- MBR
- OPNSCOPE
- SHARE
- LVLCHECK
- RCDFMTLCK
- SEQONLY
- INHWRT
- WAITRCD
- DSTDTA
- NBRRCDS
- STMFCODPAG

**Status Message:** During the running of the CPYTOIMPF command, message CPI2801 is sent as a status message informing the interactive user that a copy is occurring. More information on preventing status messages from appearing is in the Files and file systems topic in the iSeries Information Center at <http://www.ibm.com/eserver/series/infocenter>.

### Restrictions:

- During the time a CPYTOIMPF request is run, the file specified for the **To data base file (TOFILE)** parameter may be locked (similar to an \*EXCL lock with no timeout) so that no access is possible.
- If the from-file has the SHARE(\*YES) attribute, unpredictable results can occur. Therefore, if the from-file is defined with SHARE(\*YES), the user should make sure the file is not opened by any process prior to the copy.

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## Parameters

Keyword	Description	Choices	Notes
FROMFILE	From file	<i>Element list</i>	Required, Positional 1
	Element 1: File	<i>Qualified object name</i>	
	Qualifier 1: File	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
	Element 2: Member	<i>Name, *FIRST, *ALL</i>	
TOFILE	To data base file	<i>Element list</i>	Optional, Positional 2
	Element 1: File	<i>Qualified object name</i>	
	Qualifier 1: File	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
	Element 2: Member	<i>Name, *FIRST, *FROMMBR, *ALL</i>	
TOSTMF	To stream file	<i>Path name</i>	Optional, Positional 3
MBROPT	Replace or add records	<i>*ADD, *REPLACE</i>	Optional
TOCCSID	To CCSID	1-65533, <i>*FILE</i>	Optional
STMFCODPAG	Stream file code page	1-32767, <i>*STMF, *PCASCII, *STDASCII</i>	Optional
RCDDL	Record delimiter	<i>Character value, *EOR, *CRLF, *LF, *CR, *LFCR</i>	Optional
DTAFMT	Record format of import file	<i>*DLM, *FIXED</i>	Optional
STRDLM	String delimiter	<i>Character value, ", *NONE</i>	Optional
FLDDL	Field delimiter	<i>Character value, _</i>	Optional
NULLIND	Null field indicator	<i>*NO, *YES</i>	Optional
DECPNT	Decimal point	<i>*PERIOD, *COMMA</i>	Optional
DATFMT	Date format	<i>*ISO, *USA, *EUR, *JIS, *YYMD</i>	Optional
TIMFMT	Time format	<i>*ISO, *USA, *EUR, *JIS</i>	Optional

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### From file (FROMFILE)

Specifies the file that contains the records to be copied. The database file can be a single-format logical, physical, or multi-system file.

This is a required parameter.

#### Element 1: File

##### Qualifier 1: File

*name* Specify the name of the file that contains the records to be copied.

##### Qualifier 2: Library

*\*LIBL* All libraries in the library list for the current thread are searched until the first match is found.

**\*CURLIB**

The current library for the thread is searched. If no library is specified as the current library for the thread, the QGPL library is searched.

*name* Specify the name of the library to be searched.

**Element 2: Member****\*FIRST**

The first member (in order of creation date) in the specified from-file is used. Specifying \*FIRST is not allowed if the from-file has no members.

**\*ALL** All members of the specified file are copied.

*name* Specify the name of the from-file member containing the records to copy.

Top

---

**To data base file (TOFILE)**

Specifies the database file to receive the copied records. Either this parameter or the TOSTMF parameter is required.

The to-file can be any of the following file types:

- source physical file
- if the file is not a source file, the file can have only one non-numeric field
- program-described physical file
- externally-described physical file with one non-numeric field.

**Element 1: File****Qualifier 1: File**

*name* Specify the name of the file to receive the copied records.

**Qualifier 2: Library**

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

**\*CURLIB**

The current library for the thread is searched. If no library is specified as the current library for the thread, the QGPL library is searched.

*name* Specify the name of the library to be searched.

**Element 2: Member****\*FIRST**

The first member (in order of creation date) in the specified to-file is used.

Specifying \*FIRST is not allowed if the specified to-file has no members and there is no override (OVRDBF command) in effect that specified a member name for the to-file.

**\*ALL** The data is copied to the correct to-member of the partitioned table. \*ALL is only valid for partitioned tables.

**\*FROMMBR**

Corresponding from-file and to-file member names are used.

*name* Specify the name of the to-file member to receive the copied records. If a member with the specified name does not already exist in the to-file, the member will be added.

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---

## To stream file (TOSTMF)

Specifies the output stream file to which data is to be copied. Either this parameter or the TOFILE parameter is required. All directories in the path name must exist. New directories are not created. If the stream file does not exist, it will be created.

**Note:** The QSYS.LIB file system does not allow attributes to be set, so if the path name specified on the TOSTMF parameter is a QSYS member, diagnostic messages will appear in the joblog. The diagnostic messages will not prevent the copy operation from completing successfully.

*path-name*

Specify the path name of the output stream file to which data is to be copied.

Top

---

## Replace or add records (MBROPT)

Specifies whether the copy operation replaces, adds, or fails to copy to the records in the to-file member if a member with the specified name already exists. If the member does not exist, it is created and added to the to-file.

**Note:** If \*ADD is specified and the to-file contains no records, the copy operation completes normally. If \*REPLACE is specified and the to-file contains no records, the copy operation ends abnormally.

Additional information is available in the Files and file systems topic in the iSeries Information Center at <http://www.ibm.com/eserver/series/infocenter>.

**\*ADD** The copied records are added to the end of the existing member records.

**\*REPLACE**

The copied records replace the existing member records.

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---

## To CCSID (TOCCSID)

Specifies the coded character set identifier (CCSID) to use for the file specified for the **To data base file (TOFILE)** parameter.

**\*TOFILE**

The CCSID of the to-file database file is used.

**1-65533**

Specify the CCSID to be used when the CCSID of the to-file is 65535. If the to-file CCSID is not 65535, an error message will be sent.

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---

## Stream file code page (STMFCODPAG)

Specifies the method of obtaining the stream file code page and the coded character set identifier (CCSID) equivalent of the code page that is used for data conversion.

### \*STMFC

If the stream file exists, and data conversion is requested, the CCSID equivalent of the code page associated with the stream file is used to perform the conversion.

If the stream file does not exist, the code page equivalent of the source database file CCSID is used and associated with the stream file.

If the data base file CCSID is a mixed encoding scheme, only the single byte code page is written to the stream file.

### \*STDASCII

If the stream file exists, this option is valid only if the code page associated with the stream file is the same as the specified value. Otherwise, the operation will fail.

If the stream file does not exist, a code page in the IBM PC Data encoding scheme (x2100) is computed. This code page is associated with the target stream file and is used for data conversion if it is requested.

### \*PCASCII

If the stream file exists, this option is valid only if the code page associated with the stream file is the same as the specified value. Otherwise, the operation will fail.

If the stream file does not exist, a code page in the Microsoft Windows encoding scheme (x4105) is computed. (Microsoft and Windows are registered trademarks of Microsoft Corporation). This code page is associated with the target stream file and is used for data conversion if it is requested. This option allows the resulting data to be used by Microsoft Windows applications.

### 1-32767

Specify the code page to be used. If the stream file exists, this option is only valid if the code page associated with the stream file is the same as the specified value. Otherwise, an error message is sent. If the stream file does not exist, the specified code page is associated with the stream file when it is created.

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---

## Record delimiter (RCDDLML)

Specifies the record delimiter to be used.

\*EOR End of record and the data after the last field will be padded with X'00'.

### \*CRLF

Carriage-return followed by line-feed is appended to the end of the line.

\*LF Line-feed is appended to the end of the line.

\*CR Carriage-return is appended to the end of the line.

### \*LFCR

Line-feed followed by carriage-return is appended to the end of the line.

### *character-value*

Specify the single character which indicates the end of a single record.

Top

---

## Record format of import file (DTAFMT)

Specifies the format of the data of the generated to-file.

**\*DLM** The data contains delimiter characters. Refer to parameter descriptions for STRDLM, FLDDLM, and RCDDLDM for information on string, field, and record delimiter characters.

**\*FIXED**

The data format is fixed. The data is in fixed columns in each record. Refer to the **Null field indicator (NULLIND)** parameter for more information on how null fields will appear in the to-file.

Top

---

## String delimiter (STRDLM)

Specifies the string delimiter for character fields. If specified, all character fields will have this character preceding and following string values.

**""** The double quote (") character is used as the string delimiter.

**\*NONE**

No string delimiter is inserted.

*character-value*

Specify the character value for the string delimiter. The string delimiter is placed around all character, date, time, and timestamp fields.

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---

## Field delimiter (FLDDLM)

Specifies the field delimiter for the record. This value is placed between fields.

**','** A comma is used as the field delimiter.

*character-value*

Specify the character value for the field delimiter.

Top

---

## Null field indicator (NULLIND)

Specifies whether the first character following each field will contain either a **Y** or **N** indicating if the field is null. NULLIND(\*YES) is only valid if \*FIXED is specified for the **Record format of import file (DTAFMT)** parameter.

**\*NO** Do not add the null value indicator character after each field.

**\*YES** Add the null value indicator character after each field in the generated fixed-format to-file.

Top

---

## Decimal point (DECPNT)

Specifies the decimal point character to be used when copying numeric data to the to-file.

**\*PERIOD**

A period (.) is used for the decimal point character.

### \*COMMA

A comma (,) is used for the decimal point character.

Top

---

## Date format (DATFMT)

Specifies the date format to be used when copying date fields to the to-file.

**\*ISO** The International Organization for Standardization (ISO) date format **yyyy-mm-dd** is used.

**\*USA** The United States date format **mm/dd/yyyy** is used.

**\*EUR** The European date format **dd.mm.yyyy** is used.

**\*JIS** The Japanese Industrial Standard date format **yyyy-mm-dd** is used.

**\*JUL** The Julian date format **yy/ddd** is used.

### \*YYMD

The date format **yyyymmdd** is used.

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## Time format (TIMFMT)

Specifies the time format to be used when copying time fields to the to-file.

**\*ISO** The International Organization for Standardization (ISO) time format **hh.mm.ss** is used.

**\*USA** The United States time format **hh:mmxx** is used, where **xx** is AM or PM.

**\*EUR** The European time format **hh.mm.ss** is used.

**\*JIS** The Japanese Industrial Standard time format **hh:mm:ss** is used.

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---

## Examples

```
CPYTOIMPF FROMFILE(DB2FILE) TOFILE(EXPFILE)
          FLDDL(';') RCDDL('X'07')
          STRDLM('"'') DATFMT(*JIS) TIMFMT(*JIS)
```

All records of externally described file DB2FILE will be copied to import file EXPFILE. Fields in the import file will be delimited by semi-colon (;) characters. Each record in the import file will be delimited by a hexadecimal '07' character. Character, date, time, and timestamp values will begin and end with the double quotation marks (") character. Date and time fields will be in the \*JIS format.

Top

---

## Error messages

### \*ESCAPE Messages

#### CPF2817

Copy command ended because of error.

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---

## Copy To PC Document (CPYTOPCD)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Copy To PC Document (CPYTOPCD) command copies a member from a system database file to a PC document in a folder.

**Note:** Do not precede an entry with an asterisk unless that entry is a "special value" that is shown (on the display itself or in the help information) with an asterisk.

---

### Error messages for CPYTOPCD

#### \*ESCAPE Messages

##### IWS1612

Member &1 not copied to PC document.

Top

---

### Parameters

Keyword	Description	Choices	Notes
FROMFILE	From file	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: From file	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
TOFLR	To folder	<i>Character value</i>	Required, Positional 2
FROMMBR	From member	<i>Name, *FIRST</i>	Optional, Positional 3
TODOC	To document	<i>Character value, *FROMMBR</i>	Optional, Positional 4
REPLACE	Replace document	<i>*NO, *YES</i>	Optional, Positional 5
TRNTBL	Translate table	Single values: <i>*DFT, *NONE</i> Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Translate table	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
TRNFMT	Format of PC data	<i>*TEXT, *NOTEXT</i>	Optional
TRNIGC	DBCS code page	<i>*DFT, *JPN, *CHT, *BG5, *CHS, *KOR, *KSC, *SCGS, *NONE</i>	Optional
RCDFMT	Record format	<i>Name, *ALL</i>	Optional

Top

---

## From file (FROMFILE)

Specifies the name and library of the database file you are copying data from. The file can be either a physical file or a logical file.

This is a required parameter.

The possible library values are:

**\*LIBL** The library list is used to locate the database file.

**\*CURLIB**

The current library for the job is used to locate the database file. If no current library entry exists in the library list, QGPL is used.

*library-name*

Specify the library where the database file is located.

If this file is a source file and the records are being translated from EBCDIC to ASCII, the line number and date are removed when the records are written in the PC document.

Top

---

## To folder (TOFLR)

Specifies the name of the folder that contains the PC document being copied to.

The name can be a fully qualified path name of the form:

- folder1/folder2/folder3/.../foldern

The path name can be up to 63 characters in length. All folders in the path must exist.

This is a required parameter.

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---

## From member (FROMMBR)

Specifies the name of the member that is copied.

**\*FIRST**

The first member of the file is copied.

*member-name*

Specify the name of the member that is copied.

Top

---

## To document (TODOC)

Specifies the name of the PC document in the folder to contain the copied database file member. If the document does not exist, it is created.

**\*FROMMBR**

The name of the PC document is the same as the member name.

*document-name*

Specify a valid document name which has the form:

- filename.extension

The filename can be from 1 to 8 characters, and the extension can be from 1 to 3 characters.

Top

---

## Replace document (REPLACE)

Specifies if an existing document is replaced by the copy operation.

**\*NO** If a document of this name already exists in the folder specified by the **To folder** prompt (TOFLR parameter), the copy is not performed.

**\*YES** If a document of this name already exists in the folder specified by the **To folder** prompt (TOFLR parameter), it is replaced by the database file member that is copied.

Top

---

## Translate table (TRNTBL)

Specifies if translation is performed and, if so, the name of the translation table used to translate the data from EBCDIC to ASCII.

**Note:** For a user defined double-byte character set, this parameter also specifies if translation is performed and, if so, which translation table is used for single-byte translation.

The format of the records in the PC document is handled by the **Format of PC data** prompt (TRNFMT parameter),

**\*DFT** The default translation table is used.

### *translation-table-name*

Specify the name and library of the translation table.

The possible library values are:

**\*LIBL** The library list is used to locate the table.

### **\*CURLIB**

The current library for the job is used to locate the table. If no current library entry exists in the library list, QGPL is used.

### *library-name*

Specify the library where the table is located.

### **\*NONE**

No translation from EBCDIC to ASCII is performed. The records are copied to the PC document as fixed-length records. There are no ASCII carriage return, line feed, or end of file characters added to the PC document. The length of these fixed length records is the same as the length of the records in the database file member.

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---

## Format of PC data (TRNFMT)

Specifies the format the records in the PC document are to have.

This parameter is not valid if \*NONE is specified on the **Translate table** prompt (TRNTBL parameter).

### \*TEXT

The records in the PC document will be written in standard DOS ASCII variable length format. The ASCII carriage return and line feed characters are added to the end of each record, and the ASCII end of file character is added to the end of the PC document.

### \*NOTEXT

The records in the PC document will be fixed length records. The length of the records in the database file is used for the length of the records in the PC document.

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## DBCS code page (TRNIGC)

Specifies the double-byte character set used for translation. Unless overridden by the **Translate table** prompt (TRNTBL parameter), this parameter also specifies the single-byte translation table.

\*DFT The default country or region's double-byte character set.

\*JPN IBM Japanese.

\*CHT IBM Traditional Chinese.

\*BG5 Taiwan Industry standard (BIG-5).

\*CHS IBM Simplified Chinese.

\*KOR IBM Korean (KS).

\*KSC Korean Industry standard.

### \*SCGS

The People's Republic of China National standard (GB).

### \*NONE

No double-byte translation is performed.

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---

## Record format (RCDFMT)

Specifies the record format(s) of records to be copied. The possible values are:

\*ALL All records (of all record formats) in the database file are to be copied.

### *record-format-name*

Specify the name of a record format if you want only records with that specific record format to be copied.

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## Examples

None

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## Error messages

### \*ESCAPE Messages

#### IWS1612

Member &1 not copied to PC document.

[Top](#)



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## Copy To PCF File (CPYTOPCFF)

**Where allowed to run:** All environments (\*ALL)  
**Threadsafe:** No

Parameters  
Examples  
Error messages

The Copy to Portable Compiled Format font file (CPYTOPCFF) command copies all of user-defined DBCS character fonts contained in a double-byte character set (DBCS) font table to an existing PCF font file. During the copy operation, a dot matrix conversion is automatically performed. See the description for the Copy From PCF File (CPYFRMPCFF) command for a table that lists the supported dot matrix conversions. There is also a table that lists the maximum number of user-defined DBCS character fonts that can be copied for each type of DBCS font table.

**Restrictions:** You must have the following authority:

1. \*USE authority to the CPYIGCTBL, CRTPE, CHKIN and CHKOUT commands.
2. \*USE authority to the DBCS font table.
3. \*X authority to directories in the PCF file path name prefix.
4. \*RW authority to the PCF font file.

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### Parameters

Keyword	Description	Choices	Notes
FROMIGCTBL	From DBCS font table	QIGC2424, QIGC2424K, QIGC2424C, QIGC2424S, QIGC3232, QIGC3232S	Required, Positional 1
TOPCFF	To PCF file	<i>Path name</i>	Required, Positional 2
RPLFNT	Replace font	*NO, *YES	Optional

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---

### From DBCS font table (FROMIGCTBL)

Specifies the name of the DBCS font table from which all user-defined DBCS character fonts are copied.

This is a required parameter.

#### QIGC2424

The Japanese DBCS font table used for displaying and printing extension characters in a 24-by-24 dot matrix font.

#### QIGC2424C

The Traditional Chinese DBCS font table used for printing extension characters in a 24-by-24 dot matrix font.

#### QIGC2424K

The Korean DBCS font table used for printing extension characters in a 24-by-24 dot matrix font.

#### QIGC2424S

The Simplified Chinese DBCS font table used for printing extension characters in a 24-by-24 dot matrix font.

## QIGC3232

The Japanese DBCS font table used for displaying and printing extension characters in a 32-by-32 dot matrix font.

## QIGC3232S

The Simplified Chinese DBCS font table used for printing extension characters in a 32-by-32 dot matrix font.

## QIGCrrcl

The name of the DBCS font table to be copied must always be in the format QIGCrrcl, where *rr* is the table row matrix size, *cc* is the table column matrix size, and the letter *l* is an optional language identifier.

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## To PCF file (TOPCFF)

Specifies the path name of the PCF file to which user-defined character fonts are copied. The PCF file and all directories in the path name must exist. The PCF file is a stream file object, and it must be a user-defined character set with UCS-2 encoding.

This is a required parameter.

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---

## Replace font (RPLFNT)

Specifies whether user-defined DBCS character fonts in the specified PCF font file are replaced with those from the specified DBCS font table.

**\*NO** The system does not replace user-defined DBCS character fonts in the PCF font file with those from the specified DBCS font table.

**\*YES** The system replaces user-defined DBCS character fonts in the PCF font file with those from the specified DBCS font table.

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## Examples

### Example 1: Copying Without Replacing Existing Fonts

```
CPYTOPCFF QIGC2424
          '/QIBM/ProdData/NetworkStation/fonts/pcf/IBM_JPN12.pcf'
          RPLFNT(*NO)
```

This command copies all user-defined DBCS character fonts contained in the Japanese DBCS font table QIGC2424 (24-by-24 dot matrix font) to the Japanese PCF file named IBM\_JPN12.pcf (16-by-16 dot matrix font) in directory /QIBM/ProdData/NetworkStation/fonts/pcf. Only user-defined DBCS character fonts that are not found in the PCF file are copied. During the copy operation, user-defined DBCS character fonts are converted from 24-by-24 dot matrix to 16-by-16 dot matrix.

### Example 2: Copying Replacing Existing Fonts

```
CPYTOPCFF QIGC2424C
          '/QIBM/ProdData/NetworkStation/fonts/pcf/Chtpc23.pcf'
          RPLFNT(*YES)
```

This command copies all user-defined DBCS character fonts contained in the Traditional Chinese DBCS font table QIGC2424C (24-by-24 dot matrix font) to the Traditional Chinese PCF file named Chtpc23.pcf (32-by-32 dot matrix font) in directory /QIBM/ProdData/NetworkStation/fonts/pcf. User-defined DBCS character fonts in the PCF file are replaced with those found on the DBCS font table. During the copy operation, user-defined DBCS character fonts are converted from 24-by-24 dot matrix to 32-by-32 dot matrix.

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## Error messages

### \*ESCAPE Messages

#### CPFB7A7

&1 command ended due to error.

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## Copy To Stream File (CPYTOSTMF)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Copy To Stream File (CPYTOSTMF) command copies either a database file member or a save file to a stream file. Optional conversion of the data and reformatting is performed when copying a database file member. This command cannot be used to copy to or from a database file member on a remote system. Any overrides in effect for the database file member or the save file are not used by this command.

This command can operate on regular files and on the /dev/null character special file. A regular file is a file that supports the integrated file system input/output (I/O) operations open, read, and write.

For more information about integrated file system commands, see the Integrated file system information in the iSeries Information Center at <http://www.ibm.com/eserver/series/infocenter>.

### Restrictions:

1. The database-member-path-name must be of the form **name.object-type**. For example, /QSYS.LIB/LIBA.LIB/FILEA.FILE/MBRA.MBR is the form required by the QSYS.LIB file system.
2. The save-file-path-name must be of the form **name.object-type**. For example, /QSYS.LIB/LIBA.LIB/SAVEFILEA.FILE is the form required by the QSYS.LIB file system.
3. The user must have the following authorities:
  - Execute (\*X) authority to directories in the path name prefix of the database file, save file, stream file or conversion table.
  - Read, execute (\*RX) authority to the database file or save file.
  - Write (\*W) authority to the stream file if the stream file already exists.
  - Write, execute (\*WX) authority to the stream file's parent directory if the stream file does not already exist.
  - If a conversion table was specified, object operational (\*OBJOPR) to the conversion table.

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## Parameters

Keyword	Description	Choices	Notes
FROMMBR	From file member or save file	<i>Path name</i>	Required, Positional 1
TOSTMF	To stream file	<i>Path name</i>	Required, Positional 2
STMFOPT	Stream file option	*NONE, *ADD, *REPLACE	Optional
CVTDTA	Data conversion options	*AUTO, *TBL, *NONE	Optional
DBFCCSID	Database file CCSID	1-65533, *FILE	Optional
STMFCODPAG	Stream file code page	1-32767, *STMF, *PCASCII, *STDASCII	Optional
TBL	Conversion table	<i>Path name</i>	Optional
ENDLINFMT	End of line characters	*CRLE, *LF, *CR, *LFCR, *FIXED	Optional

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## From file member or save file (FROMMBR)

Specifies the path name of the database file member or save file from which data is copied. When copying from a member, the file may be a source physical file or a program-described physical file. Source physical files with multiple data fields are not supported.

If the database file is a source physical file, the sequence number and date stamp are removed when the records are written to the stream file.

For more information on specifying path names, refer to "Object naming rules" in "CL concepts and reference" in the CL concepts and reference topic in the iSeries Information Center at <http://www.ibm.com/eserver/iseres/infocenter>.

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## To stream file (TOSTMF)

Specifies the path name of the stream file to which data is copied. All directories in the path name must exist. New directories are not created. If the stream file does not exist, it is created.

This command can operate on files of type \*STMF and on the /dev/null character special file.

**Note:** The QSYS.LIB and independent ASP QSYS.LIB file systems do not allow attributes to be set, so if the path name specified on the TOSTMF parameter is a QSYS member, diagnostic messages will appear in the joblog. The diagnostic messages will not prevent the copy operation from completing successfully and can be ignored.

For more information on specifying path names, refer to "Object naming rules" in "CL concepts and reference" in the CL concepts and reference topic in the iSeries Information Center at <http://www.ibm.com/eserver/iseres/infocenter>.

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## Stream file option (STMFOPT)

Specifies whether the copy operation replaces, adds, or fails to copy the records in a stream file if a stream file with the specified name already exists. If the stream file does not exist, it is created.

### **\*NONE**

No records are copied and the operation will fail.

**\*ADD** The records are added to the end of the existing stream file records.

This value is not allowed when copying a save file.

### **\*REPLACE**

The records replace the existing stream file records.

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## Data conversion options (CVTDTA)

Specifies the process for converting the data from the database file member to the stream file.

This parameter is ignored when copying a save file.



### **\*AUTO**

The data is converted during the copy operation using the coded character set identifier (CCSID) equivalent of the stream file data code page and the database file CCSID. Single-byte, double-byte and mixed character sets are supported. The stream file data code page must be specified on the **Stream file code page (STMFCODPAG)** parameter, and the database file CCSID must be specified on the **Database file CCSID (DBFCCSID)** parameter.

**\*TBL** The data is converted using a conversion table. Only single-byte character sets are supported. The conversion table must be specified by the **Conversion table (TBL)** parameter. If a conversion table is not available, the operation will fail.

### **\*NONE**

Only the removal of the sequence numbers and date stamp from source physical files and the optional insertion of specified line-formatting characters into the stream file are performed. Database file CCSID to stream file code page conversion of other characters is not performed.

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## **Database file CCSID (DBFCCSID)**

Specifies the method of obtaining the database file CCSID.

This parameter is ignored when copying a save file.

**\*FILE** The database file CCSID is used, unless it is 65535. If the database file CCSID is 65535, and the file is not a program-described file, the operation will fail. If the database file CCSID is 65535, and the file is a program-described file, the default job CCSID is used.

### **1-65533**

Specify the database file coded character set identifier (CCSID).

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## **Stream file code page (STMFCODPAG)**

Specifies the method of obtaining the stream file code page and the CCSID equivalent of the code page that is used for data conversion.

This parameter is ignored when copying a save file.

### **\*STMF**

If the stream file exists, and data conversion is requested, the CCSID equivalent of the code page associated with the stream file is used to perform the conversion.

If the stream file does not exist, the code page equivalent of the source database file CCSID is used and associated with the stream file.

If the data base file CCSID is a mixed encoding scheme, only the single-byte code page is written to the stream file.

### **\*STDASCII**

If the stream file exists, this option is valid only if the code page associated with the stream file is the same as the specified value. Otherwise, the operation will fail.

If the stream file does not exist, a code page in the IBM PC Data encoding scheme (x2100) is computed. This code page is associated with the target stream file and is used for data conversion if it is requested.

### **\*PCASCII**

If the stream file exists, this option is valid only if the code page associated with the stream file is the same as the specified value. Otherwise, the operation will fail.

If the stream file does not exist, a code page in the Microsoft Windows encoding scheme (x4105) is computed. (Microsoft, Windows, Windows NT, and the Windows 95 logo are registered trademarks of Microsoft Corporation). This code page is associated with the target stream file and is used for data conversion if it is requested. This option allows the resulting data to be used by Microsoft Windows applications.

### **1-32767**

Specify the code page used. If the stream file exists, this option is only valid if the code page associated with the stream file is the same as the specified value. Otherwise, the operation will fail. If the stream file does not exist, the specified code page is associated with the stream file when it is created.

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## **Conversion table (TBL)**

Specifies the path name of the conversion table used to convert data from the database file member to the stream file.

For more information on specifying path names, refer to "Object naming rules" in "CL concepts and reference" in the CL concepts and reference topic in the iSeries Information Center at <http://www.ibm.com/eserver/iserics/infocenter>.

**Note:** This parameter is required and valid only if CVTDTA(\*TBL) is specified. This parameter is ignored when copying a save file.

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## **End of line characters (ENDLINFMT)**

Specifies the end-of-line characters to insert into the stream file during the copying of records.

This parameter is ignored when copying a save file.

If one of the end-of-line character options is selected (ENDLINFMT(\*FIXED) is not specified) the database file records are transformed to variable-length stream file text lines as they are copied. Each database file record is trimmed of any trailing blanks. Then, the data is converted to the destination data format (if specified) and the end-of-line character is appended to the end of the text line. The text line is copied to the stream file.

### **\*CRLF**

Carriage-return followed by line-feed is appended to the end of each line.

**\*LF** Line-feed is appended to the end of each line.

**\*CR** Carriage-return is appended to the end of each line.

### **\*LFCR**

Line-feed followed by carriage-return is appended to the end of each line.

### **\*FIXED**

The lines in the stream file are written as fixed length records. CR and LF characters are not added at the end of each line, trailing blanks are not removed from the end of each record. The length of the stream file records equals the length of the database file records.

Only stream files and database files with compatible encoding schemes which do not result in the expansion of data record lengths are valid with this option. If an incompatible combination of encoding schemes is detected, the operation will fail.

The following encoding scheme combinations are supported:

- Single-byte to single-byte
- Double-byte to double-byte
- Mixed ASCII to mixed ASCII
- Mixed EBCDIC to mixed EBCDIC

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## Examples

### Example 1: Copying Data from a Database File Member to a Stream File Using Automatic Conversion

```
CPYTOSTMF FROMMBR('/QSYS.LIB/MYLIB.LIB/MYFILE.FILE/MYMBR.MBR')
          TOSTMF('STMF.TXT')
```

This command copies the data contained in database file member /QSYS.LIB/MYLIB.LIB/MYFILE.FILE/MYMBR.MBR to a stream file named STMF.TXT in the current working directory. Automatic data conversion uses the database file CCSID and the code page equivalent of the database file CCSID. The database file member records are stripped of trailing blanks, and CR and LF characters are inserted at the end of each record since ENDLINFMT(\*CRLF) is the default value. If the stream file STMF.TXT already exists in the current working directory, the copy operation is not performed since STMFOPT(\*NONE) is the default value.

### Example 2: Copying Data from a Database File Member to a Stream File Using a Conversion Table

```
CPYTOSTMF FROMMBR('/QSYS.LIB/FINANCE.LIB/STAFF.FILE/MNGR.MBR')
          TOSTMF('/MYDIR/FINANCE.MNG') CVTDTA(*TBL)
          DBFCCSID(37) STMFCODPAG(437)
          TBL('/QSYS.LIB/QUSRSYS.LIB/TBL1.TBL')
          ENDLINFMT(*CRLF)
```

This command copies the data contained in database file member /QSYS.LIB/FINANCE.LIB/STAFF.FILE/MNGR.MBR to a stream file named FINANCE.MNG in the user directory /MYDIR. The data is converted using the conversion table TBL1.TBL contained in the directory /QSYS.LIB/QUSRSYS.LIB. The records in the database file member are trimmed of any trailing blanks, appended with CR and LF characters, and written to the stream file. The blank characters in the database file member are recognized from CCSID 37 specified on the DBFCCSID parameter. The inserted line-formatting characters: CR and LF, correspond to those of code page 437 specified on the STMFCODPAG parameter. If the stream file exists, it must have a code page of 437.

### Example 3: Copying Data from a Database File Member to a Stream File Without Data Conversion

```
CPYTOSTMF FROMMBR('/QSYS.LIB/FINANCE.LIB/STAFF.FILE/MNGR.MBR')
          TOSTMF('/MYDIR/FINANCE.MNG') CVTDTA(*NONE)
          ENDLINFMT(*FIXED)
```

This command copies the data contained in database file member /QSYS.LIB/FINANCE.LIB/STAFF.FILE/MNGR.MBR to the stream file FINANCE.MNG in the user directory MYDIR without data conversion. The stream file data is written as fixed-length records of the same length as the database file records. No line-formatting characters are inserted since ENDLINFMT(\*FIXED) is specified. If the encoding scheme of the stream file and the database file differ, the copy ends with an error message.

### Example 4: Copying Data from a Save File to a Stream File

```
CPYTOSTMF FROMMBR('/QSYS.LIB/PACKAGE.LIB/SOFTWARE.FILE')
          TOSTMF('/MYDIR/SOFTWARE')
```

This command copies the data contained in save file /QSYS.LIB/PACKAGE.LIB/SOFTWARE.FILE to the stream file /MYDIR/SOFTWARE. The stream file data is written as fixed-length records of the same length as the save file records. No line-formatting characters are inserted, nor is any data conversion performed.

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## Error messages

### \*ESCAPE Messages

#### CPFA085

Home directory not found for user &1.

#### CPFA097

Object not copied. Object is &1.

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# Copy To Tape (CPYTOTAP)

Where allowed to run: All environments (\*ALL)  
 Threadsafes: No

Parameters  
 Examples  
 Error messages

The Copy To Tape (CPYTOTAP) command copies records to a tape file. The to-file must be a tape file. The from-file can be a physical, logical, DDM, diskette, tape, or an inline data file.

**Note:** For more information on DDM files, see the Distributed Data Management information in the iSeries Information Center at <http://www.ibm.com/eserver/series/infocenter>.

This command offers a subset of the parameters available on the Copy File (CPYF) command, along with more specific tape-oriented parameters.

**Restriction:** A file's open data path (ODP) cannot be shared with any other program in the job (routing step) during the copy operation.

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## Parameters

Keyword	Description	Choices	Notes
FROMFILE	From file	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: From file	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
TOFILE	Tape file	<i>Qualified object name</i>	Required, Positional 2
	Qualifier 1: Tape file	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
FROMMBR	From member	<i>Generic name, name, *FIRST, *ALL</i>	Optional
TOSEQNBR	File sequence number	<i>1-16777215, *TAPF, *END</i>	Optional
TOLABEL	Tape label	<i>Character value, *FROMMBR, *TAPF, *NONE</i>	Optional
TODEV	Device	Single values: <i>*TAPF</i> Other values (up to 4 repetitions): <i>Name</i>	Optional
TOREELS	Copy to reels	<i>Element list</i>	Optional
	Element 1: Label processing type	<i>*TAPF, *SL, *NL, *LTM</i>	
TORCDLEN	Record length	<i>Integer, *TAPF, *CALC, *FROMFILE</i>	Optional
TOENDOPT	End of tape option	<i>*TAPF, *REWIND, *UNLOAD, *LEAVE</i>	Optional
TOVOL	Volume identifier	Single values: <i>*TAPF, *NONE</i> Other values (up to 50 repetitions): <i>Character value</i>	Optional
TOBLKLEN	Block length	<i>1-524288, *TAPF, *CALC</i>	Optional
TORCDBLK	Record block type	<i>*TAPF, *F, *FB, *V, *VB, *D, *DB, *VS, *VBS, *U</i>	Optional
TOEXPDATE	File expiration date	<i>Date, *TAPF, *PERM</i>	Optional
NBRRCDS	Number of records to copy	<i>Unsigned integer, *END</i>	Optional
COMPACT	Data compaction	<i>*TAPF, *NO</i>	Optional

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## From file (FROMFILE)

Specifies the name and library of the physical file, logical file, diskette file, or tape file, from which records are copied.

The possible library values are:

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

**\*CURLIB**

The current library for the job is used to locate the physical file, logical file, diskette file, or tape file. If no library is specified as the current library for the job, the QGPL library is used.

*library-name*

Specify the name of the library where the physical file, logical file, diskette file, or tape file, is located.

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## Tape file (TOFILE)

Specifies the file that receives the copied records.

The possible library values are:

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

**\*CURLIB**

The current library for the job is used to locate the tape file. If no library is specified as the current library for the job, QGPL library is used.

*library-name*

Specify the name of the library where the tape file is located.

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## From member (FROMMBR)

Specifies the database members or the identifiers of the diskette data tape file or the tape file members copied from the from-file. If the from-file is a spooled inline file, \*FIRST must be specified for this parameter.

**\*FIRST**

The first member of the specified file is used.

**\*ALL** All members of a database from-file, or all file label identifiers for a diskette from-file are copied. FROMMBR(\*ALL) is not valid for a tape file or inline data file.

*from-member-name*

Specify the name of the database file member or the label of a tape or diskette data file identifier that is being copied. If the tape label identifier of the tape or diskette file that is copied contains special characters or is greater than 10 characters in length, then it must be specified on the CRTTAPF, CHGTAPF, or OVRTAPF command for the device file.

*generic\*-member-name*

Specify the generic name of the set of database members or diskette labels that are being copied.

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## File sequence number (TOSEQNBR)

Specifies the sequence number of the data file that receives the copied records.

**\*TAPF** The sequence number specified in the tape file is used.

**\*END** Records are copied until the end-of-file condition is indicated.

For a labeled tape file, the label specified on the TOLABEL parameter must be found at this sequence number. Valid sequence numbers range from 1 through 16777215.

If a new data file is added to the tape to-file, the sequence number must be one higher than the sequence number of the last data file on that volume. No gaps are allowed in the series of sequence numbers. If a sequence number of an existing data file is specified, that file is overwritten, and all following files on the volume are destroyed.

### *file-sequence-number*

Specify the sequence number of the data file that receives the copied records. Valid sequence numbers range from 1 through 16777215.

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## Tape label (TOLABEL)

Specifies the label of the data file that receives the copied records. This data file identifier is ignored for a nonlabeled tape.

### **\*FROMMBR**

The receiving data file in the to-file has the same label as the member/label copied from the from-file. If a member/label name was specified as a value for the FROMMBR parameter (or implied by (\*TAPF)), then a data-file with the same name in the tape to-file receives the copied records. If a generic name or \*ALL is specified as a value for the FROMMBR parameter, then this value is not valid.

If the from-file is a nonlabeled tape file, a label identifier is created for the tape to-file in the form of CPYnnnnn, where nnnnn is the tape sequence number of the data file.

**\*TAPF** The label value specified in the tape file or on an override is used to identify the label that receives the copied records.

### **\*NONE**

No data file identifier is specified. \*NONE is not valid if the to-file tape has standard labels.

### *data-file-identifier*

Specify the label value that identifies the data file to receive the copied records.

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## Device (TODEV)

Specifies the names of devices that are used to copy records to the tape to-file.

**\*TAPF** The devices specified in the tape file description are used.

### *device-name*

Specify the names of up to four tape devices or one media library device used when writing records to the tape to-file. The order in which the device names are specified is the order in which tapes on the devices are successively written to the tape to-file. Each device must have been defined in a device description (by using the Create Device Description (CRTDEV) command) before being specified on this command.

---

## Copy to reels (TOREELS)

Specifies the type of labeling used on the tape reels that receive the copied records. This system writes only to standard-label tape or to nonlabeled tapes.

**\*TAPF** The value specified in the tape file for the to-file is used.

**\*SL** The volume used for receiving copied records has standard labels.

**\*NL** The volume used has no labels. Tape marks are used to indicate the end of each volume and the data file on each volume.

**\*LTM** The volume used has no labels, but has a leading tape mark before the first data record.

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## Record length (TORCDLEN)

Specifies (in bytes) the length of the records that are written on the tape to-file. The records in the from-file may be truncated or padded with blanks to conform to the record length specified before they are written to the tape. If an existing data file (with standard labels) is being extended on tape, the record length is obtained from the second header label (HDR2). The record length, block length and record block format must be consistently specified. If a new data file is being added or if it is a nonlabeled file, the record length must be explicitly specified by this parameter or by the RCDLEN parameter in one of the tape device file commands.

### **\*FROMFILE**

The record length for the to-file is the same as the record length of the from-file. If the from-file has a variable record length, the maximum record length of the from-file is used as the record length of the to-file.

**\*TAPF** The record length defined in the tape file is used.

### **\*CALC**

The record length from the existing data file label is used.

### *record-length*

Specify the record length ranging from 1 through 32767 bytes that is used for records that are written to the to-file. The record length must be consistent with the block length and the record block format values.

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## End of tape option (TOENDOPT)

Specifies the positioning operation that is done automatically on the last tape volume of the to-file when the tape device-file is closed. For a multivolume tape to-file, all intermediate reels are positioned by specifying the \*UNLOAD value. This only applies to the last reel.

**\*TAPF** The tape is repositioned according to the value specified in the tape file.

### **\*REWIND**

The tape is rewound, but not unloaded.

### **\*UNLOAD**

The tape is automatically rewound and unloaded after the operation ends.



**\*LEAVE**

The tape does not rewind or unload after the operation ends. It remains at the current position on the tape drive.

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## Volume identifier (TOVOL)

Specifies, for tapes with standard labels, one or more volume identifiers of the tapes that are used when copying records to the tape to-file. The tape volumes must be placed in the device in the same order as the identifiers are specified. A message is sent to the operator if they are not.

You can enter multiple values for this parameter. If you are on an entry display and you need additional entry fields to enter these multiple values, type a plus sign (+) in the entry field opposite the phrase "+ for more", and press the Enter key.

**\*TAPF** The tape volume identifiers in the tape file are used.

**\*NONE**

No tape volume identifiers are specified for this file. No volume checking is done beyond verifying that a volume with the correct label type is on the device.

*volume-identifier*

Specify up to 50 volume identifiers used to identify the tapes to receive the copied records. The tape volumes must be on the device in the same order as the identifiers are specified and in the same order as the device names are specified on the TODEV parameter. Each identifier can have up to 6 alphanumeric characters.

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## Block length (TOBLKLEN)

Specifies (in bytes) the length of data blocks transferred to the tape. The block length must be consistent with the record length and record block format values.

**\*TAPF** The block length value from the tape file is used.

**\*CALC**

No block length is specified for the tape to-file. The block length from the existing data file label is used.

*block-length*

Specify the maximum length of the data block written to the tape. The minimum block size value is 18 bytes and the maximum size is 524288 bytes.

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## Record block type (TORCDBLK)

Specifies the record format and blocking attributes of records that are copied to the tape to-file. The record block format from an existing data file label is used if an existing data file is being extended as the to-file. The record length, block length, and record block format parameters must be consistently specified.

**\*TAPF** The record block format value from the tape file is used.

- \*F Fixed-length, deblocked records in either EBCDIC or ASCII format are used.
- \*FB Fixed-length, blocked records in either EBCDIC or ASCII format are used.
- \*V Variable-length, deblocked records in EBCDIC format are used.
- \*VB Variable-length, blocked records in EBCDIC format are used.
- \*D Variable-length, deblocked records in ASCII type D format are used.
- \*DB Variable-length, blocked records in ASCII type D format are used.
- \*VS Variable, spanned records are used.
- \*VBS Variable, spanned blocked records are used.
- \*U Records in an undefined format are used.

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## File expiration date (TOEXPDATE)

Specifies the expiration date for the data file that is being added to the to-file. The data file expiration date is established for standard label tape files only and is stored in the tape header label immediately preceding the data file that the label describes.

\*TAPF The expiration date from the tape file is used for the to-file.

**\*PERM**

The data file being added is protected permanently.

*file-expiration-date*

Specify the expiration date that is used for the data file. The date must be specified in the format defined by the system values QDATFMT and, if separators are used, QDATSEP.

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## Number of records to copy (NBRRCDS)

Specifies the number of records copied to the to-file.

\*END Records are copied until the end-of-file condition is indicated.

*number-of-records*

Specify a record number, ranging from 1 through 4294967288, that identifies the number of records copied to the to-file. Fewer records are copied if an end-of-file condition occurs before the specified number of records have been copied.

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## Data compaction (COMPACT)

Specifies whether device data compaction is performed. If the tape device used by the to-file does not support data compaction, this parameter is ignored.

The possible values are:

\*TAPF To-file device data compaction is performed only if the device used by the to-file supports data compaction.

\*NO To-file device data compaction is not performed.

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## Examples

### Example 1: Copying the First Member in a Database File to Tape

```
CPYTOTAP FROMFILE(MYLIB/MYFILE) TOFILE(QTAPE) TODEV(QTAPE1)
TORCDLEN(*FROMFILE) TOEXPDAT(10 15 89)
```

This command copies the first member in database file MYFILE in library MYLIB to tape. The tape device file QTAPE is used which has attributes of SEQNBR(1) and RCDBLKFM(\*F), which are used as defaults for parameters TOSEQNBR and TORCDBLK. The additional attributes specified on the copy command include the tape device name and the expiration date of the file written on tape. The label name used on tape is the same name as that of the member copied. The record length of the tape file is also the same as the database from-file record length since TORCDLEN (\*FROMFILE) was specified.

### Example 2: Copying a Member in a Database File to Tape

```
CPYTOTAP FROMFILE(MYLIB/MYFILE) TOFILE(QTAPE) FROMMBR(M1)
TOLABEL(BACKUPM1) TODEV(QTAPE1) TORCDLEN(50)
TOBLKLEN(1000) TORCKBLK(*FB) TOENDOPT(*LEAVE)
```

This command copies member M1 from database file MYFILE in library MYLIB to tape, using tape device file QTAPE. The records are copied to label BACKUPM1 on tape device QTAPE1 and the reel is left at its current position when the copy is completed. The data file written on tape has fixed-length 50-byte records that are blocked 1000 bytes (or 20 records) to a block.

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## Error messages

### \*ESCAPE Messages

#### CPF2816

File &1 in &2 not copied because of error.

#### CPF2817

Copy command ended because of error.

#### CPF2859

Shared open data path not allowed.

#### CPF2864

Not authorized to file &1 in library &2.

#### CPF2875

Wrong file member or label opened.

#### CPF2904

Diskette labels not valid for multiple label copy.

#### CPF2949

Error closing member &3 in file &1 in &2.

#### CPF2952

Error opening file &1 in library &2.

#### CPF2968

Position error occurred copying file &1 in &2.

**CPF2971**

Error reading member &3 in file &1.

**CPF2972**

Error writing to member &3 in file &1.

**CPF9212**

Cannot load or unload DDM file &2 in &3.

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## Create Alert Table (CRTALRTBL)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Alert Table (CRTALRTBL) command creates an alert table for storing the alert description records. An alert table specifies the hardware and software products it is used for and defines alerts (problem notifications in a network). The typical user is the system or network programmer or operator responsible for network management. More information on alerts is in the Alerts Support book, SC41-5413 book.

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### Parameters

Keyword	Description	Choices	Notes
ALRTBL	Alert table	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Alert table	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
LICPGM	Product	<i>Character value, 5769SS1, *NONE</i>	Optional
LICPGMTXT	Licensed program text	<i>Character value, *BLANK</i>	Optional
TEXT	Text 'description'	<i>Character value, *BLANK</i>	Optional
AUT	Authority	<i>Name, *LIBCRTAUT, *CHANGE, *ALL, *USE, *EXCLUDE</i>	Optional

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---

### Alert table (ALRTBL)

Specifies the qualified name of the alert table being created. Each alert table contains alert descriptions that are used to create alerts. An alert table has a one-to-one correspondence with a message file. To define an alert for a particular message, the name of the alert table must be the same as the name of the message file.

**Note:** The alert table and message file do not have to be in the same library; however, the alert table library must be in the library list of the job that causes the alert to be created.

This is a required parameter.

The possible library values are:

#### \*CURLIB

The current library for the job is used to locate the alert table. If no current library entry exists in the library list, QGPL is used.

#### *library-name*

Specify the library where the alert table is located. Only the library named is searched. The user must have READ and ADD authority for the specified library.

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---

## Product (LICPGM)

Specifies the licensed program associated with this alert table. This program is included in the alert as software product identification for the alert sender.

### 5722SS1

The product identifier for the OS/400 system.

### **\*NONE**

No licensed program is specified. This value allows programs that are not defined in the software resource management database of the system. No software product identification is present in the alert for the alert sender.

### *licensed-program*

Specify a 7-character product identifier for the licensed product. The Alert Manager uses this ID to access the software resource management database for release and level information.

**Note:** This parameter does not have to be an IBM Licensed Program. Any 7-character ID that is meaningful to the use of the Work with Alerts command can be specified. If the value given for the LICPGM parameter is defined to the system, the ID and release and level information are included in the alert.

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---

## Licensed program text (LICPGMTXT)

Specifies descriptive text for the alert table licensed program parameter (for example, 'OS/400'). The text is included in the alert as software product identification for the alert sender.

### \*BLANK

No text is specified.

### *licensed-program-text*

Specify up to 30 characters of text describing the program.

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---

## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

### \*BLANK

No text is to be specified.

### *'description'*

Specify no more than 50 characters, enclosed in apostrophes.

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---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### \*LIBCRTAUT

The system determines the authority for the object by using the value specified on the **Create authority** prompt (CRTAUT parameter) on the Create Library (CRTLIB) command for the library

containing the object to be created. If the value specified on the CRTAUT parameter is changed, the new value does not affect any existing objects.

### **\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### **\*EXCLUDE**

The user cannot access the object.

### ***authorization-list-name***

Specify the name of an authorization list. Users included on the authorization list are granted authority to the object as specified by the list. The authorization list must exist when the object is created.

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---

## **Examples**

```
CRTALRTBL  ALRTBL(ALRTBLLIB/ALRTBLNBR1) LICPGM(5716SS1)
           LICPGMTXT('OS/400')
           TEXT('This is the first alert table created')
```

This command creates an alert table in the library ALRTBLLIB called ALRTBLNBR1. The public has \*CHANGE authority to the table. The licensed program associated with this ALRTBL is the OS/400 system.

Top

---

## **Error messages**

### **\*ESCAPE Messages**

#### **CPF2108**

Object &1 type \*&3 not added to library &2.

#### **CPF2112**

Object &1 in &2 type \*&3 already exists.

#### **CPF2113**

Cannot allocate library &1.

#### **CPF2151**

Operation failed for &2 in &1 type \*&3.

#### **CPF2182**

Not authorized to library &1.

**CPF2283**

Authorization list &1 does not exist.

**CPF9810**

Library &1 not found.

**CPF9820**

Not authorized to use library &1.

Top



---

## Create Authority Holder (CRTAUTHLR)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Authority Holder (CRTAUTHLR) command allows a user to create an authority holder to secure an object of type \*FILE before it exists on the system. The file must be a program-described database file. When an object by the specified name is created, the authorities specified in the authority holder are linked to the newly created object.

The authority holder is associated with one specific object, object type, and library. This allows only users with the correct authority to access the object. The authority holder and associated object always have the same owner.

If the object has authorities associated with it, they are linked to the newly created authority holder. The owner of the object becomes the owner of the authority holder. Authority holders are located in library QSYS.

### Restrictions:

1. This command is shipped with public \*EXCLUDE authority.
2. The object type being secured by the new authority holder is limited to \*FILE. The file must be a program-described database file.
3. The authority holder cannot be created for objects located in libraries QRCL, QRECOVERY, QSPL, QSPLxxxx, QSYS, or QTEMP.
4. Authority holders can only secure files in the system auxiliary storage pool (ASP) or a basic user ASP.

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---

## Parameters

Keyword	Description	Choices	Notes
OBJ	Object	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Object	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i>	
AUT	Authority	<i>Name</i> , *LIBCRTAUT, *CHANGE, *ALL, *USE, *EXCLUDE	Optional

Top

---

## Object (OBJ)

This is a required parameter.

The qualified name of the database file that the authority holder secures when the object is created.

Top

---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### \*LIBCRTAUT

The public authority for the object is taken from the value on the CRTAUT parameter of the target library (the library that is to contain the object). The public authority is determined when the object is created. If the CRTAUT value for the library changes after the object is created, the new value does not affect any existing objects.

### \*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### \*EXCLUDE

The user cannot access the object.

### *authorization-list-name*

The name of the authorization list whose authority is used for the object. Users included in the authorization list are granted authority to the object as specified in the list.

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---

## Examples

```
CRTAUTHLR OBJ(QGPL/FIL1) AUT(*EXCLUDE)
```

This command creates an authority holder for object FIL1 in library QGPL with \*EXCLUDE authority.

```
GRTOBJAUT OBJ(QGPL/FIL1) TYPE(*FILE) USER(TWO) AUT(*USE)
```

By running this command, \*USE authority is granted to user TWO for the authority holder that secures file FIL1 in library QGPL.

```
CRTSRCF FILE(QGPL/FIL1)
```

By running this command, user ONE creates a file that has a matching authority holder. User ONE becomes the owner of the file with user TWO having \*USE authority to QGPL/FIL1.

Top

---

## Error messages

### \*ESCAPE Messages

#### CPC2212

Authority holder created.

#### CPF2122

Storage limit exceeded for user profile &1.

#### CPF2163

Creation of authority holder in &2 not allowed.

#### CPF22BA

Authority holder could not be created.

#### CPF22BC

Object &1 type &3 is not program defined.

#### CPF22B2

Not authorized to create or delete authority holder.

#### CPF22B5

Authority holder already exists.

#### CPF22B6

Authority holder could not be created.

#### CPF2283

Authorization list &1 does not exist.

#### CPF2289

Unable to allocate authorization list &1.

#### CPF9803

Cannot allocate object &2 in library &3.

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---

## Create Authorization List (CRTAUTL)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Authorization List (CRTAUTL) command creates an authorization list. Authorization lists are used to give a set of users specific authorities to an object or a set of objects. Each user has the authorities to all of the objects. When an authorization list is granted authority to an object, the users on the list get authority to the object. The authorities they receive are those specified for them in the authorization list.

A user's authority on an authorization list can be overridden by granting the user specific authority to the object. Specific authorities override the user's authority specified in the authorization list. Specific authorities override the user's group authority, if both are specified.

If public authority specified for the object is \*AUTL, then the public authority specified on the authorization list is used.

### Restrictions:

1. Authorization lists cannot be used to secure user profiles or other authorization lists.
2. Only one authorization list can be used to secure an object.

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---

## Parameters

Keyword	Description	Choices	Notes
AUTL	Authorization list	<i>Name</i>	Required, Positional 1
TEXT	Text 'description'	<i>Character value, *BLANK</i>	Optional
AUT	Authority	<i>*CHANGE, *ALL, *USE, *EXCLUDE</i>	Optional, Positional 2

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---

## Authorization list (AUTL)

This is a required parameter.

The name of the authorization list being created. A maximum of 10 alphanumeric characters can be used.

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---

## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

### \*BLANK

No text is specified.

'description'

Specify no more than 50 characters, enclosed in apostrophes.

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---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### \*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### **\*EXCLUDE**

The user cannot access the object.

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---

## Examples

```
CRTAUTL  AUTL(PROGMR)  AUT(*CHANGE)
          TEXT('Programmers authorization list')
```

This command creates an authorization list (PROGMR). If an object whose authority comes from the authorization list has specified USER(\*PUBLIC) as AUT(\*AUTL), the users who do not have specific authority and whose group does not have specific authority to the object are given \*CHANGE authority for the object secured by this authorization list.

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---

## Error messages

### \*ESCAPE Messages

#### CPF2122

Storage limit exceeded for user profile &1.

**CPF22AD**

Group profile for user not found.

**CPF22A6**

User creating an authorization list must have \*ADD authority to his user profile

**CPF2204**

User profile &1 not found.

**CPF2217**

Not authorized to user profile &1.

**CPF2222**

Storage limit is greater than specified for user profile &1.

**CPF2278**

Authorization list &1 already exists.

**CPF2289**

Unable to allocate authorization list &1.

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## Create Bound CL Program (CRTBNDCL)

Where allowed to run: All environments (\*ALL)  
 Threadsafte: No

Parameters  
 Examples  
 Error messages

The Create Bound Control Language Program (CRTBNDCL) command creates an Integrated Language Environment (ILE) control language (CL) program from the specified CL source program.

Most of the parameters and options for the CRTBNDCL command are the same as the parameters and options for the Create Control Language Module (CRTCLMOD) command, with the exception of the **User profile (USRPRF)** parameter, which only exists on the CRTBNDCL command. Option \*NOGEN is not available on the CRTBNDCL command. The full compilation is always run.

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### Parameters

Keyword	Description	Choices	Notes
PGM	Program	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Program	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
SRCFILE	Source file	<i>Qualified object name</i>	Optional, Positional 2
	Qualifier 1: Source file	<i>Name, <u>QCLSRC</u></i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
SRCMBR	Source member	<i>Name, <u>PGM</u></i>	Optional, Positional 3
TEXT	Text 'description'	<i>Character value, <u>SRCMBRTXT</u>, *BLANK</i>	Optional
DFACTGRP	Default activation group	<i>*YES, *NO</i>	Optional
ACTGRP	Activation group	<i>Name, *STGMDL, *NEW, *CALLER</i>	Optional
STGMDL	Storage model	<i>*SNGLVL, *TERASPACE</i>	Optional
OUTPUT	Output	<i>*PRINT, *NONE</i>	Optional, Positional 4
OPTION	Source listing options	Values (up to 3 repetitions): *XREF, *NOXREF, *SECLVL, *NOSECLVL, *EVENTF, *NOEVENTF	Optional, Positional 5
USRPRF	User profile	<i>*<u>USER</u>, *OWNER</i>	Optional
LOG	Log commands	<i>*<u>JOB</u>, *YES, *NO</i>	Optional
REPLACE	Replace program	<i>*YES, *NO</i>	Optional
TGTRLS	Target release	<i>Simple name, <u>CURRENT</u>, *PRV</i>	Optional
AUT	Authority	<i>Name, <u>LIBCRTAUT</u>, *CHANGE, *ALL, *USE, *EXCLUDE</i>	Optional
SRTSEQ	Sort sequence	Single values: *HEX, *JOB, *JOBRUN, *LANGIDUNQ, *LANGIDSHR Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Sort sequence	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
LANGID	Language ID	<i>Character value, *JOBRUN, *JOB</i>	Optional
OPTIMIZE	Optimization	<i>*NONE, *BASIC, *FULL, 10, 20, 30, 40</i>	Optional
DBGVIEW	Debugging view	<i>*<u>STMT</u>, *SOURCE, *LIST, *ALL, *NONE</i>	Optional

Keyword	Description	Choices	Notes
ENBPFCOL	Enable performance collection	*PEP, *FULL, *NONE	Optional

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---

## Program (PGM)

Specifies the program to be created.

This is a required parameter.

### Qualifier 1: Program

*name* Specify the name of the program to be created.

### Qualifier 2: Library

#### \*CURLIB

The program is stored in the current library for the job. If no current library entry exists in the library list, QGPL is used.

*name* Specify the library where the program is to be stored.

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---

## Source file (SRCFILE)

Specifies the source file that contains the CL source member to be compiled.

### Qualifier 1: Source file

#### QCLSRC

The source file named QCLSRC, that contains the CL source member to be compiled, is used.

*name* Specify the name of the source file that contains the CL source member to be compiled. The source file can be a database file, a device file, or an inline data file.

### Qualifier 2: Library

\*LIBL All libraries in the library list for the current thread are searched until the first match is found.

#### \*CURLIB

The current library for the thread is used to locate the source file. If no library is specified as the current library for the thread, the QGPL library is used.

*name* Specify the name of the library to be searched.

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---

## Source member (SRCMBR)

Specifies the name of the member of the source file that contains the CL source program to be compiled.

\*PGM The CL source program to be compiled is in the member of the source file that has the same name as that specified on the **Program (PGM)** parameter for the compiled program.

*name* Specify the name of the member that contains the CL source program, if the member name is not the same as the name of the program to be created.

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---

## Text 'description' (TEXT)

Specifies text that briefly describes the compiled CL program.

### \*SRCMBRTXT

The text is taken from the source file member used to create the CL program. If the source file is an inline data file or a device file, the text is blank.

### \*BLANK

Text is not specified.

### 'description'

Specify no more than 50 characters of text, enclosed in apostrophes.

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---

## Default activation group (DFACTGRP)

Specifies whether the program is associated with the default activation group.

\*YES The program is associated with the default activation group.

**Note:** If this value is specified, the ACTGRP parameter cannot be specified.

\*NO The program is not associated with the default activation group.

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---

## Activation group (ACTGRP)

Specifies the activation group that the program is associated with when it is called. The activation group provides:

- Run-time data structures to support the running of programs
- Addressing protection
- A logical boundary for message creation
- A logical boundary for application cleanup processing

### \*STGMDL

IF STGMDL(\*SNGLVL) is specified, this program will be activated into the QILE activation group when it is called. If STGMDL(\*TERASPACE) is specified, the program will be activated into the QILETS activation group when it is called.

### \*CALLER

When this program gets called, the program is activated into the caller's activation group.

\*NEW When this program gets called, the system creates a new activation group.

*name* Specify the name of the activation group to be used when this program is called.

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---

## Storage model (STGMDL)

Specifies the storage model attribute of the program.

### \*SNGLVL

The program is created with single-level storage model. When a single-level storage model program is activated and run, it is supplied single-level storage for automatic and static storage. A single-level storage program runs only in a single-level storage activation group.

### \*TERASPACE

The program is created with teraspace storage model. When a teraspace storage model program is activated and run, it is supplied teraspace storage for automatic and static storage. A teraspace storage program runs only in a teraspace storage activation group. STGMDL(\*TERASPACE) cannot be specified if DFTACTGRP(\*YES) is specified.

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---

## Output (OUTPUT)

Specifies whether or not a compiler listing is produced.

### \*PRINT

The compiler listing is produced. The information contained in the listing will be dependent on the values specified for the **Source listing options (OPTION)** parameter.

### \*NONE

The compiler listing is not produced. When a listing is not required, this option should be used because compile-time performance may be better.

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## Source listing options (OPTION)

Specifies the types of output lists created when this command is processed and whether a program is created. Up to three of the following values can be specified in any order on this parameter. If neither or both of the values in each group are specified, the underlined value will be used.

**Note:** The underlined values for this parameter are *similar* to, but not *actually* default values, and therefore, cannot be changed with the Change Command Default (CHGCMDDFT) command.

### Cross Reference Option

#### \*NOXREF

No cross-reference list of references to variable and data items in the source is created.

\*XREF A cross-reference listing of the source program is produced. OUTPUT(\*PRINT) must be specified.

### Second-Level Message Text Option

#### \*NOSECLVL

No second level message text is printed.

#### \*SECLVL

Second-level message text is printed. OUTPUT(\*PRINT) must be specified.

### Event File Creation Option

### **\*NOEVENTF**

The compiler will not produce an event file for use by the CoOperative Development Environment/400 (CODE for OS/400) product.

### **\*EVENTF**

The compiler produces an event file for use by the CODE for OS/400 product. The event file is created as a member in the file EVFEVENT in your source library. The CODE for OS/400 product uses this file to offer error feedback integrated with the CODE for OS/400 editor. This option is normally specified by the CODE for OS/400 product on your behalf.

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## **User profile (USRPRF)**

Specifies whether the authority checking done while this program is running includes only the user who is running the program (\*USER) or both the user running the program and the program owner (\*OWNER). The profiles of the program user or both the program user and the program owner are used to control which objects can be used by the program, including the authority the program has for each object. Only the program owner or a user with QSECOFR authority can change the user profile attribute.

**Note:** This parameter is ignored if REPLACE(\*YES) is specified.

### **\*USER**

The program runs under the user profile of the program's user.

### **\*OWNER**

The user profiles of both the program's owner and the program's user are used when the program is processed. The collective sets of object authority in both user profiles are used to find and access objects during program processing. Authority from the owning user profile's group profile is not included in the authority for the running program.

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## **Log commands (LOG)**

Specifies the logging options for a created CL program.

**\*JOB** Logging of commands in a running CL program depends on the status of the job's logging flag (see the LOGCLPGM parameter of the Change Job (CHGJOB) command). To list the logged commands, the logging level of the jobs must be 3 or 4.

A \*YES or \*NO value takes precedence over any value specified in the CHGJOB command.

**\*YES** The commands are logged in all cases.

**\*NO** The commands are not logged.

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## **Replace program (REPLACE)**

Specifies whether an existing program is replaced if a program with the same name already exists in the specified library.

**\*YES** The existing program is replaced by moving it to the QRPLOBJ library.

### **Notes:**

1. If a running CL program is recompiled with \*YES specified for the REPLACE parameter, message queue errors may occur in the running CL program.

2. Specifying \*YES on this parameter causes the values on the USRPRF and AUT parameters to be ignored. The existing program is used as the source of authority, and the user profile attribute is copied from the existing program to the new program. To change the profile you can use the Change Program (CHGPGM) command. To change the authority for the program you can use the Grant Object Authority (GRTOBJAUT) or Revoke Object Authority (RVKOBJAUT) command.

**\*NO** The existing program is not replaced. When a program with the same name exists in the specified library, a message is displayed and compilation stops.

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## Target release (TGTRLS)

Specifies the release of the operating system on which you intend to use the object being created.

When specifying the **target-release** value, the format VxRxMx is used to specify the release, where Vx is the version, Rx is the release, and Mx is the modification level. For example, V5R3M0 is version 5, release 3, modification 0.

Valid values depend on the current version, release, and modification level of the operating system, and they change with each new release. You can press F4 while prompting this command parameter to see a list of valid target release values.

### \*CURRENT

The object is to be used on the release of the operating system currently running on your system. The object can also be used on a system with any subsequent release of the operating system installed.

**\*PRV** The object is to be used on the previous release with modification level 0 of the operating system. The object can also be used on a system with any subsequent release of the operating system installed.

### *character-value*

Specify the release in the format VxRxMx. The object can be used on a system with the specified release or with any subsequent release of the operating system installed.

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## Authority (AUT)

Specifies the authority you are granting to the users who do not have specific authority for the object, who are not on the authorization list, and whose user group has no specific authority for the object.

### \*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

### **\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by

authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

**\*EXCLUDE**

The user cannot access the object.

**name** Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

**Note:** This parameter is ignored when REPLACE(\*YES) is specified.

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## Sort sequence (SRTSEQ)

Specifies the sort sequence table to be used for string comparisons for this CL program. The sort sequence value is used with the language identifier and the coded character set identifier of the job to determine the sort sequence table to use.

### Single values

**\*HEX** A sort sequence table is not used. The hexadecimal values of the characters are used to determine the sort sequence.

**\*JOB** The sort sequence used is the SRTSEQ associated with the job when the CL program is created.

**\*JOBRUN**

The sort sequence used is the SRTSEQ associated with the job when the CL program is run.

**\*LANGIDUNQ**

The sort sequence table uses a unique weight for each character, and is the unique-weight sort table for the language specified for the LANGID parameter.

**\*LANGIDSHR**

The sort sequence table uses the same weight for multiple characters, and is the shared-weight sort sequence table associated with the language specified for the LANGID parameter.

### Qualifier 1: Sort sequence

**name** Specify the name of the sort sequence table to be used with this CL program.

### Qualifier 2: Library

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

**\*CURLIB**

The current library for the thread is searched. If no library is specified as the current library for the thread, the QGPL library is searched.

**name** Specify the name of the library to be searched.

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## Language ID (LANGID)

Specifies the language identifier to be used when SRTSEQ(\*LANGIDUNQ) or SRTSEQ(\*LANGIDSHR) is specified.

### \*JOBRUN

The language ID used is the LANGID associated with the job when the CL program is run.

**\*JOB** The language ID used is the LANGID associated with the job when the CL program is created.

### *language-ID*

Specify the language identifier to be used by the job.

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## Optimization (OPTIMIZE)

Specifies the optimization level of the generated program code. ILE CL can not be optimized. For compatibility, values other than \*NONE are accepted, but no optimization will be performed. ILE CL modules and programs should not be used with system functions that require an optimization level higher than \*NONE.

### \*NONE

The generated code is not optimized. This value is the fastest level of optimization in terms of translation time. This level allows variables to be displayed and modified while debugging.

### **\*BASIC**

No optimization is performed. CPD0861 will be displayed in the compiled listing and sent to the job log.

**\*FULL** No optimization is performed. CPD0861 will be displayed in the compiled listing and sent to the job log.

**10** No optimization is performed. CPD0861 will be displayed in the compiled listing and sent to the job log.

**20** No optimization is performed. CPD0861 will be displayed in the compiled listing and sent to the job log.

**30** No optimization is performed. CPD0861 will be displayed in the compiled listing and sent to the job log.

**40** No optimization is performed. CPD0861 will be displayed in the compiled listing and sent to the job log.

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---

## Debugging view (DBGVIEW)

Specifies which level of debugging is available for the compiled program, and which source views are available for source-level debugging.

### \*STMT

The compiled program can be debugged using program statement numbers and symbolic identifiers.

**\*ALL** All of the debug options for debugging the compiled program can be used. The source and debug listing views are generated.

### **\*SOURCE**

The source view for debugging the compiled program is generated.



**\*LIST** The listing view for debugging the compiled program is generated.

**\*NONE**

None of the debug options for debugging the compiled program are available.

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---

## Enable performance collection (ENBPFCOL)

Specifies whether collection of performance data is enabled.

**\*PEP or \*NONE**

Performance data is collected for the Program Entry Procedure entry and exit. There are no entry or exit hooks in the module's internal procedures and no precall or postcall hooks around calls to other procedures.

**\*FULL** Performance data is collected for procedure entry and exit. Performance data is also collected before and after calls to external procedures.

Top

---

## Examples

### Example 1: Creating a Program to be Run by Any System User

```
CRTBNDCL  PAYROLL  TEXT('Payroll Program')
```

This command calls the ILE CL compiler to create a program named PAYROLL. The CL procedure source is in the default source file QCLSRC in the member PAYROLL. A compiler listing is created. The program is processed under the program user's user profile and can be run by any system user.

### Example 2: Creating a Program to be Run by an Authorized User

```
CRTBNDCL  PGM(PARTS) SRCFILE(MYLIB/PARTDATA) AUT(*EXCLUDE)
          OUTPUT(*PRINT)
          TEXT('This program displays all parts data')
```

This command creates a CL program named PARTS and stores it in the current library. The source for the program is in the PARTS member of the source file PARTDATA in the library MYLIB. A compiler listing is created. This program can be processed under the profile of the user that is running the program, who could be the owner or another user to which the owner has granted specific authorization by name in the Grant Object Authority (GRTOBJAUT) command.

Top

---

## Error messages

**\*ESCAPE Messages**

**CPF0C33**

Target release &1 not valid.

**CPF0C35**

Target release &1 is not a supported release.

**CPF0807**

File containing compiler printout not opened.

**CPF0808**

Error in compiler-created code.

**CPF0814**

Licensed Program 5722-SS1 Option 9 not installed.

**CPF0815**

CL program &1 in &2 cannot be created for previous release.

**CPF0820**

Program &1 not created.

**CPF0849**

Space addressing violation.

**CPF3202**

File &1 in library &2 in use.

**CPF3203**

Cannot allocate object for file &1 in &2.

**CPF3224**

Not authorized to perform operation on file &1.

Top

---

## Create Binding Directory (CRTBNDDIR)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Binding Directory (CRTBNDDIR) command creates a binding directory object in the specified library.

### Restrictions:

- You must have read (\*READ) and add (\*ADD) authorities for the library where the binding directory is to be created.

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---

## Parameters

Keyword	Description	Choices	Notes
BNDDIR	Binding directory	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Binding directory	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
AUT	Authority	<i>Name, *LIBCRTAUT, *CHANGE, *ALL, *USE, *EXCLUDE</i>	Optional
TEXT	Text 'description'	<i>Character value, *BLANK</i>	Optional

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---

## Binding directory (BNDDIR)

Specifies the binding directory to be created.

This is a required parameter.

### Qualifier 1: Binding directory

*name* Specify the name of the binding directory to be created.

### Qualifier 2: Library

#### \*CURLIB

The binding directory is created in the current library for the job. If no library is specified as the current library for the job, the QGPL library is used.

*name* Specify the name of the library where the binding directory is to be created.

Top

---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### \*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library command (CRTLIB) for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

### **\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### **\*EXCLUDE**

The user cannot access the object.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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---

## Text 'description' (TEXT)

Specifies text that briefly describes the binding directory object.

### \*BLANK

Text is not specified.

### *character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

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---

## Examples

```
CRTBNDDIR  BNDDIR(*CURLIB/DISPLAYS)
```

This command creates the binding directory named DISPLAYS in the job's current library, or QGPL library if there is no current library for the job.

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---

## Error messages

### \*ESCAPE Messages

#### CPF5D0B

Binding directory &1 was not created

[Top](#)



# Create Configuration List (CRTCFGL)

Where allowed to run: All environments (\*ALL)  
 Threadsafes: No

Parameters  
 Examples  
 Error messages

The Create Configuration List (CRTCFGL) command creates a configuration list.

[Top](#)

## Parameters

Keyword	Description	Choices	Notes
TYPE	Configuration list type	*APPNDIR, *APPNLCL, *APPNRMT, *APPNSSN, *ASYNCADR, *ASYNCLOC, *RTLPASTR, *SNAPASTHR	Required, Positional 1
CFGL	Configuration list	<i>Name</i>	Optional
DFTFTRACN	Default filter action	*ACCEPT, *REJECT	Optional
APPNRMTFTR	APPN remote CFGL filter	*ACCEPT, *NONE	Optional
TEXT	Text 'description'	<i>Character value</i> , *BLANK	Optional
APPNLCL	APPN local location entry	Single values: *PROMPT Other values (up to 50 repetitions): <i>Element list</i>	Optional
	Element 1: Local location name	<i>Communications name</i>	
	Element 2: Entry 'description'	<i>Character value</i> , *BLANK	
APPNRMTE	APPN remote location entry	Single values: *PROMPT Other values (up to 50 repetitions): <i>Element list</i>	Optional
	Element 1: Remote location name	<i>Generic name, name</i> , *ANY	
	Element 2: Remote network identifier	<i>Communications name</i> , *NETATR, *NONE	
	Element 3: Local location name	<i>Communications name</i> , *NETATR	
	Element 4: Remote control point	<i>Communications name</i> , *NONE	
	Element 5: Control point net ID	<i>Communications name</i> , *NETATR, *NONE	
	Element 6: Location password	<i>Character value</i> , *NONE	
	Element 7: Secure location	*YES, *NO, *VFYENCPWD	
	Element 8: Single session	*YES, *NO	
	Element 9: Locally controlled session	*YES, *NO	
	Element 10: Pre-established session	*YES, *NO	
	Element 11: Entry 'description'	<i>Character value</i> , *BLANK	
	Element 12: Number of conversations	1-512, <u>10</u>	

Keyword	Description	Choices	Notes
ASYNCADRE	Async network address entry	Single values: <b>*PROMPT</b> Other values (up to 50 repetitions): <i>Element list</i>	Optional
	Element 1: Network address	<i>Character value</i>	
	Element 2: Dial retry	1-255, <u>2</u>	
	Element 3: Entry 'description'	<i>Character value, *BLANK</i>	
ASYNCLOCE	Async remote location entry	Single values: <b>*PROMPT</b> Other values (up to 50 repetitions): <i>Element list</i>	Optional
	Element 1: Remote location name	<i>Communications name</i>	
	Element 2: Remote location identifier	<i>Name</i>	
	Element 3: Entry 'description'	<i>Character value, *BLANK</i>	
RTLPASTRHRE	Retail pass-through entry	Single values: <b>*PROMPT</b> Other values (up to 50 repetitions): <i>Element list</i>	Optional
	Element 1: Retail device	<i>Name</i>	
	Element 2: SNUF device	<i>Name</i>	
	Element 3: Default host program	<i>Name</i>	
	Element 4: Entry 'description'	<i>Character value, *BLANK</i>	
AUT	Authority	<i>Name, *CHANGE, *ALL, *USE, *EXCLUDE, *LIBCRTAUT</i>	Optional

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---

## Configuration list type (TYPE)

Specifies one of five possible configuration list types.

This is a required parameter.

### \*APPNDIR

An advanced peer-to-peer networking (APPN) directory search filter configuration list is used. Only the text description (TEXT) and default action (DFTACN) parameters can be changed using this command.

**Note:** To change an entry in an APPN directory configuration list, use the Change Configuration List Entry (CHGCFGLE) command.

### \*APPNLCL

Advance peer-to-peer networking (APPN) local location list. Up to 476 APPN local location entries are allowed in the configuration list.

### \*APPNRMT

APPN remote location list. Up to 1898 APPN remote location entries are allowed in the configuration list.

### \*APPNSSN

An APPN session end point filter configuration list is used.

### \*ASYNCADR

An asynchronous network address list is created. Up to 294 Asynchronous network address entries are allowed in the configuration list.



#### **\*ASYNCLOC**

An asynchronous remote location list is created. Up to 32000 Asynchronous remote location entries are allowed in the configuration list.

#### **\*RTLPASTR**

Retail pass-through list. Up to 450 Retail pass-through entries are allowed in the configuration list.

#### **\*SNAPASTHR**

An SNA pass-through list. Up to 254 SNA pass-through entries are allowed in the configuration list. Only the text description for an SNA configuration list can be specified using this command.

**Note:** To add an entry to an SNA configuration list, use the Add Configuration List Entry (ADD CFGLE) command.

To add a device name and description to an existing entry, use the Change Configuration List Entry (CHG CFGLE) command.

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## **Configuration list (CFGL)**

Specifies the name of the configuration list. This value is required and valid only when the configuration list is an asynchronous network address list (\*ASYNCADR is specified for the **Configuration list type (TYPE)** parameter). The list types have system-supplied names: QAPPNLCL, QAPPNRMT, QASYNCADR, QASYNCLOC, QRTLPASTR, and QSNAPASTHR.

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---

## **Default filter action (DFTFTRACN)**

Specifies the default filter action for APPN requests being handled by the local system. This filter action applies to all directory search requests and session endpoint requests that are not specifically listed in the configuration list.

**Note:** This parameter is valid only if TYPE(\*APPNDIR) or TYPE(\*APPNSSN) is specified.

#### **\*REJECT**

The request is rejected.

#### **\*ACCEPT**

The request is accepted.

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---

## **APPN remote CFGL filter (APPNRMTFTR)**

Specifies whether APPN remote configuration list entries should be used when filtering session endpoint requests.

**Note:** This parameter is valid only if TYPE(\*APPNSSN) is specified.

#### **\*ACCEPT**

Session endpoint requests for entries specified in the APPN remote configuration list are accepted.

**\*NONE**

Session endpoint requests will not be filtered using the entries specified in the APPN remote configuration list.

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---

## **Text 'description' (TEXT)**

Specifies the text that briefly describes the object.

**\*BLANK**

No text is specified.

*character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

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---

## **APPN local location entry (APPNLCLE)**

Specifies the APPN local location entry. This value is required if \*APPNLCL is specified for the **Configuration list type** prompt (TYPE parameter).

You can enter multiple values for this parameter.

**\*PROMPT**

The special value of \*PROMPT allows you to add, remove, and change entries using a full screen entry panel.

A maximum of 50 entries can be specified directly for this parameter. An entry consists of a value from each of the following elements.

*local-location-name*

Specify the location name residing on the local system. This name is used by APPN to determine if the request coming in is for this system or another system in the network. The local location name must be unique and cannot already exist as a remote location name used by configuration list QAPPNRMT, or be specified on another system as a local location in the same APPN network.

*entry-description*

Specify a short description of 20 characters or less for each local entry.

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## **APPN remote location entry (APPNRMTE)**

Specifies the APPN remote location entry. This value is required if \*APPNRMT is specified for the **Configuration list type** prompt (TYPE parameter).

You can enter multiple values for this parameter.

## **\*PROMPT**

The special value of \*PROMPT allows you to add, remove, and change entries using a full screen entry panel.

A maximum of 50 entries can be specified directly for this parameter. An entry consists of a value from each of the following elements.

### ***remote-location-name***

Specify the full name of a remote location or a generic name ending with an asterisk (\*). The generic location name is used to allow one directory entry to be defined for all locations, on a single control point, whose name matches the characters preceding the asterisk. You can also specify \*ANY so the system will accept all requests sent through it. Generic entries are only allowed from network nodes.

### ***remote-network-identifier***

Specify the network identifier of the network in which the remote location resides. The default of \*NETATR uses the LCLNETID value from the system network attributes.

### ***local-location-name***

Specify the location name residing on the local system. This name is used by APPN to match a local/remote location pair entry. The default of \*NETATR uses the LCLLOCNAME value from the system network attributes.

### ***control-point-name***

Specify the control point providing network functions for the remote location. By using this control point name (directory entry for the remote location), the network is searched more efficiently to find the location. This field is required if the remote location name is generic. The default is \*NONE.

### ***control-point-network-identifier***

Specify the network identifier of the network in which the control point resides. The default of \*NETATR uses the LCLNETID value from the system network attributes.

### ***location-password***

Specify the password that is used when establishing sessions on the local location/remote location name pair. This value must contain an even number of hexadecimal characters. The default is \*NONE.

### ***secure-location***

Specifies how security information is handled for program start requests received from remote systems. The value is sent to the remote system when sessions are established. It is used in determining how allocate or evoke requests should be built. The value only applies to conversations started with the SECURITY(SAME) level of security.

**\*NO** The remote system is not a secure location. Security validation done by the remote system is not accepted. SECURITY(SAME) conversations are treated as SECURITY(NONE). No security information will be sent with allocate or evoke requests.

**\*YES** The remote system is a secure location and the local system will accept security validation done by remote systems. For SECURITY(SAME) conversations, the local system allows the remote system to verify user passwords. On the remote system, user IDs are retrieved from the operating system. The user IDs are then sent with an already verified indicator in the allocate or evoke requests.

### **\*VFYENCPWD**

The remote system is not a secure location. For SECURITY(SAME) conversations, the remote system is not allowed to send the already verified indicator. On the remote system, user IDs and passwords are retrieved from the operating system. Passwords are then encrypted and sent with the user IDs in the allocate or evoke requests, to be verified

by the local system. This value should only be used if the remote system is using OS/400 V3R2M0 or later. If the remote system does not support password protection then session establishment will not be allowed. For remote systems that support password protection, but do not support verification of encrypted passwords (VFYENCPWD), conversations will be treated as SECURITY(NONE).

***number-of-conversations***

Specify the number of conversations for a single session connection. The default number of conversations is 10. The default value must be used if single session is \*NO. The valid range for the number of conversations is 1 through 512.

***locally-controlled-session***

Specify YES or NO to indicate whether a locally controlled session is allowed for this local location/remote location name pair. The default is \*NO.

***pre-established-session***

Specify YES or NO to indicate whether the session is automatically bound when a connection is made between the local and remote location. The default is \*NO.

***entry-description***

Specify a short description for each remote entry. The default is \*BLANK.

**Note:** The combination of remote location name, network identifier, and local location name must be unique. Also, the remote location name can not already exist as a local location in configuration list QAPPNLCL, or as the current value for LCLLOCNAME or LCLCPNAME network attribute.

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## **Async network address entry (ASYNCADRE)**

Specifies the asynchronous network address entry. This value is required if \*ASYNCADR is specified for the **Configuration list type** prompt (TYPE parameter).

You can enter multiple values for this parameter.

**\*PROMPT**

The special value of \*PROMPT allows you to add, remove, and change entries using a full screen entry panel.

A maximum of 50 entries can be specified directly for this parameter. An entry consists of a value from each of the following elements.

***network-address***

Specify the X.25 network address. This value must contain only digits 0-9.

***dial-retry***

Specify the number of times that dialing will be tried again when errors occur while dialing, before attempting to dial the next number on the list. The valid range of dial retries is 1-255.

***entry-description***

Specify a short description for each network address entry.

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## Async remote location entry (ASYNCLOCE)

Specifies the asynchronous remote location entry. This value is required if \*ASYNCLOC is specified for the **Configuration list type** prompt (TYPE parameter).

You can enter multiple values for this parameter.

### \*PROMPT

The special value of \*PROMPT allows you to add, remove, and change entries using a full screen entry panel.

A maximum of 50 entries can be specified directly for this parameter. An entry consists of a value from each of the following elements.

#### *remote-location-name*

Specify the name that, when combined with the remote location identifier, determines whether to accept an incoming call. It is the same as the name used in the remote system as it's local name. This value must be unique.

#### *remote-location-identifier*

Specify an identifier that, when combined with the remote location name, determines if an incoming call will be accepted. This identifier must be the same as the remote system has for its local identifier.

#### *entry-description*

Specify a short description for each remote location entry. The default is \*BLANK.

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## Retail pass-through entry (RTLPAsthRE)

Specifies the retail pass-through entry. This value is required if \*RTLPAsthR is specified for the **Configuration list type** prompt (TYPE parameter).

You can enter multiple values for this parameter.

### \*PROMPT

The special value of \*PROMPT allows you to add, remove, and change entries using a full screen entry panel.

A maximum of 50 entries can be specified directly for this parameter. An entry consists of a value from each of the following elements.

#### *retail-device-name*

Specify the name of the retail device that communicates with the host. This value must be unique.

#### *SNUF-device-name*

Specify the name of the SNUF device through which the retail device communicates with the host. This value must be unique.

### *Default-host-program-name*

Specify the name of the program to be started on the host if the program name is not present in the SNA command (INIT-SELF) that requests a session to be started.

### *entry-description*

Specify a short description for each retail pass-through entry. The default is \*BLANK.

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## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### \*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### **\*EXCLUDE**

The user cannot access the object.

### **\*LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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## Examples

```
CRTCFGL TYPE(*APPNLCL)
```

This command brings up a full-screen entry display that allows the user to add new entries to configuration list QAPPNLCL.

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## Error messages

### \*ESCAPE Messages

**CPF2182**

Not authorized to library &1.

**CPF260D**

Configuration list &1 already exists.

**CPF260E**

Configuration list &1 not created.

**CPF261C**

Index for configuration list &1 not changed.

**CPF261D**

Index for configuration list &1 not changed.

**CPF261F**

Configuration list &1 has been deleted.

**CPF2625**

Not able to allocate object &1.

**CPF2634**

Not authorized to object &1.

**CPF9838**

User profile storage limit exceeded.

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## Create C Locale Description (CRTCLD)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create C/400\* Locale Description (CRTCLD) command creates a locale description object (\*CLD) using the source information provided on the SRCFILE and SRCMBR parameters. The locale description source file must exist.

To change an existing locale, use the Retrieve C Locale Description (RTVCLDSRC) command.

---

### Error messages for CRTCLD

#### \*ESCAPE Messages

##### PSE1707

The listing option on the CRTCLD command failed.

##### PSE1708

Member &3 is not found in the specified file and library.

##### PSE1709

File &1 is not found in library &2.

##### PSE1739

The necessary storage could not be allocated.

##### PSE1749

Compilation failed. Locale object &1 is not created.

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---

### Parameters

Keyword	Description	Choices	Notes
CLD	Locale name	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Locale name	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
SRCFILE	Source file	<i>Qualified object name</i>	Optional, Positional 2
	Qualifier 1: Source file	<i>Name, QCLDSRC</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
SRCMBR	Source member	<i>Name, *CLD</i>	Optional, Positional 3
TEXT	Text description	<i>Character value, *SRCMBRTXT, *BLANK</i>	Optional, Positional 4
OPTION	Source listing option	<i>*NOSOURCE, *SOURCE, *NOSRC, *SRC</i>	Optional, Positional 5
LISTING	Error listing level	<i>*NOSECLVL, *SECLVL</i>	Optional, Positional 6
PRTFILE	Print file	<i>Qualified object name</i>	Optional, Positional 7
	Qualifier 1: Print file	<i>Name, QSYSPRT</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	

Keyword	Description	Choices	Notes
REPLACE	Replace	<u>*YES</u> , *NO	Optional, Positional 8
AUT	Authority	Name, <u>*LIBCRTAUT</u> , *ALL, *CHANGE, *USE, *EXCLUDE	Optional, Positional 9
TGTRLS	Target Release	<u>*CURRENT</u> , *PRV, V3R0M5, V3R1M0, V3R6M0	Optional, Positional 10

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## Locale name (CLD)

Specifies the name and the library of the new C/400 locale description.

### *locale-name*

Enter a name for the C/400 locale description.

The possible library values are:

### \*CURLIB

The current library is used to store the locale when CRTCLD is processed. If you have not specified a current library, QGPL is used.

### *library-name*

Enter the name of the library where the C/400 locale description is to be created. The library must already exist.

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## Source file (SRCFILE)

Specifies the source physical file name and library of the C/400 locale description source. Both the source physical file and the library must exist.

### QCLDSRC

The default name for the source physical file containing the C/400 locale description source to be processed.

### *source-file-name*

Enter the name of the file containing the C/400 locale description source.

The possible library values are:

\*LIBL The library list is searched to find the library containing the source file when CRTCLD is processed.

### \*CURLIB

The current library is searched for the source file when CRTCLD is processed. If you have not indicated a specific library as your current library, QGPL is used.

### *library-name*

Enter the name of the library containing the C/400 locale description source file.

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---

## Source member (SRCMBR)

Specifies the member containing the C/400 locale description source. The member is in the file and library specified on the SRCFILE parameter. This member must exist.

**\*CLD** The locale name identified by the CLD parameter is also the name of the member.

*source-file-member-name*

Enter the name of the file member that contains the locale description source to be processed.

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---

## Text description (TEXT)

Enter text that describes the C/400 locale description.

**\*SRCMBRTXT**

The text description associated with the locale description source is used.

**\*BLANK**

No text appears.

*'description'*

Enter descriptive text no longer than 50 characters, and enclose it in single quotation marks. The quotation marks are not part of the 50 character string.

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## Source listing option (OPTION)

Specifies the options you want to use when you process the C/400 locale description source.

**\*NOSOURCE or \*NOSRC**

Does not create a source listing.

**\*SOURCE or \*SRC**

Creates a source listing.

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---

## Error listing level (LISTING)

Specifies the level of detail of error messages to include in the created source listing.

**\*NOSECLVL**

Only the first-level error message text is included in the created source listing.

**\*SECLVL**

Both levels of message text are included in the created source listing. The second level text describes the cause of the error, the possible steps to take to recover, and a technical description of the processing steps taken because of the error.

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## Print file (PRTFILE)

Specifies the name and library of the printer file that will be used to print the source listing.

## QSYSPRT

The listing is directed to the default printer file QSYSPRT.

### *print-file-name*

Enter the name of the printer file where you want to direct your source listing. It must be defined to have a minimum record length of 132 characters.

The possible library values are:

**\*LIBL** The system searches the library list for the printer file.

### **\*CURLIB**

The current library is searched for the printer file. If you have not indicated a specific library as your current library, QGPL is used.

### *library-name*

Enter the name of the library where the printer file will be found.

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## **Replace (REPLACE)**

Specifies whether the existing version of the locale description object is to be replaced by the current version.

**YES** The existing locale description is replaced with the new version. The old version is moved to the library, QRPLOBJ, and renamed based on the system date and time. The text description of the replaced locale description is changed to the name of the original locale description. The old locale description is deleted at the next IPL if you do not explicitly delete it.

**\*NO** The existing locale description is not replaced. If a locale description with the same name exists in the specified library, a message is displayed and the locale description is not created.

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## **Authority (AUT)**

Specifies the object authority you are granting the users who do not have specific authority to the object, who are not on the authorization list, or whose group has no specific authority to the object.

### **LIBCRTAUT**

The public authority for the object will be taken from the CRTAUT keyword of the target library (the library that will contain the created object). This value will be determined when the object is created. If the CRTAUT value for the library changes after the object is created, the new value will NOT affect any existing objects.

### **\*CHANGE**

Provides all data authority and the authority to perform all operations on the object except those limited to the owner or controlled by object authority and object management authority. You can change the object and perform basic functions on it.

**\*USE** Provides object operational authority and read authority; authority for basic operations on the object such as running a program or reading a file. You are prevented from changing the object.

**\*ALL** Authority for all operations on the object except those limited to the owner or controlled by authorization list management authority. You can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object, but you cannot transfer its ownership.

### **\*EXCLUDE**

You are prevented from accessing the object.

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## **Target Release (TGTRLS)**

Specifies the release of the operating system on which you intend to use the object being created.

**Note:** This parameter has no function in the CRTCLD command but is included for consistency with other AS/400 commands for creating objects. A \*CLD object created with any of the allowed TGTRLS values can be restored and used with the previous version of the OS/400 operating system.

### **\*CURRENT**

The object is to be used on the release of the operating system currently running on your system. For example, if V3R6M0 is running on the system, \*CURRENT means you intend to use the object on a system with V3R6M0 installed. You can also use the object on a system with any later release of the operating system installed.

**\*PRV** The object is to be used on the previous release of the operating system. For example, if V3R6M0 is running on your system, \*PRV means you intend to use the object on a system with V2R3M0 installed. You can also use the object on a system with any later release of the operating system installed.

### *release-level*

Specify the release in the format VxRxMx, where Vx is the version, Rx is the release, and Mx is the modification level.

The object can be used on a system with the specified release or any later release of the operating system installed.

Valid values depend on the current version, release, and modification level, and these change with each new release. Press the F4 (Prompt) key from the TGTRLS parameter to see the list of valid values for this release.

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## **Examples**

None

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## **Error messages**

### **\*ESCAPE Messages**

#### **PSE1707**

The listing option on the CRTCLD command failed.

#### **PSE1708**

Member &3 is not found in the specified file and library.

#### **PSE1709**

File &1 is not found in library &2.

#### **PSE1739**

The necessary storage could not be allocated.

**PSE1749**

Compilation failed. Locale object &1 is not created.

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## Create CL Module (CRTCLMOD)

Where allowed to run: All environments (\*ALL)  
 Threadsafte: No

Parameters  
 Examples  
 Error messages

The Create Control Language Module (CRTCLMOD) command creates a control language (CL) module from the specified CL source member.

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### Parameters

Keyword	Description	Choices	Notes
MODULE	Module	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Module	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
SRCFILE	Source file	<i>Qualified object name</i>	Optional, Positional 2
	Qualifier 1: Source file	<i>Name, <u>QCLSRC</u></i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
SRCMBR	Source member	<i>Name, <u>MODULE</u></i>	Optional, Positional 3
TEXT	Text 'description'	<i>Character value, *SRCMBRTXT, *BLANK</i>	Optional
OUTPUT	Output	<i>*PRINT, *NONE</i>	Optional, Positional 4
OPTION	Source listing options	Values (up to 4 repetitions): *XREF, *NOXREF, *GEN, *NOGEN, *SECLVL, *NOSECLVL, *EVENTF, *NOEVENTF	Optional, Positional 5
LOG	Log commands	<i>*JOB, *YES, *NO</i>	Optional
REPLACE	Replace module object	<i>*YES, *NO</i>	Optional
TGTRLS	Target release	<i>Simple name, *CURRENT, *PRV</i>	Optional
AUT	Authority	<i>Name, *LIBCRTAUT, *CHANGE, *ALL, *USE, *EXCLUDE</i>	Optional
SRTSEQ	Sort sequence	Single values: *HEX, *JOB, *JOBRUN, *LANGIDUNQ, *LANGIDSHR Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Sort sequence	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
LANGID	Language ID	<i>Character value, *JOBRUN, *JOB</i>	Optional
OPTIMIZE	Optimization	<i>*NONE, *BASIC, *FULL, 10, 20, 30, 40</i>	Optional
DBGVIEW	Debugging view	<i>*STMT, *SOURCE, *LIST, *ALL, *NONE</i>	Optional
ENBPFCOL	Enable performance collection	<i>*PEP, *FULL, *NONE</i>	Optional

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## Module (MODULE)

Specifies the module object to be created.

This is a required parameter.

### Qualifier 1: Module

*name* Specify the name of the module to be created.

### Qualifier 2: Library

#### \*CURLIB

The module is stored in the current library for the job. If no current library entry exists in the library list, QGPL is used.

*name* Specify the library where the module is to be stored.

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---

## Source file (SRCFILE)

Specifies the source file that contains the CL source member to be compiled.

### Qualifier 1: Source file

#### QCLSRC

The source file named QCLSRC, that contains the CL source member to be compiled, is used.

*name* Specify the name of the source file that contains the CL source member to be compiled. The source file can be a database file, a device file, or an inline data file.

### Qualifier 2: Library

\*LIBL All libraries in the library list for the current thread are searched until the first match is found.

#### \*CURLIB

The current library for the thread is used to locate the source file. If no library is specified as the current library for the thread, the QGPL library is used.

*name* Specify the name of the library to be searched.

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## Source member (SRCMBR)

Specifies the name of the member of the source file that contains the CL source member to be compiled.

#### \*MODULE

The CL source member to be compiled is in the member of the source file that has the same name as that specified for the MODULE parameter for the compiled module.

*name* Specify the name of the member that contains the CL source, if the member name is not the same as the name of the module to be created.

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## Text 'description' (TEXT)

Specifies text that briefly describes the compiled CL module.

### \*SRCMBRTXT

The text is taken from the source file member used to create the CL module. If the source file is an inline data file or a device file, the text is blank.

### \*BLANK

Text is not specified.

### 'description'

Specify no more than 50 characters of text, enclosed in apostrophes.

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## Output (OUTPUT)

Specifies whether or not a compiler listing is produced.

### \*PRINT

The compiler listing is produced. The information contained in the listing is dependent on the values specified for the **Source listing options (OPTION)** parameter.

### \*NONE

The compiler listing is not produced. When a listing is not required, this option should be used because compile-time performance may be better.

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## Source listing options (OPTION)

Specifies the types of output lists created when this command is processed and whether a program is created. A maximum of four of the following values can be specified in any order on this parameter. If neither or both of the values in each group are specified, the underlined value is used.

**Note:** The underlined values for this parameter are *similar* to, but not *actually* default values, and therefore, cannot be changed with the Change Command Default (CHGCMDDFT) command.

### Module Creation Option

\*GEN All phases of the compilation process are carried out.

### \*NOGEN

Compilations stops after syntax checking. No module is created.

### Cross-Reference Option

### \*NOXREF

No cross-reference list of references to variable and data items in the source is created.

\*XREF A cross-reference listing of the source program is produced. OUTPUT(\*PRINT) must be specified.

### Second-Level Message Text Option

### \*NOSECLVL

No second level message text is printed.

### \*SECLVL

Second-level message text is printed. OUTPUT(\*PRINT) must be specified.

## Event File Creation Option

### \*NOEVENTF

The compiler will not produce an event file for use by the CoOperative Development Environment/400 (CODE for OS/400) product.

### \*EVENTF

The compiler produces an event file for use by the CODE for OS/400 product. The event file will be created as a member in the file EVFEVENT in your source library. The CODE for OS/400 product uses this file to offer error feedback integrated with the CODE for OS/400 editor. This option is normally specified by the CODE for OS/400 product on your behalf.

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## Log commands (LOG)

Specifies the logging options for a created CL module.

\*JOB Logging of commands in a running CL module depends on the status of the job's logging flag (see the LOGCLPGM parameter of the Change Job (CHGJOB) command). To list the logged commands, the logging level of the jobs must be 3 or 4.

A \*YES or \*NO value takes precedence over any value specified in the CHGJOB command.

\*YES The commands are logged in all cases.

\*NO The commands are not logged.

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---

## Replace module object (REPLACE)

Specifies whether an existing module is replaced if a module with the same name already exists in the specified library.

\*YES The existing module is replaced by moving it to the QRPLOBJ library.

### Notes:

1. If a running CL module is recompiled with \*YES specified for the REPLACE parameter, message queue errors may occur in the running CL module.
2. Specifying \*YES for this parameter causes the value on the AUT parameter to be ignored. The existing module is used as the source of authority. To change the authority for the module, you can use the Grant Object Authority (GRTOBJAUT) or Revoke Object Authority (RVKOBJAUT) commands.

\*NO The existing module is not replaced. When a module with the same name exists in the specified library, a message is displayed and compilation stops.

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## Target release (TGTRLS)

Specifies the release of the operating system on which you intend to use the object being created.

When specifying the **target-release** value, the format VxRxMx is used to specify the release, where Vx is the version, Rx is the release, and Mx is the modification level. For example, V5R3M0 is version 5, release 3, modification 0.

Valid values depend on the current version, release, and modification level of the operating system, and they change with each new release. You can press F4 while prompting this command parameter to see a list of valid target release values.

**\*CURRENT**

The object is to be used on the release of the operating system currently running on your system. The object can also be used on a system with any subsequent release of the operating system installed.

**\*PRV** The object is to be used on the previous release with modification level 0 of the operating system. The object can also be used on a system with any subsequent release of the operating system installed.

*character-value*

Specify the release in the format VxRxMx. The object can be used on a system with the specified release or with any subsequent release of the operating system installed.

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## Authority (AUT)

Specifies the authority you are granting to the users who do not have specific authority for the object, who are not on the authorization list, and whose user group has no specific authority for the object.

**\*LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

**\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

**\*EXCLUDE**

The user cannot access the object.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

**Note:** This parameter is ignored when REPLACE(\*YES) is specified.

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## Sort sequence (SRTSEQ)

Specifies the sort sequence table to be used for string comparisons for this CL module. The sort sequence value is used with the language identifier and the coded character set identifier of the job to determine the sort sequence table to use.

### Single values

**\*HEX** A sort sequence table is not used. The hexadecimal values of the characters are used to determine the sort sequence.

**\*JOB** The sort sequence used is the SRTSEQ associated with the job when the CL module is created.

**\*JOBRUN**

The sort sequence used is the SRTSEQ associated with the job when the CL module is run.

**\*LANGIDUNQ**

The sort sequence table uses a unique weight for each character, and is the unique-weight sort table for the language specified for the LANGID parameter.

**\*LANGIDSHR**

The sort sequence table uses the same weight for multiple characters, and is the shared-weight sort sequence table associated with the language specified for the LANGID parameter.

### Qualifier 1: Sort sequence

*name* Specify the name of the sort sequence table to be used with this CL module.

### Qualifier 2: Library

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

**\*CURLIB**

The current library for the thread is searched. If no library is specified as the current library for the thread, the QGPL library is searched.

*name* Specify the name of the library to be searched.

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---

## Language ID (LANGID)

Specifies the language identifier to be used when SRTSEQ(\*LANGIDUNQ) or SRTSEQ(\*LANGIDSHR) is specified.

**\*JOBRUN**

The language ID used is the LANGID associated with the job when the CL module is run.

**\*JOB** The language ID used is the LANGID associated with the job when the CL module is created.

*language-ID*

Specify the language identifier to be used by the job.

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---

## Optimization (OPTIMIZE)

Specifies the optimization level of the generated program code. ILE CL can not be optimized. For compatibility, values other than \*NONE are accepted, but no optimization will be performed. ILE CL modules and programs should not be used with system functions that require an optimization level higher than \*NONE.

**\*NONE**

The generated code is not optimized. This value is the fastest level of optimization in terms of translation time. This level allows variables to be displayed and modified while debugging.

**\*BASIC**

No optimization is performed. CPD0861 will be displayed in the compiled listing and sent to the job log.

**\*FULL** No optimization is performed. CPD0861 will be displayed in the compiled listing and sent to the job log.

**10** No optimization is performed. CPD0861 will be displayed in the compiled listing and sent to the job log.

**20** No optimization is performed. CPD0861 will be displayed in the compiled listing and sent to the job log.

**30** No optimization is performed. CPD0861 will be displayed in the compiled listing and sent to the job log.

**40** No optimization is performed. CPD0861 will be displayed in the compiled listing and sent to the job log.

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---

## Debugging view (DBGVIEW)

Specifies which level of debugging is available for the compiled module, and which source views are available for source-level debugging.

**\*STMT**

The compiled module can be debugged using module statement numbers and symbolic identifiers.

**\*NONE**

None of the debug options for debugging the compiled module are available.

**\*ALL** All of the debug options for debugging the compiled module can be used. The source and debug listing views are generated.

**\*SOURCE**

The source view for debugging the compiled module is generated.

**\*LIST** The listing view for debugging the compiled module is generated.

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## Enable performance collection (ENBPFCOL)

Specifies whether collection of performance data is enabled.

**\*PEP or \*NONE**

Performance data is collected for the Program Entry Procedure entry and exit. There are no entry or exit hooks in the module's internal procedures and no precall or postcall hooks around calls to other procedures.

**\*FULL** Performance data is collected for procedure entry and exit. Performance data is also collected before and after calls to external procedures.

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## Examples

### Example 1: Creating a CL Module

```
CRTCLMOD  PAYROLL  TEXT('Payro11 Program')
```

This command calls the ILE CL compiler to create a module (\*MODULE) named PAYROLL. The CL procedure source is in the default source file QCLSRC in the member PAYROLL. A compiler listing is created.

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## Error messages

### \*ESCAPE Messages

#### CPF0C33

Target release &1 not valid.

#### CPF0C35

Target release &1 is not a supported release.

#### CPF0807

File containing compiler printout not opened.

#### CPF0808

Error in compiler-created code.

#### CPF0814

Licensed Program 5722-SS1 Option 9 not installed.

#### CPF0815

CL program &1 in &2 cannot be created for previous release.

#### CPF0821

Module &1 not created.

#### CPF0849

Space addressing violation.

#### CPF3202

File &1 in library &2 in use.

#### CPF3203

Cannot allocate object for file &1 in &2.

#### CPF3224

Not authorized to perform operation on file &1.

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# Create CL Program (CRTCLPGM)

Where allowed to run: All environments (\*ALL)  
 Threadsafes: No

Parameters  
 Examples  
 Error messages

The Create CL Program (CRTCLPGM) command creates a Control Language (CL) program from the specified CL source program.

**Restrictions:** The amount of auxiliary storage occupied by a compiled program varies with the number of commands in the program, the kinds of functions performed by the commands (for example: display, create, add, and call), and the kinds of parameter values specified (variables versus constants). Some combinations of these factors can cause the system internal size limits for the program to be exceeded (an unlikely occurrence). When the limits are exceeded, the program must be rewritten, usually as multiple programs instead of one program.

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## Parameters

Keyword	Description	Choices	Notes
PGM	Program	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Program	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
SRCFILE	Source file	<i>Qualified object name</i>	Optional, Positional 2
	Qualifier 1: Source file	<i>Name, <u>QCLSRC</u></i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
SRCMBR	Source member	<i>Name, *PGM</i>	Optional, Positional 3
TEXT	Text 'description'	<i>Character value, *SRCMBRTXT, *BLANK</i>	Optional
OPTION	Source listing options	Values (up to 6 repetitions): *SOURCE, *NOSOURCE, *SRC, *NOSRC, *XREF, *NOXREF, *GEN, *NOGEN, *SECLVL, *NOSECLVL, *SRCDBG, *NOSRCDBG, *LSTDBG, *NOLSTDBG	Optional, Positional 4
GENOPT	Generation options	Values (up to 3 repetitions): *NOLIST, *LIST, *NOXREF, *XREF, *NOPATCH, *PATCH	Optional, Positional 5
USRPRF	User profile	<i>*USER, *OWNER</i>	Optional
LOG	Log commands	<i>*JOB, *YES, *NO</i>	Optional
ALWRTVSRC	Allow RTVCLSRC	<i>*YES, *NO</i>	Optional
REPLACE	Replace program	<i>*YES, *NO</i>	Optional
TGTRLS	Target release	<i>Simple name, *CURRENT, *PRV</i>	Optional
AUT	Authority	<i>Name, *LIBCRTAUT, *CHANGE, *ALL, *USE, *EXCLUDE</i>	Optional
SRTSEQ	Sort sequence	Single values: *HEX, *JOB, *JOB RUN, *LANGIDUNQ, *LANGIDSHR Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Sort sequence	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
LANGID	Language ID	<i>Character value, *JOB RUN, *JOB</i>	Optional

---

## Program (PGM)

Specifies the program to be created.

This is a required parameter.

### Qualifier 1: Program

*name* Specify the name of the program to be created.

### Qualifier 2: Library

#### \*CURLIB

The program is stored in the current library for the job. If no current library entry exists in the library list, QGPL is used.

*name* Specify the library where the program is to be stored.

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---

## Source file (SRCFILE)

Specifies the source file that contains the CL source member to be compiled.

### Qualifier 1: Source file

#### QCLSRC

The source file named QCLSRC, that contains the CL source member to be compiled, is used.

*name* Specify the name of the source file that contains the CL source member to be compiled. The source file can be a database file, a device file, or an inline data file.

### Qualifier 2: Library

\*LIBL All libraries in the library list for the current thread are searched until the first match is found.

#### \*CURLIB

The current library for the thread is used to locate the source file. If no library is specified as the current library for the thread, the QGPL library is used.

*name* Specify the name of the library to be searched.

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## Source member (SRCMBR)

Specifies the name of the source member (of the source file) that contains the CL source program to be compiled.

\*PGM The job name is the same as the program name specified for the **Program (PGM)** parameter.

*name* If the member name is not the same as the name of the program to be created, specify the name of the member that contains the CL source program.

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## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

### \*SRCMBRTXT

The text is taken from the source file member used to create the CL program.

### \*BLANK

No text is specified.

### *character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

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---

## Source listing options (OPTION)

Specifies the types of output listings created when this command is processed, and if a program is created when this command is processed. Multiple option values can be specified in any order on this parameter. If neither or both of the values in each group are specified, the underlined value will be used.

**Note:** The underlined values for this parameter are *similar* to, but not *actually* default values, and therefore, cannot be changed with the Change Command Default (CHGCMDDFT) command.

### Source Listing Option

#### \*SRC or \*SOURCE

The compiler creates a listing of the source input used to compile the program.

#### \*NOSRC or \*NOSOURCE

A complete compiler source listing is not created; only compiler errors are listed.

### Cross Reference Option

\*XREF The compiler creates a cross-reference listing of references to variables or labels in the source. If \*NOSOURCE is specified, \*NOXREF is always assumed.

#### \*NOXREF

No cross-reference listing of references to variables and data items in the source is created.

### Program Creation Option

\*GEN The compiler creates a program and places it in the appropriate library.

#### \*NOGEN

No program is created. The compiler is to syntax check the source and (if \*SOURCE or \*SRC option is specified) produce a source listing.

### Second-Level Message Text Option

#### \*NOSECLVL

No second-level message text will be printed.

#### \*SECLVL

Second-level text will be printed, along with first-level text, for compiler errors.

### Source-Level Debug Option

#### \*NOSRCDBG

Source-level debug information is not generated. Source-level error information will not be generated unless \*LSTDBG is specified.

### **\*SRCDBG**

The compiler generates source-level error and debug information for use with CoOperative Development Environment/400 (CODE/400). Source-level or listing-level debugging information is also necessary if you want to use the source-level debug function of the system debugger (STRDBG OPMSRC(\*YES)) to debug OPM programs. An event file is created even if the compiler completes the process without error.

### **Listing-Level Debug Option**

#### **\*NOLSTDBG**

A listing view or listing-level debugging information is not generated. Source-level error information will not be created unless \*SRCDBG is specified.

#### **\*LSTDBG**

The compiler generates a listing view, source-level error information, and listing-level debugging information for use with CoOperative Development Environment/400 (CODE/400). Source-level or listing-level debugging information is also necessary if you want to use the source-level debug function of the system debugger (STRDBG OPMSRC(\*YES)) to debug OPM programs.

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## **Generation options (GENOPT)**

Specifies the program generation options to be used. These values are ignored if OPTION(\*NOGEN) is specified. Multiple option values can be specified in any order on this parameter. If neither or both of the values in each group are specified, the underlined value will be used.

**Note:** The underlined values for this parameter are *similar* to, but not *actually* default values, and therefore, cannot be changed with the Change Command Default (CHGCMDDF) command.

### **IRP/MI Listing Option**

#### **\*NOLIST**

No listing of the intermediate representation of the program (IRP) is created.

**\*LIST** A listing of the intermediate representation of the program (IRP), including the generated machine interface (MI) instructions, is created.

### **IRP/MI Cross-Reference Option**

#### **\*NOXREF**

No cross-reference listing of variable and data item references in the intermediate representation of the program is created.

**\*XREF** A cross-reference listing of variable and data item references in the intermediate representation of the program is created.

### **Program Patch Area Option**

#### **\*NOPATCH**

No space is to be reserved in the compiled program for a program patch area.

#### **\*PATCH**

Space is reserved in the compiled CL program for a program patch area.

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## User profile (USRPRF)

Specifies whether the authority checking done while this program is running should include only the user who is running the program (\*USER) or both the user who is running the program and the program owner (\*OWNER). The profiles of the program user or both the program user and the program owner are used to control which objects can be used by the program, including the authority the program has for each object. Only the program owner or a user with QSECOFR authority can change the user profile attribute.

**Note:** This parameter is ignored if REPLACE(\*YES) is specified.

### \*USER

The program runs under the user profile of the program's user.

### \*OWNER

The user profiles of both the program's owner and the program's user are used when the program is processed. The collective sets of object authority in both user profiles are used to find and access objects during program processing. Authority from the owning user profile's group profile is not included in the authority for the running program.

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## Log commands (LOG)

Specifies the logging options for a created CL program. \*YES or \*NO specified here takes precedence over any value specified in the Change Job (CHGJOB) command.

\*JOB Logging of commands in a running CL program depends on the status of the job's logging flag (see the LOGCLPGM parameter of the Change Job (CHGJOB) command).

\*YES Commands are logged in all cases.

\*NO Commands are not logged.

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## Allow RTVCLSRC (ALWRTVSRC)

Specifies whether source for the CL program is saved with the program. Source that is saved can be retrieved later by using the Retrieve CL Source (RTVCLSRC) command.

\*YES Source for the CL program is saved with the program.

\*NO Source for the CL program is not saved with the program.

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## Replace program (REPLACE)

Specifies, if a program by the same name already exists in the specified library, whether the existing program is replaced.

### Notes:

1. If a running CL program is recompiled with \*YES specified for the REPLACE parameter, message queue errors may occur in the running CL program.
2. Specifying \*YES for this parameter will cause the values of the **User profile (USRPRF)** parameter and **Authority (AUT)** parameter to be ignored. The existing program is used as the source of authority,

and the user profile attribute is copied from the existing program to the new program. Use the Change Program (CHGPGM) command to change the user profile and the Grant Object Authority (GRTOBJAUT) or Revoke Object Authority (RVKOBJAUT) commands to change the authority for the program.

- \*YES** Replace the existing program by moving it to the QRPLOBJ library.
- \*NO** Do not replace an existing program by the same name in the specified library.

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## Target release (TGTRLS)

Specifies the release of the operating system on which you intend to use the object being created.

When specifying the **target-release** value, the format VxRxMx is used to specify the release, where Vx is the version, Rx is the release, and Mx is the modification level. For example, V5R3M0 is version 5, release 3, modification 0.

Valid values depend on the current version, release, and modification level of the operating system, and they change with each new release. You can press F4 while prompting this command parameter to see a list of valid target release values.

### \*CURRENT

The object is to be used on the release of the operating system currently running on your system. The object can also be used on a system with any subsequent release of the operating system installed.

- \*PRV** The object is to be used on the previous release with modification level 0 of the operating system. The object can also be used on a system with any subsequent release of the operating system installed.

### *character-value*

Specify the release in the format VxRxMx. The object can be used on a system with the specified release or with any subsequent release of the operating system installed.

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## Authority (AUT)

Specifies the authority you are granting to the users who do not have specific authority for the object, who are not on the authorization list, and whose user group has no specific authority for the object.

### \*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

### **\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

- \*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence,

specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

**\*EXCLUDE**

The user cannot access the object.

**name** Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

**Note:** This parameter is ignored when REPLACE(\*YES) is specified.

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## Sort sequence (SRTSEQ)

Specifies the sort sequence table to be used for string comparisons for this CL program. The sort sequence value is used with the language identifier and the coded character set identifier of the job to determine the sort sequence table to use.

### Single values

**\*HEX** A sort sequence table is not used. The hexadecimal values of the characters are used to determine the sort sequence.

**\*JOB** The sort sequence used is the SRTSEQ associated with the job when the CL program is created.

**\*JOBRUN**

The sort sequence used is the SRTSEQ associated with the job when the CL program is run.

**\*LANGIDUNQ**

The sort sequence table uses a unique weight for each character, and is the unique-weight sort table for the language specified for the LANGID parameter.

**\*LANGIDSHR**

The sort sequence table uses the same weight for multiple characters, and is the shared-weight sort sequence table associated with the language specified for the LANGID parameter.

### Qualifier 1: Sort sequence

**name** Specify the name of the sort sequence table to be used with this CL program.

### Qualifier 2: Library

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

**\*CURLIB**

The current library for the thread is searched. If no library is specified as the current library for the thread, the QGPL library is searched.

**name** Specify the name of the library to be searched.

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## Language ID (LANGID)

Specifies the language identifier to be used when SRTSEQ(\*LANGIDUNQ) or SRTSEQ(\*LANGIDSHR) is specified.

### \*JOBRUN

The language ID used is the LANGID associated with the job when the CL program is run.

**\*JOB** The language ID used is the LANGID associated with the job when the CL program is created.

### *language-ID*

Specify the language identifier to be used by the job.

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## Examples

### Example 1: Creating a Program to be Run by Any System User

```
CRTCLPGM  PAYROLL TEXT('Payroll Program')
```

This command calls the CL compiler to create a program named PAYROLL. The CL procedure source is in the default source file QCLSRC in the member PAYROLL. A compiler listing is created. The program is processed under the program user's user profile and can be run by any system user.

### Example 2: Creating a Program to be Run by an Authorized User

```
CRTCLPGM  PGM(PARTS) SRCFILE(MYLIB/PARTDATA) AUT(*EXCLUDE)
          TEXT('This program displays all parts data')
```

This command creates a CL program named PARTS and stores it in the current library. The source for the program is in the PARTS member of the source file PARTDATA in the library MYLIB. A compiler listing is created. This program can be processed under the profile of the user that is running the program, who could be the owner or another user to which the owner has granted specific authorization by name in the Grant Object Authority (GRTOBJAUT) command.

### Example 3: Creating a Program to be Run on a Previous Release System

```
CRTCLPGM  PGM(MYPGM) SRCFILE(MYLIB/MYDATA) TGTRLS(*PRV)
```

This command creates a CL program that can be saved for a previous release system, restored on that system, and run on that system.

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## Error messages

### \*ESCAPE Messages

#### CPF0C33

Target release &1 not valid.

#### CPF0C35

Target release &1 is not a supported release.

#### CPF0801

Program &1 not created.

#### CPF0804

Built-in function operands not valid. Reason code &1.

**CPF0807**  
File containing compiler printout not opened.

**CPF0808**  
Error in compiler-created code.

**CPF0814**  
Licensed Program 5722-SS1 Option 9 not installed.

**CPF0815**  
CL program &1 in &2 cannot be created for previous release.

**CPF0816**  
%SWITCH mask &1 not valid.

**CPF0849**  
Space addressing violation.

**CPF3202**  
File &1 in library &2 in use.

**CPF3203**  
Cannot allocate object for file &1 in &2.

**CPF3224**  
Not authorized to perform operation on file &1.

**EVF3140**  
The program's debug information was not created.

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## Create Class (CRTCLS)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Class command creates a class object and specifies the attributes to be contained in the class. The class defines the processing attributes for jobs that use the class. The class used by a job is specified in the subsystem description routing entry used to start the job. If a job consists of multiple routing steps, the class used by each subsequent routing step is specified in the routing entry used to start the routing step.

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---

### Parameters

Keyword	Description	Choices	Notes
CLS	Class	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Class	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
RUNPTY	Run priority	1-99, <u>50</u>	Optional
TIMESLICE	Time slice	0-9999999, <u>2000</u>	Optional
PURGE	Eligible for purge	<i>*YES, *NO</i>	Optional
DFTWAIT	Default wait time	0-9999999, <u>30</u> , *NOMAX	Optional
CPUTIME	Maximum CPU time	1-9999999, *NOMAX	Optional
MAXTMPSTG	Maximum temporary storage	1-2147483647, *NOMAX	Optional
MAXTHD	Maximum threads	1-32767, *NOMAX	Optional
TEXT	Text 'description'	<i>Character value, *BLANK</i>	Optional
AUT	Authority	<i>Name, *LIBCRTAUT, *CHANGE, *ALL, *USE, *EXCLUDE</i>	Optional

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---

### Class (CLS)

Specifies the name and library used for the class name.

This is a required parameter.

#### Qualifier 1: Class

*name* Specify the name of the class.

#### Qualifier 2: Library

##### \*CURLIB

The class is created in the current library for the thread. If no library is specified as the current library for the thread, the QGPL library is used.

*name* Specify the library where the class is created.

---

## Run priority (RUNPTY)

Specifies the run priority of jobs that use the class. Run priority is a value ranging from 1 (highest priority) through 99 (lowest priority) that represents the priority at which the job competes for the processing unit relative to other jobs that are active at the same time. For multi-threaded jobs, the run priority is also the highest run priority allowed for any thread within the job. Individual threads within the job may have a lower priority.

This value represents the relative, not absolute, importance of the job. For example, a job with a run priority of 25 is **not** twice as important as one with a run priority of 50.

**50** Jobs that use this class have a run priority of 50.

**1-99** Specify the run priority of jobs using this class.

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---

## Time slice (TIMESLICE)

Specifies the maximum amount of processor time (in milliseconds) given to each thread in a job using this class before other threads in a job or other jobs are given the opportunity to run. The time slice establishes the amount of time needed by a thread in a job to accomplish a meaningful amount of processing. At the end of the time slice, the thread might be put in an inactive state so that other threads can become active in the storage pool.

**2000** A maximum run time of 2000 milliseconds is allocated to each thread each time it is allowed to process.

**0-9999999**

Specify the maximum amount of time (in milliseconds) that each thread in a job using this class can have to run when it is given processing time.

**Note:** Although you can specify a value of less than 8, the system takes a minimum of 8 milliseconds to run a process. If you display a job's run attributes, the time slice value is never less than 8.

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## Eligible for purge (PURGE)

Specifies whether the job is eligible to be moved out of main storage and put into auxiliary storage at the end of a time slice or when there is a long wait (such as waiting for a work station user's response). This attribute is ignored when more than one thread is active within the job.

**\*YES** The job is eligible to be moved out of main storage and into auxiliary storage. However, a job with multiple threads is never purged from main storage.

**\*NO** The job is not eligible to be moved out of main storage and put into auxiliary storage. However, when main storage is needed, pages belonging to a thread in this job may be moved to auxiliary storage. Then, when a thread in this job runs again, its pages are returned to main storage as they are needed.

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## Default wait time (DFTWAIT)

Specifies the default maximum time (in seconds) that a thread in the job waits for a system instruction, such as the LOCK machine interface (MI) instruction, to acquire a resource. This default wait time is used when a wait time is not otherwise specified for a given situation. Normally, this would be the amount of time the system user would be willing to wait for the system before the request is ended. If the wait time for any one instruction is exceeded, an error message can be displayed or it can be automatically handled by a Monitor Message (MONMSG) command.

**30** An instruction wait has a maximum of 30 seconds in which to complete.

**\*NOMAX**

There is no maximum wait time.

**0-9999999**

Specify the maximum time (in seconds) that the system waits for an instruction to acquire a resource.

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---

## Maximum CPU time (CPUTIME)

Specifies the maximum processing unit time (in milliseconds) that the job can use. If the job consists of multiple routing steps, each routing step is allowed to use this amount of processing unit time. If the maximum time is exceeded, the job is ended.

**\*NOMAX**

There is no limit on the processing unit time used.

**1-9999999**

Specify the maximum amount of processing unit time (in milliseconds) that can be used.

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---

## Maximum temporary storage (MAXTMPSTG)

Specifies the maximum amount of temporary (auxiliary) storage (in kilobytes) that the job can use. If the job consists of multiple routing steps, this is the maximum temporary storage that the routing step can use. This temporary storage is used for storage required by the program itself and by implicitly created internal system objects used to support the job. It does not include storage in the QTEMP library. If the maximum temporary storage is exceeded, the job is ended. This parameter does not apply to the use of permanent storage, which is controlled through the user profile.

**\*NOMAX**

The system maximum is used.

**1-2147483647**

Specify the maximum amount of temporary storage (in kilobytes) that can be used.

**Note:** Although the value is specified in kilobytes, the specified value is stored in the class rounded up to the nearest megabyte.

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## Maximum threads (MAXTHD)

Specifies the maximum number of threads that a job using this class can run with at any time. If multiple threads are initiated simultaneously, this value may be exceeded. If this maximum value is exceeded, the excess threads will be allowed to run to their normal completion. Initiation of additional threads will be inhibited until the maximum number of threads in the job drops below this maximum value.

### \*NOMAX

There is no maximum number of threads.

### 1-32767

Specify the maximum number of threads for a job.

**Note:** Depending upon the resources used by the threads and the resources available on the system, the initiation of additional threads may be inhibited before this maximum value is reached.

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## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

### \*BLANK

No text is specified.

### *'description'*

Specify no more than 50 characters of text, enclosed in apostrophes.

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## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### \*LIBCRTAUT

The authority for the object is taken from the value specified for the **Create authority (CRTAUT)** parameter of the library in which the object is being created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

### \*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file.

The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

#### **\*EXCLUDE**

The user cannot access the object.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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## **Examples**

```
CRTCLS CLS(CLASS1) RUNPTY(60) TIMESLICE(900)
      TEXT('This class for all batch jobs from Dept 4836')
```

This command creates a class called CLASS1. The class is stored in the current library specified for the job. The user text 'This class for all batch jobs from Dept 4836' describes the class. The attributes of this class provide a run priority of 60 and a time slice of 900 milliseconds. If the job has not finished running at the end of a time slice, it is eligible to be moved out of main storage until it is allocated another time slice. The defaults for the other parameters are assumed.

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## **Error messages**

### **\*ESCAPE Messages**

#### **CPF1027**

No authority to library &1.

#### **CPF1039**

Class library &1 not found.

#### **CPF1064**

Class &1 exists in library &2.

#### **CPF1067**

Cannot allocate library &1.

#### **CPF9802**

Not authorized to object &2 in &3.

#### **CPF9899**

Error occurred during processing of command.

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## Create Cluster (CRTCLU)

**Where allowed to run:** All environments (\*ALL)  
**Threadsafe:** No

Parameters  
Examples  
Error messages

The Create Cluster (CRTCLU) command is used to create a new cluster of one or more nodes. Each node specified on the Node parameter will be placed in the cluster membership list.

If the Start indicator (START) parameter value is \*NO, each node that is being added will have a status of New and Cluster Resource Services will not be started on any node. In order to start Cluster Resource Services, the Start Cluster Node (STRCLUNOD) command must be invoked on a node that ran the CRTCLU command. The STRCLUNOD command may be used to start nodes in the cluster membership list.

If the START parameter value is \*YES, the cluster can contain only one node. Cluster Resource Services will be started on the node being defined. If Cluster Resource Services is not successfully started, the status of the node remains New.

If the NODE0100 format is chosen, the current cluster version will be set equal to the requesting node's potential node version.

After Cluster Resource Services has been started on the original node, additional nodes can only be started by calling the Start Cluster Node (STRCLUNOD) command on the original node. If Cluster Resource Services is active on more than one node, additional nodes may be started by invoking the Start Cluster Node (STRCLUNOD) command on any node that has a status of Active.

Once the cluster has been created, the Add Cluster Node Entry (ADDCLUNODE) command can be used to add additional nodes to the cluster membership list. The ADDCLUNODE command can be invoked on any node in the cluster that has a status of Active or from the node on which the cluster was originally created.

### Restrictions:

1. You must have input/output system configuration (\*IOSYSCFG) special authority to run this command.
2. This command cannot be called from a cluster resource group exit program.
3. A node can be a member of only one cluster.
4. You must include the system on which the command is issued in the cluster membership list.

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## Parameters

Keyword	Description	Choices	Notes
CLUSTER	Cluster	<i>Name</i>	Required, Positional 1
NODE	Node list	Values (up to 128 repetitions): <i>Element list</i>	Required, Positional 2
	Element 1: Node identifier	<i>Name</i>	
	Element 2: IP address	Values (up to 2 repetitions): <i>Character value</i>	
START	Start indicator	*YES, *NO	Optional

Keyword	Description	Choices	Notes
VERSION	Target cluster version	* <u>CUR</u> , *PRV	Optional

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## Cluster (CLUSTER)

Specifies the cluster which will be created.

This is a required parameter.

*name* Specify the name of the cluster to be created.

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## Node identifier (NODE)

Specifies information about the cluster and the list of nodes which will be placed in the cluster membership list. A maximum of 128 nodes can be in a cluster.

This is a required parameter.

### Element 1: Node identifier

*name* Specify the name for the system that uniquely identifies a node.

### Element 2: IP address

The cluster interface address is an IP address that is used by Cluster Resource Services to communicate with other nodes in the cluster. A maximum of 2 interface addresses per node can be specified.

#### *character-value*

Specify the IP address to be used to communicate with other nodes in the cluster. The address is in dotted decimal format.

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## Start indicator (START)

Specifies whether or not Cluster Resource Services is to be started on the node being defined.

\*YES Cluster Resource Services will be started on the node.

\*NO Cluster Resource Services will not be started on any node.

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## Target cluster version (VERSION)

Specifies the version the cluster will use in conversation with other nodes in the cluster. This also determines the potential node version of the nodes allowed to join the cluster. The following possible values are based on the node originating the request.

\*CUR The cluster will communicate at the requesting node's potential node version. In addition, nodes with a potential node version less than the requesting node will not be allowed to join the cluster.



**\*PRV** The cluster will communicate at the requesting node's potential node version minus 1. This allows nodes at a previous potential node version to join the cluster. However, no new cluster function can be used until all nodes have the latest cluster version.

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## Examples

```
CRTCLU CLUSTER(MYCLUSTER)
        NODE((NODE01 ('9.5.13.187')) (NODE02 ('9.5.13.193')))
        START(*NO) VERSION(*PRV)
```

This command creates cluster MYCLUSTER. The cluster membership list is NODE01 and NODE02. Interface address 9.5.13.187 will be used to communicate with node NODE01. Interface address 9.5.13.193 will be used to communicate with node NODE02. Cluster communications will use the cluster version previous to the requesting nodes potential version level. Cluster Resource Services is not started on the nodes.

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## Error messages

### \*ESCAPE Messages

#### **CPF0001**

Error found on &1 command.

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## Create Command (CRTCMD)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Command (CRTCMD) command creates a new user-defined command (that is, a command definition) that can use the same command processing support that is used by IBM-supplied commands. The command definition is an object that can be stored in the general purpose library (QGPL) or in a user library. To update an existing command (for example, change the name of one of its parameter keywords), the existing command must first be deleted by the Delete Command (DLTCMD) command and then created again by the Create Command (CRTCMD) command. However, some of the values can be changed by the Change Command (CHGCMD) command.

To create a command, a set of command definition statements are entered into a source file. The Create Command (CRTCMD) command is used to process the source file and create a command definition object. The following command definition statements are used as needed:

- Command statement (CMD): One CMD statement is needed for each command being defined.
- Parameter statement (PARM): One PARM statement is required for each command parameter in the command being defined. It defines the parameter to be passed to the command processing program (CPP).
- Element statement (ELEM): An ELEM statement further defines a parameter that is a list of values. One statement is required for each possible element of the list.
- Qualifier statement (QUAL): A QUAL statement is required to describe each part of a qualified name that can be accepted for a parameter (defined in a PARM statement) or for an element in a list of values (defined in an ELEM statement).
- Dependent statement (DEP): The DEP statement indicates which parameters are interdependent.
- Prompt control statement (PMTCTL): The PMTCTL statement describes the conditions used to select a parameter for prompting.

Descriptions of the command definition statements are in the Control Language (CL) topic of the Programming category in the iSeries Information Center at URL <http://www.ibm.com/eserver/series/infocenter> .

**Restriction:** The CRTCMD command can be used only to create the command definition of an actual CL command. That is, it cannot be used to create definitions of *statements*, such as the command definition statements themselves.

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### Parameters

Keyword	Description	Choices	Notes
CMD	Command	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Command	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	

Keyword	Description	Choices	Notes
PGM	Program to process command	Single values: *REXX Other values: <i>Qualified object name</i>	Required, Positional 2
	Qualifier 1: Program to process command	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
SRCFILE	Source file	<i>Qualified object name</i>	Optional, Positional 3
	Qualifier 1: Source file	<i>Name, QCMSRC</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
SRCMBR	Source member	<i>Name, *CMD</i>	Optional, Positional 4
REXSRCFILE	REXX source file	<i>Qualified object name</i>	Optional
	Qualifier 1: REXX source file	<i>Name, QREXSRC</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
REXSRCMBR	REXX source member	<i>Name, *CMD</i>	Optional
REXCMDENV	REXX command environment	Single values: *COMMAND, *CPICOMM, *EXECSQL Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: REXX command environment	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
REXEXITPGM	REXX exit programs	Single values: *NONE Other values (up to 8 repetitions): <i>Element list</i>	Optional
	Element 1: Program	<i>Qualified object name</i>	
	Qualifier 1: Program	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
	Element 2: Exit code	2, 3, 4, 5, 7, 8, 9, 10	
THDSAFE	Threadsafe	*YES, *NO, *COND	Optional
MLTHDACN	Multithreaded job action	*SYSVAL, *RUN, *MSG, *NORUN	Optional
TEXT	Text 'description'	<i>Character value, *SRCMBRTXT, *CMDPMT, *BLANK</i>	Optional
VLDCKR	Validity checking program	Single values: *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Validity checking program	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
MODE	Mode in which valid	Single values: *ALL Other values (up to 3 repetitions): *PROD, *DEBUG, *SERVICE	Optional
ALLOW	Where allowed to run	Single values: *ALL Other values (up to 9 repetitions): *BATCH, *INTERACT, *BPGM, *IPGM, *BREXX, *IREXX, *EXEC, *BMOD, *IMOD	Optional
ALWLMTUSR	Allow limited users	*NO, *YES	Optional
MAXPOS	Maximum positional parameters	0-75, *NOMAX	Optional
PMTFILE	Message file for prompt text	Single values: *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Message file for prompt text	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
MSGF	Message file	<i>Qualified object name</i>	Optional
	Qualifier 1: Message file	<i>Name, QCPFMSG</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	

Keyword	Description	Choices	Notes
HLP SHELF	Help bookshelf	Simple name, *NONE, *LIST	Optional
HLP PNLGRP	Help panel group	Single values: *NONE Other values: Qualified object name	Optional
	Qualifier 1: Help panel group	Name	
	Qualifier 2: Library	Name, *LIBL, *CURLIB	
HLP ID	Help identifier	Character value, *CMD, *NONE	Optional
HLP SCHIDX	Help search index	Single values: *NONE Other values: Qualified object name	Optional
	Qualifier 1: Help search index	Name	
	Qualifier 2: Library	Name, *LIBL, *CURLIB	
CURLIB	Current library	Name, *NOCHG, *CRTDFT	Optional
PRDLIB	Product library	Name, *NOCHG, *NONE	Optional
PMT OVRPGM	Prompt override program	Single values: *NONE Other values: Qualified object name	Optional
	Qualifier 1: Prompt override program	Name	
	Qualifier 2: Library	Name, *LIBL, *CURLIB	
AUT	Authority	Name, *LIBCRTAUT, *USE, *ALL, *CHANGE, *EXCLUDE	Optional
REPLACE	Replace command	*YES, *NO	Optional
ENBGUI	Enable GUI	*YES, *NO	Optional

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## Command (CMD)

Specifies the command to be created.

### Qualifier 1: Command

*name* Specify the name of the command to be created.

This is a required parameter.

### Qualifier 2: Library

#### \*CURLIB

The command is created in the current library for the job. If no library is specified as the current library for the job, QGPL is used.

*name* Specify the name of the library where the command is to be located.

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## Program to process command (PGM)

Specifies the name and library of the command processing program (CPP) used to process the command. The command processing program is not needed until command run time.

The parameters passed to the command processing program are the ones defined by the command definition statements in the source file specified in the **Source file (SRCFILE)** parameter.

This is a required parameter.

### Single values

#### \*REXX

The CPP for this command is the REXX procedure identified on the **REXX source member (REXSRCMBR)** parameter.

#### Qualifier 1: Program to process command

*name* Specify the name of the CPP that processes the command.

#### Qualifier 2: Library

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

#### \*CURLIB

The current library for the job is used to locate the program. If no library is specified as the current library for the job, QGPL is used.

*name* Specify the name of the library where the program is located.

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---

## Source file (SRCFILE)

Specifies the source file that contains the command definition statements.

#### Qualifier 1: Source file

#### QCMDSRC

The source file named QCMDSRC contains the command definition statements.

*name* Specify the name of the source file that contains the command definition statements for the command being created.

#### Qualifier 2: Library

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

#### \*CURLIB

The current library for the job is used to locate the source file. If no library is specified as the current library for the job, QGPL is used.

*name* Specify the library name for the source file that contains the command definition statements for the command being created.

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---

## Source member (SRCMBR)

Specifies the source file member that contains the command definition statements used to create the command.

**\*CMD** When the file specified for the **Source file (SRCFILE)** parameter is a database file, the name of the source file member is the name specified for the **Command (CMD)** parameter of this command.

*name* Specify the name of the member in the source file specified for the SRCFILE parameter.

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---

## REXX source file (REXSRCFILE)

Specifies the source file that contains the REXX command processing program (CPP).

### Qualifier 1: REXX source file

#### QREXSRC

The file named QREXSRC contains the REXX CPP source file member.

*name* Specify the name of the source file that contains the source member to use.

### Qualifier 2: Library

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

#### **\*CURLIB**

The current library is used to locate the source file. If no library is specified as the current library for the job, QGPL is used.

*name* Specify the name of the library used to locate the REXX source file.

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---

## REXX source member (REXSRCMBR)

Specifies the source file member that contains the REXX procedure that is to function as the apparent command processing program (CPP).

**\*CMD** The default member name is the name specified for the **Command (CMD)** parameter of this command.

*name* Specify the name of the source file member that contains the REXX procedure that is to function as the apparent command processing program.

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---

## REXX command environment (REXCMDENV)

Specifies the command environment that is active when the REXX command processing program (CPP) starts to run. If the OS/400 system control language (CL) environment is not used, a program can be specified to process commands found in the REXX procedure. The REXX interpreter calls this program to process commands encountered in the procedure. This environment can be changed through the REXX ADDRESS instruction.

### Single values

#### \*COMMAND

The OS/400 control language (CL) command environment is used.

#### **\*CPICOMM**

The Common Programming Interface (CPI) for Communications command environment is used. CPICOMM is the command environment used for CL commands that are embedded within a REXX procedure.

#### **\*EXECSQL**

The Structured Query Language (SQL) Command environment is used. EXECSQL is the command environment used for CL commands that are imbedded within a SQL procedure.

### Qualifier 1: REXX command environment

*name* Specify the name of the program to be called to process commands that are embedded in the REXX procedure.

### Qualifier 2: Library

\*LIBL All libraries in the library list for the current thread are searched until the first match is found.

#### \*CURLIB

The current library for the job is used to locate the program. If no library is specified as the current library for the job, QGPL is used.

*name* Specify the name of the library where the program is located.

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---

## REXX exit programs (REXEXITPGM)

Specifies the exit programs to be used when the REXX command processing program (CPP) is started. A maximum of eight program and exit code combinations can be specified.

### Single values

#### \*NONE

There are no exit programs for the REXX CPP.

### Element 1: Program

#### Qualifier 1: Program

*name* Specify the name of the exit program.

#### Qualifier 2: Library

\*LIBL All libraries in the library list for the current thread are searched until the first match is found.

#### \*CURLIB

The current library list is used to locate the program. If no library is specified as the current library for the job, QGPL is used.

*name* Specify the name of the library to be searched.

### Element 2: Exit code

- 2 The associated program is called whenever an external function or subroutine has been called by the REXX program. The exit program is then responsible for locating and calling the requested routine.
- 3 The associated program is called whenever the interpreter is going to call a command. The exit program is responsible for locating and calling the command given the command string and the current environment name.
- 4 The associated program is called whenever a REXX instruction or function attempts an operation on the REXX external data queue.



- 5 The associated program is called when session input or output operations are attempted.
- 7 The associated program is called after running each clause of the REXX procedure to determine whether it should be halted.
- 8 The associated program is called after running each clause of the REXX program to check whether tracing should be turned on or off.
- 9 The associated program is called before interpretation of the first instruction of a REXX procedure (including REXX procedures called as external functions and subroutines).
- 10 The associated program is called after interpretation of the last instruction of a REXX procedure (including REXX procedures called as external functions and subroutines).

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---

## Threadsafe (THDSAFE)

Specifies whether the command is threadsafe and can be used safely in a job that has multiple threads.

**\*NO** The command is not threadsafe and should not be used in a job that has multiple threads.

**\*YES** The command is threadsafe and can be used safely in a job that has multiple threads.

**\*COND**

The command is threadsafe under certain conditions. See the online help or other documentation for the command to determine the conditions under which the command is threadsafe.

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---

## Multithreaded job action (MLTTHDACN)

Specify the multithreaded job action for this command. If you do not know the action to take in a multithreaded job, use the default value of \*SYSVAL.

**\*SYSVAL**

The multithreaded job action specified in the QMLTTHDACN system value is used.

**\*RUN** Run the command.

**\*MSG** Run the command and send a diagnostic message.

**\*NORUN**

Do not run the command.

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---

## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

**\*SRCMBRTXT**

The text is taken from the source file member used to create the CL command.

**\*CMDPMT**

The text is taken from the text defined for the PROMPT keyword of the CMD statement in the command definition source.

**\*BLANK**

No text is specified.

*'description'*

Specify no more than 50 characters of text, enclosed in apostrophes.

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---

## Validity checking program (VLDCKR)

Specifies the program that performs additional validity checking on the parameters in the command being created. The same parameters that are passed to the command processing program (CPP) are also passed to the validity checking program. The validity checker performs additional parameter checking beyond that specified by the command definition statements in the source file, and beyond normal control language syntax checking. More information on validity checking is in the CL Programming book, SC41-5721.

### Single values

#### \*NONE

There is no separate validity checking program for this command. All validity checking is done by the command analyzer and the command processing program. Whenever the command is processed or checked for validity, provided variables and expressions are not used.

### Qualifier 1: Validity checking program

*name* Specify the name and library of the validity checking program that checks the validity of the command.

### Qualifier 2: Library

\*LIBL All libraries in the library list for the current thread are searched until the first match is found.

#### \*CURLIB

The current library for the job is used to locate the program. If no library is specified as the current library for the job, QGPL is used.

*name* Specify the name of the library where the validity checking program is located.

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---

## Mode in which valid (MODE)

Specifies the modes of operating environment to which the newly defined command applies.

### Single values

\*ALL The command is valid in all the types of modes: production, debug, and service.

### Other values (up to 3 repetitions)

#### \*PROD

The command is valid for production mode operations.

#### \*DEBUG

The command is valid for debug mode operations.

#### \*SERVICE

The command is valid for service mode operations.

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---

## Where allowed to run (ALLOW)

Specifies where the command can be processed.

### Single values

**\*ALL** The command can be processed in a batch input stream, in a CL program, in a REXX procedure, in a CL ILE module, or when processed interactively. It can also be passed to the system program QCMDEXC (or QCAEXEC) for processing.

### Other values (up to 9 repetitions)

#### \*BATCH

The command can be processed in a batch input stream, external to a compiled CL program.

#### \*INTERACT

The command can be processed interactively, external to a compiled CL program.

#### \*BPGM

The command can be processed in a compiled CL program that is called from batch entry.

#### \*IPGM

The command can be processed in a compiled CL program that is called from interactive entry.

#### \*BREXX

The command can be used in a REXX procedure run in a batch job.

#### \*IREXX

The command can be used in a REXX procedure run in an interactive job.

#### \*BMOD

The command can be used in a batch CL ILE program only.

#### \*IMOD

The command can be used in a interactive CL ILE program only.

#### \*EXEC

The command can be used as a parameter on the CALL command and be passed as a character string to the system program QCMDEXC (or QCAEXEC) for processing. If \*EXEC is specified, either \*BATCH or \*INTERACT must also be specified.

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## Allow limited users (ALWLMTUSR)

Specifies whether a user whose profile is set for limited capabilities is allowed to use the command by typing it in the command line on a menu.

**\*NO** This command cannot be entered in the command line on a menu by a user whose profile is set for limited capabilities.

**\*YES** This command can be entered in the command line on a menu by a user whose profile is set for limited capabilities.

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## Maximum positional parameters (MAXPOS)

Specifies the maximum number of parameters that can be specified positionally (without the parameter keyword) for this command. This parameter value must be greater than the number of nonconstant required parameters and less than the total number of nonconstant parameters. Parameters of TYPE(\*ZEROELEM), parameters with the CONSTANT attribute, and lists and qualified names whose ELEMs and QUALs have the CONSTANT attribute or are of TYPE(\*ZEROELEM) are not included in the number of parameters that can be coded positionally for this command.

### \*NOMAX

No maximum positional coding limit is specified for this command.

**0-75** Specify the maximum number of positional parameters.

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## Message file for prompt text (PMTFILE)

Specifies the message file from which the prompt text for the command is retrieved.

### Single values

#### \*NONE

No message file is needed for the prompt text. The text, if any, is supplied in the definition statements that define the command.

### Qualifier 1: Message file for prompt text

*name* Specify the name of the message file.

### Qualifier 2: Library

\*LIBL All libraries in the library list for the current thread are searched until the first match is found.

#### \*CURLIB

The current library for the job is used to locate the message file. If no library is specified as the current library for the job, QGPL is used.

*name* Specify the name of the library where the message file is located.

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## Message file (MSGF)

Specifies the message file from which messages identified on the Dependency (DEP) command definition statements are retrieved. The **Message identifier (MSGID)** parameter on the DEP statements lets you specify the message identifier to be sent if a parameter syntax error is detected. For message identifiers with a three-character prefix other than 'CPF', the message file specified for this parameter will be used. QCPFMSG is always used for as the message file for messages that have the prefix 'CPF' in the message identifier.

### Qualifier 1: Message file

#### QCPFMSG

Message file QCPFMSG is the file from which DEP error messages are retrieved.

*name* Specify the name of the message file from which DEP error messages are retrieved.

### Qualifier 2: Library

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

**\*CURLIB**

The current library for the job is used to locate the message file. If no library is specified as the current library for the job, QGPL is used.

*name* Specify the name of the library where the message file is located.

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## Help bookshelf (HLPSHELF)

This parameter is no longer supported.

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## Help panel group (HLPPNLGRP)

Specifies the help panel group for this command.

**Single values**

**\*NONE**

No help panel group is specified.

**Qualifier 1: Help panel group**

*name* Specify the name of the help panel group for this command.

**Qualifier 2: Library**

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

**\*CURLIB**

The current library for the job is used to locate the panel group. If no library is specified as the current library for the job, QGPL is used.

*name* Specify the name of the library where the panel group is located.

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## Help identifier (HLPID)

Specifies the root name for all help section identifiers for this command. All help sections in the help panel group associated with this command will begin with this name.

**\*NONE**

No help identifier is specified. \*NONE is not allowed if a panel group name is specified for the **Help panel group (HLPPNLGRP)** parameter.

**\*CMD** The name of the command is to be used as the root for help section identifiers in the help panel group.

*name* Specify the root name for the help section identifiers for this command.

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## Help search index (HLPSEARCH)

Specifies the help search index to use when the search index function key is pressed from the help screen.

### Single values

#### \*NONE

No help search index is associated with this command.

### Qualifier 1: Help search index

*name* Specify the name of the search index to be used when the search index function key is pressed.

### Qualifier 2: Library

\*LIBL All libraries in the library list for the current thread are searched until the first match is found.

#### \*CURLIB

The current library for the job is used to locate the search index. If no library is specified as the current library for the job, the QGPL library is used.

*name* Specify the name of the library where the search index is located.

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## Current library (CURLIB)

Specifies the name of the current library associated with the job being run.

**Note:** This library is also the current library when the validity checker program (if any) is processed for the command.

#### \*NOCHG

The current library does not change for the processing of this command. If the current library is changed during processing of the command, the change remains in effect after command processing is complete.

#### \*CRTDFT

No current library is active during the processing of the command. The current library that was active before command processing began is restored when processing is completed.

If \*CURLIB was specified as the to-value for any single values or special values for this command, or for any command processed while no current library is active, the QGPL library is used as the current library.

*name* Specify the name of the library that is used as the current library. The library need not exist when the command is created, but must exist when the command is processed. When command processing is completed, the current library is restored to its previous value. If the current library is changed during command processing by the Change Library List (CHGLIBL) command or Change Current Library (CHGCURLIB) command, the change is effective only until the command is processed. QTEMP cannot be specified for the current library.

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## Product library (PRDLIB)

Specifies the product library that is to be in effect during the processing of the command.

**Note:** The product library for a command or menu remains in the library list while a command or menu is active, unless another command or menu changes the product library. When a command or menu that changed the product library ends, the product library is restored to what it was when the command or menu started.

**\*NOCHG**

The product library is not changed when processing of the command starts. If the product library is changed during the processing of the command, the change remains in effect after command processing is complete.

**\*NONE**

There is no product library in the job's library list. The product library is restored to its previous value when command processing is complete.

*name* Specify the name of the library to be used as the product library during command processing. The library need not exist when the command is created, but must exist when the command is processed. When command processing is completed, the product library is restored to its previous value. QTEMP cannot be specified for the product library.

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## Prompt override program (PMTOVRPGM)

Specifies the name and library of the prompt override program (POP) that will replace (on the prompt display) the default values with the current actual values specified for the parameter. If a POP is specified, the key parameters (specified as KEYPARM(\*YES) on the PARM statement in the command definition source) are the only parameters visible on the initial prompt display. When values are input for the key parameters, the remaining parameters are shown on the display with the actual values instead of the default values.

**\*NONE**

No prompt override program is specified.

**Note:** If \*NONE is specified when key parameters exist in the command definition source (that is when KEYPARM(\*YES) is specified on the PARM statement), a warning message is issued when the command is created, and KEYPARM(\*NO) will be assumed for all parameters.

*name* Specify the name of the prompt override program for the command.

### Qualifier 2: Library

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

**\*CURLIB**

The current library for the job is used to locate the prompt override program. If no library is specified as the current library for the job, QGPL is used.

*name* Specify the name of the library where the prompt override program is located.

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## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

**\*LIBCRTAUT**

The system determines the authority for the object by using the value specified on the **Create authority (CRTAUT)** parameter on the Create Library command (CRTLIB) for the library

containing the object to be created. If the value specified on the **Create authority (CRTAUT)** parameter is changed, the new value will not affect any existing objects.

**\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

**\*EXCLUDE**

The user cannot access the object.

*name* Specify the name of an authorization list. Users included on the authorization list are granted authority to the object as specified by the list. The authorization list must exist when the object is created.

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## Replace command (REPLACE)

Specifies the replacement of an existing command with a new version with the same name, type, and library, without first issuing a DLTCMD to remove the old one.

The old version is renamed, moved to library QRPLOBJ, and then cleared on the next IPL of the system.

**\*YES** If the create operation is successful, existing commands are replaced by new versions of the same command.

**\*NO** Existing commands are not replaced, and the creation of new commands with the same name, type, and library as the existing commands is not allowed.

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## Enable GUI (ENBGUI)

Specifies whether the command prompt panels are enabled for conversion to a graphical user interface.

**\*NO** The command prompt panels are not enabled for conversion to a graphical user interface.

**\*YES** The command prompt panels are enabled for conversion to a graphical user interface by including information about the panel content in the 5250 data stream.

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## Examples

```
CRTCMD  CMD(PAYROLL)  PGM(PAY076)  SRCFILE(PAYSOURCE)
        AUT(*EXCLUDE)
```

The command named PAYROLL is created from the source file PAYSOURCE. The command is private and calls the command processing program (CPP) named PAY076. It is a valid command when entered in a batch input stream, when compiled in a control language program, when entered interactively, or when passed to the QCMD EXC program.

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## Error messages

### \*ESCAPE Messages

#### CPF0201

Command &2 not created in library &3.

#### CPF0210

Cannot open printer file.

#### CPF0212

Unable to open source file.

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## Create Class-of-Service Desc (CRTCOSD)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Class-of-Service Description (CRTCOSD) command creates a class-of-service description. A class-of-service description determines the nodes and transmission groups that are eligible for inclusion in advanced program-to-program communications (APPC) or Advanced Peer-to-Peer Networking (APPN). More information on class-of-services is in the APPN Support information in the iSeries Information Center at <http://www.iseries.ibm.com/infocenter> and the APPC Programming book, SC41-5443.

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### Parameters

Keyword	Description	Choices	Notes
COSD	Class-of-service description	<i>Communications name</i>	Required, Positional 1
TMSPTY	Transmission priority	*LOW, * <u>MED</u> , *HIGH	Optional

Keyword	Description	Choices	Notes
ROW1LINE	Row 1 for lines	<i>Element list</i>	Optional
	Element 1: Line row weight	0-255, <u>30</u>	
	Element 2: Minimum link speed	*MIN, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, <u>4M</u> , 10M, 16M, *MAX	
	Element 3: Maximum link speed	*MIN, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, * <u>MAX</u>	
	Element 4: Minimum cost/connect time	0-255, <u>0</u>	
	Element 5: Maximum cost/connect time	0-255, <u>0</u>	
	Element 6: Minimum cost/byte	0-255, <u>0</u>	
	Element 7: Maximum cost/byte	0-255, <u>0</u>	
	Element 8: Minimum security for line	* <u>NONSECURE</u> , *PKTSWTNET, *UNDGRDCBL, *SECURECND, *GUARDCND, *ENCRYPTED, *MAX	
	Element 9: Maximum security for line	*NONSECURE, *PKTSWTNET, *UNDGRDCBL, *SECURECND, *GUARDCND, *ENCRYPTED, * <u>MAX</u>	
	Element 10: Minimum propagation delay	* <u>MIN</u> , *LAN, *TELEPHONE, *PKTSWTNET, *SATELLITE, *MAX	
	Element 11: Maximum propagation delay	*MIN, * <u>LAN</u> , *TELEPHONE, *PKTSWTNET, *SATELLITE, *MAX	
	Element 12: Minimum user-defined 1	0-255, <u>0</u>	
	Element 13: Maximum user-defined 1	0-255, <u>255</u>	
	Element 14: Minimum user-defined 2	0-255, <u>0</u>	
	Element 15: Maximum user-defined 2	0-255, <u>255</u>	
	Element 16: Minimum user-defined 3	0-255, <u>0</u>	
Element 17: Maximum user-defined 3	0-255, <u>255</u>		
ROW1NODE	Row 1 for nodes	<i>Element list</i>	Optional
	Element 1: Node row weight	0-255, <u>5</u>	
	Element 2: Min route addition resistance	0-255, <u>0</u>	
	Element 3: Max route addition resistance	0-255, <u>31</u>	
	Element 4: Minimum congestion for node	* <u>LOW</u> , *HIGH	
	Element 5: Maximum congestion for node	* <u>LOW</u> , *HIGH	

Keyword	Description	Choices	Notes
ROW2LINE	Row 2 for lines	<i>Element list</i>	Optional
	Element 1: Line row weight	0-255, <u>60</u>	
	Element 2: Minimum link speed	*MIN, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, <u>56000</u> , 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, *MAX	
	Element 3: Maximum link speed	*MIN, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, * <u>MAX</u>	
	Element 4: Minimum cost/connect time	0-255, <u>0</u>	
	Element 5: Maximum cost/connect time	0-255, <u>0</u>	
	Element 6: Minimum cost/byte	0-255, <u>0</u>	
	Element 7: Maximum cost/byte	0-255, <u>0</u>	
	Element 8: Minimum security for line	* <u>NONSECURE</u> , *PKTSWTNET, *UNDGRDCBL, *SECURECND, *GUARDCND, *ENCRYPTED, *MAX	
	Element 9: Maximum security for line	*NONSECURE, *PKTSWTNET, *UNDGRDCBL, *SECURECND, *GUARDCND, *ENCRYPTED, * <u>MAX</u>	
	Element 10: Minimum propagation delay	* <u>MIN</u> , *LAN, *TELEPHONE, *PKTSWTNET, *SATELLITE, *MAX	
	Element 11: Maximum propagation delay	*MIN, *LAN, * <u>TELEPHONE</u> , *PKTSWTNET, *SATELLITE, *MAX	
	Element 12: Minimum user-defined 1	0-255, <u>0</u>	
	Element 13: Maximum user-defined 1	0-255, <u>255</u>	
	Element 14: Minimum user-defined 2	0-255, <u>0</u>	
	Element 15: Maximum user-defined 2	0-255, <u>255</u>	
	Element 16: Minimum user-defined 3	0-255, <u>0</u>	
Element 17: Maximum user-defined 3	0-255, <u>255</u>		
ROW2NODE	Row 2 for nodes	<i>Element list</i>	Optional
	Element 1: Node row weight	0-255, <u>10</u>	
	Element 2: Min route addition resistance	0-255, <u>0</u>	
	Element 3: Max route addition resistance	0-255, <u>63</u>	
	Element 4: Minimum congestion for node	* <u>LOW</u> , *HIGH	
	Element 5: Maximum congestion for node	* <u>LOW</u> , *HIGH	

Keyword	Description	Choices	Notes
ROW3LINE	Row 3 for lines	<i>Element list</i>	Optional
	Element 1: Line row weight	0-255, <u>90</u>	
	Element 2: Minimum link speed	*MIN, 1200, 2400, 4800, 7200, 9600, 14400, <b>19200</b> , 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, *MAX	
	Element 3: Maximum link speed	*MIN, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, * <b>MAX</b>	
	Element 4: Minimum cost/connect time	0-255, <u>0</u>	
	Element 5: Maximum cost/connect time	0-255, <u>0</u>	
	Element 6: Minimum cost/byte	0-255, <u>0</u>	
	Element 7: Maximum cost/byte	0-255, <u>0</u>	
	Element 8: Minimum security for line	* <b>NONSECURE</b> , *PKTSWTNET, *UNDGRDCBL, *SECURECND, *GUARDCND, *ENCRYPTED, *MAX	
	Element 9: Maximum security for line	*NONSECURE, *PKTSWTNET, *UNDGRDCBL, *SECURECND, *GUARDCND, *ENCRYPTED, * <b>MAX</b>	
	Element 10: Minimum propagation delay	* <b>MIN</b> , *LAN, *TELEPHONE, *PKTSWTNET, *SATELLITE, *MAX	
	Element 11: Maximum propagation delay	*MIN, *LAN, * <b>TELEPHONE</b> , *PKTSWTNET, *SATELLITE, *MAX	
	Element 12: Minimum user-defined 1	0-255, <u>0</u>	
	Element 13: Maximum user-defined 1	0-255, <u>255</u>	
	Element 14: Minimum user-defined 2	0-255, <u>0</u>	
	Element 15: Maximum user-defined 2	0-255, <u>255</u>	
	Element 16: Minimum user-defined 3	0-255, <u>0</u>	
Element 17: Maximum user-defined 3	0-255, <u>255</u>		
ROW3NODE	Row 3 for nodes	<i>Element list</i>	Optional
	Element 1: Node row weight	0-255, <u>20</u>	
	Element 2: Min route addition resistance	0-255, <u>0</u>	
	Element 3: Max route addition resistance	0-255, <u>95</u>	
	Element 4: Minimum congestion for node	* <b>LOW</b> , *HIGH	
	Element 5: Maximum congestion for node	* <b>LOW</b> , *HIGH	

Keyword	Description	Choices	Notes
ROW4LINE	Row 4 for lines	<i>Element list</i>	Optional
	Element 1: Line row weight	0-255, <u>120</u>	
	Element 2: Minimum link speed	*MIN, 1200, 2400, 4800, 7200, <b>9600</b> , 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, *MAX	
	Element 3: Maximum link speed	*MIN, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, * <b>MAX</b>	
	Element 4: Minimum cost/connect time	0-255, <u>0</u>	
	Element 5: Maximum cost/connect time	0-255, <u>0</u>	
	Element 6: Minimum cost/byte	0-255, <u>0</u>	
	Element 7: Maximum cost/byte	0-255, <u>0</u>	
	Element 8: Minimum security for line	* <b>NONSECURE</b> , *PKTSWTNET, *UNDGRDCBL, *SECURECND, *GUARDCND, *ENCRYPTED, *MAX	
	Element 9: Maximum security for line	*NONSECURE, *PKTSWTNET, *UNDGRDCBL, *SECURECND, *GUARDCND, *ENCRYPTED, * <b>MAX</b>	
	Element 10: Minimum propagation delay	* <b>MIN</b> , *LAN, *TELEPHONE, *PKTSWTNET, *SATELLITE, *MAX	
	Element 11: Maximum propagation delay	*MIN, *LAN, * <b>TELEPHONE</b> , *PKTSWTNET, *SATELLITE, *MAX	
	Element 12: Minimum user-defined 1	0-255, <u>0</u>	
	Element 13: Maximum user-defined 1	0-255, <u>255</u>	
	Element 14: Minimum user-defined 2	0-255, <u>0</u>	
	Element 15: Maximum user-defined 2	0-255, <u>255</u>	
	Element 16: Minimum user-defined 3	0-255, <u>0</u>	
Element 17: Maximum user-defined 3	0-255, <u>255</u>		
ROW4NODE	Row 4 for nodes	<i>Element list</i>	Optional
	Element 1: Node row weight	0-255, <u>40</u>	
	Element 2: Min route addition resistance	0-255, <u>0</u>	
	Element 3: Max route addition resistance	0-255, <u>127</u>	
	Element 4: Minimum congestion for node	* <b>LOW</b> , *HIGH	
	Element 5: Maximum congestion for node	* <b>LOW</b> , *HIGH	

Keyword	Description	Choices	Notes
ROW5LINE	Row 5 for lines	<i>Element list</i>	Optional
	Element 1: Line row weight	0-255, <u>150</u>	
	Element 2: Minimum link speed	*MIN, 1200, 2400, 4800, 7200, 9600, 14400, <b>19200</b> , 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, *MAX	
	Element 3: Maximum link speed	*MIN, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, * <b>MAX</b>	
	Element 4: Minimum cost/connect time	0-255, <u>0</u>	
	Element 5: Maximum cost/connect time	0-255, <u>0</u>	
	Element 6: Minimum cost/byte	0-255, <u>0</u>	
	Element 7: Maximum cost/byte	0-255, <u>0</u>	
	Element 8: Minimum security for line	* <b>NONSECURE</b> , *PKTSWTNET, *UNDGRDCBL, *SECURECND, *GUARDCND, *ENCRYPTED, *MAX	
	Element 9: Maximum security for line	*NONSECURE, *PKTSWTNET, *UNDGRDCBL, *SECURECND, *GUARDCND, *ENCRYPTED, * <b>MAX</b>	
	Element 10: Minimum propagation delay	* <b>MIN</b> , *LAN, *TELEPHONE, *PKTSWTNET, *SATELLITE, *MAX	
	Element 11: Maximum propagation delay	*MIN, *LAN, *TELEPHONE, * <b>PKTSWTNET</b> , *SATELLITE, *MAX	
	Element 12: Minimum user-defined 1	0-255, <u>0</u>	
	Element 13: Maximum user-defined 1	0-255, <u>255</u>	
	Element 14: Minimum user-defined 2	0-255, <u>0</u>	
	Element 15: Maximum user-defined 2	0-255, <u>255</u>	
	Element 16: Minimum user-defined 3	0-255, <u>0</u>	
Element 17: Maximum user-defined 3	0-255, <u>255</u>		
ROW5NODE	Row 5 for nodes	<i>Element list</i>	Optional
	Element 1: Node row weight	0-255, <u>80</u>	
	Element 2: Min route addition resistance	0-255, <u>0</u>	
	Element 3: Max route addition resistance	0-255, <u>159</u>	
	Element 4: Minimum congestion for node	* <b>LOW</b> , *HIGH	
	Element 5: Maximum congestion for node	* <b>LOW</b> , *HIGH	



Keyword	Description	Choices	Notes
ROW6LINE	Row 6 for lines	<i>Element list</i>	Optional
	Element 1: Line row weight	0-255, <u>180</u>	
	Element 2: Minimum link speed	*MIN, 1200, 2400, 4800, 7200, <b>9600</b> , 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, *MAX	
	Element 3: Maximum link speed	*MIN, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, *MAX	
	Element 4: Minimum cost/connect time	0-255, <u>0</u>	
	Element 5: Maximum cost/connect time	0-255, <u>128</u>	
	Element 6: Minimum cost/byte	0-255, <u>0</u>	
	Element 7: Maximum cost/byte	0-255, <u>128</u>	
	Element 8: Minimum security for line	*NONSECURE, *PKTSWTNET, *UNDGRDCBL, *SECURECND, *GUARDCND, *ENCRYPTED, *MAX	
	Element 9: Maximum security for line	*NONSECURE, *PKTSWTNET, *UNDGRDCBL, *SECURECND, *GUARDCND, *ENCRYPTED, *MAX	
	Element 10: Minimum propagation delay	*MIN, *LAN, *TELEPHONE, *PKTSWTNET, *SATELLITE, *MAX	
	Element 11: Maximum propagation delay	*MIN, *LAN, *TELEPHONE, *PKTSWTNET, *SATELLITE, *MAX	
	Element 12: Minimum user-defined 1	0-255, <u>0</u>	
	Element 13: Maximum user-defined 1	0-255, <u>255</u>	
	Element 14: Minimum user-defined 2	0-255, <u>0</u>	
	Element 15: Maximum user-defined 2	0-255, <u>255</u>	
	Element 16: Minimum user-defined 3	0-255, <u>0</u>	
Element 17: Maximum user-defined 3	0-255, <u>255</u>		
ROW6NODE	Row 6 for nodes	<i>Element list</i>	Optional
	Element 1: Node row weight	0-255, <u>100</u>	
	Element 2: Min route addition resistance	0-255, <u>0</u>	
	Element 3: Max route addition resistance	0-255, <u>191</u>	
	Element 4: Minimum congestion for node	*LOW, *HIGH	
	Element 5: Maximum congestion for node	*LOW, *HIGH	

Keyword	Description	Choices	Notes
ROW7LINE	Row 7 for lines	<i>Element list</i>	Optional
	Element 1: Line row weight	0-255, <u>210</u>	
	Element 2: Minimum link speed	*MIN, 1200, 2400, <b>4800</b> , 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, *MAX	
	Element 3: Maximum link speed	*MIN, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, * <b>MAX</b>	
	Element 4: Minimum cost/connect time	0-255, <u>0</u>	
	Element 5: Maximum cost/connect time	0-255, <u>196</u>	
	Element 6: Minimum cost/byte	0-255, <u>0</u>	
	Element 7: Maximum cost/byte	0-255, <u>196</u>	
	Element 8: Minimum security for line	* <b>NONSECURE</b> , *PKTSWTNET, *UNDGRDCBL, *SECURECND, *GUARDCND, *ENCRYPTED, *MAX	
	Element 9: Maximum security for line	*NONSECURE, *PKTSWTNET, *UNDGRDCBL, *SECURECND, *GUARDCND, *ENCRYPTED, * <b>MAX</b>	
	Element 10: Minimum propagation delay	* <b>MIN</b> , *LAN, *TELEPHONE, *PKTSWTNET, *SATELLITE, *MAX	
	Element 11: Maximum propagation delay	*MIN, *LAN, *TELEPHONE, *PKTSWTNET, *SATELLITE, * <b>MAX</b>	
	Element 12: Minimum user-defined 1	0-255, <u>0</u>	
	Element 13: Maximum user-defined 1	0-255, <u>255</u>	
	Element 14: Minimum user-defined 2	0-255, <u>0</u>	
	Element 15: Maximum user-defined 2	0-255, <u>255</u>	
	Element 16: Minimum user-defined 3	0-255, <u>0</u>	
Element 17: Maximum user-defined 3	0-255, <u>255</u>		
ROW7NODE	Row 7 for nodes	<i>Element list</i>	Optional
	Element 1: Node row weight	0-255, <u>120</u>	
	Element 2: Min route addition resistance	0-255, <u>0</u>	
	Element 3: Max route addition resistance	0-255, <u>223</u>	
	Element 4: Minimum congestion for node	* <b>LOW</b> , *HIGH	
	Element 5: Maximum congestion for node	* <b>HIGH</b> , *LOW	

Keyword	Description	Choices	Notes
ROW8LINE	Row 8 for lines	<i>Element list</i>	Optional
	Element 1: Line row weight	0-255, <u>240</u>	
	Element 2: Minimum link speed	* <b>MIN</b> , 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, * <b>MAX</b>	
	Element 3: Maximum link speed	* <b>MIN</b> , 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, * <b>MAX</b>	
	Element 4: Minimum cost/connect time	0-255, <u>0</u>	
	Element 5: Maximum cost/connect time	0-255, <u>255</u>	
	Element 6: Minimum cost/byte	0-255, <u>0</u>	
	Element 7: Maximum cost/byte	0-255, <u>255</u>	
	Element 8: Minimum security for line	* <b>NONSECURE</b> , *PKTSWTNET, *UNDGRDCBL, *SECURECND, *GUARDCND, *ENCRYPTED, * <b>MAX</b>	
	Element 9: Maximum security for line	* <b>NONSECURE</b> , *PKTSWTNET, *UNDGRDCBL, *SECURECND, *GUARDCND, *ENCRYPTED, * <b>MAX</b>	
	Element 10: Minimum propagation delay	* <b>MIN</b> , *LAN, *TELEPHONE, *PKTSWTNET, *SATELLITE, * <b>MAX</b>	
	Element 11: Maximum propagation delay	* <b>MIN</b> , *LAN, *TELEPHONE, *PKTSWTNET, *SATELLITE, * <b>MAX</b>	
	Element 12: Minimum user-defined 1	0-255, <u>0</u>	
	Element 13: Maximum user-defined 1	0-255, <u>255</u>	
	Element 14: Minimum user-defined 2	0-255, <u>0</u>	
	Element 15: Maximum user-defined 2	0-255, <u>255</u>	
	Element 16: Minimum user-defined 3	0-255, <u>0</u>	
Element 17: Maximum user-defined 3	0-255, <u>255</u>		
ROW8NODE	Row 8 for nodes	<i>Element list</i>	Optional
	Element 1: Node row weight	0-255, <u>150</u>	
	Element 2: Min route addition resistance	0-255, <u>0</u>	
	Element 3: Max route addition resistance	0-255, <u>255</u>	
	Element 4: Minimum congestion for node	* <b>LOW</b> , * <b>HIGH</b>	
	Element 5: Maximum congestion for node	* <b>HIGH</b> , * <b>LOW</b>	
TEXT	Text 'description'	<i>Character value</i> , * <b>BLANK</b>	Optional
AUT	Authority	<i>Name</i> , * <b>CHANGE</b> , *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

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## Class-of-service description (COSD)

Specifies the name of the class-of-service description.

This is a required parameter.

This name ranges from 1 to 8 characters.

This is a required parameter.

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## Transmission priority (TMSPTY)

Specifies the transmission priority for this class-of-service description.

**\*LOW** The lowest transmission priority is used for this class-of-service description.

**\*MED** Medium transmission priority is used for this class-of-service description.

**\*HIGH**  
The highest transmission priority is used for this class-of-service description.

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## Row 1 for lines (ROW1LINE)

Specifies the list of line-related criteria used for the first through eighth rows of the class-of-service description. Each row describes the attributes of the line connection between two nodes in the APPN network. The rows are examined in order from first through eighth to attempt to define a network routing path. The list shows a value for each of the following elements.

### *line-weighting-factor*

Specifies the relative weight of this row for line connections. The weight ranges from 0 to 255. The more desirable line connections are assigned the lower weights.

### *minimum-link-speed*

Specifies the minimum link speed for a line connection that is accepted by this line row criteria. Valid values are \*MIN, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, or \*MAX bps.

### *maximum-link-speed*

Specifies the maximum link speed for a line connection that is accepted by this line row criteria. Valid values are \*MIN, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, or \*MAX bps.

### *minimum-cost/connect-time*

Specifies the minimum relative cost per connect time that is accepted by this line row criteria. Valid costs range from 0 to 255. 0 implies a low cost, while 255 indicates a high cost.

***maximum-cost/connect-time***

Specifies the maximum relative cost per connect time that is accepted by this line row criteria. Valid costs range from 0 to 255. 0 implies a low cost, while 255 indicates a high cost.

***minimum-cost/byte***

Specifies the minimum relative cost per byte that is accepted by this line row criteria. Valid costs range from 0 to 255. 0 implies a low cost, while 255 indicates a high cost.

***maximum-cost/byte***

Specifies the maximum relative cost per byte that is accepted by this line row criteria. Valid costs range from 0 to 255. 0 implies a low cost, while 255 indicates a high cost.

***minimum-security***

Specifies the minimum security level that is accepted by this line row criteria. Valid values are in order from least to most secure.

- \*NONSECURE (No Security)
- \*PKTSWTNET (Packet Switched Network)
- \*UNDGRDCBL (Underground Cable)
- \*SECURECND (Secure Conduit)
- \*GUARDCND (Guarded Conduit)
- \*ENCRYPTED (Encrypted Line)
- \*MAX (Guarded Conduit, protected against physical and radiation tapping)

***maximum-security***

Specifies the maximum security level that is accepted by this line row criteria. Valid values are in order from least to most secure.

- \*NONSECURE (No Security)
- \*PKTSWTNET (Packet Switched Network)
- \*UNDGRDCBL (Underground Cable)
- \*SECURECND (Secure Conduit)
- \*GUARDCND (Guarded Conduit)
- \*ENCRYPTED (Encrypted Line)
- \*MAX (Guarded Conduit, protected against physical and radiation tapping)

***minimum-propagation-delay***

Specifies the minimum propagation delay that is accepted by this line row criteria. Valid values are in order from least to longest delay.

- \*MIN (Minimum propagation delay)
- \*LAN (Propagation delay using a local area network)
- \*TELEPHONE (Propagation delay using telephone lines)
- \*PKTSWTNET (Propagation delay using a packet switched network)
- \*SATELLITE (Propagation delay using satellite communications)
- \*MAX (Maximum propagation delay)

***maximum-propagation-delay***

Specifies the maximum propagation delay that is accepted by this line row criteria. Valid values are in order from least to longest delay.

- \*MIN (Minimum propagation delay)
- \*LAN (Propagation delay using a local area network)
- \*TELEPHONE (Propagation delay using telephone lines)
- \*PKTSWTNET (Propagation delay using a packet switched network)
- \*SATELLITE (Propagation delay using satellite communications)

- \*MAX (Maximum propagation delay)

#### *user-defined-fields*

Specify your own line connection criteria with three user-defined fields (with minimum and maximum ranges for each field). Valid values are 0 to 255.

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## Row 1 for nodes (ROW1NODE)

Specifies the list of node-related criteria used for the first through eighth rows of the class-of-service description. This row describes the attributes of a node in the APPN network. The rows are examined in order from the first through eighth rows to define a network routing path. The list shows a value for each of the following elements.

#### *node-weighting-factor*

Specifies the relative weight of this row for nodes. The weight ranges from 0 to 255. The more desirable nodes are assigned the lower weights.

#### *route-addition-resistance-minimum*

Specifies the minimum route addition resistance accepted by this node row criteria. Valid values range from 0 to 255. 0 implies a low resistance, and 255 indicates a high resistance.

#### *route-addition-resistance-maximum*

Specifies the maximum route addition resistance accepted by this node row criteria. Valid values range from 0 to 255. 0 implies a low resistance, and 255 indicates a high resistance.

#### *congestion-minimum*

Specifies the minimum congestion level accepted by this node criteria. Valid values are \*LOW (low congestion level) or \*HIGH (high congestion level).

#### *congestion-maximum*

Specifies the maximum congestion level accepted by this node criteria. Valid values are \*LOW (low congestion level) or \*HIGH (high congestion level).

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## Row 2 for lines (ROW2LINE)

Specifies the list of line-related criteria used for the first through eighth rows of the class-of-service description. Each row describes the attributes of the line connection between two nodes in the APPN network. The rows are examined in order from first through eighth to attempt to define a network routing path. The list shows a value for each of the following elements.

#### *line-weighting-factor*

Specifies the relative weight of this row for line connections. The weight ranges from 0 to 255. The more desirable line connections are assigned the lower weights.

#### *minimum-link-speed*

Specifies the minimum link speed for a line connection that is accepted by this line row criteria. Valid values are \*MIN, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, or \*MAX bps.

#### *maximum-link-speed*

Specifies the maximum link speed for a line connection that is accepted by this line row criteria. Valid values are \*MIN, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000,

614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, or \*MAX bps.

***minimum-cost/connect-time***

Specifies the minimum relative cost per connect time that is accepted by this line row criteria. Valid costs range from 0 to 255. 0 implies a low cost, while 255 indicates a high cost.

***maximum-cost/connect-time***

Specifies the maximum relative cost per connect time that is accepted by this line row criteria. Valid costs range from 0 to 255. 0 implies a low cost, while 255 indicates a high cost.

***minimum-cost/byte***

Specifies the minimum relative cost per byte that is accepted by this line row criteria. Valid costs range from 0 to 255. 0 implies a low cost, while 255 indicates a high cost.

***maximum-cost/byte***

Specifies the maximum relative cost per byte that is accepted by this line row criteria. Valid costs range from 0 to 255. 0 implies a low cost, while 255 indicates a high cost.

***minimum-security***

Specifies the minimum security level that is accepted by this line row criteria. Valid values are in order from least to most secure.

- \*NONSECURE (No Security)
- \*PKTSWTNET (Packet Switched Network)
- \*UNDGRDCBL (Underground Cable)
- \*SECURECND (Secure Conduit)
- \*GUARDCND (Guarded Conduit)
- \*ENCRYPTED (Encrypted Line)
- \*MAX (Guarded Conduit, protected against physical and radiation tapping)

***maximum-security***

Specifies the maximum security level that is accepted by this line row criteria. Valid values are in order from least to most secure.

- \*NONSECURE (No Security)
- \*PKTSWTNET (Packet Switched Network)
- \*UNDGRDCBL (Underground Cable)
- \*SECURECND (Secure Conduit)
- \*GUARDCND (Guarded Conduit)
- \*ENCRYPTED (Encrypted Line)
- \*MAX (Guarded Conduit, protected against physical and radiation tapping)

***minimum-propagation-delay***

Specifies the minimum propagation delay that is accepted by this line row criteria. Valid values are in order from least to longest delay.

- \*MIN (Minimum propagation delay)
- \*LAN (Propagation delay using a local area network)
- \*TELEPHONE (Propagation delay using telephone lines)
- \*PKTSWTNET (Propagation delay using a packet switched network)
- \*SATELLITE (Propagation delay using satellite communications)
- \*MAX (Maximum propagation delay)

***maximum-propagation-delay***

Specifies the maximum propagation delay that is accepted by this line row criteria. Valid values are in order from least to longest delay.

- \*MIN (Minimum propagation delay)

- \*LAN (Propagation delay using a local area network)
- \*TELEPHONE (Propagation delay using telephone lines)
- \*PKTSWTNET (Propagation delay using a packet switched network)
- \*SATELLITE (Propagation delay using satellite communications)
- \*MAX (Maximum propagation delay)

***user-defined-fields***

Specify your own line connection criteria with three user-defined fields (with minimum and maximum ranges for each field). Valid values are 0 to 255.

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## Row 2 for nodes (ROW2NODE)

Specifies the list of node-related criteria used for the first through eighth rows of the class-of-service description. This row describes the attributes of a node in the APPN network. The rows are examined in order from the first through eighth rows to define a network routing path. The list shows a value for each of the following elements.

***node-weighting-factor***

Specifies the relative weight of this row for nodes. The weight ranges from 0 to 255. The more desirable nodes are assigned the lower weights.

***route-addition-resistance-minimum***

Specifies the minimum route addition resistance accepted by this node row criteria. Valid values range from 0 to 255. 0 implies a low resistance, and 255 indicates a high resistance.

***route-addition-resistance-maximum***

Specifies the maximum route addition resistance accepted by this node row criteria. Valid values range from 0 to 255. 0 implies a low resistance, and 255 indicates a high resistance.

***congestion-minimum***

Specifies the minimum congestion level accepted by this node criteria. Valid values are \*LOW (low congestion level) or \*HIGH (high congestion level).

***congestion-maximum***

Specifies the maximum congestion level accepted by this node criteria. Valid values are \*LOW (low congestion level) or \*HIGH (high congestion level).

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## Row 3 for lines (ROW3LINE)

Specifies the list of line-related criteria used for the first through eighth rows of the class-of-service description. Each row describes the attributes of the line connection between two nodes in the APPN network. The rows are examined in order from first through eighth to attempt to define a network routing path. The list shows a value for each of the following elements.

***line-weighting-factor***

Specifies the relative weight of this row for line connections. The weight ranges from 0 to 255. The more desirable line connections are assigned the lower weights.

***minimum-link-speed***

Specifies the minimum link speed for a line connection that is accepted by this line row criteria. Valid values are \*MIN, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, or \*MAX bps.



***maximum-link-speed***

Specifies the maximum link speed for a line connection that is accepted by this line row criteria. Valid values are \*MIN, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, or \*MAX bps.

***minimum-cost/connect-time***

Specifies the minimum relative cost per connect time that is accepted by this line row criteria. Valid costs range from 0 to 255. 0 implies a low cost, while 255 indicates a high cost.

***maximum-cost/connect-time***

Specifies the maximum relative cost per connect time that is accepted by this line row criteria. Valid costs range from 0 to 255. 0 implies a low cost, while 255 indicates a high cost.

***minimum-cost/byte***

Specifies the minimum relative cost per byte that is accepted by this line row criteria. Valid costs range from 0 to 255. 0 implies a low cost, while 255 indicates a high cost.

***maximum-cost/byte***

Specifies the maximum relative cost per byte that is accepted by this line row criteria. Valid costs range from 0 to 255. 0 implies a low cost, while 255 indicates a high cost.

***minimum-security***

Specifies the minimum security level that is accepted by this line row criteria. Valid values are in order from least to most secure.

- \*NONSECURE (No Security)
- \*PKTSWTNET (Packet Switched Network)
- \*UNDGRDCBL (Underground Cable)
- \*SECURECND (Secure Conduit)
- \*GUARDCND (Guarded Conduit)
- \*ENCRYPTED (Encrypted Line)
- \*MAX (Guarded Conduit, protected against physical and radiation tapping)

***maximum-security***

Specifies the maximum security level that is accepted by this line row criteria. Valid values are in order from least to most secure.

- \*NONSECURE (No Security)
- \*PKTSWTNET (Packet Switched Network)
- \*UNDGRDCBL (Underground Cable)
- \*SECURECND (Secure Conduit)
- \*GUARDCND (Guarded Conduit)
- \*ENCRYPTED (Encrypted Line)
- \*MAX (Guarded Conduit, protected against physical and radiation tapping)

***minimum-propagation-delay***

Specifies the minimum propagation delay that is accepted by this line row criteria. Valid values are in order from least to longest delay.

- \*MIN (Minimum propagation delay)
- \*LAN (Propagation delay using a local area network)
- \*TELEPHONE (Propagation delay using telephone lines)
- \*PKTSWTNET (Propagation delay using a packet switched network)
- \*SATELLITE (Propagation delay using satellite communications)
- \*MAX (Maximum propagation delay)

### *maximum-propagation-delay*

Specifies the maximum propagation delay that is accepted by this line row criteria. Valid values are in order from least to longest delay.

- \*MIN (Minimum propagation delay)
- \*LAN (Propagation delay using a local area network)
- \*TELEPHONE (Propagation delay using telephone lines)
- \*PKTSWTNET (Propagation delay using a packet switched network)
- \*SATELLITE (Propagation delay using satellite communications)
- \*MAX (Maximum propagation delay)

### *user-defined-fields*

Specify your own line connection criteria with three user-defined fields (with minimum and maximum ranges for each field). Valid values are 0 to 255.

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## Row 3 for nodes (ROW3NODE)

Specifies the list of node-related criteria used for the first through eighth rows of the class-of-service description. This row describes the attributes of a node in the APPN network. The rows are examined in order from the first through eighth rows to define a network routing path. The list shows a value for each of the following elements.

### *node-weighting-factor*

Specifies the relative weight of this row for nodes. The weight ranges from 0 to 255. The more desirable nodes are assigned the lower weights.

### *route-addition-resistance-minimum*

Specifies the minimum route addition resistance accepted by this node row criteria. Valid values range from 0 to 255. 0 implies a low resistance, and 255 indicates a high resistance.

### *route-addition-resistance-maximum*

Specifies the maximum route addition resistance accepted by this node row criteria. Valid values range from 0 to 255. 0 implies a low resistance, and 255 indicates a high resistance.

### *congestion-minimum*

Specifies the minimum congestion level accepted by this node criteria. Valid values are \*LOW (low congestion level) or \*HIGH (high congestion level).

### *congestion-maximum*

Specifies the maximum congestion level accepted by this node criteria. Valid values are \*LOW (low congestion level) or \*HIGH (high congestion level).

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## Row 4 for lines (ROW4LINE)

Specifies the list of line-related criteria used for the first through eighth rows of the class-of-service description. Each row describes the attributes of the line connection between two nodes in the APPN network. The rows are examined in order from first through eighth to attempt to define a network routing path. The list shows a value for each of the following elements.

### *line-weighting-factor*

Specifies the relative weight of this row for line connections. The weight ranges from 0 to 255. The more desirable line connections are assigned the lower weights.

***minimum-link-speed***

Specifies the minimum link speed for a line connection that is accepted by this line row criteria. Valid values are \*MIN, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, or \*MAX bps.

***maximum-link-speed***

Specifies the maximum link speed for a line connection that is accepted by this line row criteria. Valid values are \*MIN, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, or \*MAX bps.

***minimum-cost/connect-time***

Specifies the minimum relative cost per connect time that is accepted by this line row criteria. Valid costs range from 0 to 255. 0 implies a low cost, while 255 indicates a high cost.

***maximum-cost/connect-time***

Specifies the maximum relative cost per connect time that is accepted by this line row criteria. Valid costs range from 0 to 255. 0 implies a low cost, while 255 indicates a high cost.

***minimum-cost/byte***

Specifies the minimum relative cost per byte that is accepted by this line row criteria. Valid costs range from 0 to 255. 0 implies a low cost, while 255 indicates a high cost.

***maximum-cost/byte***

Specifies the maximum relative cost per byte that is accepted by this line row criteria. Valid costs range from 0 to 255. 0 implies a low cost, while 255 indicates a high cost.

***minimum-security***

Specifies the minimum security level that is accepted by this line row criteria. Valid values are in order from least to most secure.

- \*NONSECURE (No Security)
- \*PKTSWTNET (Packet Switched Network)
- \*UNDGRDCBL (Underground Cable)
- \*SECURECND (Secure Conduit)
- \*GUARDCND (Guarded Conduit)
- \*ENCRYPTED (Encrypted Line)
- \*MAX (Guarded Conduit, protected against physical and radiation tapping)

***maximum-security***

Specifies the maximum security level that is accepted by this line row criteria. Valid values are in order from least to most secure.

- \*NONSECURE (No Security)
- \*PKTSWTNET (Packet Switched Network)
- \*UNDGRDCBL (Underground Cable)
- \*SECURECND (Secure Conduit)
- \*GUARDCND (Guarded Conduit)
- \*ENCRYPTED (Encrypted Line)
- \*MAX (Guarded Conduit, protected against physical and radiation tapping)

***minimum-propagation-delay***

Specifies the minimum propagation delay that is accepted by this line row criteria. Valid values are in order from least to longest delay.

- \*MIN (Minimum propagation delay)

- \*LAN (Propagation delay using a local area network)
- \*TELEPHONE (Propagation delay using telephone lines)
- \*PKTSWTNET (Propagation delay using a packet switched network)
- \*SATELLITE (Propagation delay using satellite communications)
- \*MAX (Maximum propagation delay)

***maximum-propagation-delay***

Specifies the maximum propagation delay that is accepted by this line row criteria. Valid values are in order from least to longest delay.

- \*MIN (Minimum propagation delay)
- \*LAN (Propagation delay using a local area network)
- \*TELEPHONE (Propagation delay using telephone lines)
- \*PKTSWTNET (Propagation delay using a packet switched network)
- \*SATELLITE (Propagation delay using satellite communications)
- \*MAX (Maximum propagation delay)

***user-defined-fields***

Specify your own line connection criteria with three user-defined fields (with minimum and maximum ranges for each field). Valid values are 0 to 255.

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## **Row 4 for nodes (ROW4NODE)**

Specifies the list of node-related criteria used for the first through eighth rows of the class-of-service description. This row describes the attributes of a node in the APPN network. The rows are examined in order from the first through eighth rows to define a network routing path. The list shows a value for each of the following elements.

***node-weighting-factor***

Specifies the relative weight of this row for nodes. The weight ranges from 0 to 255. The more desirable nodes are assigned the lower weights.

***route-addition-resistance-minimum***

Specifies the minimum route addition resistance accepted by this node row criteria. Valid values range from 0 to 255. 0 implies a low resistance, and 255 indicates a high resistance.

***route-addition-resistance-maximum***

Specifies the maximum route addition resistance accepted by this node row criteria. Valid values range from 0 to 255. 0 implies a low resistance, and 255 indicates a high resistance.

***congestion-minimum***

Specifies the minimum congestion level accepted by this node criteria. Valid values are \*LOW (low congestion level) or \*HIGH (high congestion level).

***congestion-maximum***

Specifies the maximum congestion level accepted by this node criteria. Valid values are \*LOW (low congestion level) or \*HIGH (high congestion level).

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## Row 5 for lines (ROW5LINE)

Specifies the list of line-related criteria used for the first through eighth rows of the class-of-service description. Each row describes the attributes of the line connection between two nodes in the APPN network. The rows are examined in order from first through eighth to attempt to define a network routing path. The list shows a value for each of the following elements.

### *line-weighting-factor*

Specifies the relative weight of this row for line connections. The weight ranges from 0 to 255. The more desirable line connections are assigned the lower weights.

### *minimum-link-speed*

Specifies the minimum link speed for a line connection that is accepted by this line row criteria. Valid values are \*MIN, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, or \*MAX bps.

### *maximum-link-speed*

Specifies the maximum link speed for a line connection that is accepted by this line row criteria. Valid values are \*MIN, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, or \*MAX bps.

### *minimum-cost/connect-time*

Specifies the minimum relative cost per connect time that is accepted by this line row criteria. Valid costs range from 0 to 255. 0 implies a low cost, while 255 indicates a high cost.

### *maximum-cost/connect-time*

Specifies the maximum relative cost per connect time that is accepted by this line row criteria. Valid costs range from 0 to 255. 0 implies a low cost, while 255 indicates a high cost.

### *minimum-cost/byte*

Specifies the minimum relative cost per byte that is accepted by this line row criteria. Valid costs range from 0 to 255. 0 implies a low cost, while 255 indicates a high cost.

### *maximum-cost/byte*

Specifies the maximum relative cost per byte that is accepted by this line row criteria. Valid costs range from 0 to 255. 0 implies a low cost, while 255 indicates a high cost.

### *minimum-security*

Specifies the minimum security level that is accepted by this line row criteria. Valid values are in order from least to most secure.

- \*NONSECURE (No Security)
- \*PKTSWTNET (Packet Switched Network)
- \*UNDGRDCBL (Underground Cable)
- \*SECURECND (Secure Conduit)
- \*GUARDCND (Guarded Conduit)
- \*ENCRYPTED (Encrypted Line)
- \*MAX (Guarded Conduit, protected against physical and radiation tapping)

### *maximum-security*

Specifies the maximum security level that is accepted by this line row criteria. Valid values are in order from least to most secure.

- \*NONSECURE (No Security)
- \*PKTSWTNET (Packet Switched Network)
- \*UNDGRDCBL (Underground Cable)

- \*SECURECND (Secure Conduit)
- \*GUARDCND (Guarded Conduit)
- \*ENCRYPTED (Encrypted Line)
- \*MAX (Guarded Conduit, protected against physical and radiation tapping)

***minimum-propagation-delay***

Specifies the minimum propagation delay that is accepted by this line row criteria. Valid values are in order from least to longest delay.

- \*MIN (Minimum propagation delay)
- \*LAN (Propagation delay using a local area network)
- \*TELEPHONE (Propagation delay using telephone lines)
- \*PKTSWTNET (Propagation delay using a packet switched network)
- \*SATELLITE (Propagation delay using satellite communications)
- \*MAX (Maximum propagation delay)

***maximum-propagation-delay***

Specifies the maximum propagation delay that is accepted by this line row criteria. Valid values are in order from least to longest delay.

- \*MIN (Minimum propagation delay)
- \*LAN (Propagation delay using a local area network)
- \*TELEPHONE (Propagation delay using telephone lines)
- \*PKTSWTNET (Propagation delay using a packet switched network)
- \*SATELLITE (Propagation delay using satellite communications)
- \*MAX (Maximum propagation delay)

***user-defined-fields***

Specify your own line connection criteria with three user-defined fields (with minimum and maximum ranges for each field). Valid values are 0 to 255.

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## Row 5 for nodes (ROW5NODE)

Specifies the list of node-related criteria used for the first through eighth rows of the class-of-service description. This row describes the attributes of a node in the APPN network. The rows are examined in order from the first through eighth rows to define a network routing path. The list shows a value for each of the following elements.

***node-weighting-factor***

Specifies the relative weight of this row for nodes. The weight ranges from 0 to 255. The more desirable nodes are assigned the lower weights.

***route-addition-resistance-minimum***

Specifies the minimum route addition resistance accepted by this node row criteria. Valid values range from 0 to 255. 0 implies a low resistance, and 255 indicates a high resistance.

***route-addition-resistance-maximum***

Specifies the maximum route addition resistance accepted by this node row criteria. Valid values range from 0 to 255. 0 implies a low resistance, and 255 indicates a high resistance.

***congestion-minimum***

Specifies the minimum congestion level accepted by this node criteria. Valid values are \*LOW (low congestion level) or \*HIGH (high congestion level).

### *congestion-maximum*

Specifies the maximum congestion level accepted by this node criteria. Valid values are \*LOW (low congestion level) or \*HIGH (high congestion level).

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## **Row 6 for lines (ROW6LINE)**

Specifies the list of line-related criteria used for the first through eighth rows of the class-of-service description. Each row describes the attributes of the line connection between two nodes in the APPN network. The rows are examined in order from first through eighth to attempt to define a network routing path. The list shows a value for each of the following elements.

### *line-weighting-factor*

Specifies the relative weight of this row for line connections. The weight ranges from 0 to 255. The more desirable line connections are assigned the lower weights.

### *minimum-link-speed*

Specifies the minimum link speed for a line connection that is accepted by this line row criteria. Valid values are \*MIN, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, or \*MAX bps.

### *maximum-link-speed*

Specifies the maximum link speed for a line connection that is accepted by this line row criteria. Valid values are \*MIN, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, or \*MAX bps.

### *minimum-cost/connect-time*

Specifies the minimum relative cost per connect time that is accepted by this line row criteria. Valid costs range from 0 to 255. 0 implies a low cost, while 255 indicates a high cost.

### *maximum-cost/connect-time*

Specifies the maximum relative cost per connect time that is accepted by this line row criteria. Valid costs range from 0 to 255. 0 implies a low cost, while 255 indicates a high cost.

### *minimum-cost/byte*

Specifies the minimum relative cost per byte that is accepted by this line row criteria. Valid costs range from 0 to 255. 0 implies a low cost, while 255 indicates a high cost.

### *maximum-cost/byte*

Specifies the maximum relative cost per byte that is accepted by this line row criteria. Valid costs range from 0 to 255. 0 implies a low cost, while 255 indicates a high cost.

### *minimum-security*

Specifies the minimum security level that is accepted by this line row criteria. Valid values are in order from least to most secure.

- \*NONSECURE (No Security)
- \*PKTSWTNET (Packet Switched Network)
- \*UNDGRDCBL (Underground Cable)
- \*SECURECND (Secure Conduit)
- \*GUARDCND (Guarded Conduit)
- \*ENCRYPTED (Encrypted Line)
- \*MAX (Guarded Conduit, protected against physical and radiation tapping)

### *maximum-security*

Specifies the maximum security level that is accepted by this line row criteria. Valid values are in order from least to most secure.

- \*NONSECURE (No Security)
- \*PKTSWTNET (Packet Switched Network)
- \*UNDGRDCBL (Underground Cable)
- \*SECURECND (Secure Conduit)
- \*GUARDCND (Guarded Conduit)
- \*ENCRYPTED (Encrypted Line)
- \*MAX (Guarded Conduit, protected against physical and radiation tapping)

### *minimum-propagation-delay*

Specifies the minimum propagation delay that is accepted by this line row criteria. Valid values are in order from least to longest delay.

- \*MIN (Minimum propagation delay)
- \*LAN (Propagation delay using a local area network)
- \*TELEPHONE (Propagation delay using telephone lines)
- \*PKTSWTNET (Propagation delay using a packet switched network)
- \*SATELLITE (Propagation delay using satellite communications)
- \*MAX (Maximum propagation delay)

### *maximum-propagation-delay*

Specifies the maximum propagation delay that is accepted by this line row criteria. Valid values are in order from least to longest delay.

- \*MIN (Minimum propagation delay)
- \*LAN (Propagation delay using a local area network)
- \*TELEPHONE (Propagation delay using telephone lines)
- \*PKTSWTNET (Propagation delay using a packet switched network)
- \*SATELLITE (Propagation delay using satellite communications)
- \*MAX (Maximum propagation delay)

### *user-defined-fields*

Specify your own line connection criteria with three user-defined fields (with minimum and maximum ranges for each field). Valid values are 0 to 255.

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## **Row 6 for nodes (ROW6NODE)**

Specifies the list of node-related criteria used for the first through eighth rows of the class-of-service description. This row describes the attributes of a node in the APPN network. The rows are examined in order from the first through eighth rows to define a network routing path. The list shows a value for each of the following elements.

### *node-weighting-factor*

Specifies the relative weight of this row for nodes. The weight ranges from 0 to 255. The more desirable nodes are assigned the lower weights.

### *route-addition-resistance-minimum*

Specifies the minimum route addition resistance accepted by this node row criteria. Valid values range from 0 to 255. 0 implies a low resistance, and 255 indicates a high resistance.



*route-addition-resistance-maximum*

Specifies the maximum route addition resistance accepted by this node row criteria. Valid values range from 0 to 255. 0 implies a low resistance, and 255 indicates a high resistance.

*congestion-minimum*

Specifies the minimum congestion level accepted by this node criteria. Valid values are \*LOW (low congestion level) or \*HIGH (high congestion level).

*congestion-maximum*

Specifies the maximum congestion level accepted by this node criteria. Valid values are \*LOW (low congestion level) or \*HIGH (high congestion level).

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## Row 7 for lines (ROW7LINE)

Specifies the list of line-related criteria used for the first through eighth rows of the class-of-service description. Each row describes the attributes of the line connection between two nodes in the APPN network. The rows are examined in order from first through eighth to attempt to define a network routing path. The list shows a value for each of the following elements.

*line-weighting-factor*

Specifies the relative weight of this row for line connections. The weight ranges from 0 to 255. The more desirable line connections are assigned the lower weights.

*minimum-link-speed*

Specifies the minimum link speed for a line connection that is accepted by this line row criteria. Valid values are \*MIN, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, or \*MAX bps.

*maximum-link-speed*

Specifies the maximum link speed for a line connection that is accepted by this line row criteria. Valid values are \*MIN, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, or \*MAX bps.

*minimum-cost/connect-time*

Specifies the minimum relative cost per connect time that is accepted by this line row criteria. Valid costs range from 0 to 255. 0 implies a low cost, while 255 indicates a high cost.

*maximum-cost/connect-time*

Specifies the maximum relative cost per connect time that is accepted by this line row criteria. Valid costs range from 0 to 255. 0 implies a low cost, while 255 indicates a high cost.

*minimum-cost/byte*

Specifies the minimum relative cost per byte that is accepted by this line row criteria. Valid costs range from 0 to 255. 0 implies a low cost, while 255 indicates a high cost.

*maximum-cost/byte*

Specifies the maximum relative cost per byte that is accepted by this line row criteria. Valid costs range from 0 to 255. 0 implies a low cost, while 255 indicates a high cost.

*minimum-security*

Specifies the minimum security level that is accepted by this line row criteria. Valid values are in order from least to most secure.

- \*NONSECURE (No Security)
- \*PKTSWTNET (Packet Switched Network)

- \*UNDGRDCBL (Underground Cable)
- \*SECURECND (Secure Conduit)
- \*GUARDCND (Guarded Conduit)
- \*ENCRYPTED (Encrypted Line)
- \*MAX (Guarded Conduit, protected against physical and radiation tapping)

***maximum-security***

Specifies the maximum security level that is accepted by this line row criteria. Valid values are in order from least to most secure.

- \*NONSECURE (No Security)
- \*PKTSWTNET (Packet Switched Network)
- \*UNDGRDCBL (Underground Cable)
- \*SECURECND (Secure Conduit)
- \*GUARDCND (Guarded Conduit)
- \*ENCRYPTED (Encrypted Line)
- \*MAX (Guarded Conduit, protected against physical and radiation tapping)

***minimum-propagation-delay***

Specifies the minimum propagation delay that is accepted by this line row criteria. Valid values are in order from least to longest delay.

- \*MIN (Minimum propagation delay)
- \*LAN (Propagation delay using a local area network)
- \*TELEPHONE (Propagation delay using telephone lines)
- \*PKTSWTNET (Propagation delay using a packet switched network)
- \*SATELLITE (Propagation delay using satellite communications)
- \*MAX (Maximum propagation delay)

***maximum-propagation-delay***

Specifies the maximum propagation delay that is accepted by this line row criteria. Valid values are in order from least to longest delay.

- \*MIN (Minimum propagation delay)
- \*LAN (Propagation delay using a local area network)
- \*TELEPHONE (Propagation delay using telephone lines)
- \*PKTSWTNET (Propagation delay using a packet switched network)
- \*SATELLITE (Propagation delay using satellite communications)
- \*MAX (Maximum propagation delay)

***user-defined-fields***

Specify your own line connection criteria with three user-defined fields (with minimum and maximum ranges for each field). Valid values are 0 to 255.

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## **Row 7 for nodes (ROW7NODE)**

Specifies the list of node-related criteria used for the first through eighth rows of the class-of-service description. This row describes the attributes of a node in the APPN network. The rows are examined in order from the first through eighth rows to define a network routing path. The list shows a value for each of the following elements.

*node-weighting-factor*

Specifies the relative weight of this row for nodes. The weight ranges from 0 to 255. The more desirable nodes are assigned the lower weights.

*route-addition-resistance-minimum*

Specifies the minimum route addition resistance accepted by this node row criteria. Valid values range from 0 to 255. 0 implies a low resistance, and 255 indicates a high resistance.

*route-addition-resistance-maximum*

Specifies the maximum route addition resistance accepted by this node row criteria. Valid values range from 0 to 255. 0 implies a low resistance, and 255 indicates a high resistance.

*congestion-minimum*

Specifies the minimum congestion level accepted by this node criteria. Valid values are \*LOW (low congestion level) or \*HIGH (high congestion level).

*congestion-maximum*

Specifies the maximum congestion level accepted by this node criteria. Valid values are \*LOW (low congestion level) or \*HIGH (high congestion level).

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## Row 8 for lines (ROW8LINE)

Specifies the list of line-related criteria used for the first through eighth rows of the class-of-service description. Each row describes the attributes of the line connection between two nodes in the APPN network. The rows are examined in order from first through eighth to attempt to define a network routing path. The list shows a value for each of the following elements.

*line-weighting-factor*

Specifies the relative weight of this row for line connections. The weight ranges from 0 to 255. The more desirable line connections are assigned the lower weights.

*minimum-link-speed*

Specifies the minimum link speed for a line connection that is accepted by this line row criteria. Valid values are \*MIN, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, or \*MAX bps.

*maximum-link-speed*

Specifies the maximum link speed for a line connection that is accepted by this line row criteria. Valid values are \*MIN, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, or \*MAX bps.

*minimum-cost/connect-time*

Specifies the minimum relative cost per connect time that is accepted by this line row criteria. Valid costs range from 0 to 255. 0 implies a low cost, while 255 indicates a high cost.

*maximum-cost/connect-time*

Specifies the maximum relative cost per connect time that is accepted by this line row criteria. Valid costs range from 0 to 255. 0 implies a low cost, while 255 indicates a high cost.

*minimum-cost/byte*

Specifies the minimum relative cost per byte that is accepted by this line row criteria. Valid costs range from 0 to 255. 0 implies a low cost, while 255 indicates a high cost.

### *maximum-cost/byte*

Specifies the maximum relative cost per byte that is accepted by this line row criteria. Valid costs range from 0 to 255. 0 implies a low cost, while 255 indicates a high cost.

### *minimum-security*

Specifies the minimum security level that is accepted by this line row criteria. Valid values are in order from least to most secure.

- \*NONSECURE (No Security)
- \*PKTSWTNET (Packet Switched Network)
- \*UNDGRDCBL (Underground Cable)
- \*SECURECND (Secure Conduit)
- \*GUARDCND (Guarded Conduit)
- \*ENCRYPTED (Encrypted Line)
- \*MAX (Guarded Conduit, protected against physical and radiation tapping)

### *maximum-security*

Specifies the maximum security level that is accepted by this line row criteria. Valid values are in order from least to most secure.

- \*NONSECURE (No Security)
- \*PKTSWTNET (Packet Switched Network)
- \*UNDGRDCBL (Underground Cable)
- \*SECURECND (Secure Conduit)
- \*GUARDCND (Guarded Conduit)
- \*ENCRYPTED (Encrypted Line)
- \*MAX (Guarded Conduit, protected against physical and radiation tapping)

### *minimum-propagation-delay*

Specifies the minimum propagation delay that is accepted by this line row criteria. Valid values are in order from least to longest delay.

- \*MIN (Minimum propagation delay)
- \*LAN (Propagation delay using a local area network)
- \*TELEPHONE (Propagation delay using telephone lines)
- \*PKTSWTNET (Propagation delay using a packet switched network)
- \*SATELLITE (Propagation delay using satellite communications)
- \*MAX (Maximum propagation delay)

### *maximum-propagation-delay*

Specifies the maximum propagation delay that is accepted by this line row criteria. Valid values are in order from least to longest delay.

- \*MIN (Minimum propagation delay)
- \*LAN (Propagation delay using a local area network)
- \*TELEPHONE (Propagation delay using telephone lines)
- \*PKTSWTNET (Propagation delay using a packet switched network)
- \*SATELLITE (Propagation delay using satellite communications)
- \*MAX (Maximum propagation delay)

### *user-defined-fields*

Specify your own line connection criteria with three user-defined fields (with minimum and maximum ranges for each field). Valid values are 0 to 255.

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## Row 8 for nodes (ROW8NODE)

Specifies the list of node-related criteria used for the first through eighth rows of the class-of-service description. This row describes the attributes of a node in the APPN network. The rows are examined in order from the first through eighth rows to define a network routing path. The list shows a value for each of the following elements.

### *node-weighting-factor*

Specifies the relative weight of this row for nodes. The weight ranges from 0 to 255. The more desirable nodes are assigned the lower weights.

### *route-addition-resistance-minimum*

Specifies the minimum route addition resistance accepted by this node row criteria. Valid values range from 0 to 255. 0 implies a low resistance, and 255 indicates a high resistance.

### *route-addition-resistance-maximum*

Specifies the maximum route addition resistance accepted by this node row criteria. Valid values range from 0 to 255. 0 implies a low resistance, and 255 indicates a high resistance.

### *congestion-minimum*

Specifies the minimum congestion level accepted by this node criteria. Valid values are \*LOW (low congestion level) or \*HIGH (high congestion level).

### *congestion-maximum*

Specifies the maximum congestion level accepted by this node criteria. Valid values are \*LOW (low congestion level) or \*HIGH (high congestion level).

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## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

### **\*BLANK**

No text is specified.

### *character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

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## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### **\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file.

The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

**\*EXCLUDE**

The user cannot access the object.

**\*LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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## Examples

```
CRTCOSD  COSD(COSD1)
          ROW1LINE(15 9600 19200 20 30
                  50 75 *SECURECND *GUARDCND
                  *PKTSWTNET *SATELLITE 100 200 50 100 25 50)
          TEXT('customized Row1line')
```

This command creates COSD1. All values are specified for Row1Line, and defaults are accepted for all the other rows.

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## Error messages

**\*ESCAPE Messages**

**CPF26CB**

Class-of-service description &1 not created due to errors.

**CPF2610**

Parameter not valid.

**CPF2660**

Class-of-service description &1 already exists.

**CPF9838**

User profile storage limit exceeded.

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## Create Cluster Resource Group (CRTCRG)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Cluster Resource Group (CRTCRG) command creates a cluster resource group object. The cluster resource group serves as the control object for a collection of resilient resources. It identifies a recovery domain, which is a set of nodes in the cluster that will play a role in the recovery. Additional characteristics for the cluster resource group, such as the exit program that will be called to perform resource specific processing. The cluster resource group exit program will be called with an action code of Initialize after each group has been created on each node in the recovery domain, if an exit program is specified for the cluster resource group. Successful completion of this command results in a new job started in the QSYSWRK subsystem. This job has the same name as the name of the cluster resource group being created.

To change attributes of the cluster resource group use the Change Cluster Resource Group (CHGCRG) command.

This command will do the following:

- Create the cluster resource group object on all nodes in the recovery domain. The cluster resource group may be accessed by a cluster resource group command running on any node in the cluster.
- Provide users a single system image of the cluster resource group object. That is, any changes made to the cluster resource group will be made on all nodes in the recovery domain.
- Call the cluster resource group exit program with an action code of Initialize after the cluster resource group has been created on each node in the recovery domain, if an exit program is specified for the cluster resource group. The cluster resource group status will be set to Initialize Pending. If the exit program fails, the cluster resource group object is deleted from all nodes in the recovery domain.
- If the exit program is successful, the cluster resource group status is set to Inactive. To change the cluster resource group status to Active, use the Start Cluster Resource Group (STRCRG) command.
- After the exit program is called, this command verifies the queue (CRGMSGUSRQ parameter), used by the Distribute Information (QcstDistributeInformation) API, exists if one was specified. The distributed information user queue must be created with pointer capable messages disabled. This means that pointers are not allowed within the message content.
- After the exit program is called, this command verifies the failover message queue and library on all recovery domain nodes if one was specified.

### Restrictions:

1. You must have input/output system configuration (\*IOSYSCFG) special authority to run this command.
2. This command cannot be called from a cluster resource group exit program.
3. The cluster resource group name cannot begin with QCST.
4. Cluster Resource Services must be active on the node processing the request.
5. All nodes in the recovery domain must be in the cluster with a status of Active.
6. The cluster resource group exit program must exist on all nodes in the recovery domain if an exit program is specified. It must have the same name and be in the same library on each node.
7. Each node can be specified only once in the recovery domain.
8. The cluster resource group name cannot be used by an existing cluster resource group on any node in the cluster.

9. For application cluster resource groups, the following restrictions apply to the specified takeover IP address:
  - a. If Cluster Resource Services configures the takeover IP address, all nodes in the recovery domain must be in the same subnet (network address) and the subnet defined on all nodes in the recovery domain.
  - b. The takeover IP address must be unique. If Cluster Resource Services is responsible for configuring the takeover IP address, it will be added to each node in the recovery domain.
  - c. The takeover IP address must not be active on any node in the recovery domain.
10. For device cluster resource groups:
  - a. Only auxiliary storage pool devices are supported.
  - b. All nodes in the recovery domain must belong to the same device domain.
  - c. The configuration objects, such as device descriptions, for the devices specified for the cluster resource group must exist on all nodes in the recovery domain and the resource name specified in a configuration object must be the same on all nodes in the recovery domain.
  - d. If a site name is specified, then a data port IP address must be specified. The reverse applies too, if a data port IP address is specified, then a site name must be specified.
  - e. If a data base is specified in a configuration object, it must be the same on all nodes in the recovery domain.
  - f. The server takeover IP address must be unique. It can only be associated with a primary auxiliary storage pool.
  - g. The same configuration object cannot be specified for more than one cluster resource group.
  - h. Devices attached to the same input/output processor (IOP) or high-speed link input/output (I/O) bridge can be specified for only one cluster resource group.
  - i. If devices attached to different IOPs or high-speed link I/O bridges are grouped such as for an auxiliary storage pool, all devices for the affected IOPs or high-speed link I/O bridges must be specified in the same cluster resource group.
  - j. The IOP or high-speed link I/O bridge controlling the devices specified in a cluster resource group must be accessible by all nodes in the cluster resource group's recovery domain. This is verified if sufficient hardware configuration has been performed so that all nodes are aware of the new hardware. If hardware configuration is incomplete, this is verified when the Start Cluster Resource Group (STRCRG) command is called.
  - k. If configuration objects are specified and the primary node does not currently own the devices, this command fails with an error message.
  - l. A cluster resource group may be created with no device entries. Device entries must be added using the Add Cluster Resource Group Device Entry (ADDCRGDEVE) command before the cluster resource group can be started.
  - m. If the cluster resource group contains any members of an auxiliary storage pool group, it must contain **all** members before the cluster resource group can be started. All members do not have to be specified when the cluster resource group is created. Additional members can be added with the Add Cluster Resource Group Device Entry (ADDCRGDEVE) Command. If the auxiliary storage pool group exists and clustering can determine the members of the group, a warning message is sent if any members were not specified.
  - n. If the configuration objects specified are for remote independent auxiliary storage pool mirroring, each node in the recovery domain may have a site name and up to 4 data port IP addresses. There can be at most 2 different site names amongst the nodes. If a site name is specified, at least one data port IP address must be specified too. The reverse is also true. If one or more data port IP address is specified, a site name must be specified too.

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## Parameters

Keyword	Description	Choices	Notes
CLUSTER	Cluster	<i>Name</i>	Required, Positional 1
CRG	Cluster resource group	<i>Name</i>	Required, Positional 2
CRGTYPE	Cluster resource group type	*DATA, *APP, *DEV	Required, Positional 3
EXITPGM	CRG exit program	Single values: *NONE Other values: <i>Qualified object name</i>	Required, Positional 4
	Qualifier 1: CRG exit program	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i>	
USRPRF	User profile	<i>Simple name</i> , *NONE	Required, Positional 5
RCYDMN	Recovery domain node list	Values (up to 128 repetitions): <i>Element list</i>	Required, Positional 6
	Element 1: Node identifier	<i>Name</i>	
	Element 2: Node role	* <b>BACKUP</b> , *PRIMARY, *REPLICATE	
	Element 3: Backup sequence number	<i>Integer</i> , * <b>LAST</b>	
	Element 4: Site name	<i>Name</i> , * <b>NONE</b>	
	Element 5: Data port IP address	Single values: * <b>NONE</b> Other values (up to 4 repetitions): <i>Character value</i>	
TKVINTNETA	Takeover IP address	<i>Character value</i>	Optional, Positional 7
EXITPGMFMFMT	Exit program format name	<b>EXTP0100</b> , EXTP0200	Optional
EXITPGMDTA	Exit program data	<i>Character value</i> , * <b>NONE</b>	Optional
CRGMSGUSRQ	Distribute info user queue	Single values: * <b>NONE</b> Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Distribute info user queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i>	
CFGINTNETA	Configure takeover IP address	* <b>CRS</b> , *USR	Optional
JOB	Job	<i>Name</i> , * <b>JOB</b>	Optional
ALWRESTART	Allow application restarts	* <b>NO</b> , *YES	Optional
NBRRESTART	Number of application restarts	0-3, * <b>NONE</b>	Optional
CFGOBJ	Configuration object list	Values (up to 256 repetitions): <i>Element list</i>	Optional
	Element 1: Configuration object	<i>Name</i> , * <b>NONE</b>	
	Element 2: Configuration object type	* <b>DEV</b>	
	Element 3: Configuration object online	* <b>OFFLINE</b> , *ONLINE, *PRIMARY	
	Element 4: Server takeover IP address	<i>Character value</i> , * <b>NONE</b>	
TEXT	Text 'description'	<i>Character value</i> , * <b>BLANK</b>	Optional

Keyword	Description	Choices	Notes
FLVMSGQ	Failover message queue	Single values: <b>*NONE</b> Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Failover message queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i>	
FLVWAITIM	Failover wait time	<i>Integer</i> , <b>*NOWAIT</b> , <b>*NOMAX</b>	Optional
FLVDFTACN	Failover default action	<b>*PROCEED</b> , <b>*CANCEL</b>	Optional

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## Cluster (CLUSTER)

Specifies the cluster containing the cluster resource group which will be created.

This is a required parameter.

*name* Specify the name of the cluster.

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## Cluster resource group (CRG)

Specifies the cluster resource group to be created.

This is a required parameter.

*name* Specify the name of the cluster resource group.

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## Cluster resource group type (CRGTYPE)

Specifies the type of the cluster resource group to be created.

This is a required parameter.

**\*DATA**

The cluster resource group is a data cluster resource group.

**\*APP** The cluster resource group is an application cluster resource group.

**\*DEV** The cluster resource group is a device cluster resource group.

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## CRG exit program (EXITPGM)

Specifies the exit program that is used to handle action codes that are passed to it due to operations on the cluster resource group. The exit program cannot be in an independent auxiliary storage pool. The action codes are described in the Cluster Resource Group Exit Program section in the API manual.

This is a required parameter.

### Single values

**\*NONE**

The cluster resource group does not have an exit program. This is valid only for a device cluster resource group.

#### **Qualifier 1: CRG exit program**

*name* Specify the name of the exit program.

#### **Qualifier 2: Library**

*name* Specify the name of the library where the exit program exists. QTEMP is not a valid library name.

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## **User profile (USRPRF)**

Specifies the user profile under which the exit program should be run. The user profile must exist on all nodes in the recovery domain.

The value for this parameter must be \*NONE if no exit program is specified.

The following user profiles are not valid:

- QDBSHR
- QDOC
- QDTFOWN
- QRJE
- QLPAUTO
- QLPINSTALL
- QSECOFR
- QSPL
- QSYS
- QTSTRQS

This is a required parameter.

**\*NONE**

There is no exit program so no user profile is needed.

*simple-name*

Specify the name of the user profile to use for running the exit program.

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## **Recovery domain node list (RCYDMN)**

Specifies the list of nodes that compose the recovery domain. A role must be defined for each node in the recovery domain. The node role can be primary, backup, or replicate. Nodes in the recovery domain must be unique.

You can specify up to 128 nodes for the recovery domain.

This is a required parameter.

### Element 1: Node identifier

Specify an active cluster node that will participate in the recovery of resilient resources represented by this cluster resource group.

*name* Specify the name for the system that uniquely identifies a node.

### Element 2: Node role

Specify the role of the cluster node in the recovery.

#### \*BACKUP

The new node will be added as a backup node.

#### \*PRIMARY

The new node will be added as the primary node. One node in the recovery domain must have the role of \*PRIMARY.

#### \*REPLICATE

The new node will be added as a replicate. Replicate nodes are not ordered.

### Element 3: Backup sequence number

Specifies the backup order for a node with a role of \*BACKUP. At the completion of the request the nodes with backup roles will be sequentially renumbered from the first backup to the last. The first backup will always be 1.

#### \*LAST

The node will be added as the last backup in the recovery domain. If \*LAST is specified for more than one node, then the first node specified with \*LAST will be the last backup node, second node specified will be the second to the last backup node, etc..

#### *integer*

Specify the backup sequence number.

### Element 4: Site name

Specifies the site name of the recovery domain node. This is valid in a version 4 cluster and only for a device cluster resource group, specifically for geographic mirroring. A site contains a subset of recovery domain nodes in the same physical location. All nodes at a site have access to the same copy of the auxiliary storage pool. Only nodes with a site name need to have access to the devices.

#### \*NONE

The recovery domain node does not have a site name.

*name* Specify the site name for a recovery domain node.

### Element 5: Data port IP address

Specify the data port IP address for the recovery domain node. This is valid only in a cluster of version 4 or higher, for a device cluster resource group, specifically for geographic mirroring. The data port IP address is used to send updates from a source node that owns the production copy of auxiliary storage pool to a target node that owns the mirror copy of the auxiliary storage pool. The user is responsible for configuring and starting/ending the data port IP address. The data port IP address must already exist on the specified node. This must be represented in dotted decimal format.

### Single values

#### \*NONE

The recovery domain node does not have a data port IP address.

### Other values (up to 4 repetitions)

#### *character-value*

Specify the data port IP address for the recovery domain node.

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## Takeover IP address (TKVINTNETA)

Specifies the internet interface address that is to be associated with an application. This is the takeover IP address that will be switched between systems. The field must be represented in dotted decimal format.

This is a required parameter.

#### *character-value*

Specify the takeover IP address for the application cluster resource group.

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## Exit program format name (EXITPGMFMT)

Specifies the format which should be used for the information passed to the user when a CRG exit program is called.

#### EXTP0100

Exit program information defined in EXTP0100 format will be passed to user.

#### EXTP0200

Exit program information defined in EXTP0200 format will be passed to user. Additional information such as site name and data port IP address on each node are passed to the exit program.

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## Exit program data (EXITPGMDTA)

Specifies up to 256 bytes of data that is passed to the cluster resource group exit program when it is called. This parameter may contain any scalar data except pointers. For example, it can be used to provide state information. This data will be stored with the specified cluster resource group and copied to all nodes in the recovery domain. Pointers in this area will not resolve correctly on all nodes and should not be placed in the data.

#### \*NONE

There is no exit program data.

#### *character*

Specify up to 256 bytes of data to be passed to the cluster resource group exit program.

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## Distribute info user queue (CRGMSGUSRQ)

Specifies the user queue to receive distributed information from the Distribute Information (QcstDistributeInformation) API. If the user would like to distribute cluster-wide information through this cluster resource group using the Distribute Information (QcstDistributeInformation) API, then this parameter must be set to a value other than \*NONE. If this field is set, the specified user queue must

exist on all nodes in the recovery domain after the exit program completes. The only way to change the value of this field once the cluster resource group has been created is to delete and recreate the cluster resource group.

### Single values

#### \*NONE

The QcstDistributeInformation (QcstDistributeInformation) API will not be used to distribute information through this cluster resource group.

### Qualifier 1: Distribute info user queue

*name* Specify the name of the user queue to receive the distributed information.

### Qualifier 2: Library

*name* Specify the name of the library that contains the user queue to receive the distributed information. The library name cannot be QTEMP.

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## Configure takeover IP address (CFGINTNETA)

Specifies who is responsible for configuring (adding and removing) the takeover IP address. This does not affect the starting and ending of the takeover IP address, Cluster Resource Services will perform this function.

\*CRS Cluster Resource Services is responsible for configuring the takeover IP address. The takeover IP address must not exist on any of the nodes in the recovery domain prior to creating cluster resource group. The takeover IP address will be removed when the cluster resource group is deleted.

\*USR User is responsible for configuring the takeover IP address. The takeover IP address must be added on all nodes in the recovery domain except replicates prior to starting the cluster resource group. For details on configuring a takeover IP address for an application cluster resource group that has recovery domain nodes in different subnets, go to Configuring under the Clustering topic in the iSeries Information Center. You can access the Information Center from the iSeries Information Center CD-ROM or from the following Web site:  
<http://www.ibm.com/eserver/series/infocenter>

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## Job (JOB)

Specifies the name given the batch job that is submitted by the cluster resource group. This job will call the cluster resource group exit program with the action code generated by the command being used. If this field is blank, the job name will be the value in the job description found in the specified user profile to run the exit program.

#### \*JOB

The job name in the job description for the specified user profile will be used.

*name* Specify the name to be given to the batch job submitted for running the exit program.

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## Allow application restarts (ALWRESTART)

Specifies whether or not to restart an application if the cluster resource group exit program fails.

**\*NO** Do not attempt to restart the application. The cluster resource group exit program is called with an action code of Failover.

**\*YES** Attempt to restart the application on the same node. The cluster resource group exit program will be called with an action code of Restart. If the application cannot be restarted in the specified maximum number of attempts, the cluster resource group exit program will be called with an action code of Failover.

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## Number of application restarts (NBRRESTART)

Specifies the number of times a cluster resource group exit program can be called on a same node before failure occurs. Maximum number of restarts is 3. If the cluster resource group is currently active, any change does not take affect until failover occurs or the cluster resource group exit program job ends.

**\*NONE** There should be no restart attempts before a failover is started.

**0-3** Specify the number of times that restart will be attempted before doing a failover.

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## Configuration object list (CFGOBJ)

Specifies detailed information about the resilient devices to be added to the cluster resource group.

You can specify up to 256 devices for this parameter.

### Element 1: Configuration object

The name of the auxiliary storage pool device description object which can be switched between the nodes in the recovery domain. An auxiliary storage pool device description can be specified in only one cluster resource group.

**\*NONE** There are no configuration objects defined for this cluster resource group.

*name* Specify the name of the configuration object.

### Element 2: Configuration object type

Specifies the type of configuration object specified with configuration object name.

**\*DEV** Configuration objects of type device description.

### Element 3: Configuration object online

Specifies what configuration action to take when the cluster resource group is switched over or failed over to a backup node. The configuration object can be varied on and the server takeover IP address can be started or leave the configuration object varied off and the server takeover IP address inactive when a device ownership is moved to another node. This attribute does **not** vary the device on or off when the cluster resource group is started or ended.

#### **\*OFFLINE**

Do not vary the configuration object on and do not start the server takeover IP address.

#### **\*ONLINE**

Vary the configuration object on and start the server takeover IP address.

#### **\*PRIMARY**

This is a secondary ASP. Vary on processing is determined by the corresponding primary ASP for this ASP group.

#### **Element 4: Server takeover IP address**

Specifies a takeover IP address for servers associated with the relational database name in the device description for an auxiliary storage pool. This element is optional and can only be specified for a primary auxiliary storage pool. If specified, the address must be presented in dotted decimal format. The specified address must exist on all nodes in the recovery domain if the cluster resource group is active. If not specified, or for a secondary or UDFS auxiliary storage pool, the element must be set to \*NONE.

#### **\*NONE**

There is no server takeover IP address associated with the relational database name in the device description for an auxiliary storage pool.

#### ***character-value***

Specify the takeover IP address for servers associated with the relational database name.

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### **Text 'description' (TEXT)**

Specifies the text used to briefly describe the cluster resource group object.

#### **\*BLANK**

There is no text describing this cluster resource group.

#### ***character-value***

Specify up to 50 characters of text to describe the cluster resource group object.

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---

### **Failover message queue (FLVMSGQ)**

Specifies the message queue to receive messages (CPABB01) dealing with failover. If the user would like to receive notice before a failover occurs, then this parameter must be set to a value other than \*NONE. If this field is set, the specified message queue must exist on all nodes in the recovery domain after the exit program completes. The message queue cannot be in an independent auxiliary storage pool.

#### **Single values**

#### **\*NONE**

No messages will be sent when a failover occurs for this cluster resource group.

#### **Qualifier 1: Failover message queue**

***name*** Specify the name of the failover message queue.

#### **Qualifier 2: Library**

***name*** Specify the name of the library that contains the message queue to receive the failover message. The library name cannot be \*CURLIB, QTEMP, or \*LIBL.



---

## Failover wait time (FLVWAITTIM)

Specifies the number of minutes to wait for a reply to the failover message that was enqueued on the failover message queue.

### \*NOWAIT

Failover proceeds without user intervention. Behaves the same as V5R1M0 and prior releases.

### \*NOMAX

Wait forever until a response is given to the failover inquiry message.

### *integer*

Specify the number of minutes to wait for a response to the failover inquiry message. If no response is received in the specified number of minutes, the failover default action field will be looked at to decide how to proceed.

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---

## Failover default action (FLVDFTACN )

Specifies the default action to be taken if a response to the failover message is not received in the failover wait time limit.

### \*PROCEED

Proceed with failover.

### \*CANCEL

Do not attempt failover.

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---

## Examples

### Example 1: Creating a CRG with a Two-Node Recovery Domain

```
CRTCRG CLUSTER(MYCLUSTER) CRG(MYCRG) CRGTYPE(*DEV)
      EXITPGM(TEST/EXITPGM) USRPRF(USER1)
      RCYDMN((NODE01 *PRIMARY) (NODE02 *BACKUP *LAST))
      CFGOBJL(*NONE) TEXT('IASP for Application 17')
```

This command creates a device cluster resource group called MYCRG in the cluster called MYCLUSTER. The recovery domain consists of two nodes. NODE01 is the primary and NODE02 is the only backup. The list of configuration objects is not specified on this command; the Add CRG Device Entry (ADDCRGDEVE) command can be used to add this information.

### Example 2: Creating a CRG with a Single-Node Recovery Domain

```
CRTCRG CLUSTER(MYCLUSTER) CRG(MYCRG) CRGTYPE(*DEV)
      EXITPGM(TEST/EXITPGM) USRPRF(USER1)
      RCYDMN((NODE01 *PRIMARY *LAST MYSITE ('1.1.1.1'
                                           '2.2.2.2'))))
      EXITPGMFMT(EXTP0200)
      TEXT('IASP for Application 17')
```

This command creates a device cluster resource group called MYCRG in the cluster called MYCLUSTER. The recovery domain consists of one node, NODE01. The recovery domain sets NODE01 as the primary node in site MYSITE, with 2 data port IP addresses, 1.1.1.1 and 2.2.2.2.

---

## Error messages

### \*ESCAPE Messages

#### CPF1999

Errors occurred on command.

---

## Create CRQ Description (CRTCRQD)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Change Request Description (CRTCRQD) command can be used to create a change request description. A change request description contains a list of activities that are performed to complete the specified change.

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---

### Parameters

Keyword	Description	Choices	Notes
CRQD	Change request description	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Change request description	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
USRPRF	User profile	<i>*SBM, *OWNER</i>	Optional
PRBID	Problem identifier	<i>Character value, *NONE</i>	Optional
PRBORG	Problem origin	<i>Element list</i>	Optional
	Element 1: Network identifier	<i>Communications name, *NETATR</i>	
	Element 2: Control point name	<i>Communications name, *NETATR</i>	
TEXT	Text 'description'	<i>Character value, *BLANK</i>	Optional
AUT	Authority	<i>Name, *EXCLUDE, *LIBCRTAUT, *CHANGE, *ALL, *USE</i>	Optional

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---

### Change request description (CRQD)

Specifies the name and the library of the change request description being created.

The name of the change request description can be qualified by one of the following library values:

#### \*CURLIB

The change request description is created in the current library for the job. If no library is specified as the current library for the job, the QGPL library is used.

#### *library-name*

Specify the name of the library where the change request description is created.

The possible values are:

#### *change-request-description-name*

Specify the name of the change request description being created.

This is a required parameter.

---

## User profile (USRPRF)

Specifies whether the authority checking (done while this change request is running) is based on the user who submitted the change request description or on the owner of the change request description. The user profile is used to run the change request and control which objects can be used by the change request.

The possible values are:

**\*SBM** The user profile of the submitter is used when the change request is run.

**\*OWNER**

The user profile of the change request description owner is used when the change request is run.

**Note:** This is not like a program that runs under its owner's profile, for which both the program owner and the program user profiles are used. Only the owner's profile is used if this value is specified.

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---

## Problem identifier (PRBID)

Specifies the ID of the problem to be associated with this change request description. Problems with different origin systems might have the same identifier.

The possible values are:

**\*NONE**

A problem ID is not specified.

*problem-identifier*

Specify the ID of the problem to be associated with the change request description. If a problem ID is not found, a diagnostic message is issued.

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---

## Problem Origin (PRBORG)

Specifies the origin system of the problem ID.

The possible network identifier values are:

**\*NETATR**

The network ID is the same as the one defined in the network attributes for this system.

*network-identifier*

Specify a network ID.

The possible control point name values are:

**\*NETATR**

The control point name is the same as the local control point name defined in the network attributes for this system.

*control-point-name*

Specify a control point name.

---

## Text 'description' (TEXT)

Specifies text that briefly describes the object. More information on this parameter is in the CL Reference book, Appendix A.

The possible values are:

**\*BLANK**

Text is not specified.

**'description'**

Specify a maximum of 50 characters, enclosed in apostrophes.

---

## Authority (AUT)

Specifies the authority given to users who do not have specific authority to the object, who are not on an authorization list, and whose user group has no specific authority to the object.

The possible values are:

**\*EXCLUDE**

The user cannot access the object.

**\*LIBCRTAUT**

The public authority for the object is taken from the value on the CRTAUT parameter of the target library (the library that is to contain the object). The public authority is determined when the object is created. If the CRTAUT value for the library changes after the object is created, the new value does not affect any existing objects.

**\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

**Note:** The user with \*CHANGE authority cannot change the user profile value (USRPRF). To change the user profile value, the user must be the owner or must have \*ALLOBJ and \*SECADM authority.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user can also change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

**authorization-list-name**

Specify the name of the authorization list whose authority is used.

---

## Examples

### Example 1: Creating a Change Request Description in Your Own Library

```
CRTCRQD CRQD(MYLIB/CHG001)
```

This command creates a change request description in MYLIB with the name CHG001 and a text description.

### Example 2: Creating a Change Request Description That Runs Under Another Person's Profile

```
CRTCRQD CRQD(CHG222) USRPRF(*SBM)
```

This command creates a change request description called CHG222 that runs under the user profile that submits it.

### Example 3: Creating a Change Request Description and Associating a Problem With It

```
CRTCRQD CRQD(CHG999) PRBID(1234567890) PRBORG(*NETATR STORE101)
```

This command creates a change request description in \*CURLIB called CHG999 that is associated with problem ID 1234567890. The problem origin network ID is the same as the local system. The control point name is STORE101.

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---

## Error messages

### \*ESCAPE Messages

#### CPF969A

Change request description created, but warnings exist.

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---

## Create Comm Side Information (CRTCSI)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Communications Side Information (CRTCSI) command creates a side information object in a specific library. The side information object name must be unique in the library in which the side information object is to be created. More information on how the system uses the RMTLOCNAME, DEV, LCLLOCNAME, and RMTNETID parameters to select an APPC device description is in the APPC Programming book, SC41-5443.

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---

### Parameters

Keyword	Description	Choices	Notes
CSI	Side information	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Side information	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
RMTLOCNAME	Remote location	<i>Communications name</i>	Optional
TNSPGM	Transaction program	<i>Character value</i>	Optional
TEXT	Text 'description'	<i>Character value, *BLANK</i>	Optional
DEV	Device	<i>Communications name, *LOC</i>	Optional
LCLLOCNAME	Local location	<i>Communications name, *LOC, *NETATR</i>	Optional
MODE	Mode	<i>Communications name, *NETATR</i>	Optional
RMTNETID	Remote network identifier	<i>Communications name, *LOC, *NETATR, *NONE</i>	Optional
AUT	Authority	<i>Name, *LIBCRTAUT, *CHANGE, *ALL, *USE, *EXCLUDE</i>	Optional

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---

### Side information (CSI)

Specifies the name of the side information object to be created. An object name must be specified.

This is a required parameter.

#### *side-information-name*

Specify the name of the object that will contain the desired side information object.

The possible library values are:

#### **\*CURLIB**

The side information object is created in the current library. If no library is specified as the current library for the job, QGPL is used.

#### *library-name*

Specify the name of the library where the side information object is created.

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---

## Remote location (RMTLOCNAME)

Specifies the remote location name with which your program communicates. The Common Programming Interface (CPI)- Communications partner\_LU\_name, which consists of the remote network identifier and the remote location, determines the remote logical unit of the remote program.

This is a required parameter.

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---

## Transaction program (TNSPGM)

Specifies the name (up to 64 characters) of the transaction program on the remote system to be started.

**Note:** To specify SNA service transaction program names, enter the hexadecimal representation of the service transaction program name. For example, to specify a service transaction program name whose hexadecimal representation is 21F0F0F1, you would enter X'21F0F0F1'.

More information on SNA service transaction program names is in the SNA Transaction Programmer's Reference Manual for LU Type 6.2.

This is a required parameter.

Top

---

## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

The possible values are:

**\*BLANK**

No text is specified.

***'description'***

Specify no more than 50 characters of text, enclosed in apostrophes.

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## Device (DEV)

Specifies the name of the device description used for the remote system.

The possible values are:

**\*LOC**

***device-name***

The device is determined by the system.

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## Local location (LCLLOCNAME)

Specifies the local location name.

The possible values are:

**\*LOC** The local location name is determined by the system.

**\*NETATR**

The LCLLOCNAME value specified in the system network attributes is used.

*local-location-name*

Specify the name of your location. Specify the local location if you want to indicate a specific location name for the remote location.

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---

## Mode (MODE)

Specifies the mode used to control the session. This name is the same as the Common Programming Interface (CPI)- Communications mode\_name.

The possible values are:

**\*NETATR**

The mode in the network attributes is used.

**BLANK**

Eight blank characters are used.

*mode-name*

Specify a mode name for the remote location.

**Note:** The values SNASVCMG and CPSVCMG are not allowed.

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---

## Remote network identifier (RMTNETID)

Specifies the remote network identifier used with the remote location. The Common Programming Interface (CPI)- Communications partner\_LU\_name, which consists of the remote network identifier and the remote location, determines the remote logical unit of the remote program.

The possible values are:

**\*LOC** The remote network ID for the remote location is used.

**\*NETATR**

The remote network identifier specified in the network attributes is used.

**\*NONE**

The remote network has no name.

*remote-network-id*

Specify a remote network ID.

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---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

The possible values are:

### \*LIBCRTAUT

Public authority for the object is taken from the CRTAUT parameter of the specified library. This value is determined at create time. If the CRTAUT value for the library changes after the object is created, the new value does not affect existing objects.

### \*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### \*EXCLUDE

The user cannot access the object.

### *authorization-list*

Specify the name of the authorization list whose authority is used for the side information.

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## Examples

```
CRTCSI  CSI(QGPL/SIDEOBJ) RMTLOCNAME(APPC2)
        TNSPGM(TESTNOP)  AUT(*CHANGE)
```

This command creates a communications side information object named SIDEOBJ in library QGPL. The remote location name is set to APPC2, the transaction program name to TESTNOP. The authority to the object is \*CHANGE.

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## Error messages

### \*ESCAPE Messages

#### CPF3B82

Communications side information object &1 already exists in library &2.

**CPF3B83**

Communications side information object &1 not created in library &2.

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## Create Ctl Desc (APPC) (CRTCTLAPPC)

Where allowed to run: All environments (\*ALL)  
 Threadsafte: No

Parameters  
 Examples  
 Error messages

The Create Controller Description (APPC) (CRTCTLAPPC) command creates a controller description for an advanced program-to-program communications (APPC) controller. For more information about this command, see the Communications Configuration book, SC41-5401.

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### Parameters

Keyword	Description	Choices	Notes
CTLD	Controller description	<i>Name</i>	Required, Positional 1
LINKTYPE	Link type	*ANYNW, *FAX, *FR, *ILAN, *LAN, *LOCAL, *OPC, *SDLC, *TDLC, *VRTAPPN, *X25	Required, Positional 2
ONLINE	Online at IPL	*YES, *NO	Optional
SWITCHED	Switched connection	*NO, *YES	Optional
SHM	Short hold mode	*NO, *YES	Optional
SNBU	Switched network backup	*NO, *YES	Optional
APPN	APPN-capable	*YES, *NO	Optional
TYPE	Controller type	*BLANK, *FBSS, 3174, 3274, 3651, 3684, 3694, 4680, 4684, 4701, 4702, 4730, 4731, 4732, 4736	Optional
LINE	Attached nonswitched line	<i>Name</i>	Optional
SWTLINLST	Switched line list	Values (up to 64 repetitions): <i>Name</i>	Optional
MAXFRAME	Maximum frame size	265-16393, 256, 265, 512, 521, 1024, 1033, 1496, 1994, 2048, 2057, 4060, 4096, 8156, 16393, *LINKTYPE	Optional
RMTNETID	Remote network identifier	<i>Communications name</i> , *NETATR, *NONE, *ANY	Optional
RMTCPNAME	Remote control point	<i>Communications name</i> , *ANY	Optional
RMTSYSNAME	Remote System Name	<i>Character value</i>	Optional
EXCHID	Exchange identifier	X'00000000'-X'FFFFFFFF'	Optional
INLCNN	Initial connection	*DIAL, *ANS	Optional
DIALINIT	Dial initiation	*LINKTYPE, *IMMED, *DELAY	Optional
CNNNBR	Connection number	<i>Character value</i> , *DC, *ANY	Optional
ANSNBR	Answer number	*CNNNBR, *ANY	Optional
CNNLSTOUT	Outgoing connection list	<i>Name</i>	Optional
CNNLSTOUTE	Connection list entry	<i>Name</i>	Optional
ROLE	Data link role	*NEG, *PRI, *SEC	Optional
SHMDSCLMT	SHM disconnect limit	1-254, 10, *NOMAX	Optional
SHMDSCTMR	SHM disconnect timer	2-3000, 50	Optional
STNADR	Station address	X'00'-X'FE'	Optional
ADPTADR	LAN remote adapter address	X'000000000001'-X'FFFFFFFFFFFF'	Optional
DSAP	LAN DSAP	04, 08, 0C, 10, 14, 18, 1C, 20, 24, 28, 2C, 30, 34, 38, 3C, 40, 44, 48, 4C, 50, 54, 58, 5C, 60, 64, 68, 6C, 70, 74, 78, 7C, 80, 84, 88, 8C, 90, 94, 98, 9C	Optional

Keyword	Description	Choices	Notes
SSAP	LAN SSAP	04, 08, 0C, 10, 14, 18, 1C, 20, 24, 28, 2C, 30, 34, 38, 3C, 40, 44, 48, 4C, 50, 54, 58, 5C, 60, 64, 68, 6C, 70, 74, 78, 7C, 80, 84, 88, 8C, 90, 94, 98, 9C	Optional
NETLVL	X.25 network level	1980, 1984, 1988	Optional
LINKPCL	X.25 link level protocol	Character value, *QLLC, *ELLC, *LLC2	Optional
LGLCHLID	X.25 logical channel ID	Character value	Optional
CNNPWD	X.25 connection password	Character value, X''	Optional
CPSSN	APPN CP session support	*YES, *NO	Optional
NODETYPE	Remote APPN node type	*ENDNODE, *LENNODE, *NETNODE, *CALC	Optional
BEXROLE	Branch extender role	*NETNODE, *ENDNODE	Optional
HPR	APPN/HPR capable	*YES, *NO	Optional
HPRPTHSWT	HPR path switching	*NO, *YES	Optional
TMSGRPNBR	APPN transmission group number	1-20, 1, *CALC	Optional
MINSWTSTS	APPN minimum switched status	*VRYONPND, *VRYON	Optional
AUTOCRTDEV	Autocreate device	*ALL, *NONE	Optional
AUTODLTDEV	Autodelete device	1-10000, 1440, *NO	Optional
USRDFN1	User-defined 1	0-255, *LIND	Optional
USRDFN2	User-defined 2	0-255, *LIND	Optional
USRDFN3	User-defined 3	0-255, *LIND	Optional
MDLCTL	Model controller description	*NO, *YES	Optional
CNNNETID	Connection network network ID	Communications name, *NETATR, *NONE	Optional
CNNCPNAME	Connection network CP	Communications name	Optional
TEXT	Text 'description'	Character value, *BLANK	Optional
DEV	Attached devices	Values (up to 254 repetitions): Name	Optional
CODE	Character code	*EBCDIC, *ASCII	Optional
SSCPID	SSCP identifier	X'000000000001'-X'FFFFFFFFFFFF'	Optional
IDLCWDSIZ	IDLC window size	1-31, *LIND	Optional
IDLCFRMRTY	IDLC frame retry	0-100, *LIND	Optional
IDLCRSPTMR	IDLC response timer	10-100, *LIND	Optional
IDLCCNNRTY	IDLC connect retry	1-100, *LIND, *NOMAX	Optional
PREDIALDLY	Predial delay	0-254, 6	Optional
REDIALDLY	Redial delay	0-254, 120	Optional
DIALRTY	Dial retry	0-254, 2	Optional
SWTDSC	Switched disconnect	*YES, *NO	Optional
DSCTMR	Disconnect timer	Element list	Optional
	Element 1: Minimum connect timer	0-65535, 170	
	Element 2: Disconnection delay timer	0-65535, 30	
POLLPTY	SDLC poll priority	*NO, *YES	Optional
POLLMT	SDLC poll limit	0-4, 0	Optional
OUTLMT	SDLC out limit	*POLLMT, 0, 1, 2, 3, 4	Optional
CNNPOLLRTY	SDLC connect poll retry	0-65534, *CALC, *NOMAX	Optional
NDMPOLLTMR	SDLC NDM poll timer	0-3000, *CALC	Optional
LANFRMRTY	LAN frame retry	0-254, *CALC	Optional

Keyword	Description	Choices	Notes
LANCNNRTY	LAN connection retry	0-254, <u>*CALC</u>	Optional
LANRSPTMR	LAN response timer	0-254, <u>*CALC</u>	Optional
LANCNTMR	LAN connection timer	0-254, <u>*CALC</u>	Optional
LANACKTMR	LAN acknowledgement timer	0-254, <u>*CALC</u>	Optional
LANINACTMR	LAN inactivity timer	0-255, <u>*CALC</u>	Optional
LANACKFRQ	LAN acknowledgement frequency	0-127, <u>*CALC</u>	Optional
LANMAXOUT	LAN max outstanding frames	1-127, <u>*CALC</u>	Optional
LANACPTY	LAN access priority	0-3, <u>*CALC</u>	Optional
LANWDWSTP	LAN window step	1-127, <u>*NONE</u>	Optional
SWTLINSLCT	X.25 switched line selection	<u>*FIRST</u> , <u>*CALC</u>	Optional
DFTPKTSIZE	X.25 default packet size	<i>Element list</i>	Optional
	Element 1: Transmit value	<u>*LIND</u> , 64, 128, 256, 512, 1024, 2048, 4096	
	Element 2: Receive value	<u>*LIND</u> , <u>*TRANSMIT</u> , 64, 128, 256, 512, 1024, 2048, 4096	
DFTWDWSIZE	X.25 default window size	<i>Element list</i>	Optional
	Element 1: Transmit value	1-15, <u>*LIND</u>	
	Element 2: Receive value	1-15, <u>*LIND</u> , <u>*TRANSMIT</u>	
USRGRPID	X.25 user group identifier	<i>Character value</i>	Optional
RVSCRG	X.25 reverse charging	<u>*NONE</u> , <u>*REQUEST</u> , <u>*ACCEPT</u> , <u>*BOTH</u>	Optional
X25FRMRTY	X.25 frame retry	0-21, <u>7</u>	Optional
X25CNNRTY	X.25 connection retry	0-21, <u>7</u>	Optional
X25RSPTMR	X.25 response timer	1-2550, <u>300</u>	Optional
X25CNTMR	X.25 connection timer	1-2550, <u>300</u>	Optional
X25DLYTMR	X.25 delayed connection timer	1-32767, <u>*CALC</u>	Optional
X25ACKTMR	X.25 acknowledgement timer	0-2550, <u>20</u>	Optional
X25INACTMR	X.25 inactivity timer	1-2550, <u>1050</u>	Optional
USRFCL	User facilities	<i>Character value</i>	Optional
CMNRCYLMT	Recovery limits	Single values: <u>*SYSVAL</u> Other values: <i>Element list</i>	Optional
	Element 1: Count limit	0-99, <u>2</u>	
	Element 2: Time interval	0-120, <u>5</u>	
MSGQ	Message queue	Single values: <u>*SYSVAL</u> , <u>*SYSOPR</u> Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Message queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i>	
AUT	Authority	<i>Name</i> , <u>*CHANGE</u> , <u>*ALL</u> , <u>*USE</u> , <u>*EXCLUDE</u> , <u>*LIBCRTAUT</u>	Optional

Top

## Controller description (CTLD)

This is a required parameter.

Specifies the name of the controller description.

---

## Link type (LINKTYPE)

Specifies the type of line to which this controller is attached.

This is a required parameter.

### \*ANYNW

This controller is not directly attached to a line. It is being used to run APPC applications over a transport other than the native transport (SNA). RMTCPNAME and RMTNETID are required when \*ANYNW is specified. The following parameters are allowed:

- RMTNETID (remote network identifier)
- ONLINE (online at IPL)
- RMTCPNAME (remote CP NAME)
- USRDFN1 (user-defined 1)
- USRDFN2 (user-defined 2)
- USRDFN3 (user-defined 3)
- Text
- AUT (authority)
- CMNRCYLMT (communications recovery limit)

### \*FAX

This controller is attached to a local fax line. If \*FAX is specified, the following criteria must be met:

- The following parameters can be specified: online at IPL (ONLINE), attached devices (DEV), authority (AUT), text description (TEXT), and attached nonswitched line (LINE)
- The SWITCHED and APPN parameters must not be specified or have \*NO specified
- APPN support is not provided; therefore, all attached devices must have APPN(\*NO) specified

### \*FR

This controller is attached to a frame relay line.

### \*ILAN

This controller does not use a communication line since all communications are within the system. This link type allows multiple operating systems (running on one physical system) to communicate without requiring a physical communications link.

**Note:** If LINKTYPE(\*ILAN) is specified, the value specified for NODETYPE must be \*LENNODE or \*NETNODE and the value specified on the SSAP parameter must be different than the value specified on the DSAP parameter.

### \*LAN

This controller is attached to a distributed data interface (DDI), Ethernet, or token-ring local area network line.

### \*LOCAL

This controller uses no communication lines since all communications are local. If \*LOCAL is specified, the following criteria must be met:

- SWITCHED, SNBU, and APPN must remain unspecified or be \*NO



- The LINE, MAXFRAME, RMTNETID, RMTCPNAME, EXCHID, CPSSN, NODETYPE, TMSGRPNBR, SSCPID, and ROLE parameters must not be specified
- Parameters relating to SDLC, X.21 short-hold mode, X.25, or LAN configuration must not be specified.
- Since LINKTYPE(\*LOCAL) controllers must have APPN(\*NO) specified, any attached devices must also have APPN(\*NO) specified

**\*OPC**

This controller is attached to the optical bus (OptiConnect).

**\*SDLC**

This controller is attached to a synchronous data link control (SDLC) line.

**\*TDLC**

This controller is attached to a twinaxial data link control (TDLC) line.

**\*VRTAPPN**

This controller is used for APPN communications. It is not attached to any specific communications line. If \*VRTAPPN is specified, the following criteria must be met:

- SWITCHED and SNBU must remain unspecified or be \*NO
- APPN(\*YES) must be specified
- The LINE, MAXFRAME, RMTNETID, RMTCPNAME, EXCHID, CPSSN, NODETYPE, TMSGRPNBR, SSCPID, and ROLE parameters must not be specified
- Parameters relating to SDLC, X.21 short-hold mode, X.25, or LAN configuration must not be specified
- Since LINKTYPE(\*VRTAPPN) controllers are for supporting APPN communications, any attached devices must have APPN(\*YES) specified

**\*X25**

This controller is attached to an X.25 line.

Top

## Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

**\*YES**

The controller is automatically varied on at IPL.

**\*NO**

The controller is not automatically varied on at IPL.

Top

## Switched connection (SWITCHED)

Specifies whether this controller is attached to a switched line, a token-ring network, Ethernet LAN, or an X.25 switched virtual circuit (SVC). \*NO must be specified for APPC controllers attached to a TDLC line.

**\*NO**

This controller is attached to a nonswitched line. Specify this value for controllers attaching to an X.25 permanent virtual circuit (PVC).

**\*YES**

This controller is attached to a switched line. Specify this value for controllers attached to an X.25 switched virtual circuit (SVC). Also specify this value for controllers attached to a local area network.

**Note:** If LINKTYPE is \*LAN, the SWITCHED parameter value must be \*YES or must not be specified.

Top

---

## Short hold mode (SHM)

Specifies whether this controller is to be used for X.21 short hold mode. To specify \*YES, you must also specify \*SDLC for the **Link type (LINKTYPE)** parameter, and \*YES for the **Switched connection (SWITCHED)** parameter.

\*NO

This controller is not used for X.21 short hold mode.

**\*YES**

This controller is used for X.21 short hold mode.

Top

---

## Switched network backup (SNBU)

Specifies whether the remote system modem has the switched network backup (SNBU) feature. The backup feature is used to bypass a broken nonswitched (leased line) connection by establishing a switched connection. To activate SNBU, you must change the controller description of the modem from nonswitched to switched by specifying \*YES for the **Activate swt network backup (ACTSNBU)** parameter.

**Note:** If the modem model you are using is an IBM 386x, 586x, or 786x, you should not change the controller description. Instead, manually switch the modem to the unswitched mode, and manually dial the connection.

Both the local and remote modems must support the SNBU feature to perform a valid activation.

\*NO The remote system modem does not have the SNBU feature.

**\*YES**

The remote system modem has the SNBU feature.

Top

---

## APPN-capable (APPN)

Specifies whether the local system uses advanced peer-to-peer networking (APPN) functions when communicating with this controller. \*YES must be specified for APPC controllers attached to a TDLC line.

### \*YES

This controller is for APPN.

### \*NO

This controller is not for APPN.

Top

---

## Controller type (TYPE)

Specifies the type of controller for this description. This parameter is valid only when \*NO is specified on the APPN parameter.

### \*BLANK

No T2.0 controller is specified.

### \*FBSS

This description represents a Financial Branch System Services (FBSS) controller.

#### **3174**

This description represents a 3174 controller.

#### **3274**

This description represents a 3274 controller.

#### **3651**

This description represents a 3651 controller.

#### **3684**

This description represents a 3684 controller.

#### **3694**

This description represents a 3694 check processor.

#### **4680**

This description represents a 4680 controller.

#### **4684**

This description represents a 4684 controller.

#### **4701**

This description represents a 4701 finance controller.

#### **4702**

This description represents a 4702 finance controller.

**4730**

This description represents a 4730 personal banking machine.

**4731**

This description represents a 4731 personal banking machine.

**4732**

This description represents a 4732 personal banking machine.

**4736**

This description represents a 4736 self-service transaction machine.

Top

---

## Attached nonswitched line (LINE)

Specifies the name of the nonswitched lines to which this controller is attached. The line description must already exist.

**Note:** The associated line must be varied off before this command is entered. Specify this parameter for controllers attaching to an X.25 permanent virtual circuit (PVC).

Top

---

## Switched line list (SWTLINLST)

Specifies the names of the switched lines to which this controller attaches. The line descriptions must already exist. Up to 64 switched line names can be specified.

*\*switched-line-NAME*

Specify the names of up to 64 lines that are connected to this controller. The same line name can be used more than once. For each line name specified, a line description by that name must already exist.

Top

---

## Maximum frame size (MAXFRAME)

Specifies the maximum frame (path information unit (PIU)) size the controller can send or receive. This value is used to calculate the request unit (RU) sizes. Since the maximum PIU size that the controller can send or receive is negotiated at exchange identifier time, the maximum PIU size used at run time may be different. This value matches the corresponding value on the host system.

\*LINKTYPE

The following values are used for the various types: \*LAN - 16393, \*SDLC - 521, \*TDLC - 4105, \*IDLC - 2048, \*X25 - 1024, or \*FR - 1590.

*maximum-frame-size*

Specify the frame size for the controller. The frame size that can be used depends on the type of line being used. Valid frame sizes for each line type are: For \*FR, specify a value from 265 through 8182. For

\*IDLC, specify a value ranging from 265 through 8196. For \*LAN, specify a value from 265 through 16393 (265 through 4444 for DDI LANs). For \*SDLC, specify 265, 521, 1033, or 2057. For \*X25, specify 256, 265, 512, 521, 1024, 1033, 2048, or 4096.

**Note:** The numeric values listed for \*LINKTYPE are valid only if TYPE(\*BLANK) is specified when the controller is created.

Top

---

## Remote network identifier (RMTNETID)

Specifies the NAME of the remote network in which the adjacent control point resides.

### \*NETATR

The LCLNETID value specified in the system network attributes is used.

### \*NONE

No remote network identifier (ID) is used.

### \*ANY

The system determines which remote network identifier is used.

*remote-network-identifier*

Specify the remote network identifier.

Top

---

## Remote control point (RMTCPNAME)

Specifies the control point name of the remote system.

### \*ANY

The system determines the name of the remote control point used.

*remote-control-point-name*

Specify the remote control point NAME.

Top

---

## Remote System Name (RMTSYSNAME)

Specifies the NAME of the remote system to which there is an OptiConnect bus connection. The current system NAME of the remote system can be found by using the DSPNETA command on that system.

**Note:** This parameter is valid only when LINKTYPE(\*OPC) is specified.

Top

---

## Exchange identifier (EXCHID)

Specifies the remote exchange identifier of this controller. The controller sends (exchanges) its identifier to another location when a connection is established. The 8-digit hexadecimal identifier contains 3 digits for the block number and 5 digits for the identifier of the specific controller.

**Note:** This parameter is required for both SDLC switched lines and SNBU lines when either of the following occurs:

- Both APPN(\*YES) and NODETYPE(\*LENNODE) are specified.
- APPN(\*NO) is specified and RMTCPNAME is not specified.

The block number of the exchange identifier is related to the controller:

### Controller

#### Block Number

**3174, 3274**

001 to 0FE

**3601 \*** 016 (\* 3601 is configured as 4701)

**3651, 3684**

005

**3694** 02F

**4680** 04D

**4684** 005

**4702, 4702**

057

**5251** 020

**5294** 045

**5394** 05F

**5494** 073

### iSeries

056

### Displaywriter

03A

### System/36

03E

### System/38

022

For the 5251, 5394, and 5294 controllers, the last five digits must begin with 000. For 5494 controllers, the last five digits are either 000nn where nn is the station address of the 5494 controller, or the last five digits of the 5494 serial number when the serial number starts with XI.

Top

---

## Initial connection (INLCNN)

Specifies the method used to establish a connection with this controller.

### \*DIAL

The system initiates outgoing calls and answers incoming calls.

### \*ANS

The connection is made by the iSeries system when it answers an incoming call from this controller. If a call is received from the remote controller and all necessary conditions are met, the incoming call is answered by the system.

For X.25 connections, the line attached to the controller requires switched virtual circuits (SVCs) configured on the LGLCHLE parameter of type OUT or BOTH(\*SVCOUT or \*SVCBOTH) for the connection to succeed.

The line can be changed using the Change Line Description (X.25) (CHGLINX25) command.

Top

---

## Dial initiation (DIALINIT)

Specifies the method used to make the initial dial on a switched line between the system and the remote controller.

### \*LINKTYPE

The type of dial connection initiated is specified on the LINKTYPE parameter. For LAN or SDLC short-hold mode connections, the default is to dial the connection as soon as the controller description is varied on. For all other link types, the default is to delay dialing.

### \*IMMED

The dial connection is initiated as soon as the controller description is varied on.

### \*DELAY

The dial connection is delayed until a job is initiated that requests the use of the remote controller resources.

Top

---

## Connection number (C>NNBR)

Specifies the telephone number to dial to connect to this controller.

### \*DC

Direct call is being used in an X.21 circuit switched network.

\*ANY The system accepts calls from any network address.

*connection-number*

Specify the connection number.

Top

---

## Answer number (ANSNBR)

Specifies the X.25 network address from which calls are accepted.

### \*CNNNBR

Calls from the X.25 network address specified on the CNNNBR parameter are accepted.

### \*ANY

Calls are accepted from any X.25 network address.

Top

**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## Outgoing connection list (CNLSTOUT)

Specifies, for ISDN switched connections, the name of a connection list object that contains the ISDN assigned numbers for a dial out operation to the ISDN.

### *list-object*

Specify the name of a connection list object.

Top

**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## Connection list entry (CNLSTOUTE)

Specifies, for ISDN switched connections, the entry name from the connection list that is used to make a call to the ISDN. The connection list must have been identified on the **Outgoing connection list (CNLSTOUT)** parameter.

### *entry-name*

Specify an entry name.

Top

---

## Data link role (ROLE)

Specifies the data link role which the remote controller has on this connection. The primary station is the controlling station and the secondary station is the responding station. The primary station controls the data link by sending commands to the secondary station, and the secondary station responds to the commands.

### \*NEG

The local system and the remote system negotiate which computer is primary.

### \*PRI



The remote system is the primary station on this communications line.

\*SEC

The remote system is a secondary station on this communications line.

Top

---

## SHM disconnect limit (SHMDSCLMT)

Specifies the number of consecutive nonproductive responses that are required from the remote station before the connection can be suspended for this X.21 short hold mode connection. This parameter is used only if \*YES is specified for the **Short hold mode (SHM)** parameter, and \*NEG or \*SEC is specified for the **Data link role (ROLE)** parameter.

10

10 consecutive nonproductive responses must be received before the connection can be suspended.

\*NOMAX

There is no disconnect limit.

*SHM-disconnect-limit*

Specify a number from 1 to 254, indicating the number of consecutive nonproductive responses that must be received before the connection can be suspended.

Top

---

## SHM disconnect timer (SHMDSCTMR)

Specifies, in tenths of a second, the minimum length of time that the primary system maintains the connection to the remote system for this X.21 short hold mode controller. This parameter is valid only if \*YES is specified for the **Short hold mode (SHM)** parameter, and \*NEG or \*SEC is specified for the **Data link role (ROLE)** parameter.

50

The primary maintains the connection to the remote system for a minimum of 5 seconds.

*SHM-disconnect-timer*

Specify a value from 2 to 3000 in 0.1 second intervals.

Top

---

## Station address (STNADR)

Specifies the station address used when communicating with the controller.

Valid values range from 00 to FE.

**Note:** 00 can be specified only for APPC controllers when \*TDLC is specified for the **Link type (LINKTYPE)** parameter.

**Note:** If \*SEC is specified on the ROLE parameter, this is the station address of the remote controller. If \*PRI or \*NEG is specified on the ROLE parameter, this is the local station address.

Top

---

## LAN remote adapter address (ADPTADR)

Specifies the 12-character adapter address of the remote controller. This is the address to which the system sends data when it communicates with the remote controller. This value can be obtained from the remote controller's configuration record. Valid values range from hex 000000000001 through hex FFFFFFFF.

*adapter-address*

Specify the adapter address of the remote controller.

Top

---

## LAN DSAP (DSAP)

Specifies the destination service access point (DSAP). This is the logical address this system will send to when it communicates with the remote controller. This address allows the controller to properly route the data that comes from this system. The default value for the destination service access point is 04.

The value must match the value specified on the source service access point (SSAP) parameter in the remote controller's configuration record.

**Note:** The \*OPC controller uses the value above for this field. The combination of RMTSYSNAME and DSAP defines a unique controller. This allows multiple controllers to exist between two systems.

04

The destination service access point is the default 04.

*destination service access point*

Specify a hexadecimal value ranging from 04 through 9C, in increments of 4 (for example, 04, 08, 0C, 10) to represent the destination service access point.

Top

---

## LAN SSAP (SSAP)

Specifies the source service access point (SSAP). This is the logical address the local system uses when it sends data to the remote controller. This address allows the controller to properly route the data that comes from the local system. The default value for the source service access point is 04.

It must match the value assigned to the destination service access point (DSAP) in the remote controller's configuration record.

04

The system uses the logical address of 04.

*source service access point:*

Specify a hexadecimal value ranging from 04 through 9C, in increments of 4 (for example, 04, 08, 0C, 10) to represent the source service access point.

Top

---

## X.25 network level (NETLVL)

Specifies the level of the X.25 network used to access this controller. The level is specified by giving the year of the standard used by the X.25 network.

**Note:** Use of the lower value of the remote DTE or the network level is suggested; for example, if the remote DTE is using the CCITT standard of 1980 and the network 1984, specify 1980 for this parameter.

### 1980

The 1980 Standard is used.

### 1984

The 1984 Standard is used.

### 1988

The 1988 Standard is used.

Top

---

## X.25 link level protocol (LINKPCL)

Specifies the link level protocol used on the X.25 network to communicate with this controller.

### \*QLLC

The Qualified Logical Link Control (QLLC) protocol is used.

### \*ELLC

The Enhanced Logical Link Control (ELLC) protocol is used.

Top

---

## X.25 logical channel ID (LGLCHLID)

Specifies the logical channel identifier used for the X.25 permanent virtual circuit (PVC) to this controller. The valid entry is xyy. Where:

- x = the logical group number, derived from your network subscription.
- yy = the logical channel number, derived from your subscription. The logical channel identifier must be one of the PVC logical channel identifiers that was defined in the X.25 line description. There is no default for this parameter.

Top

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## X.25 connection password (CNNPWD)

Specifies the X.25 network password used for password exchange with the X.24 Call Request and Incoming Call packets (Call User Data field). This parameter is not valid for permanent virtual circuit (PVC) connections.

If you want to use a connection password that consists of characters whose hexadecimal value is less than 40, you must specify the password as a hexadecimal value. When less than 8 bytes are specified, the end of the password field is padded with blanks. A password of all blank is valid. All incoming call requests must match this password to establish a connection.

To specify a hexadecimal password, the digits must be specified in multiples of two, be no more than 16 digits long, be enclosed in apostrophes, and be preceded by an X. For example, X'0102030405' is a valid hexadecimal password.

**Note:** This connection password is highly recommended for controllers that operate with the Enhanced Logical Link Control (ELLC) protocol LINKPCL(\*ELLC) on switched virtual circuit (SVC) connections. This enhanced protocol supports reconnection of virtual circuits after network errors which disconnect the line with a clear signal; however, this reconnection is not allowed to proceed without the password validation procedure being used as a unique identifier for the controller.

### *X.25-connection-password*

Specify the connection password. The password for each controller can consist of any alphanumeric characters represented by the hexadecimal values ranging from 40 through FF.

Top

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## APPN CP session support (CPSSN)

Specifies whether this controller supports sessions between control points.

### \*YES

This controller supports sessions between control points.

### \*NO

This controller does not support sessions between control points.

Top

---

## Remote APPN node type (NODETYPE)

Specifies the type of APPN node which this controller represents.

### \*ENDNODE

This node is an end node in an APPN network.

### \*LENNODE

This node is a low-entry networking node in an APPN network.

### \*NETNODE

This node is a network node in an APPN network.

## **\*CALC**

The system determines the type of node this controller represents.

Top

---

## **Branch extender role (BEXROLE)**

Specifies the role of the local system in an APPN network for the remote controller being configured. This parameter is only used when the local system has enabled the branch extender function via the NODETYPE parameter in the network attributes being set to \*BEXNODE.

### **\*NETNODE**

The local system takes the role of a network node for the remote controller.

### **\*ENDNODE**

The local system takes the role of an end node for the remote controller.

Top

---

## **APPN/HPR capable (HPR)**

Specifies whether the local system can use APPN high-performance routing (HPR) when communicating with this controller. The controller description must specify APPN(\*YES) to enable HPR. If HPR(\*YES) is specified, the value of the MAXFRAME parameter of the line specified by the switched line list must be greater than or equal to 768, otherwise HPR will not be enabled over this connection.

### **\*YES**

The local system can use HPR, and HPR flows can proceed over the link defined by this controller.

### **\*NO**

The local system cannot use HPR, and HPR flows cannot proceed over the link defined by this controller.

Top

---

## **HPR path switching (HPRPTHSWT)**

Specifies whether an attempt is made to switch paths of HPR connections associated with this controller at the time the controller is varied off. If a path switch is not attempted or if there are no other available paths, jobs associated with the HPR connections will be ended. See the APPN Support information in the iSeries Information Center at <http://www.iseries.ibm.com/infocenter> for more information.

### **\*NO**

When this controller is varied off path switching will not be done for HPR connections associated with this controller. Jobs associated with HPR connections will be ended.

### **\*YES**

When this controller is varied off an attempt to switch paths of HPR connections associated with this controller will be made.

Top

---

## APPN transmission group number (TMSGRPNBR)

Specifies the transmission group number for this controller.

1

The default transmission group is one.

**\*CALC**

The system specifies the value for the transmission group number.

*transmission-group-number*

Specify a value from 1 to 20 for the transmission group number.

Top

---

## APPN minimum switched status (MINSWTSTS)

Specifies the minimum status of the switched connection so that APPN will consider it as a controller that is available for routing.

\*VRYONPND

APPN will consider the controller available for routing if the status is vary on pending, varied on, or active.

**\*VRYON**

APPN will consider the controller available for routing only if the status is varied on or active.

Top

---

## Autocreate device (AUTOCRTDEV)

Specifies whether device descriptions can be automatically created for this controller description.

**Note:** This parameter does not apply to the automatic creation of APPC devices. This parameter only applies to dependent devices on this controller.

\*ALL

All dependent devices than can be automatically created for this controller, except APPC devices, are automatically created.

**\*NONE**

Dependent devices on this controller are not automatically created.

Top

---

## Autodelete device (AUTODLTDEV)

Specifies the number of minutes an automatically created device can remain in an idle state (when there are no active conversations on that device). When the time expires, the system automatically varies off and deletes the device description.

### 1440

The system will automatically vary off and delete the automatically-configured idle device descriptions after 1440 minutes (24 hours).

### **\*NO**

The system will not automatically vary off and delete the automatically-configured idle device descriptions.

### *wait-time*

Specify the number of minutes to wait before deleting the automatically-configured idle device descriptions for this controller. Valid values range from 1 to 10,000.

Top

---

## User-defined 1 (USRDFN)

This field is used to describe unique characteristics of the line that you want to control. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

### \*LIND

The user-defined value specified in the line description is used.

### *user-defined*

Specify a value ranging from 0 through 255.

Top

---

## User-defined 2 (USRDFN)

This field is used to describe unique characteristics of the line that you want to control. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

### \*LIND

The user-defined value specified in the line description is used.

### *user-defined*

Specify a value ranging from 0 through 255.

Top

---

## User-defined 3 (USRDFN)

This field is used to describe unique characteristics of the line that you want to control. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

### \*LIND

The user-defined value specified in the line description is used.

*user-defined*

Specify a value ranging from 0 through 255.

Top

---

## Model controller description (MDLCTL)

Indicates whether or not this controller is a 'Model' for automatically created controller descriptions. Values on the model description, such as timer delays, retry limits, and frame size, are used for new controller descriptions that are automatically created and configured when communications with a remote system is started. The new controller must be attached to one of the SINGLE line descriptions in the switched line list (SWTLINLST parameter) of the model controller.

A model controller description is not attached to any devices, and only one controller description can be varied on for each line description.

For more information on model controllers, see the APPN Support information in the iSeries Information Center at <http://www.iseries.ibm.com/infocenter>.

**Note:** This parameter is only valid if the parameter LINKTYPE is \*LAN.

### \*NO

This controller is not a model controller.

### \*YES

This controller is a model controller.

Top

---

## Connection network network ID (CNNNETID)

Specifies the connection network identifier of this controller description. If a value is specified for this parameter (other than none), this controller description represents this connection to the connection network.

**Note:** The LCLNETID value specified in the system network attributes is used.

### \*NETATR

The LCLNETID value specified in the system network attributes is used.

### \*NONE

There is no connection network identifier.

*connection-network-netid*



Specify the connection network identifier that represents this controller description to the network.

Top

---

## Connection network CP (CNNCPNAME)

Specifies the name of the connection network control point.

A connection network is defined to allow controller descriptions to be automatically created for incoming or outgoing connections. This parameter is valid only if MDLCTL(\*YES) is specified; it is required if CNNNETID is specified.

Top

---

## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

### \*BLANK

No text is specified.

*character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

---

## Attached devices (DEV)

Specifies the names of the devices that are attached to this controller. The device descriptions must already exist.

Up to 254 devices can be attached to this controller.

Top

---

## Character code (CODE)

Specifies whether the extended binary-coded decimal interchange code (\*EBCDIC) or the American National Standard Code for Information Interchange (\*ASCII) character code is used on the line.

### \*EBCDIC

The extended binary-coded decimal interchange code (EBCDIC) character code is used.

### \*ASCII

The ASCII character code is used.

Top

---

## SSCP identifier (SSCPID)

Specifies the system service control point identifier of the host system.

*system-service-control-point-identifier*

Specify the system service control point identifier as a 12-digit hexadecimal value.

Top

**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## IDLC window size (IDLCWDWSIZ)

Specifies the window size for transmission to and reception controllers attached to the IDLC line.

\*LIND

The value specified in the line description is used as the default window size.

*window-size*

Specify the window size. Valid values range from 1 through 31.

Top

**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## IDLC frame retry (IDLCFRMRTY)

Specifies the maximum number of attempts to transmit a frame before reporting an error.

\*LIND

The number of attempts specified in the line description is used.

*IDLC-frame-retry*

Specify a number of attempts. Valid values range from 0 through 100.

Top

**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## IDLC response timer (IDLCRSPTMR)

Specifies the amount of time, in tenths of a second, to wait before retransmitting a frame if acknowledgement has not been received.

\*LIND

The time specified in the line description is used.

*IDLC-response-timer*

Specify an amount of time. Valid values range from 10 through 100 tenths of a second. For example, 100 tenths of a second equals 10 seconds.

Top

**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## IDLC connect retry (IDLCCNNRTY)

Specifies the number of times to attempt retransmission at connection time.

### \*LIND

The number of attempts specified in the line description is used.

### \*NOMAX

Indicates to continue until a successful transmission has been made.

### *connect-retry*

Specify a number of attempts. Valid values range from 1 through 100.

Top

---

## Predial delay (PREDIALDLY)

Specifies the time interval to wait (in 0.5 second intervals) before dialing a number.

**Note:** This parameter can be specified only if \*YES is specified on either the SWITCHED or SNBU parameter, and LINKTYPE(\*SDLC) and SHM(\*NO) are both specified.

### 6

The default value of 6 provides a 3-second delay.

### *predial-delay*

Specify a value ranging from 0 to 254 units. Each unit represents 0.5 second. To indicate no delay, specify a value of 0.

Top

---

## Redial delay (REDIALDLY)

Specifies the time interval to wait (in 0.5 second intervals) before re-dialing when the call attempt is unsuccessful.

**Note:** This parameter can be specified only if \*YES is specified on either the SWITCHED or SNBU parameter, and LINKTYPE(\*SDLC) and SHM(\*NO) are both specified.

120 The default value of 120 provides a 60-second delay.

### *redial-delay*

Specify a value from 0 to 254 units. Each unit represents 0.5 second. To indicate no delay, specify a value of 0.

Top

---

## Dial retry (DIALRTY)

Specifies the number of re-dial attempts made by the system before considering the dialing unsuccessful.

**Note:** This parameter can be specified only if \*YES is specified on either the SWITCHED or SNBU parameter, and LINKTYPE(\*SDLC) and SHM(\*NO) are both specified.

2 The default number of retries is 2.

### *dial-retry*

Specify a value from 0 to 254 in 0.5-second intervals, for the number of times the dialing will be tried.

Top

---

## Switched disconnect (SWTDSC)

Specifies whether the switched connection to this controller is dropped when the last device is varied off.

### \*NO

The switched connection is not dropped when the last device is varied off.

### \*YES

The switched connection is varied off when the last device is varied off.

Top

---

## Disconnect timer (DSCTMR)

Specifies options for controlling the time (in seconds) before a connection without activity is dropped, or the amount of time to delay the automatic disconnection. If the user does not want the line to drop, specify \*NO for the SWTDSC parameter.

### Element 1: Minimum Connect Timer

#### 170

A connection is dropped when it has been inactive for 170 seconds.

#### *disconnect-timer*

Specify a time to wait before disconnecting. Valid values range from 0 through 65535 seconds.

### Element 2: Disconnect Delay Timer

#### 30

The disconnection is delayed for 30 seconds.

#### *disconnect-delay-timer*

Specify a value to delay link take down after the last session on the controller is stopped. Valid values range from 0 through 65535 seconds.

**Note:** For objects migrated from V2R1M1 or previous systems, the disconnect delay timer has a value of zero. This value is interpreted by the system as 30 seconds.

---

## SDLC poll priority (POLLPTY)

Specifies whether this controller has priority when polled. This parameter can be specified only if SHM is \*NO.

\*NO

This controller does not have polling priority.

\*YES

This controller does have polling priority.

---

## SDLC poll limit (POLLMT)

Specifies, for an SDLC secondary or negotiable controller, the number of consecutive polls issued to the same controller when the poll results in receiving frames. This parameter can be specified only if SHM is \*NO.

0

The default number of polls is zero.

*poll limit*

Specify a number of polls. Valid values range from 0 through 4.

---

## SDLC out limit (OUTLMT)

Specifies the number of consecutive times SDLC allows the transmission of the maximum number of frames to a station, before allowing transmission to another station.

\*POLLMT

The value is the same as the one specified for the **SDLC poll limit (POLLMT)** parameter.

*out-limit*

Specify a value ranging from 0 through 4.

---

## SDLC connect poll retry (CNNPOLLRTY)

Specifies the number of times to retry connecting to a controller before reporting an error.

\*CALC

The number of retries is 7 if the controller is switched, and \*NOMAX if the controller is nonswitched.

\*NOMAX

The system will retry indefinitely.

### *connect-poll-retry*

Specify a value ranging from 0 to 65534 for the number of retries.

Top

---

## **SDLC NDM poll timer (NDMPOLLTMR)**

Specifies the minimum interval at which a secondary station should be polled if a poll from the primary to the secondary (which is in normal disconnect mode (NDM)) does not result in receiving the appropriate response.

This parameter is valid only if the link type is \*SDLC and the controller role is secondary or negotiable and \*NO is specified on the SHM parameter.

### \*CALC

The poll interval is calculated by the system.

### *NDM-poll-timer*

Specify a value ranging from 1 to 3000 units. Each unit represents 0.1 second. To indicate no timer, specify 0.

Top

---

## **LAN frame retry (LANFRMRTY)**

Specifies the number of times to retry a transmission when there is no acknowledgment from the remote controller in the time period specified by the LANRSPTMR parameter. This value is only used after a successful connection has been made.

### \*CALC

The system determines the LAN frame retry value based on the type of line that is lined to the controller.

### *LAN-frame-retry*

Specify a value ranging from 0 through 254 for the number of times a frame is transmitted before an acknowledgement is received.

Top

---

## **LAN connection retry (LANCNNRTY)**

Specifies the number of times a transmission is attempted before an acknowledgement is received. This value is used at connection time (unlike LANFRMRTY which is used after a connection has been made).

### \*CALC

The system determines the LAN connection retry value.

### *LAN-connection-retry*

Specify a value ranging from 0 through 254 for the number of times the transmission is attempted before an acknowledgement is received.

---

## LAN response timer (LANRSPTMR)

Specifies the time period used to determine an inoperative condition on the link when connected.

### \*CALC

The system determines the LAN response timer value.

### *LAN-response-timer*

Specify a value from 1 to 254 units. Each unit represents 0.1 second. To indicate no timer, specify 0.

---

## LAN connection timer (LANCNNTMR)

Specifies the time period used to determine an inoperative condition on the link at connection time.

### \*CALC

The system determines the LAN connection timer value.

### *LAN-connection-timer*

Specify a value ranging from 1 through 254 in 0.1-second intervals for the amount of time the system waits before an inoperative condition occurs. To indicate no timer, specify 0.

---

## LAN acknowledgement timer (LANACKTMR)

Specifies the time interval to delay sending acknowledgements for received frames.

### \*CALC

The system determines the LAN acknowledgement timer value.

### *LAN-acknowledgement-timer*

Specify a value ranging from 1 to 254 units. Each unit represents 0.1 second. To indicate no timer, specify 0. If 0 is specified for the **LAN acknowledgement frequency (LANACKFRQ)** parameter, 0 must also be specified for this parameter. If a non-zero number is specified for the LANACKFRQ parameter, a non-zero number must also be specified for this parameter.

---

## LAN inactivity timer (LANINACTMR)

Specifies the time period used to determine an inactive condition for the controller.

### \*CALC

The system determines the LAN inactivity timer value.

### *LAN-inactivity-timer*

Specify a value ranging from 1 through 255 in 0.1-second intervals for the length of time used to determine an inactive condition for the controller. To indicate no timer, specify 0.

Top

---

## LAN acknowledgement frequency (LANACKFRQ)

Specifies the maximum number of frames received before sending an acknowledgement to the controller.

### \*CALC

The system determines the LAN acknowledgement frequency value.

### *LAN-acknowledge-frequency*

Specify a value from 0 to 127 for the number of frames received. If 0 is specified for the **LAN acknowledgement timer (LANACKTMR)** parameter, 0 must also be specified for this parameter. If a non-zero number is specified for the LANACKTMR parameter, a non-zero number must also be specified for this parameter.

Top

---

## LAN max outstanding frames (LANMAXOUT)

Specifies the maximum number of frames that can be sent before an acknowledgement is received from the remote system.

### \*CALC

The system determines the LAN maximum outstanding frames value.

### *LAN-maximum-outstanding-frames*

Specify a value ranging from 1 through 127 for the number of frames that can be sent before an acknowledgement is received.

Top

---

## LAN access priority (LANACCPTY)

Specifies the priority used for accessing the remote controller. The larger the number the higher the priority for this controller. This parameter is only used when the controller attaches to TRLAN.

### \*CALC

The system determines the LAN access priority value.

### *LAN-access-priority*

Specify a value from 0 to 3 for the access priority for this controller on a local area network (LAN).

Top



---

## LAN window step (LANWDWSTP)

Specifies whether to reduce to 1 the maximum number of frames outstanding to the remote system during network congestion. This parameter (LAN Window Step) indicates the number of frames that must be successfully received by the remote system before the number of maximum outstanding frames can be increased by 1. The increase continues this way until the maximum number of outstanding frames reaches the value specified by the LAN maximum outstanding frames (LANMAXOUT) parameter.

### \*NONE

The number of outstanding frames is not reduced during network congestion.

### *LAN-window-step*

Specify a value from 1 to 127 for the number of frames that must be successfully received by the remote system before the maximum number of outstanding frames can be increased by 1.

Top

---

## X.25 switched line selection (SWTLINSLCT)

Specifies the method that is used to select lines from an X.25 switched line list.

### \*FIRST

Lines are selected beginning with the first line in the switched line list.

### \*CALC

The system determines which line in the switched line list will be selected.

Top

---

## X.25 default packet size (DFTPCKTSIZE)

Specifies the default packet size used by the X.25 network for transmission and reception.

### Element 1: Transmit Packet Size

#### \*LIND

The value specified in the line description is the default value.

#### *transmit-packet-size*

Specify a default packet size for transmission. The valid values for the packet size are 64, 128, 256, 512, 1024, 2048, and 4096.

### Element 2: Receive Packet Size

#### \*LIND

The value specified in the line description is the default value.

#### \*TRANSMIT

The value specified as the default packet size for transmission is used as the default for reception.

#### *receive-packet-size*

Specify a default packet size for reception. The valid values for the packet size are 64, 128, 256, 512, 1024, 2048, and 4096.

Top

---

## X.25 default window size (DFTWDWSIZE)

Specifies the default window size for transmission and reception.

### Element 1: Transmit Window Size

#### \*LIND

The value specified in the line description is used as the default window size.

#### *transmit-window-size*

Specify the appropriate default window size. If you specified modulus 8, valid values range from 1 through 7. If you specified modulus 128, valid values range from 1 through 15. For switched virtual circuit (SVC) incoming calls, the system accepts the window size indicated in the Incoming Call packet facilities field.

### Element 2: Receive Window Size

#### \*LIND

The value specified in the line description is used as the default window size.

#### \*TRANSMIT

The value specified as the default window size for transmission is used as the default for reception.

#### *receive-window-size*

Specify the appropriate default window size. If you specified modulus 8, valid values range from 1 through 7. If you specified modulus 128, valid values range from 1 through 15.

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---

## X.25 user group identifier (USRGRPID)

Specifies the closed user-group ID for contacting this switched virtual circuit (SVC) controller on the X.25 network.

Specify the 2-digit decimal value, from 00 through 99, as provided by the network subscription. This parameter is not valid for permanent virtual circuit (PVC) connections. It is valid only for SVC circuit outgoing call operations and is ignored for SVC incoming call connections.

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---

## **X.25 reverse charging (RVSCRG)**

Specifies whether reverse charges are accepted or requested when contacting this controller.

### **\*NONE**

No reverse charging for network tariff billing is accepted.

### **\*REQUEST**

Charges are requested on outgoing call request packets.

### **\*ACCEPT**

Reverse charging for network tariff billing is accepted on incoming requests.

### **\*BOTH**

Both incoming and outgoing requests are accepted.

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---

## **X.25 frame retry (X25FRMRTY)**

Specifies the maximum number of times a frame is sent after the response timer ends when connected to this controller. The value for this parameter depends on the quality of service provided by the network and the connection to that network; that is, the frequency of lost link protocol data units.

7

The default for the maximum number of transmissions is 7.

### ***X.25 frame retry***

Specify a value ranging from 0 through 21 for the number of times a frame is sent.

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---

## **X.25 connection retry (X25CNNRTY)**

Specifies the maximum number of times that a logical link control (LLC) protocol data unit is sent after the connect response timer expires when connecting to this controller.

7

The default for the maximum number of transmissions is 7.

### ***X.25 connection retry***

Specify a value ranging from 0 through 21 for the number times a frame is sent.

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---

## X.25 response timer (X25RSPTMR)

Specifies the time period allowed to return an acknowledgement when an LLC protocol data unit is sent while connected to this controller.

300

The time allowed to return an acknowledgment is 30 seconds.

*X.25 response-timer*

Specify an amount of time in tenths of a second. Valid values range from 1 through 2550 in 0.1-second intervals.

Top

---

## X.25 connection timer (X25CNNTMR)

Specifies the time period allowed to return an acknowledgement when an LLC protocol data unit is sent while connecting to this controller.

300

The default amount of time is 30 seconds.

*connection-timer*

Specify an amount of time in tenths of a second. Valid values range from 1 through 2550 in 0.1 second intervals.

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---

## X.25 delayed connection timer (X25DLYTMR)

Specifies the time interval between attempts to establish a connection to the controller.

\*CALC

Use the values specified for the **X.25 connection timer (X25CNNTMR)** parameter and the **X.25 connection retry (X25CNNRTY)** parameter to determine how often and how many times to try establishing the connection.

*X.25-delay-timer*

Specify a value ranging from 1 to 32767 units. Each unit represents 0.1 second. Connection attempts are repeated indefinitely at this time interval.

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---

## X.25 acknowledgement timer (X25ACKTMR)

Specifies the amount of time to delay sending acknowledgements for received frames.

20

The time allowed to delay sending an acknowledgment is 2 seconds.

*X.25-acknowledgment-timer*

Valid values range from 1 to 2550 in 0.1 second intervals, or 0 to indicate no delay.

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---

## X.25 inactivity timer (X25INACTMR)

Specifies the time period used to determine an inactive condition for the controller. Valid values range from 1 to 2550 in 0.1 second intervals.

1440

The time period used to determine an inactive condition for the controller is 10.5 seconds.

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---

## User facilities (USRFCL)

Specifies a string of hexadecimal characters sent to the X.25 network to request additional services. The system allows up to 218 hexadecimal characters.

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---

## Recovery limits (CMNRCYLMT)

Specifies the number of recovery attempts made by the system before an inquiry message is sent to the system operator. Also specifies the time (in minutes) that must elapse before the system sends an inquiry message to the system operator indicating that the recovery attempt count limit is reached.

### Element 1: Maximum Recovery Limit

2

Two recovery attempts are made within the interval specified.

\*SYSVAL

The value in the QCMNRCYLMT system value is used.

*count limit*

Specify the number of second-level recovery attempts to be made. Valid values range from 0 through 99.

### Element 2: Recovery Time Interval

5

The specified number of recovery attempts is made within a 5-minute interval.

*time-interval*

Specify the time interval (in minutes) at which the specified number of second-level recoveries are attempted. Valid values range from 0 through 120. If the value specified for *count-limit* is not 0, the value 0 specifies infinite recovery.

More information on communication recovery is in the Communications Management book, SC41-5406.

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---

## Message queue (MSGQ)

Specifies the message queue to which operational messages are sent.

### \*SYSVAL

Messages are sent to the message queue defined in the QCFGMSGQ system value.

### \*SYSOPR

Messages are sent to the system operator message queue (QSYS/QSYSOPR).

### Qualifier 1: Message queue

*name* Specify the name of the message queue to which operational messages are sent.

### Qualifier 2: Library

*name* Specify the name of the library where the message queue is located.

For more information about using this command, see the Communications Management book, SC41-5406.

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---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### \*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### \*EXCLUDE

The user cannot access the object.

### \*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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---

## Examples

```
CRTCTLAPPC  CTLD(OUTLAND) LINKTYPE(*SDLC)
             APPN(*NO) LINE(OUTLINE)
             RMTNETID(*NONE) STNADR(C1)
```

This command configures an APPC controller description attached to a nonswitched SDLC line with a station address of C1.

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---

## Error messages

### \*ESCAPE Messages

#### **CPF26BB**

Extended wireless controller member not changed.

#### **CPF26BC**

Extended wireless controller member not displayed.

#### **CPF26BD**

Entry for barcode group not removed from extended wireless controller member.

#### **CPF26BE**

Entry for PTC group not removed from extended wireless controller member.

#### **CPF26BF**

Program QZXCINZ terminated abnormally. See previous messages.

#### **CPF26B3**

Extended wireless line member not added.

#### **CPF26B4**

Extended wireless line member not changed.

#### **CPF26B5**

Extended wireless line member not displayed.

#### **CPF26B8**

Extended wireless controller member not added.

#### **CPF2716**

Controller description &1 not created.

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## Create Ctl Desc (Async) (CRTCTLASC)

Where allowed to run: All environments (\*ALL)  
 Threadsafte: No

Parameters  
 Examples  
 Error messages

The Create Controller Description (Async) (CRTCTLASC) command creates a controller description for an asynchronous controller.

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### Parameters

Keyword	Description	Choices	Notes
CTLD	Controller description	<i>Name</i>	Required, Positional 1
LINKTYPE	Link type	*ASYNC, *X25	Required, Positional 2
ONLINE	Online at IPL	*YES, *NO	Optional
SWITCHED	Switched connection	*NO, *YES	Optional
SNBU	Switched network backup	*NO, *YES	Optional
LINE	Attached nonswitched line	<i>Name</i>	Optional
SWTLINLST	Switched line list	Values (up to 64 repetitions): <i>Name</i>	Optional
INLCNN	Initial connection	*DIAL, *ANS	Optional
CNNNBR	Connection number	<i>Character value</i> , *ANY	Optional
ANSNBR	Answer number	*CNNNBR, *ANY	Optional
LGLCHLID	X.25 logical channel ID	<i>Character value</i>	Optional
TEXT	Text 'description'	<i>Character value</i> , *BLANK	Optional
DEV	Attached devices	<i>Name</i>	Optional
PREDIALDLY	Predial delay	0-254, <u>6</u>	Optional
REDIALDLY	Redial delay	0-254, <u>120</u>	Optional
DIALRTY	Dial retry	0-254, <u>2</u>	Optional
SWTDSC	Switched disconnect	*NO, *YES	Optional
ACKTMR	File transfer ack timer	16-65535, <u>16</u>	Optional
RETRY	File transfer retry	1-255, <u>7</u>	Optional
RMTVIFY	Remote verify	*NO, *YES	Optional
LCLLOCNAME	Local location	<i>Name</i>	Optional
LCLID	Local identifier	<i>Name</i>	Optional
PADEML	PAD Emulation	*NO, *YES	Optional
SWTLINSLCT	X.25 switched line selection	*FIRST, *CALC	Optional
DFTPFSIZE	X.25 default packet size	<i>Element list</i>	Optional
	Element 1: Transmit value	*LIND, 64, 128, 256, 512, 1024, 2048, 4096	
	Element 2: Receive value	*LIND, *TRANSMIT, 64, 128, 256, 512, 1024, 2048, 4096	
DFTWDSIZE	X.25 default window size	<i>Element list</i>	Optional
	Element 1: Transmit value	1-15, *LIND	
	Element 2: Receive value	1-15, *LIND, *TRANSMIT	

Keyword	Description	Choices	Notes
USRGRPID	X.25 user group identifier	<i>Character value</i>	Optional
RVSCRG	X.25 reverse charging	<b>*NONE</b> , *REQUEST, *ACCEPT, *BOTH	Optional
USRFCL	User facilities	<i>Character value</i>	Optional
CMNRCYLMT	Recovery limits	Single values: *SYSVAL Other values: <i>Element list</i>	Optional
	Element 1: Count limit	0-99, <u>2</u>	
	Element 2: Time interval	0-120, <u>5</u>	
MSGQ	Message queue	Single values: *SYSVAL, *SYSOPR Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Message queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i>	
AUT	Authority	<i>Name</i> , <b>*CHANGE</b> , *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

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## Controller description (CTLD)

This is a required parameter.

Specifies the name of the controller description.

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---

## Link type (LINKTYPE)

Specifies the type of line to which this controller is attached.

This is a required parameter.

**\*ASYNC**

This controller is attached to an asynchronous line.

**\*X25**

This controller is attached to an X.25 line.

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---

## Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

**\*YES**

The controller is automatically varied on at IPL.

**\*NO**

The controller is not automatically varied on at IPL.

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---

## Switched connection (SWITCHED)

Specifies whether this controller is attached to a switched line, a token-ring network, Ethernet LAN, or an X.25 switched virtual circuit (SVC). \*NO must be specified for APPC controllers attached to a TDLC line.

### \*NO

This controller is attached to a nonswitched line. Specify this value for controllers attaching to an X.25 permanent virtual circuit (PVC).

### \*YES

This controller is attached to a switched line. Specify this value for controllers attached to an X.25 switched virtual circuit (SVC). Also specify this value for controllers attached to a local area network.

**Note:** If LINKTYPE is \*LAN, the SWITCHED parameter value must be \*YES or must not be specified.

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---

## Switched network backup (SNBU)

Specifies whether the remote system modem has the switched network backup (SNBU) feature. The backup feature is used to bypass a broken nonswitched (leased line) connection by establishing a switched connection. To activate SNBU, you must change the controller description of the modem from nonswitched to switched by specifying \*YES for the **Activate swt network backup (ACTSNBU)** parameter.

**Note:** If the modem model you are using is an IBM 386x, 586x, or 786x, you should not change the controller description. Instead, manually switch the modem to the unswitched mode, and manually dial the connection.

Both the local and remote modems must support the SNBU feature to perform a valid activation.

\*NO The remote system modem does not have the SNBU feature.

### \*YES

The remote system modem has the SNBU feature.

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---

## Attached nonswitched line (LINE)

Specifies the name of the nonswitched lines to which this controller is attached. The line description must already exist.

**Note:** The associated line must be varied off before this command is entered. Specify this parameter for controllers attaching to an X.25 permanent virtual circuit (PVC).

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---

## Switched line list (SWTLINLST)

Specifies the names of the switched lines to which this controller attaches. The line descriptions must already exist. Up to 64 switched line names can be specified.

*\*switched-line-NAME*

Specify the names of up to 64 lines that are connected to this controller. The same line name can be used more than once. For each line name specified, a line description by that name must already exist.

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---

## Initial connection (INLCNN)

Specifies the method used to establish a connection with this controller.

### \*DIAL

The system initiates outgoing calls and answers incoming calls.

### \*ANS

The connection is made by the iSeries system when it answers an incoming call from this controller. If a call is received from the remote controller and all necessary conditions are met, the incoming call is answered by the system.

For X.25 connections, the line attached to the controller requires switched virtual circuits (SVCs) configured on the LGLCHLE parameter of type OUT or BOTH(\*SVCOUT or \*SVCBOTH) for the connection to succeed.

The line can be changed using the Change Line Description (X.25) (CHGLINX25) command.

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## Connection number (CNNNBR)

Specifies the telephone number to dial to connect to this controller.

This could be a telephone number, an X.25 network address, or an X.21 connection number depending on the type of line the controller is attached to.

**\*ANY** The system accepts calls from any network address.

### *connection-number*

Specify the connection number used to call this controller. This could be a telephone number or an X.25 network address.

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---

## Answer number (ANSNBR)

Specifies the X.25 network address from which calls are accepted.

### \*CNNNBR

Calls from the X.25 network address specified on the CNNNBR parameter are accepted.

### \*ANY

Calls are accepted from any X.25 network address.

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---

## X.25 logical channel ID (LGLCHLID)

Specifies the logical channel identifier used for the X.25 permanent virtual circuit (PVC) to this controller. The valid entry is xyy. Where:

- x = the logical group number, derived from your network subscription.
- yy = the logical channel number, derived from your subscription. The logical channel identifier must be one of the PVC logical channel identifiers that was defined in the X.25 line description. There is no default for this parameter.

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## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

### \*BLANK

No text is specified.

*character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

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## Attached devices (DEV)

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### Attached devices (DEV)

Specifies the names of the devices that are attached to this controller. The device descriptions must already exist.

Asynchronous communications supports only one device attached to each controller. The device name must be the same as that specified when the associated device description was created. The device description must already exist.

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---

## Predial delay (PREDIALDLY)

Specifies the time interval to wait (in 0.5 second intervals) before dialing a number.

**Note:** This parameter can be specified only if switched line or switched network backup is \*YES and the link type is \*ASYNC for asynchronous controllers.

6

The default value of 6 provides a 3-second delay.

*predial-delay*

Specify a value ranging from 0 to 254 units. Each unit represents 0.5 second. To indicate no delay, specify a value of 0.

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---

## Redial delay (REDIALDLY)

Specifies the time interval to wait (in 0.5 second intervals) before re-dialing when the call attempt is unsuccessful.

**Note:** This parameter can be specified only if switched line or switched network backup is \*YES and the link type is \*ASYNC for asynchronous controllers.

120 The default value of 120 provides a 60-second delay.

### *redial-delay*

Specify a value from 0 to 254 units. Each unit represents 0.5 second. To indicate no delay, specify a value of 0.

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---

## Dial retry (DIALRTY)

Specifies the number of re-dial attempts made by the system before considering the dialing unsuccessful.

**Note:** This parameter can be specified only if switched line or switched network backup is \*YES and the link type is \*ASYNC for asynchronous controllers.

2 The default number of retries is 2.

### *dial-retry*

Specify a value from 0 to 254 in 0.5-second intervals, for the number of times the dialing will be tried.

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---

## Switched disconnect (SWTDSC)

Specifies whether the switched connection to this controller is dropped when the last device is varied off.

### \*NO

The switched connection is not dropped when the last device is varied off.

### \*YES

The switched connection is varied off when the last device is varied off.

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## File transfer ack timer (ACKTMR)

Specifies the time period allowed for an acknowledgement when using file transfer support.

Valid values range from 16 to 65535 in one-second intervals.

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## File transfer retry (RETRY)

Specifies the number of retries when using file transfer support.

Valid values range from 1 to 255.

7

Seven is the default for number of retries.

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## Remote verify (RMTVIFY)

Specifies whether the remote system requires verification of local location NAME and local ID. The remote system requires verification if a generic controller and device are configured to accept calls from any X.25 network address.

\*NO

The remote system does not require verification of local location name and local ID.

\*YES

The remote system does require verification of the local location name and local ID.

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## Local location (LCLLOCNAME)

Specifies the name that, when combined with the local ID, identifies your controller to a remote system. This name must be the same as the name specified by the remote system in its remote location list.

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## Local identifier (LCLID)

Specifies the ID that, when combined with the local location NAME, identifies your controller to a remote system. This ID must be the same as the ID specified by the remote system in its remote location list.

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## PAD Emulation (PADEML)

Specifies whether this controller emulates an X.25 packet assembler/disassembler (PAD). This PAD emulation follows CCITT recommendations for X.3, X.28, and X.29. This parameter is valid only if \*X25 is specified for the **Link type (LINKTYPE)** parameter, SWITCHED is \*YES, and the initial connection (INLCNN) is set to \*DIAL.

\*NO

This controller does not emulate an X.25 packet assembler/disassembler (PAD).

\*YES

This controller emulates an X.25 packet assembler/disassembler (PAD).

---

## X.25 switched line selection (SWTLINSLCT)

Specifies the method that is used to select lines from an X.25 switched line list.

### \*FIRST

Lines are selected beginning with the first line in the switched line list.

### \*CALC

The system determines which line in the switched line list will be selected.

---

## X.25 default packet size (DFTPKTSIZE)

Specifies the default packet size used by the X.25 network for transmission and reception.

### Element 1: Transmit Packet Size

#### \*LIND

The value specified in the line description is the default value.

*transmit-packet-size*

Specify a default packet size for transmission. The valid values for the packet size are 64, 128, 256, 512, 1024, 2048, and 4096.

### Element 2: Receive Packet Size

#### \*LIND

The value specified in the line description is the default value.

#### \*TRANSMIT

The value specified as the default packet size for transmission is used as the default for reception.

*receive-packet-size*

Specify a default packet size for reception. The valid values for the packet size are 64, 128, 256, 512, 1024, 2048, and 4096.

---

## X.25 default window size (DFTWDWSIZE)

Specifies the default window size for transmission and reception.

### Element 1: Transmit Window Size

#### \*LIND

The value specified in the line description is used as the default window size.



### *transmit-window-size*

Specify the appropriate default window size. If you specified modulus 8, valid values range from 1 through 7. If you specified modulus 128, valid values range from 1 through 15. For switched virtual circuit (SVC) incoming calls, the system accepts the window size indicated in the Incoming Call packet facilities field.

#### **Element 2: Receive Window Size**

##### **\*LIND**

The value specified in the line description is used as the default window size.

##### **\*TRANSMIT**

The value specified as the default window size for transmission is used as the default for reception.

### *receive-window-size*

Specify the appropriate default window size. If you specified modulus 8, valid values range from 1 through 7. If you specified modulus 128, valid values range from 1 through 15.

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---

## **X.25 user group identifier (USRGRPID)**

Specifies the closed user-group ID for contacting this switched virtual circuit (SVC) controller on the X.25 network.

Specify the 2-digit decimal value, from 00 through 99, as provided by the network subscription. This parameter is not valid for permanent virtual circuit (PVC) connections. It is valid only for SVC circuit outgoing call operations and is ignored for SVC incoming call connections.

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---

## **X.25 reverse charging (RVSCRG)**

Specifies whether reverse charges are accepted or requested when contacting this controller.

##### **\*NONE**

No reverse charging for network tariff billing is accepted.

##### **\*REQUEST**

Charges are requested on outgoing call request packets.

##### **\*ACCEPT**

Reverse charging for network tariff billing is accepted on incoming requests.

##### **\*BOTH**

Both incoming and outgoing requests are accepted.

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---

## User facilities (USRFCL)

Specifies a string of hexadecimal characters sent to the X.25 network to request additional services. The system allows up to 218 hexadecimal characters.

**Note:** Values entered in this field are determined by the supplier of the network subscription. Do not include coding of facilities shown through keywords: packet size, window size, user group identifier, and reverse charging.

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---

## Recovery limits (CMNRCYLMT)

Specifies the number of recovery attempts made by the system before an inquiry message is sent to the system operator. Also specifies the time (in minutes) that must elapse before the system sends an inquiry message to the system operator indicating that the recovery attempt count limit is reached.

### Element 1: Maximum Recovery Limit

2

Two recovery attempts are made within the interval specified.

#### \*SYSVAL

The value in the QCMNRCYLMT system value is used.

*count limit*

Specify the number of second-level recovery attempts to be made. Valid values range from 0 through 99.

### Element 2: Recovery Time Interval

5

The specified number of recovery attempts is made within a 5-minute interval.

*time-interval*

Specify the time interval (in minutes) at which the specified number of second-level recoveries are attempted. Valid values range from 0 through 120. If the value specified for *count-limit* is not 0, the value 0 specifies infinite recovery.

More information on communication recovery is in the Communications Management book, SC41-5406.

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---

## Message queue (MSGQ)

Specifies the message queue to which operational messages are sent.

#### \*SYSVAL

Messages are sent to the message queue defined in the QCFGMSGQ system value.

#### \*SYSOPR

Messages are sent to the system operator message queue (QSYS/QSYSOPR).

### Qualifier 1: Message queue

*name* Specify the name of the message queue to which operational messages are sent.

## Qualifier 2: Library

*name* Specify the name of the library where the message queue is located.

For more information about using this command, see the Communications Management book, SC41-5406.

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---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### \*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### **\*EXCLUDE**

The user cannot access the object.

### **\*LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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---

## Examples

```
CRTCTLASC CTLD(ASCCTL) LINKTYPE(*ASYNC) LINE(ASCLIN)
```

This command creates an asynchronous controller attached to a nonswitched asynchronous line.

Top

---

## Error messages

### \*ESCAPE Messages

#### **CPF26BB**

Extended wireless controller member not changed.

**CPF26BC**

Extended wireless controller member not displayed.

**CPF26BD**

Entry for barcode group not removed from extended wireless controller member.

**CPF26BE**

Entry for PTC group not removed from extended wireless controller member.

**CPF26BF**

Program QZXCINZ terminated abnormally. See previous messages.

**CPF26B3**

Extended wireless line member not added.

**CPF26B4**

Extended wireless line member not changed.

**CPF26B5**

Extended wireless line member not displayed.

**CPF26B8**

Extended wireless controller member not added.

**CPF2716**

Controller description &1 not created.

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## Create Ctl Desc (BSC) (CRTCTLBSC)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Controller Description (BSC) (CRTCTLBSC) command creates a controller description for a binary synchronous communications (BSC) controller.

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---

### Parameters

Keyword	Description	Choices	Notes
CTLD	Controller description	<i>Name</i>	Required, Positional 1
ONLINE	Online at IPL	*YES, *NO	Optional
CNN	Connection type	*NONSWTPP, *SWTPP, *MPTRIB	Optional
SNBU	Switched network backup	*NO, *YES	Optional
LINE	Attached nonswitched line	<i>Name</i>	Optional
SWTLINLST	Switched line list	Values (up to 64 repetitions): <i>Name</i>	Optional
APPTYPE	Application type	*PGM, *RJE, *EML	Optional
INLCNN	Initial connection	*DIAL, *ANS	Optional
CNNBR	Connection number	<i>Character value</i>	Optional
LCLID	Local identifier	<i>Character value</i> , *NOID	Optional
RMTID	Remote identifiers	Values (up to 64 repetitions): <i>Character value</i> , *ANY, *NOID	Optional
RJEHOST	RJE host type	*RES, *JES2, *JES3, *RSCS	Optional
RJELOGON	RJE host signon/logon	<i>Character value</i>	Optional
TEXT	Text 'description'	<i>Character value</i> , *BLANK	Optional
DEV	Attached devices	Values (up to 32 repetitions): <i>Name</i>	Optional
PREDIALDLY	Predial delay	0-254, <u>6</u>	Optional
REDIALDLY	Redial delay	0-254, <u>120</u>	Optional
DIALRTY	Dial retry	0-254, <u>2</u>	Optional
CMNRCYLMT	Recovery limits	Single values: *SYSVAL Other values: <i>Element list</i>	Optional
	Element 1: Count limit	0-99, <u>2</u>	
	Element 2: Time interval	0-120, <u>5</u>	
AUT	Authority	<i>Name</i> , *CHANGE, *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

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---

### Controller description (CTLD)

This is a required parameter.

Specifies the name of the controller description.

---

## Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

### \*YES

The controller is automatically varied on at IPL.

### \*NO

The controller is not automatically varied on at IPL.

---

## Connection type (CNN)

Specifies the type of connection on which this BSC controller is used.

**Note:** This value must match the value specified for the CNN parameter in the CRTLINBSC command.

### NONSWTPP

Nonswitched point-to-point connection.

### \*SWTPP

Switched point-to-point connection.

### \*MPTRIB

Multipoint tributary connection.

---

## Switched network backup (SNBU)

Specifies whether the remote system modem has the switched network backup (SNBU) feature. The backup feature is used to bypass a broken nonswitched (leased line) connection by establishing a switched connection. To activate SNBU, you must change the controller description of the modem from nonswitched to switched by specifying \*YES for the **Activate swt network backup (ACTSNBU)** parameter.

**Note:** If the modem model you are using is an IBM 386x, 586x, or 786x, you should not change the controller description. Instead, manually switch the modem to the unswitched mode, and manually dial the connection.

Both the local and remote modems must support the SNBU feature to perform a valid activation.

\*NO The remote system modem does not have the SNBU feature.

### \*YES

The remote system modem has the SNBU feature.

---

## Attached nonswitched line (LINE)

Specifies the name of the nonswitched lines to which this controller is attached. The line description must already exist.

**Note:** The associated line must be varied off before this command is entered. Specify this parameter for controllers attaching to an X.25 permanent virtual circuit (PVC).

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---

## Switched line list (SWTLINLST)

Specifies the names of the switched lines to which this controller attaches. The line descriptions must already exist. Up to 64 switched line names can be specified.

*\*switched-line-NAME*

Specify the names of up to 64 lines that are connected to this controller. The same line name can be used more than once. For each line name specified, a line description by that name must already exist.

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---

## Application type (APPTYPE)

Specifies the application type used by this device.

**Note:** This value must match the value specified on the APPTYPE parameter in the CRTLINBSC command.

\*PGM

The application is a user-written program.

\*RJE

The application is BSC Remote Job Entry (RJE).

\*EML

The application is BSC 3270 Device Emulation.

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---

## Initial connection (INLCNN)

Specifies the method used to establish a connection with this controller.

\*DIAL

The system initiates outgoing calls and answers incoming calls.

\*ANS

The connection is made by the iSeries system when it answers an incoming call from this controller. If a call is received from the remote controller and all necessary conditions are met, the incoming call is answered by the system.

For X.25 connections, the line attached to the controller requires switched virtual circuits (SVCs) configured on the LGLCHLE parameter of type OUT or BOTH(\*SVCOUT or \*SVCBOTH) for the connection to succeed.

The line can be changed using the Change Line Description (X.25) (CHGLINX25) command.

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## Connection number (CNNBR)

Specifies the telephone number to dial to connect to this controller.

*connection-number*

Specify the connection number.

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---

## Local identifier (LCLID)

Specifies the local ID used to identify the local system to the remote controller.

\*NOID

The local system sends a null identifier when communicating with the controller.

*local-id*

Specify a local ID that is from 2 to 30 hexadecimal characters long and contains an even number of characters. The identifier cannot contain any BSC control characters.

The following guidelines are recommended to help ensure that the telephone connection is made to the correct BSC controller:

- The local ID should be a minimum of 4 characters.
- If the ID is only 4 characters, the first 2 and last 2 should be the same (example: F3F3 or 8484).

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## Remote identifiers (RMTID)

Specifies the identifiers for remote BSC controllers. A maximum of 64 remote controller IDs can be specified.

\*ANY

The system accepts any identifier sent by the remote controller.

**Note:** This value is valid only when it is the last or the only value specified.

\*NOID

The local system accepts a null identifier sent by the remote system.

*remote-ID*

Specify a remote controller ID that is from 2 to 30 hexadecimal characters long and contains an even number of characters. The identifier cannot contain any BSC control characters.



The following guidelines are recommended to help ensure that the phone connection is made to the correct BSC controller:

- The remote ID should be a minimum of 4 characters.
- If the ID is only 4 characters, the first 2 and last 2 should be the same (example: F1F1 or 8585).

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## RJE host type (RJEHOST)

Specifies the subsystem type of the host to which RJE is connected.

### **\*RES**

The host is RES (Remote Entry System).

### **\*JES2**

The host is JES2 (Job Entry Subsystem 2).

### **\*JES3**

The host is JES3 (Job Entry Subsystem 3).

### **\*RSCS**

The host is RSCS (Remote Spooling Communications System).

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---

## RJE host signon/logon (RJELOGON)

Specify up to 80 characters of text, enclosed in apostrophes, used as sign-on text for the RJE host system. This parameter is required only when APPTYPE(\*RJE) is specified. Specify the sign-on information required by the host system.

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## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

### **\*BLANK**

No text is specified.

*character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

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---

## Attached devices (DEV)

Specifies the names of the devices that are attached to this controller. The device descriptions must already exist.

The maximum number of devices that can attach to this controller is 32 if CNN is \*MPTRIB, 24 if APPTYPE is \*RJE, or 1 for all other cases.

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## Predial delay (PREDIALDLY)

Specifies the time interval to wait (in 0.5 second intervals) before dialing a number.

6

The default value of 6 provides a 3-second delay.

### *predial-delay*

Specify a value ranging from 0 to 254 units. Each unit represents 0.5 second. To indicate no delay, specify a value of 0.

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---

## Redial delay (REDIALDLY)

Specifies the time interval to wait (in 0.5 second intervals) before re-dialing when the call attempt is unsuccessful.

120 The default value of 120 provides a 60-second delay.

### *redial-delay*

Specify a value from 0 to 254 units. Each unit represents 0.5 second. To indicate no delay, specify a value of 0.

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---

## Dial retry (DIALRTY)

Specifies the number of re-dial attempts made by the system before considering the dialing unsuccessful.

2 The default number of retries is 2.

### *dial-retry*

Specify a value from 0 to 254 in 0.5-second intervals, for the number of times the dialing will be tried.

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## Recovery limits (CMNRCYLMT)

Specifies the number of recovery attempts made by the system before an inquiry message is sent to the system operator. Also specifies the time (in minutes) that must elapse before the system sends an inquiry message to the system operator indicating that the recovery attempt count limit is reached.

### Element 1: Maximum Recovery Limit

2

Two recovery attempts are made within the interval specified.

### \*SYSVAL

The value in the QCMNRCYLMT system value is used.

### *count limit*

Specify the number of second-level recovery attempts to be made. Valid values range from 0 through 99.

### **Element 2: Recovery Time Interval**

5

The specified number of recovery attempts is made within a 5-minute interval.

### *time-interval*

Specify the time interval (in minutes) at which the specified number of second-level recoveries are attempted. Valid values range from 0 through 120. If the value specified for *count-limit* is not 0, the value 0 specifies infinite recovery.

More information on communication recovery is in the Communications Management book, SC41-5406.

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## **Authority (AUT)**

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### \*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### **\*EXCLUDE**

The user cannot access the object.

### **\*LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

**name** Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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## Examples

```
CRTCTLBSC  CTLD(BSC1)  CNN(*SWTPP)
           CNNBR(1234567)  LCLID(020202)
           RMTID(*ANY)  SWTLINLST(BSC1)  INLCNN(*ANS)
```

This command creates a BSC controller on a switched line that accepts calls from any remote location.

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## Error messages

### \*ESCAPE Messages

#### **CPF26BB**

Extended wireless controller member not changed.

#### **CPF26BC**

Extended wireless controller member not displayed.

#### **CPF26BD**

Entry for barcode group not removed from extended wireless controller member.

#### **CPF26BE**

Entry for PTC group not removed from extended wireless controller member.

#### **CPF26BF**

Program QZXCINZ terminated abnormally. See previous messages.

#### **CPF26B3**

Extended wireless line member not added.

#### **CPF26B4**

Extended wireless line member not changed.

#### **CPF26B5**

Extended wireless line member not displayed.

#### **CPF26B8**

Extended wireless controller member not added.

#### **CPF2716**

Controller description &1 not created.

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## Create Ctl Desc (Finance) (CRTCTLFNC)

Where allowed to run: All environments (\*ALL)  
 Threadsaf: No

Parameters  
 Examples  
 Error messages

The Create Controller Description (Finance) (CRTCTLFNC) command creates a controller description for a finance controller. For more information about using this command, see the Communications Configuration book, SC41-5401.

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### Parameters

Keyword	Description	Choices	Notes
CTLD	Controller description	<i>Name</i>	Required, Positional 1
TYPE	Controller type	*FBSS, 3694, 4701, 4702, 4730, 4731, 4732, 4736	Required, Positional 2
MODEL	Controller model	0	Required, Positional 3
LINKTYPE	Link type	*LAN, *SDLC, *X25	Required, Positional 4
ONLINE	Online at IPL	*YES, *NO	Optional
SWITCHED	Switched connection	*NO, *YES	Optional
SHM	Short hold mode	*NO, *YES	Optional
SNBU	Switched network backup	*NO, *YES	Optional
LINE	Attached nonswitched line	<i>Name</i>	Optional
SWTLINLST	Switched line list	Values (up to 64 repetitions): <i>Name</i>	Optional
MAXFRAME	Maximum frame size	265-1033, 256, 265, 512, 521, 1033, *LINKTYPE	Optional
EXCHID	Exchange identifier	X'00000000'-X'FFFFFFF'	Optional
INLCNN	Initial connection	*DIAL, *ANS	Optional
CNNNBR	Connection number	<i>Character value</i> , *DC, *ANY	Optional
ANSNBR	Answer number	*CNNNBR, *ANY	Optional
SHMDSCLMT	SHM disconnect limit	1-254, <u>10</u> , *NOMAX	Optional
SHMDSCTMR	SHM disconnect timer	2-3000, <u>50</u>	Optional
STNADR	Station address	X'01'-X'FE'	Optional
ADPTADR	LAN remote adapter address	X'000000000001'-X'FFFFFFFFFFFF'	Optional
NETLVL	X.25 network level	1980, 1984, 1988	Optional
LINKPCL	X.25 link level protocol	*QLLC, *ELLC	Optional
LGLCHLID	X.25 logical channel ID	<i>Character value</i>	Optional
CNNPWD	X.25 connection password	<i>Character value</i> , X''	Optional
TEXT	Text 'description'	<i>Character value</i> , *BLANK	Optional
DEV	Attached devices	Values (up to 255 repetitions): <i>Name</i>	Optional
CODE	Character code	*EBCDIC, *ASCII	Optional
SSCPID	SSCP identifier	X'000000000001'-X'FFFFFFFFFFFF', <u>050000000000</u>	Optional
PREDIALDLY	Predial delay	0-254, <u>6</u>	Optional

Keyword	Description	Choices	Notes
REDIALDLY	Redial delay	0-254, <u>120</u>	Optional
DIALRTY	Dial retry	0-254, <u>2</u>	Optional
SWTDSC	Switched disconnect	*YES, *NO	Optional
POLLPTY	SDLC poll priority	*NO, *YES	Optional
POLLMT	SDLC poll limit	0-4, <u>0</u>	Optional
OUTLMT	SDLC out limit	*POLLMT, 0, 1, 2, 3, 4	Optional
CNNPOLLRTY	SDLC connect poll retry	0-65534, *CALC, *NOMAX	Optional
NDMPOLLTMR	SDLC NDM poll timer	0-3000, *CALC	Optional
DSAP	LAN DSAP	<u>04</u> , 08, 0C, 10, 14, 18, 1C, 20, 24, 28, 2C, 30, 34, 38, 3C, 40, 44, 48, 4C, 50, 54, 58, 5C, 60, 64, 68, 6C, 70, 74, 78, 7C, 80, 84, 88, 8C, 90, 94, 98, 9C	Optional
SSAP	LAN SSAP	<u>04</u> , 08, 0C, 10, 14, 18, 1C, 20, 24, 28, 2C, 30, 34, 38, 3C, 40, 44, 48, 4C, 50, 54, 58, 5C, 60, 64, 68, 6C, 70, 74, 78, 7C, 80, 84, 88, 8C, 90, 94, 98, 9C	Optional
LANFRMRTY	LAN frame retry	0-254, *CALC	Optional
LANCNNRTY	LAN connection retry	0-254, *CALC	Optional
LANRSPTMR	LAN response timer	0-254, *CALC	Optional
LANCNTMR	LAN connection timer	0-254, *CALC	Optional
LANACKTMR	LAN acknowledgement timer	0-254, *CALC	Optional
LANINACTMR	LAN inactivity timer	0-255, *CALC	Optional
LANACKFRQ	LAN acknowledgement frequency	0-127, *CALC	Optional
LANMAXOUT	LAN max outstanding frames	1-127, *CALC	Optional
LANACCPTY	LAN access priority	0-3, *CALC	Optional
LANWDWSTP	LAN window step	1-127, *NONE	Optional
SWTLINSLCT	X.25 switched line selection	*FIRST, *CALC	Optional
DFTPFSIZE	X.25 default packet size	<i>Element list</i>	Optional
	Element 1: Transmit value	*LIND, 64, 128, 256, 512, 1024, 2048, 4096	
	Element 2: Receive value	*LIND, *TRANSMIT, 64, 128, 256, 512, 1024, 2048, 4096	
DFTWDWSIZE	X.25 default window size	<i>Element list</i>	Optional
	Element 1: Transmit value	1-15, *LIND	
	Element 2: Receive value	1-15, *LIND, *TRANSMIT	
USRGRPID	X.25 user group identifier	<i>Character value</i>	Optional
RVSCRG	X.25 reverse charging	*NONE, *REQUEST, *ACCEPT, *BOTH	Optional
X25FRMRTY	X.25 frame retry	0-21, <u>7</u>	Optional
X25CNNRTY	X.25 connection retry	0-21, <u>7</u>	Optional
X25RSPTMR	X.25 response timer	1-2550, <u>100</u>	Optional
X25CNTMR	X.25 connection timer	1-2550, <u>100</u>	Optional
X25DLYTMR	X.25 delayed connection timer	1-32767, *CALC	Optional
X25ACKTMR	X.25 acknowledgement timer	0-2550, <u>20</u>	Optional
X25INACTMR	X.25 inactivity timer	1-2550, <u>350</u>	Optional
USRFCL	User facilities	<i>Character value</i>	Optional

Keyword	Description	Choices	Notes
CMNRCYLMT	Recovery limits	Single values: *SYSVAL Other values: <i>Element list</i>	Optional
	Element 1: Count limit	0-99, <u>2</u>	
	Element 2: Time interval	0-120, <u>5</u>	
AUT	Authority	<i>Name</i> , * <b>CHANGE</b> , *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

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## Controller description (CTLDD)

This is a required parameter.

Specifies the name of the controller description.

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---

## Controller type (TYPE)

This is a required parameter.

Specifies the type of controller for this description.

\*FBSS

This description represents a Financial Branch System Services (FBSS) controller.

**3694**

This description represents a 3694 check processor.

**4701**

This description represents a 4701 finance controller.

**4702**

This description represents a 4702 finance controller.

**4730**

This description represents a 4730 personal banking machine.

**4731**

This description represents a 4731 personal banking machine.

**4732**

This description represents a 4732 personal banking machine.

**4736**

This description represents a 4736 self-service transaction machine.

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## Controller model (MODEL)

This is a required parameter.

Specifies the model number of the controller that is described. This number tells the system which features the controller has.

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## Link type (LINKTYPE)

Specifies the type of line to which this controller is attached.

This is a required parameter.

**\*LAN**

This controller is attached to a Local Area Network (LAN).

**\*SDLC**

This controller is attached to a synchronous data link control (SDLC) line.

**\*X25**

This controller is attached to an X.25 line.

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## Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

**\*YES**

The controller is automatically varied on at IPL.

**\*NO**

The controller is not automatically varied on at IPL.

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---

## Switched connection (SWITCHED)

Specifies whether this controller is attached to a switched line, a token-ring network, Ethernet LAN, or an X.25 switched virtual circuit (SVC). \*NO must be specified for APPC controllers attached to a TDLC line.

**\*NO**

This controller is attached to a nonswitched line. Specify this value for controllers attaching to an X.25 permanent virtual circuit (PVC).

**\*YES**

This controller is attached to a switched line. Specify this value for controllers attached to an X.25 switched virtual circuit (SVC). Also specify this value for controllers attached to a local area network.



**Note:** If LINKTYPE is \*LAN, the SWITCHED parameter value must be \*YES or must not be specified.

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## Short hold mode (SHM)

Specifies whether this controller is to be used for X.21 short hold mode. To specify \*YES, you must also specify \*SDLC for the **Link type (LINKTYPE)** parameter, and \*YES for the **Switched connection (SWITCHED)** parameter.

### \*NO

This controller is not used for X.21 short hold mode.

### \*YES

This controller is used for X.21 short hold mode.

Top

---

## Switched network backup (SNBU)

Specifies whether the remote system modem has the switched network backup (SNBU) feature. The backup feature is used to bypass a broken nonswitched (leased line) connection by establishing a switched connection. To activate SNBU, you must change the controller description of the modem from nonswitched to switched by specifying \*YES for the **Activate swt network backup (ACTSNBU)** parameter.

**Note:** If the modem model you are using is an IBM 386x, 586x, or 786x, you should not change the controller description. Instead, manually switch the modem to the unswitched mode, and manually dial the connection.

Both the local and remote modems must support the SNBU feature to perform a valid activation.

\*NO The remote system modem does not have the SNBU feature.

### \*YES

The remote system modem has the SNBU feature.

Top

---

## Attached nonswitched line (LINE)

Specifies the name of the nonswitched lines to which this controller is attached. The line description must already exist.

**Note:** The associated line must be varied off before this command is entered. Specify this parameter for controllers attaching to an X.25 permanent virtual circuit (PVC).

Top

---

## Switched line list (SWTLINLST)

Specifies the names of the switched lines to which this controller attaches. The line descriptions must already exist. Up to 64 switched line names can be specified.

*\*switched-line-NAME*

Specify the names of up to 64 lines that are connected to this controller. The same line name can be used more than once. For each line name specified, a line description by that name must already exist.

Top

---

## Maximum frame size (MAXFRAME)

Specifies the maximum frame (path information unit (PIU)) size the controller can send or receive. This value is used to calculate the request unit (RU) sizes. Since the maximum PIU size that the controller can send or receive is negotiated at exchange identifier time, the maximum PIU size used at run time may be different. This value matches the corresponding value on the host system.

\*LINKTYPE

The following values are used for the various link types: \*LAN - 521, \*SDLC - 265, \*X25 - 256.

**256**

The frame size for \*X25.

**265**

The frame size for \*SDLC, \*LAN, or \*X25.

**512**

The frame size for \*X25.

**521**

The frame size for \*SDLC, \*LAN, or \*X25.

**1033**

The frame size for \*SDLC.

*frame-size*

Specify the frame size. For \*LAN, specify a value from 265 to 521. For \*SDLC, specify 265, 521, or 1033. For \*X25, specify 256, 265, 512, or 521.

**Note:** For a 4730, 4731, 4732, 4736, or 3694 controller, \*LINKTYPE or 265 may be specified.

Top

---

## Exchange identifier (EXCHID)

Specifies the exchange identifier of this controller. The controller sends (exchanges) its identifier to another location when a connection is established. The 8-digit hexadecimal identifier contains 3 digits for the block number and 5 digits for the identifier of the specific controller.

Controller	Block Number	Hexadecimal Identifier
3694	02F	xxxxx
4701	057	xxxxx
4702	057	xxxxx
4730	043	xxxxx
4731	043	xxxxx
4732	043	xxxxx
4736	043	xxxxx
*FBSS	000-FFF	xxxxx
3601 (configured as a 4701)	016	xxxxx

Top

---

## Initial connection (INLCNN)

Specifies the method used to establish a connection with this controller.

### \*DIAL

The system initiates outgoing calls and answers incoming calls.

### \*ANS

The connection is made by the iSeries system when it answers an incoming call from this controller. If a call is received from the remote controller and all necessary conditions are met, the incoming call is answered by the system.

For X.25 connections, the line attached to the controller requires switched virtual circuits (SVCs) configured on the LGLCHLE parameter of type OUT or BOTH(\*SVCOUT or \*SVCBOTH) for the connection to succeed.

The line can be changed using the Change Line Description (X.25) (CHGLINX25) command.

Top

---

## Connection number (CNNNBR)

Specifies the telephone number to dial to connect to this controller.

### \*DC

Direct call is being used in an X.21 circuit switched network.

\*ANY The system accepts calls from any network address.

### *connection-number*

Specify the connection number.

Top

---

## Answer number (ANSNBR)

Specifies the X.25 network address from which calls are accepted.

### \*CNNNBR

Calls from the X.25 network address specified on the CNNNBR parameter are accepted.

### \*ANY

Calls are accepted from any X.25 network address.

Top

---

## SHM disconnect limit (SHMDSCLMT)

Specifies the number of consecutive nonproductive responses that are required from the remote station before the connection can be suspended for this X.21 short hold mode connection. This parameter is used only if \*YES is specified for the **Short hold mode (SHM)** parameter, and \*NEG or \*SEC is specified for the **Data link role (ROLE)** parameter.

### 10

10 consecutive nonproductive responses must be received before the connection can be suspended.

### \*NOMAX

There is no disconnect limit.

### *SHM-disconnect-limit*

Specify a number from 1 to 254, indicating the number of consecutive nonproductive responses that must be received before the connection can be suspended.

Top

---

## SHM disconnect timer (SHMDSCTMR)

Specifies, in tenths of a second, the minimum length of time that the primary system maintains the connection to the remote system for this X.21 short hold mode controller. This parameter is valid only if \*YES is specified for the **Short hold mode (SHM)** parameter, and \*NEG or \*SEC is specified for the **Data link role (ROLE)** parameter.

### 50

The primary maintains the connection to the remote system for a minimum of 5 seconds.

### *SHM-disconnect-timer*

Specify a value from 2 to 3000 in 0.1 second intervals.

Top

---

## Station address (STNADR)

Specifies the station address used when communicating with the controller.

Valid values range from 00 to FE.

**Note:** 00 can be specified only for APPC controllers when \*TDLC is specified for the **Link type (LINKTYPE)** parameter.

**Note:** If \*SEC is specified on the ROLE parameter, this is the station address of the remote controller. If \*PRI or \*NEG is specified on the ROLE parameter, this is the local station address.

Top

---

## LAN remote adapter address (ADPTADR)

Specifies the 12-character adapter address of the remote controller. This is the address to which the system sends data when it communicates with the remote controller. This value can be obtained from the remote controller's configuration record. Valid values range from hex 000000000001 through hex FFFFFFFF.

*adapter-address*

Specify the adapter address of the remote controller.

Top

---

## X.25 network level (NETLVL)

Specifies the level of the X.25 network used to access this controller. The level is specified by giving the year of the standard used by the X.25 network.

**Note:** Use of the lower value of the remote DTE or the network level is suggested; for example, if the remote DTE is using the CCITT standard of 1980 and the network 1984, specify 1980 for this parameter.

**1980**

The 1980 Standard is used.

**1984**

The 1984 Standard is used.

**1988**

The 1988 Standard is used.

Top

---

## X.25 link level protocol (LINKPCL)

Specifies the link level protocol used on the X.25 network to communicate with this controller.

**\*QLLC**

The Qualified Logical Link Control (QLLC) protocol is used.

**\*ELLC**

The Enhanced Logical Link Control (ELLC) protocol is used.

Top

---

## X.25 logical channel ID (LGLCHLID)

Specifies the logical channel identifier used for the X.25 permanent virtual circuit (PVC) to this controller. The valid entry is xyy. Where:

- x = the logical group number, derived from your network subscription.
- yy = the logical channel number, derived from your subscription. The logical channel identifier must be one of the PVC logical channel identifiers that was defined in the X.25 line description. There is no default for this parameter.

Top

---

## X.25 connection password (CNNPWD)

Specifies the X.25 network password used for password exchange with the X.24 Call Request and Incoming Call packets (Call User Data field). This parameter is not valid for permanent virtual circuit (PVC) connections.

If you want to use a connection password that consists of characters whose hexadecimal value is less than 40, you must specify the password as a hexadecimal value. When less than 8 bytes are specified, the end of the password field is padded with blanks. A password of all blank is valid. All incoming call requests must match this password to establish a connection.

To specify a hexadecimal password, the digits must be specified in multiples of two, be no more than 16 digits long, be enclosed in apostrophes, and be preceded by an X. For example, X'0102030405' is a valid hexadecimal password.

**Note:** This connection password is highly recommended for controllers that operate with the Enhanced Logical Link Control (ELLC) protocol LINKPCL(\*ELLC) on switched virtual circuit (SVC) connections. This enhanced protocol supports reconnection of virtual circuits after network errors which disconnect the line with a clear signal; however, this reconnection is not allowed to proceed without the password validation procedure being used as a unique identifier for the controller.

### *X.25-connection-password*

Specify the connection password. The password for each controller can consist of any alphanumeric characters represented by the hexadecimal values ranging from 40 through FF.

Top

---

## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

### \*BLANK

No text is specified.

### *character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

---

## Attached devices (DEV)

Specifies the names of the devices that are attached to this controller. The device descriptions must already exist.

The maximum number of devices that can attach to this controller is 255 for a 4701 or a 4702 controller; 3 for a 4730, and 2 for a 4731, 4732, or 4736 controller; 255 for a \*FBSS controller; or 4 for a 3694 check processor.

Top

---

## Character code (CODE)

Specifies whether the extended binary-coded decimal interchange code (\*EBCDIC) or the American National Standard Code for Information Interchange (\*ASCII) character code is used on the line.

### \*EBCDIC

The extended binary-coded decimal interchange code (EBCDIC) character code is used.

### \*ASCII

The ASCII character code is used.

Top

---

## SSCP identifier (SSCPID)

Specifies the system service control point identifier of the host system.

050000000000

The default value for the system service control point identifier.

*system-service-control-point-identifier*

Specify the system service control point identifier as a 12-digit hexadecimal value.

Top

---

## Predial delay (PREDIALDLY)

Specifies the time interval to wait (in 0.5 second intervals) before dialing a number.

6

The default value of 6 provides a 3-second delay.

*predial-delay*

Specify a value ranging from 0 to 254 units. Each unit represents 0.5 second. To indicate no delay, specify a value of 0.

Top

---

## Redial delay (REDIALDLY)

Specifies the time interval to wait (in 0.5 second intervals) before re-dialing when the call attempt is unsuccessful.

**120** The default value of 120 provides a 60-second delay.

*redial-delay*

Specify a value from 0 to 254 units. Each unit represents 0.5 second. To indicate no delay, specify a value of 0.

Top

---

## Dial retry (DIALRTY)

Specifies the number of re-dial attempts made by the system before considering the dialing unsuccessful.

**2** The default number of retries is 2.

*dial-retry*

Specify a value from 0 to 254 in 0.5-second intervals, for the number of times the dialing will be tried.

Top

---

## Switched disconnect (SWTDSC)

Specifies whether the switched connection to this controller is dropped when the last device is varied off.

**\*YES**

The switched connection is varied off when the last device is varied off.

**\*NO**

The switched connection is not dropped when the last device is varied off.

Top

---

## SDLC poll priority (POLLPTY)

Specifies whether this controller has priority when polled. This parameter can be specified only if SHM is \*NO.

**\*NO**

This controller does not have polling priority.

**\*YES**

This controller does have polling priority.

Top

---

## SDLC poll limit (POLLMT)

Specifies, for an SDLC secondary or negotiable controller, the number of consecutive polls issued to the same controller when the poll results in receiving frames. This parameter can be specified only if SHM is \*NO.

**0**

The default number of polls is zero.



### *poll limit*

Specify a number of polls. Valid values range from 0 through 4.

Top

---

## **SDLC out limit (OUTLMT)**

Specifies the number of consecutive times SDLC allows the transmission of the maximum number of frames to a station, before allowing transmission to another station.

### \*POLLMT

The value is the same as the one specified for the **SDLC poll limit (POLLMT)** parameter.

### *out-limit*

Specify a value ranging from 0 through 4.

Top

---

## **SDLC connect poll retry (CNNPOLLRTY)**

Specifies the number of times to retry connecting to a controller before reporting an error.

### \*CALC

The number of retries is 7 if the controller is switched, and \*NOMAX if the controller is nonswitched.

### \*NOMAX

The system will retry indefinitely.

### *connect-poll-retry*

Specify a value ranging from 0 to 65534 for the number of retries.

Top

---

## **SDLC NDM poll timer (NDMPOLLTMR)**

Specifies the minimum interval at which a secondary station should be polled if a poll from the primary to the secondary (which is in normal disconnect mode (NDM)) does not result in receiving the appropriate response.

This parameter is valid only if the link type is \*SDLC and the controller role is secondary or negotiable and \*NO is specified on the SHM parameter.

### \*CALC

The poll interval is calculated by the system.

### *NDM-poll-timer*

Specify a value ranging from 1 to 3000 units. Each unit represents 0.1 second. To indicate no timer, specify 0.

Top

---

## LAN DSAP (DSAP)

Specifies the destination service access point (DSAP). This is the logical address this system will send to when it communicates with the remote controller. This address allows the controller to properly route the data that comes from this system. The default value for the destination service access point is 04.

The value must match the value specified on the source service access point (SSAP) parameter in the remote controller's configuration record.

**Note:** The \*OPC controller uses the value above for this field. The combination of RMTSYSNAME and DSAP defines a unique controller. This allows multiple controllers to exist between two systems.

### 04

The destination service access point is the default 04.

#### *destination service access point*

Specify a hexadecimal value ranging from 04 through 9C, in increments of 4 (for example, 04, 08, 0C, 10) to represent the destination service access point.

Top

---

## LAN SSAP (SSAP)

Specifies the source service access point (SSAP). This is the logical address the local system uses when it sends data to the remote controller. This address allows the controller to properly route the data that comes from the local system. The default value for the source service access point is 04.

It must match the value assigned to the destination service access point (DSAP) in the remote controller's configuration record.

### 04

The system uses the logical address of 04.

#### *source service access point:*

Specify a hexadecimal value ranging from 04 through 9C, in increments of 4 (for example, 04, 08, 0C, 10) to represent the source service access point.

Top

---

## LAN frame retry (LANFRMRTY)

Specifies the number of times to retry a transmission when there is no acknowledgment from the remote controller in the time period specified by the LANRSPTMR parameter. This value is only used after a successful connection has been made.

### \*CALC

The system determines the LAN frame retry value based on the type of line that is lined to the controller.

#### *LAN-frame-retry*

Specify a value ranging from 0 through 254 for the number of times a frame is transmitted before an acknowledgement is received.

Top

---

## LAN connection retry (LANCNNRTY)

Specifies the number of times a transmission is attempted before an acknowledgement is received. This value is used at connection time (unlike LANFRMRTY which is used after a connection has been made).

### \*CALC

The system determines the LAN connection retry value.

### *LAN-connection-retry*

Specify a value ranging from 0 through 254 for the number of times the transmission is attempted before an acknowledgement is received.

Top

---

## LAN response timer (LANRSPTMR)

Specifies the time period used to determine an inoperative condition on the link when connected.

### \*CALC

The system determines the LAN response timer value.

### *LAN-response-timer*

Specify a value from 1 to 254 units. Each unit represents 0.1 second. To indicate no timer, specify 0.

Top

---

## LAN connection timer (LANCNNTMR)

Specifies the time period used to determine an inoperative condition on the link at connection time.

### \*CALC

The system determines the LAN connection timer value.

### *LAN-connection-timer*

Specify a value ranging from 1 through 254 in 0.1-second intervals for the amount of time the system waits before an inoperative condition occurs. To indicate no timer, specify 0.

Top

---

## LAN acknowledgement timer (LANACKTMR)

Specifies the time interval to delay sending acknowledgements for received frames.

### \*CALC

The system determines the LAN acknowledgement timer value.

#### *LAN-acknowledgement-timer*

Specify a value ranging from 1 to 254 units. Each unit represents 0.1 second. To indicate no timer, specify 0. If 0 is specified for the **LAN acknowledgement frequency (LANACKFRQ)** parameter, 0 must also be specified for this parameter. If a non-zero number is specified for the LANACKFRQ parameter, a non-zero number must also be specified for this parameter.

Top

---

## LAN inactivity timer (LANINACTMR)

Specifies the time period used to determine an inactive condition for the controller.

### \*CALC

The system determines the LAN inactivity timer value.

#### *LAN-inactivity-timer*

Specify a value ranging from 1 through 255 in 0.1-second intervals for the length of time used to determine an inactive condition for the controller. To indicate no timer, specify 0.

Top

---

## LAN acknowledgement frequency (LANACKFRQ)

Specifies the maximum number of frames received before sending an acknowledgement to the controller.

### \*CALC

The system determines the LAN acknowledgement frequency value.

#### *LAN-acknowledge-frequency*

Specify a value from 0 to 127 for the number of frames received. If 0 is specified for the **LAN acknowledgement timer (LANACKTMR)** parameter, 0 must also be specified for this parameter. If a non-zero number is specified for the LANACKTMR parameter, a non-zero number must also be specified for this parameter.

Top

---

## LAN max outstanding frames (LANMAXOUT)

Specifies the maximum number of frames that can be sent before an acknowledgement is received from the remote system.

### \*CALC

The system determines the LAN maximum outstanding frames value.

### *LAN-maximum-outstanding-frames*

Specify a value ranging from 1 through 127 for the number of frames that can be sent before an acknowledgement is received.

Top

---

## **LAN access priority (LANACCPTY)**

Specifies the priority used for accessing the remote controller. The larger the number the higher the priority for this controller. This parameter is only used when the controller attaches to TRLAN.

### \*CALC

The system determines the LAN access priority value.

### *LAN-access-priority*

Specify a value from 0 to 3 for the access priority for this controller on a local area network (LAN).

Top

---

## **LAN window step (LANWDWSTP)**

Specifies whether to reduce to 1 the maximum number of frames outstanding to the remote system during network congestion. This parameter (LAN Window Step) indicates the number of frames that must be successfully received by the remote system before the number of maximum outstanding frames can be increased by 1. The increase continues this way until the maximum number of outstanding frames reaches the value specified by the LAN maximum outstanding frames (LANMAXOUT) parameter.

### \*NONE

The number of outstanding frames is not reduced during network congestion.

### *LAN-window-step*

Specify a value from 1 to 127 for the number of frames that must be successfully received by the remote system before the maximum number of outstanding frames can be increased by 1.

Top

---

## **X.25 switched line selection (SWTLINSLCT)**

Specifies the method that is used to select lines from an X.25 switched line list.

### \*FIRST

Lines are selected beginning with the first line in the switched line list.

### \*CALC

The system determines which line in the switched line list will be selected.

Top

---

## X.25 default packet size (DFTPKTSIZE)

Specifies the default packet size used by the X.25 network for transmission and reception.

### Element 1: Transmit Packet Size

#### \*LIND

The value specified in the line description is the default value.

#### *transmit-packet-size*

Specify a default packet size for transmission. The valid values for the packet size are 64, 128, 256, 512, 1024, 2048, and 4096.

### Element 2: Receive Packet Size

#### \*LIND

The value specified in the line description is the default value.

#### **\*TRANSMIT**

The value specified as the default packet size for transmission is used as the default for reception.

#### *receive-packet-size*

Specify a default packet size for reception. The valid values for the packet size are 64, 128, 256, 512, 1024, 2048, and 4096.

Top

---

## X.25 default window size (DFTWDWSIZE)

Specifies the default window size for transmission and reception.

### Element 1: Transmit Window Size

#### \*LIND

The value specified in the line description is used as the default window size.

#### *transmit-window-size*

Specify the appropriate default window size. If you specified modulus 8, valid values range from 1 through 7. If you specified modulus 128, valid values range from 1 through 15. For switched virtual circuit (SVC) incoming calls, the system accepts the window size indicated in the Incoming Call packet facilities field.

### Element 2: Receive Window Size

#### \*LIND

The value specified in the line description is used as the default window size.

#### **\*TRANSMIT**

The value specified as the default window size for transmission is used as the default for reception.

#### *receive-window-size*

Specify the appropriate default window size. If you specified modulus 8, valid values range from 1 through 7. If you specified modulus 128, valid values range from 1 through 15.

Top

---

## **X.25 user group identifier (USRGRPID)**

Specifies the closed user-group ID for contacting this switched virtual circuit (SVC) controller on the X.25 network.

Specify the 2-digit decimal value, from 00 through 99, as provided by the network subscription. This parameter is not valid for permanent virtual circuit (PVC) connections. It is valid only for SVC circuit outgoing call operations and is ignored for SVC incoming call connections.

Top

---

## **X.25 reverse charging (RVSCRG)**

Specifies whether reverse charges are accepted or requested when contacting this controller.

### **\*NONE**

No reverse charging for network tariff billing is accepted.

### **\*REQUEST**

Charges are requested on outgoing call request packets.

### **\*ACCEPT**

Reverse charging for network tariff billing is accepted on incoming requests.

### **\*BOTH**

Both incoming and outgoing requests are accepted.

Top

---

## **X.25 frame retry (X25FRMRTY)**

Specifies the maximum number of times a frame is sent after the response timer ends when connected to this controller. The value for this parameter depends on the quality of service provided by the network and the connection to that network; that is, the frequency of lost link protocol data units.

7

The default for the maximum number of transmissions is 7.

### ***X.25 frame retry***

Specify a value ranging from 0 through 21 for the number of times a frame is sent.

Top

---

## X.25 connection retry (X25CNNRTY)

Specifies the maximum number of times that a logical link control (LLC) protocol data unit is sent after the connect response timer expires when connecting to this controller.

7

The default for the maximum number of transmissions is 7.

### *X.25 connection retry*

Specify a value ranging from 0 through 21 for the number times a frame is sent.

Top

---

## X.25 response timer (X25RSPTMR)

Specifies the time period allowed to return an acknowledgement when an LLC protocol data unit is sent while connected to this controller.

100

The default amount of time is 10 seconds.

### *X.25 response-timer*

Specify an amount of time in tenths of a second. Valid values range from 1 through 2550 in 0.1-second intervals.

Top

---

## X.25 connection timer (X25CNNTMR)

Specifies the time period allowed to return an acknowledgement when an LLC protocol data unit is sent while connecting to this controller.

100

The default amount of time is 10 seconds.

### *connection-timer*

Specify an amount of time in tenths of a second. Valid values range from 1 through 2550 in 0.1 second intervals.

Top

---

## X.25 delayed connection timer (X25DLYTMR)

Specifies the time interval between attempts to establish a connection to the controller.

### \*CALC

Use the values specified for the **X.25 connection timer (X25CNNTMR)** parameter and the **X.25 connection retry (X25CNNRTY)** parameter to determine how often and how many times to try establishing the connection.

### *X.25-delay-timer*



Specify a value ranging from 1 to 32767 units. Each unit represents 0.1 second. Connection attempts are repeated indefinitely at this time interval.

Top

---

## X.25 acknowledgement timer (X25ACKTMR)

Specifies the amount of time to delay sending acknowledgements for received frames.

20

The time allowed to delay sending an acknowledgment is 2 seconds.

*X.25-acknowledgment-timer*

Valid values range from 1 to 2550 in 0.1 second intervals, or 0 to indicate no delay.

Top

---

## X.25 inactivity timer (X25INACTMR)

Specifies the time period used to determine an inactive condition for the controller. Valid values range from 1 to 2550 in 0.1 second intervals.

350

The time period used to determine an inactive condition for the controller is 3.5 seconds.

Top

---

## User facilities (USRFCL)

Specifies a string of hexadecimal characters sent to the X.25 network to request additional services. The system allows up to 218 hexadecimal characters.

Top

---

## Recovery limits (CMNRCYLMT)

Specifies the number of recovery attempts made by the system before an inquiry message is sent to the system operator. Also specifies the time (in minutes) that must elapse before the system sends an inquiry message to the system operator indicating that the recovery attempt count limit is reached.

### Element 1: Maximum Recovery Limit

2

Two recovery attempts are made within the interval specified.

\*SYSVAL

The value in the QCMNRCYLMT system value is used.

*count limit*

Specify the number of second-level recovery attempts to be made. Valid values range from 0 through 99.

### Element 2: Recovery Time Interval

The specified number of recovery attempts is made within a 5-minute interval.

*time-interval*

Specify the time interval (in minutes) at which the specified number of second-level recoveries are attempted. Valid values range from 0 through 120. If the value specified for *count-limit* is not 0, the value 0 specifies infinite recovery.

More information on communication recovery is in the Communications Management book, SC41-5406.

Top

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### \*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### **\*EXCLUDE**

The user cannot access the object.

### **\*LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

**name** Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

## Examples

```
CRTCTLFNC  CTLD(FNC1)  TYPE(4701)  MODEL(0)  LINKTYPE(*SDLC)
           LINE(FNCLINE)  STNADR(C1)
```

This command creates a 4701 finance controller attached to a nonswitched SDLC line with a station address of C1.

---

## Error messages

### \*ESCAPE Messages

**CPF26BB**

Extended wireless controller member not changed.

**CPF26BC**

Extended wireless controller member not displayed.

**CPF26BD**

Entry for barcode group not removed from extended wireless controller member.

**CPF26BE**

Entry for PTC group not removed from extended wireless controller member.

**CPF26BF**

Program QZXCINZ terminated abnormally. See previous messages.

**CPF26B3**

Extended wireless line member not added.

**CPF26B4**

Extended wireless line member not changed.

**CPF26B5**

Extended wireless line member not displayed.

**CPF26B8**

Extended wireless controller member not added.

**CPF2716**

Controller description &1 not created.



## Create Ctl Desc (SNA Host) (CRTCTLHOST)

Where allowed to run: All environments (\*ALL)  
 Threadsafte: No

Parameters  
 Examples  
 Error messages

The Create Controller Description (SNA Host) (CRTCTLHOST) command creates a controller description for a Systems Network Architecture (SNA) Host controller. For more information about using this command is in the Communications Configuration book, SC41-5401.

Top

### Parameters

Keyword	Description	Choices	Notes
CTLD	Controller description	<i>Name</i>	Required, Positional 1
LINKTYPE	Link type	*DLUR, *FR, *LAN, *SDLC, *X25	Required, Positional 2
ONLINE	Online at IPL	*YES, *NO	Optional
SWITCHED	Switched connection	*NO, *YES	Optional
SHM	Short hold mode	*NO, *YES	Optional
SNBU	Switched network backup	*NO, *YES	Optional
APPN	APPN-capable	*YES, *NO	Optional
LINE	Attached nonswitched line	<i>Name</i>	Optional
SWTLINLST	Switched line list	Values (up to 64 repetitions): <i>Name</i>	Optional
MAXFRAME	Maximum frame size	265-16393, 256, 265, 512, 521, 1024, 1033, 1994, 2048, 2057, 4060, 4096, 8156, 16393, *LINKTYPE	Optional
RMTNETID	Remote network identifier	<i>Communications name</i> , *NETATR, *NONE, *ANY	Optional
RMTCPNAME	Remote control point	<i>Communications name</i> , *ANY	Optional
ADJLNKSTN	Adjacent link station	<i>Communications name</i> , *NONE, *ANY	Optional
SSCPID	SSCP identifier	X'050000000000'-X'05FFFFFFF'	Optional
LCLEXCHID	Local exchange identifier	X'05600000'-X'056FFFFF', *LIND	Optional
INLCNN	Initial connection	*DIAL, *ANS	Optional
DIALINIT	Dial initiation	*LINKTYPE, *IMMED, *DELAY	Optional
CNNNBR	Connection number	<i>Character value</i> , *DC, *ANY	Optional
ANSNBR	Answer number	*CNNNBR, *ANY	Optional
CNNLSTOUT	Outgoing connection list	<i>Name</i>	Optional
CNNLSTOUTE	Connection list entry	<i>Name</i>	Optional
STNADR	Station address	X'01'-X'FE'	Optional
ADPTADR	LAN remote adapter address	X'000000000001'-X'FFFFFFFFF'	Optional
NETLVL	X.25 network level	1980, 1984, 1988	Optional
LINKPCL	X.25 link level protocol	*QLLC, *ELLC	Optional
LGLCHLID	X.25 logical channel ID	<i>Character value</i>	Optional
CNNPWD	X.25 connection password	<i>Character value</i> , X''	Optional
CPSSN	APPN CP session support	*YES, *NO	Optional
NODETYPE	Remote APPN node type	*ENDNODE, *LENNODE, *NETNODE, *CALC	Optional

Keyword	Description	Choices	Notes
BEXROLE	Branch extender role	*NETNODE, *ENDNODE	Optional
HPR	APPN/HPR capable	*YES, *NO	Optional
HPRPTHSWT	HPR path switching	*NO, *YES	Optional
TMSGRPNBR	APPN transmission group number	1-20, <u>1</u> , *CALC	Optional
MINSWTSTS	APPN minimum switched status	*VRYONPND, *VRYON	Optional
AUTOCRTDEV	Autocreate device	*ALL, *DEVINIT, *NONE	Optional
AUTODLTDEV	Autodelete device	1-10000, <u>1440</u> , *NO	Optional
USRDFN1	User-defined 1	0-255, *LIND	Optional
USRDFN2	User-defined 2	0-255, *LIND	Optional
USRDFN3	User-defined 3	0-255, *LIND	Optional
RECONTACT	Recontact on vary off	*YES, *NO	Optional
TEXT	Text 'description'	Character value, *BLANK	Optional
PRIDLUS	Primary DLUS name	Single values: *NONE Other values: <i>Element list</i>	Optional
	Element 1: Control point name	<i>Communications name</i>	
	Element 2: Network identifier	<i>Communications name, *NETATR</i>	
BKUDLUS	Backup DLUS name	Single values: *NONE Other values: <i>Element list</i>	Optional
	Element 1: Control point name	<i>Communications name</i>	
	Element 2: Network identifier	<i>Communications name, *NETATR</i>	
DEPPUNAME	Dependent PU name	<i>Communications name, *NONE</i>	Optional
ACTTMR	Activation timer	30-2550, <u>170</u>	Optional
RECNNTMR	Dsc/reconnect timer (T309)	1-2550, <u>170</u>	Optional
DEV	Attached devices	Values (up to 254 repetitions): <i>Name</i>	Optional
CODE	Character code	*EBCDIC, *ASCII	Optional
IDLCWDWSIZ	IDLC window size	1-31, *LIND	Optional
IDLCFRMRTY	IDLC frame retry	0-100, *LIND	Optional
IDLCRSPTMR	IDLC response timer	10-100, *LIND	Optional
IDLCCNNRTY	IDLC connect retry	1-100, *LIND, *NOMAX	Optional
PREDIALDLY	Predial delay	0-254, <u>6</u>	Optional
REDIALDLY	Redial delay	0-254, <u>120</u>	Optional
DIALRTY	Dial retry	0-254, <u>2</u>	Optional
SWTDSC	Switched disconnect	*NO, *YES	Optional
DSCTMR	Disconnect timer	<i>Element list</i>	Optional
	Element 1: Minimum connect timer	0-65535, <u>170</u>	
	Element 2: Disconnection delay timer	0-65535, <u>30</u>	
DSAP	LAN DSAP	<u>04</u> , 08, 0C, 10, 14, 18, 1C, 20, 24, 28, 2C, 30, 34, 38, 3C, 40, 44, 48, 4C, 50, 54, 58, 5C, 60, 64, 68, 6C, 70, 74, 78, 7C, 80, 84, 88, 8C, 90, 94, 98, 9C	Optional
SSAP	LAN SSAP	<u>04</u> , 08, 0C, 10, 14, 18, 1C, 20, 24, 28, 2C, 30, 34, 38, 3C, 40, 44, 48, 4C, 50, 54, 58, 5C, 60, 64, 68, 6C, 70, 74, 78, 7C, 80, 84, 88, 8C, 90, 94, 98, 9C	Optional

Keyword	Description	Choices	Notes
LANFRMRTY	LAN frame retry	0-254, <u>*CALC</u>	Optional
LANCNNRTY	LAN connection retry	0-254, <u>*CALC</u>	Optional
LANRSPTMR	LAN response timer	0-254, <u>*CALC</u>	Optional
LANCNTMR	LAN connection timer	0-254, <u>*CALC</u>	Optional
LANACKTMR	LAN acknowledgement timer	0-254, <u>*CALC</u>	Optional
LANINACTMR	LAN inactivity timer	0-255, <u>*CALC</u>	Optional
LANACKFRQ	LAN acknowledgement frequency	0-127, <u>*CALC</u>	Optional
LANMAXOUT	LAN max outstanding frames	1-127, <u>*CALC</u>	Optional
LANACPTY	LAN access priority	0-3, <u>*CALC</u>	Optional
LANWDWSTP	LAN window step	1-127, <u>*NONE</u>	Optional
SWTLINSLCT	X.25 switched line selection	<u>*FIRST</u> , <u>*CALC</u>	Optional
DFTPKTSIZE	X.25 default packet size	<i>Element list</i>	Optional
	Element 1: Transmit value	<u>*LIND</u> , 64, 128, 256, 512, 1024, 2048, 4096	
	Element 2: Receive value	<u>*LIND</u> , *TRANSMIT, 64, 128, 256, 512, 1024, 2048, 4096	
DFTWDWSIZE	X.25 default window size	<i>Element list</i>	Optional
	Element 1: Transmit value	1-15, <u>*LIND</u>	
	Element 2: Receive value	1-15, <u>*LIND</u> , *TRANSMIT	
USRGRPID	X.25 user group identifier	<i>Character value</i>	Optional
RVSCRG	X.25 reverse charging	<u>*NONE</u> , *REQUEST, *ACCEPT, *BOTH	Optional
X25FRMRTY	X.25 frame retry	0-21, <u>7</u>	Optional
X25RSPTMR	X.25 response timer	1-2550, <u>300</u>	Optional
X25ACKTMR	X.25 acknowledgement timer	0-2550, <u>20</u>	Optional
X25INACTMR	X.25 inactivity timer	1-2550, <u>1050</u>	Optional
USRFLC	User facilities	<i>Character value</i>	Optional
CMNRCYLMT	Recovery limits	Single values: *SYSVAL Other values: <i>Element list</i>	Optional
	Element 1: Count limit	0-99, <u>2</u>	
	Element 2: Time interval	0-120, <u>5</u>	
MSGQ	Message queue	Single values: <u>*SYSVAL</u> , *SYSOPR Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Message queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i>	
AUT	Authority	<i>Name</i> , <u>*CHANGE</u> , *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

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## Controller description (CTLD)

This is a required parameter.

Specifies the name of the controller description.

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## Link type (LINKTYPE)

Specifies the type of line to which this controller is attached.

This is a required parameter.

### **\*FR**

This controller is attached to a frame relay line.

### **\*LAN**

This controller is attached to a DDI, Ethernet, or token-ring local area network (LAN) line.

### **\*SDLC**

This controller is attached to a synchronous data link control (SDLC) line.

### **\*X25**

This controller is attached to an X.25 line.

### **\*DLUR**

This controller is used for Dependent LU Requester (DLUR) functions and has no line attached.

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## Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

### **\*YES**

The controller is automatically varied on at IPL.

### **\*NO**

The controller is not automatically varied on at IPL.

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## Switched connection (SWITCHED)

Specifies whether this controller is attached to a switched line, a token-ring network, Ethernet LAN, or an X.25 switched virtual circuit (SVC). \*NO must be specified for APPC controllers attached to a TDLC line.

### **\*NO**

This controller is attached to a nonswitched line. Specify this value for controllers attaching to an X.25 permanent virtual circuit (PVC).

### **\*YES**

This controller is attached to a switched line. Specify this value for controllers attached to an X.25 switched virtual circuit (SVC). Also specify this value for controllers attached to a local area network.

**Note:** If LINKTYPE is \*LAN, the SWITCHED parameter value must be \*YES or must not be specified.



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## Short hold mode (SHM)

Specifies whether this controller is to be used for X.21 short hold mode. To specify \*YES, you must also specify \*SDLC for the **Link type (LINKTYPE)** parameter, and \*YES for the **Switched connection (SWITCHED)** parameter.

### \*NO

This controller is not used for X.21 short hold mode.

### \*YES

This controller is used for X.21 short hold mode.

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## Switched network backup (SNBU)

Specifies whether the remote system modem has the switched network backup (SNBU) feature. The backup feature is used to bypass a broken nonswitched (leased line) connection by establishing a switched connection. To activate SNBU, you must change the controller description of the modem from nonswitched to switched by specifying \*YES for the **Activate swt network backup (ACTSNBU)** parameter.

**Note:** If the modem model you are using is an IBM 386x, 586x, or 786x, you should not change the controller description. Instead, manually switch the modem to the unswitched mode, and manually dial the connection.

Both the local and remote modems must support the SNBU feature to perform a valid activation.

\*NO The remote system modem does not have the SNBU feature.

### \*YES

The remote system modem has the SNBU feature.

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## APPN-capable (APPN)

Specifies whether the local system uses advanced peer-to-peer networking (APPN) functions when communicating with this controller. \*YES must be specified for APPC controllers attached to a TDLC line.

### \*YES

This controller is for APPN.

### \*NO

This controller is not for APPN.

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## Attached nonswitched line (LINE)

Specifies the name of the nonswitched lines to which this controller is attached. The line description must already exist.

**Note:** The associated line must be varied off before this command is entered. Specify this parameter for controllers attaching to an X.25 permanent virtual circuit (PVC).

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## Switched line list (SWTLINLST)

Specifies the names of the switched lines to which this controller attaches. The line descriptions must already exist. Up to 64 switched line names can be specified.

*\*switched-line-NAME*

Specify the names of up to 64 lines that are connected to this controller. The same line name can be used more than once. For each line name specified, a line description by that name must already exist.

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## Maximum frame size (MAXFRAME)

Specifies the maximum frame (path information unit (PIU)) size the controller can send or receive. This value is used to calculate the request unit (RU) sizes. Since the maximum PIU size that the controller can send or receive is negotiated at exchange identifier time, the maximum PIU size used at run time may be different. This value matches the corresponding value on the host system.

\*LINKTYPE

The following values are used for the various types:

- \*FR - 1590
- \*IDLC - 2048
- \*LAN - 16393
- \*SDLC - 521
- \*X25 - 1024

*maximum-frame-size*

Specify the frame size for the controller. The frame size that can be used depends on the type of line being used. Valid frame sizes for each line type are: For \*FR, specify a value from 265 through 8182. For \*IDLC, specify a value ranging from 265 through 8196. For \*LAN, specify a value from 265 through 16393 (265 through 4444 for DDI LANs). For \*SDLC, specify 265, 521, 1033, or 2057. For \*X25, specify 256, 265, 512, 521, 1024, 1033, 2048, or 4096.

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## Remote network identifier (RMTNETID)

Specifies the NAME of the remote network in which the adjacent control point resides.

\*NETATR

The LCLNETID value specified in the system network attributes is used.

**\*NONE**

No remote network identifier (ID) is used.

**\*ANY**

The system determines which remote network identifier is used.

*remote-network-identifier*

Specify the remote network identifier.

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## Remote control point (RMTCPNAME)

Specifies the control point name of the remote system.

**\*ANY**

The system determines the name of the remote control point used.

*remote-control-point-name*

Specify the remote control point NAME.

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## Adjacent link station (ADJLNKSTN)

Specifies the NAME of the adjacent link station. This name is used by the system to identify which switched controller description on the iSeries system is used to establish a link to a host S/370 system. The adjacent link station name for the iSeries system must match the name provided by the host system during link activation.

**\*NONE**

No adjacent link station NAME is specified.

**\*ANY**

The system determines which adjacent link station is used.

*adjacent-link-station-name*

Specify the adjacent link station name.

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## SSCP identifier (SSCPID)

Specifies the system service control point identifier of the host system.

**Note:** The system service control point identifier (SSCPID) is a 12-digit hexadecimal value; the first 2 digits are hexadecimal 05. This parameter is required for SDLC switched and SNBU if APPN(\*YES) and NODETYPE(\*LENNODE) are specified, or if APPN(\*NO) is specified but RMTCPNAME is not specified. This parameter must be specified if SHM(\*YES) is also specified.

*system-service-control-point-identifier*

Specify the system service control point identifier as a 12-digit hexadecimal value.

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## Local exchange identifier (LCLEXCHID)

Specifies the number used to identify the local system to the remote system. **NOTE:**

This parameter is necessary under either of the following conditions:

1. if parallel connections are required between an iSeries system and an SNA host system.
2. for Dependent LU Requester (DLUR) support (LINKTYPE(\*DLUR)), if the dependent physical unit name (DEPPUNAME) parameter is not specified.

### \*LIND

The system uses the exchange identifier specified in the line description on the EXCHID parameter associated with this controller description.

### *local-exchange-identifier*

Specify a local exchange identifier. The first three digits of this 8-digit hexadecimal number identify the block number and the remaining five digits identify the system.

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## Initial connection (INLCNN)

Specifies the method used to establish a connection with this controller.

### \*DIAL

The system initiates outgoing calls and answers incoming calls.

### \*ANS

The connection is made by the iSeries system when it answers an incoming call from this controller. If a call is received from the remote controller and all necessary conditions are met, the incoming call is answered by the system.

For X.25 connections, the line attached to the controller requires switched virtual circuits (SVCs) configured on the LGLCHLE parameter of type OUT or BOTH(\*SVCOUT or \*SVCBOTH) for the connection to succeed.

The line can be changed using the Change Line Description (X.25) (CHGLINX25) command.

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## Dial initiation (DIALINIT)

Specifies the method used to make the initial dial on a switched line between the system and the remote controller.

### \*LINKTYPE

The type of dial connection initiated is specified on the LINKTYPE parameter. For LAN or SDLC short-hold mode connections, the default is to dial the connection as soon as the controller description is varied on. For all other link types, the default is to delay dialing.

**\*IMMED**

The dial connection is initiated as soon as the controller description is varied on.

**\*DELAY**

The dial connection is delayed until a job is initiated that requests the use of the remote controller resources.

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## Connection number (CNNNBR)

Specifies the telephone number to dial to connect to this controller.

**\*DC**

Direct call is being used in an X.21 circuit switched network.

**\*ANY** The system accepts calls from any network address.

*connection-number*

Specify the connection number.

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## Answer number (ANSNBR)

Specifies the X.25 network address from which calls are accepted.

**\*CNNNBR**

Calls from the X.25 network address specified on the CNNNBR parameter are accepted.

**\*ANY**

Calls are accepted from any X.25 network address.

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**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## Outgoing connection list (CNLSTOUT)

Specifies, for ISDN switched connections, the name of a connection list object that contains the ISDN assigned numbers for a dial out operation to the ISDN.

*list-object*

Specify the name of a connection list object.

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**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

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## Connection list entry (CNLSTOUTE)

Specifies, for ISDN switched connections, the entry name from the connection list that is used to make a call to the ISDN. The connection list must have been identified on the **Outgoing connection list (CNLSTOUT)** parameter.

*entry-name*

Specify an entry name.

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## Station address (STNADR)

Specifies the station address used when communicating with the controller.

Valid values range from 00 to FE.

**Note:** 00 can be specified only for APPC controllers when \*TDLC is specified for the **Link type (LINKTYPE)** parameter.

**Note:** If \*SEC is specified on the ROLE parameter, this is the station address of the remote controller. If \*PRI or \*NEG is specified on the ROLE parameter, this is the local station address.

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## LAN remote adapter address (ADPTADR)

Specifies the 12-character adapter address of the remote controller. This is the address to which the system sends data when it communicates with the remote controller. This value can be obtained from the remote controller's configuration record. Valid values range from hex 000000000001 through hex FFFFFFFF.

*adapter-address*

Specify the adapter address of the remote controller.

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## X.25 network level (NETLVL)

Specifies the level of the X.25 network used to access this controller. The level is specified by giving the year of the standard used by the X.25 network.

**Note:** Use of the lower value of the remote DTE or the network level is suggested; for example, if the remote DTE is using the CCITT standard of 1980 and the network 1984, specify 1980 for this parameter.

**1980**

The 1980 Standard is used.

**1984**

The 1984 Standard is used.

1988

The 1988 Standard is used.

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## X.25 link level protocol (LINKPCL)

Specifies the link level protocol used on the X.25 network to communicate with this controller.

### \*QLLC

The Qualified Logical Link Control (QLLC) protocol is used.

### \*ELLC

The Enhanced Logical Link Control (ELLC) protocol is used.

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## X.25 logical channel ID (LGLCHLID)

Specifies the logical channel identifier used for the X.25 permanent virtual circuit (PVC) to this controller. The valid entry is xyy. Where:

- x = the logical group number, derived from your network subscription.
- yy = the logical channel number, derived from your subscription. The logical channel identifier must be one of the PVC logical channel identifiers that was defined in the X.25 line description. There is no default for this parameter.

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## X.25 connection password (CNNPWD)

Specifies the X.25 network password used for password exchange with the X.24 Call Request and Incoming Call packets (Call User Data field). This parameter is not valid for permanent virtual circuit (PVC) connections.

If you want to use a connection password that consists of characters whose hexadecimal value is less than 40, you must specify the password as a hexadecimal value. When less than 8 bytes are specified, the end of the password field is padded with blanks. A password of all blank is valid. All incoming call requests must match this password to establish a connection.

To specify a hexadecimal password, the digits must be specified in multiples of two, be no more than 16 digits long, be enclosed in apostrophes, and be preceded by an X. For example, X'0102030405' is a valid hexadecimal password.

**Note:** This connection password is highly recommended for controllers that operate with the Enhanced Logical Link Control (ELLC) protocol LINKPCL(\*ELLC) on switched virtual circuit (SVC) connections. This enhanced protocol supports reconnection of virtual circuits after network errors which disconnect the line with a clear signal; however, this reconnection is not allowed to proceed without the password validation procedure being used as a unique identifier for the controller.

*X.25-connection-password*

Specify the connection password. The password for each controller can consist of any alphanumeric characters represented by the hexadecimal values ranging from 40 through FF.

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## APPN CP session support (CPSSN)

Specifies whether this controller supports sessions between control points.

### \*YES

This controller supports sessions between control points.

### \*NO

This controller does not support sessions between control points.

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## Remote APPN node type (NODETYPE)

Specifies the type of APPN node which this controller represents.

### \*ENDNODE

This node is an end node in an APPN network.

### \*LENNODE

This node is a low-entry networking node in an APPN network.

### \*NETNODE

This node is a network node in an APPN network.

### \*CALC

The system determines the type of node this controller represents.

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## Branch extender role (BEXROLE)

Specifies the role of the local system in an APPN network for the remote controller being configured. This parameter is only used when the local system has enabled the branch extender function via the NODETYPE parameter in the network attributes being set to \*BEXNODE.

### \*NETNODE

The local system takes the role of a network node for the remote controller.

### \*ENDNODE

The local system takes the role of an end node for the remote controller.

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## APPN/HPR capable (HPR)

Specifies whether the local system can use APPN high-performance routing (HPR) when communicating with this controller. The controller description must specify APPN(\*YES) to enable HPR. If HPR(\*YES) is specified, the value of the MAXFRAME parameter of the line specified by the switched line list must be greater than or equal to 768, otherwise HPR will not be enabled over this connection.

### \*YES

The local system can use HPR, and HPR flows can proceed over the link defined by this controller.

### \*NO

The local system cannot use HPR, and HPR flows cannot proceed over the link defined by this controller.

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## HPR path switching (HPRPTHSWT)

Specifies whether an attempt is made to switch paths of HPR connections associated with this controller at the time the controller is varied off. If a path switch is not attempted or if there are no other available paths, jobs associated with the HPR connections will be ended. See the APPN Support information in the iSeries Information Center at <http://www.iseries.ibm.com/infocenter> for more information.

### \*NO

When this controller is varied off path switching will not be done for HPR connections associated with this controller. Jobs associated with HPR connections will be ended.

### \*YES

When this controller is varied off an attempt to switch paths of HPR connections associated with this controller will be made.

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## APPN transmission group number (TMSGRPNBR)

Specifies the transmission group number for this controller.

### 1

The default transmission group is one.

### \*CALC

The system specifies the value for the transmission group number.

*transmission-group-number*

Specify a value from 1 to 20 for the transmission group number.

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## APPN minimum switched status (MINSWTSTS)

Specifies the minimum status of the switched connection so that APPN will consider it as a controller that is available for routing.

### \*VRYONPND

APPN will consider the controller available for routing if the status is vary on pending, varied on, or active.

### \*VRYON

APPN will consider the controller available for routing only if the status is varied on or active.

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## Autocreate device (AUTOCRTDEV)

Specifies whether device descriptions can be automatically created for this controller description.

### \*ALL

All dependent devices than can be automatically created for this controller, except APPC devices, are automatically created.

### \*DEVINIT

Only session printer and display devices started by the SNA host controller (device-initiated) are automatically created.

### \*NONE

Dependent devices on this controller are not automatically created.

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## Autodelete device (AUTODLTDEV)

Specifies the number of minutes an automatically created device can remain in an idle state (when there are no active conversations on that device). When the time expires, the system automatically varies off and deletes the device description.

### 1440

The system will automatically vary off and delete the automatically-configured idle device descriptions after 1440 minutes (24 hours).

### \*NO

The system will not automatically vary off and delete the automatically-configured idle device descriptions.

### *wait-time*

Specify the number of minutes to wait before deleting the automatically-configured idle device descriptions for this controller. Valid values range from 1 to 10,000.

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## User-defined 1 (USRDFN)

This field is used to describe unique characteristics of the line that you want to control. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

### \*LIND

The user-defined value specified in the line description is used.

*user-defined*

Specify a value ranging from 0 through 255.

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## User-defined 2 (USRDFN)

This field is used to describe unique characteristics of the line that you want to control. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

### \*LIND

The user-defined value specified in the line description is used.

*user-defined*

Specify a value ranging from 0 through 255.

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## User-defined 3 (USRDFN)

This field is used to describe unique characteristics of the line that you want to control. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

### \*LIND

The user-defined value specified in the line description is used.

*user-defined*

Specify a value ranging from 0 through 255.

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## Recontact on vary off (RECONTACT)

Specifies whether a request for re-contact is sent to the host system when a normal vary off of the iSeries controller description is done.

**Note:** This parameter is valid only for X.25 and SDLC leased lines (if \*X.25 or \*SDLC is specified on the LINKTYPE parameter and \*NO is specified on the SWITCHED parameter).

### \*YES

A request for re-contact to the remote system is sent.

### \*NO

A request for re-contact to the remote system is not sent. When this value is specified, a status of inactive is shown for the remote system.

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## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

### \*BLANK

No text is specified.

*character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

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## Primary DLUS name (PRIDLUS)

Specifies the primary Dependent LU Server (DLUS) NAME and network identifier.

The name is in the format of XXXXXXXX YYYYYYYY the prefix being the CP name and the suffix being the network identifier of the APPN network (subnet) that the remote DLUS resides in. If the DLUS is in the same network as the iSeries system, then the user only needs to define the CP name; the default network identifier that is used is the local network identifier specified in the network attributes.

The network qualified CP name of the remote DLUS system services control point (SSCP) with which the iSeries DLUR host controller prefers to communicate. If this parameter is filled in and the iSeries DLUR controller is configured as Initial Connection \*DIAL, the iSeries sends an activation request to this DLUS first.

The default is \*NONE, but if Initial Connection is \*DIAL INLCNN(\*DIAL), then this parameter becomes a required parameter.

### Element 1: Primary DLUS name

#### \*NONE

No primary CP name is given.

*primary-DLUS-name*

Specify the name of the primary Dependent LU Server.

### Element 2: Network ID

#### \*NETATR

The LCLNETID value specified in the system network attributes is used.

*network-ID*

Specify the network identifier of the Dependent LU Server.

Top

---

## Backup DLUS name (BKUDLUS)

Specifies the backup Dependent LU Server (DLUS) name and network identifier.

The name is in the format of XXXXXXXX YYYYYYYY the prefix being the CP name and the suffix being the network identifier of the APPN network (subnet) that the remote DLUS resides in. If the DLUS is in the same network as the iSeries system, then the user only needs to define the CP name; the default network identifier that is used is the local network identifier specified in the network attributes.

The network qualified CP name of the remote DLUS system services control point (SSCP) with which the iSeries DLUR host controller prefers to communicate. If this parameter is filled in and the iSeries DLUR controller is configured as Initial Connection \*DIAL, the iSeries sends an activation request to this DLUS first.

The default is \*NONE, but if Initial Connection is \*DIAL INLCNN(\*DIAL), then this parameter becomes a required parameter.

### Element 1: Backup DLUS Name

\*NONE

No backup CP name is given.

*backup-DLUS-NAME*

Specify the NAME of the backup Dependent LU Server.

### Element 2: Network ID

\*NETATR

The LCLNETID value specified in the system network attributes is used.

*network-ID*

Specify the network identifier of the backup Dependent LU Server.

Top

---

## Dependent PU name (DEPPUNAME)

Specifies the dependent physical unit (PU) name used for DLUR, providing additional security for the connection.

If this name is filled in, an activation request (SNA ACTPU) from a DLUS node must reference this name or it will be rejected.

When the iSeries DLUR node initiates a session with the remote DLUS node (INLCNN(\*DIAL)), the dependent PU NAME will be sent to the DLUS and it will return that name on the ACTPU request.

If the remote DLUS node initiates a session to the iSeries DLUR host controller via activation of pre-defined definitions on the DLUS node, there will have to be close coordination of the dependent PU NAME and the PU NAME specified on the DLUS.

If this parameter is not filled in, then checking is done on the local exchange ID and remote CP name parameters of the controller.

\*NONE

No location name is defined.

*dependent-PU-NAME*

Specify the dependent PU NAME used for DLUR applications.

Top

---

### **30-2550 (seconds) (ACTTMR)**

This timer is used when OS/400 attempts to activate a session to the remote DLUS node (initial connection \*DIAL). It is the amount of time the system will wait for an answer from the remote DLUS.

This parameter is used in conjunction with recovery limits (CMNRCYLMT) count limit and timer interval. For each attempt (up to count limit), an activation request (timed by the activation timer) is requested. Between attempts, the system waits for the timer interval before a new activation is attempted (assuming the system times out before receiving a retry error message).

The three parameters on the attempts to the primary DLUS are used and, once the count limit is exceeded, the system resets and tries the same retry limit count to the backup DLUS (if configured). Once the retry limit count is exhausted to all configured DLUS nodes, an error message is issued to the QSYSOPR message log with options to retry the whole activation sequence again.

#### 170

The default time of 170 seconds is used.

*activation-timer-value*

Specify, in seconds, a value ranging from 30 through 2550.

Top

---

### **Dsc/reconnect timer (T309) (RECNTMR)**

This timer is used when a session outage occurs to the remote DLUS node. It is the amount of time the OS/400 DLUR support waits for the DLUS node to send an activation request back to the iSeries. Once the timer expires, OS/400 does the following:

- If the iSeries DLUR host controller is configured to INLCNN(\*DIAL):
  1. The DLUR support makes a one time attempt to activate a session to the DLUS node the system was connected to at the time of session outage.
  2. If that attempt fails, an error message is displayed in the QSYSOPR message log with retry option. If retry is taken, then the activation request is sent through the configured primary/backup DLUS again.
- If the iSeries DLUR host controller is configured to INLCNN(\*ANS):
  1. The DLUR controller waits for an activation attempt from any DLUS node.

#### 170

The default time of 170 seconds is used.

*reconnect-timer-value*

Specify, in seconds, a value ranging from 30 through 2550.

Top

---

## Attached devices (DEV)

Specifies the names of the devices that are attached to this controller. The device descriptions must already exist.

Up to 254 devices can be attached to this controller.

Top

---

## Character code (CODE)

Specifies whether the extended binary-coded decimal interchange code (\*EBCDIC) or the American National Standard Code for Information Interchange (\*ASCII) character code is used on the line.

### \*EBCDIC

The extended binary-coded decimal interchange code (EBCDIC) character code is used.

### \*ASCII

The ASCII character code is used.

Top

**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## IDLC window size (IDLCWDWSIZ)

Specifies the window size for transmission to and reception controllers attached to the IDLC line.

### \*LIND

The value specified in the line description is used as the default window size.

*window-size*

Specify the window size. Valid values range from 1 through 31.

Top

**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## IDLC frame retry (IDLCFRMRTY)

Specifies the maximum number of attempts to transmit a frame before reporting an error.

### \*LIND

The number of attempts specified in the line description is used.

*IDLC-frame-retry*

Specify a number of attempts. Valid values range from 0 through 100.

Top

**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## **IDLC response timer (IDLCRSPTMR)**

Specifies the amount of time, in tenths of a second, to wait before retransmitting a frame if acknowledgement has not been received.

### **\*LIND**

The time specified in the line description is used.

### ***IDLC-response-timer***

Specify an amount of time. Valid values range from 10 through 100 tenths of a second. For example, 100 tenths of a second equals 10 seconds.

Top

**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## **IDLC connect retry (IDLCCNNRTY)**

Specifies the number of times to attempt retransmission at connection time.

### **\*LIND**

The number of attempts specified in the line description is used.

### **\*NOMAX**

Indicates to continue until a successful transmission has been made.

### ***connect-retry***

Specify a number of attempts. Valid values range from 1 through 100.

Top

---

## **Predial delay (PREDIALDLY)**

Specifies the time interval to wait (in 0.5 second intervals) before dialing a number.

### **6**

The default value of 6 provides a 3-second delay.

### ***predial-delay***

Specify a value ranging from 0 to 254 units. Each unit represents 0.5 second. To indicate no delay, specify a value of 0.

Top

---

## **Redial delay (REDIALDLY)**

Specifies the time interval to wait (in 0.5 second intervals) before re-dialing when the call attempt is unsuccessful.



120 The default value of 120 provides a 60-second delay.

*redial-delay*

Specify a value from 0 to 254 units. Each unit represents 0.5 second. To indicate no delay, specify a value of 0.

Top

---

## Dial retry (DIALRTY)

Specifies the number of re-dial attempts made by the system before considering the dialing unsuccessful.

2 The default number of retries is 2.

*dial-retry*

Specify a value from 0 to 254 in 0.5-second intervals, for the number of times the dialing will be tried.

Top

---

## Switched disconnect (SWTDSC)

Specifies whether the switched connection to this controller is dropped when the last device is varied off.

\*NO

The switched connection is not dropped when the last device is varied off.

\*YES

The switched connection is varied off when the last device is varied off.

Top

---

## Disconnect timer (DSCTMR)

Specifies options for controlling the time (in seconds) before a connection without activity is dropped, or the amount of time to delay the automatic disconnection. If the user does not want the line to drop, specify \*NO for the SWTDSC parameter.

### Element 1: Minimum Connect Timer

170

A connection is dropped when it has been inactive for 170 seconds.

*disconnect-timer*

Specify a time to wait before disconnecting. Valid values range from 0 through 65535 seconds.

### Element 2: Disconnect Delay Timer

30

The disconnection is delayed for 30 seconds.

*disconnect-delay-timer*

Specify a value to delay link take down after the last session on the controller is stopped. Valid values range from 0 through 65535 seconds.

**Note:** For objects migrated from V2R1M1 or previous systems, the disconnect delay timer has a value of zero. This value is interpreted by the system as 30 seconds.

Top

---

## LAN DSAP (DSAP)

Specifies the destination service access point (DSAP). This is the logical address this system will send to when it communicates with the remote controller. This address allows the controller to properly route the data that comes from this system. The default value for the destination service access point is 04.

The value must match the value specified on the source service access point (SSAP) parameter in the remote controller's configuration record.

**Note:** The \*OPC controller uses the value above for this field. The combination of RMTSYSNAME and DSAP defines a unique controller. This allows multiple controllers to exist between two systems.

### 04

The destination service access point is the default 04.

#### *destination service access point*

Specify a hexadecimal value ranging from 04 through 9C, in increments of 4 (for example, 04, 08, 0C, 10) to represent the destination service access point.

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---

## LAN SSAP (SSAP)

Specifies the source service access point (SSAP). This is the logical address the local system uses when it sends data to the remote controller. This address allows the controller to properly route the data that comes from the local system. The default value for the source service access point is 04.

It must match the value assigned to the destination service access point (DSAP) in the remote controller's configuration record.

### 04

The system uses the logical address of 04.

#### *source service access point:*

Specify a hexadecimal value ranging from 04 through 9C, in increments of 4 (for example, 04, 08, 0C, 10) to represent the source service access point.

Top

---

## LAN frame retry (LANFRMRTY)

Specifies the number of times to retry a transmission when there is no acknowledgment from the remote controller in the time period specified by the LANRSPTMR parameter. This value is only used after a successful connection has been made.

### \*CALC

The system determines the LAN frame retry value based on the type of line that is lined to the controller.

#### *LAN-frame-retry*

Specify a value ranging from 0 through 254 for the number of times a frame is transmitted before an acknowledgement is received.

Top

---

## LAN connection retry (LANCNNRTY)

Specifies the number of times a transmission is attempted before an acknowledgement is received. This value is used at connection time (unlike LANFRMRTY which is used after a connection has been made).

### \*CALC

The system determines the LAN connection retry value.

#### *LAN-connection-retry*

Specify a value ranging from 0 through 254 for the number of times the transmission is attempted before an acknowledgement is received.

Top

---

## LAN response timer (LANRSPTMR)

Specifies the time period used to determine an inoperative condition on the link when connected.

### \*CALC

The system determines the LAN response timer value.

#### *LAN-response-timer*

Specify a value from 1 to 254 units. Each unit represents 0.1 second. To indicate no timer, specify 0.

Top

---

## LAN connection timer (LANCNNTMR)

Specifies the time period used to determine an inoperative condition on the link at connection time.

### \*CALC

The system determines the LAN connection timer value.

#### *LAN-connection-timer*

Specify a value ranging from 1 through 254 in 0.1-second intervals for the amount of time the system waits before an inoperative condition occurs. To indicate no timer, specify 0.

Top

---

## LAN acknowledgement timer (LANACKTMR)

Specifies the time interval to delay sending acknowledgements for received frames.

### \*CALC

The system determines the LAN acknowledgement timer value.

#### *LAN-acknowledgement-timer*

Specify a value ranging from 1 to 254 units. Each unit represents 0.1 second. To indicate no timer, specify 0. If 0 is specified for the **LAN acknowledgement frequency (LANACKFRQ)** parameter, 0 must also be specified for this parameter. If a non-zero number is specified for the LANACKFRQ parameter, a non-zero number must also be specified for this parameter.

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---

## LAN inactivity timer (LANINACTMR)

Specifies the time period used to determine an inactive condition for the controller.

### \*CALC

The system determines the LAN inactivity timer value.

#### *LAN-inactivity-timer*

Specify a value ranging from 1 through 255 in 0.1-second intervals for the length of time used to determine an inactive condition for the controller. To indicate no timer, specify 0.

Top

---

## LAN acknowledgement frequency (LANACKFRQ)

Specifies the maximum number of frames received before sending an acknowledgement to the controller.

### \*CALC

The system determines the LAN acknowledgement frequency value.

#### *LAN-acknowledge-frequency*

Specify a value from 0 to 127 for the number of frames received. If 0 is specified for the **LAN acknowledgement timer (LANACKTMR)** parameter, 0 must also be specified for this parameter. If a non-zero number is specified for the LANACKTMR parameter, a non-zero number must also be specified for this parameter.

Top

---

## LAN max outstanding frames (LANMAXOUT)

Specifies the maximum number of frames that can be sent before an acknowledgement is received from the remote system.

### \*CALC

The system determines the LAN maximum outstanding frames value.

### *LAN-maximum-outstanding-frames*

Specify a value ranging from 1 through 127 for the number of frames that can be sent before an acknowledgement is received.

Top

---

## LAN access priority (LANACCPTY)

Specifies the priority used for accessing the remote controller. The larger the number the higher the priority for this controller. This parameter is only used when the controller attaches to TRLAN.

### \*CALC

The system determines the LAN access priority value.

### *LAN-access-priority*

Specify a value from 0 to 3 for the access priority for this controller on a local area network (LAN).

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---

## LAN window step (LANWDWSTP)

Specifies whether to reduce to 1 the maximum number of frames outstanding to the remote system during network congestion. This parameter (LAN Window Step) indicates the number of frames that must be successfully received by the remote system before the number of maximum outstanding frames can be increased by 1. The increase continues this way until the maximum number of outstanding frames reaches the value specified by the LAN maximum outstanding frames (LANMAXOUT) parameter.

### \*NONE

The number of outstanding frames is not reduced during network congestion.

### *LAN-window-step*

Specify a value from 1 to 127 for the number of frames that must be successfully received by the remote system before the maximum number of outstanding frames can be increased by 1.

Top

---

## X.25 switched line selection (SWTLINSLCT)

Specifies the method that is used to select lines from an X.25 switched line list.

### \*FIRST

Lines are selected beginning with the first line in the switched line list.

### \*CALC

The system determines which line in the switched line list will be selected.

Top

---

## X.25 default packet size (DFTPCKTSIZE)

Specifies the default packet size used by the X.25 network for transmission and reception.

### Element 1: Transmit Packet Size

#### \*LIND

The value specified in the line description is the default value.

*transmit-packet-size*

Specify a default packet size for transmission. The valid values for the packet size are 64, 128, 256, 512, 1024, 2048, and 4096.

### Element 2: Receive Packet Size

#### \*LIND

The value specified in the line description is the default value.

#### \*TRANSMIT

The value specified as the default packet size for transmission is used as the default for reception.

*receive-packet-size*

Specify a default packet size for reception. The valid values for the packet size are 64, 128, 256, 512, 1024, 2048, and 4096.

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---

## X.25 default window size (DFTWDWSIZE)

Specifies the default window size for transmission and reception.

### Element 1: Transmit Window Size

#### \*LIND

The value specified in the line description is used as the default window size.

*transmit-window-size*

Specify the appropriate default window size. If you specified modulus 8, valid values range from 1 through 7. If you specified modulus 128, valid values range from 1 through 15. For switched virtual circuit (SVC) incoming calls, the system accepts the window size indicated in the Incoming Call packet facilities field.

#### **Element 2: Receive Window Size**

##### **\*LIND**

The value specified in the line description is used as the default window size.

##### **\*TRANSMIT**

The value specified as the default window size for transmission is used as the default for reception.

##### ***receive-window-size***

Specify the appropriate default window size. If you specified modulus 8, valid values range from 1 through 7. If you specified modulus 128, valid values range from 1 through 15.

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---

## **X.25 user group identifier (USRGRPID)**

Specifies the closed user-group ID for contacting this switched virtual circuit (SVC) controller on the X.25 network.

Specify the 2-digit decimal value, from 00 through 99, as provided by the network subscription. This parameter is not valid for permanent virtual circuit (PVC) connections. It is valid only for SVC circuit outgoing call operations and is ignored for SVC incoming call connections.

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## **X.25 reverse charging (RVSCRG)**

Specifies whether reverse charges are accepted or requested when contacting this controller.

##### **\*NONE**

No reverse charging for network tariff billing is accepted.

##### **\*REQUEST**

Charges are requested on outgoing call request packets.

##### **\*ACCEPT**

Reverse charging for network tariff billing is accepted on incoming requests.

##### **\*BOTH**

Both incoming and outgoing requests are accepted.

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---

## **X.25 frame retry (X25FRMRTY)**

Specifies the maximum number of times a frame is sent after the response timer ends when connected to this controller. The value for this parameter depends on the quality of service provided by the network and the connection to that network; that is, the frequency of lost link protocol data units.

7

The default for the maximum number of transmissions is 7.

### *X.25 frame retry*

Specify a value ranging from 0 through 21 for the number of times a frame is sent.

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---

## **X.25 response timer (X25RSPTMR)**

Specifies the time period allowed to return an acknowledgement when an LLC protocol data unit is sent while connected to this controller.

300

The time allowed to return an acknowledgment is 30 seconds.

### *X.25 response-timer*

Specify an amount of time in tenths of a second. Valid values range from 1 through 2550 in 0.1-second intervals.

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---

## **X.25 acknowledgement timer (X25ACKTMR)**

Specifies the amount of time to delay sending acknowledgements for received frames.

20

The time allowed to delay sending an acknowledgment is 2 seconds.

### *X.25-acknowledgment-timer*

Valid values range from 1 to 2550 in 0.1 second intervals, or 0 to indicate no delay.

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## **X.25 inactivity timer (X25INACTMR)**

Specifies the time period used to determine an inactive condition for the controller. Valid values range from 1 to 2550 in 0.1 second intervals.

1440

The time period used to determine an inactive condition for the controller is 10.5 seconds.

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## User facilities (USRFCL)

Specifies a string of hexadecimal characters sent to the X.25 network to request additional services. The system allows up to 218 hexadecimal characters.

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## Recovery limits (CMNRCYLMT)

Specifies the number of recovery attempts made by the system before an inquiry message is sent to the system operator. Also specifies the time (in minutes) that must elapse before the system sends an inquiry message to the system operator indicating that the recovery attempt count limit is reached.

### Element 1: Maximum Recovery Limit

2

Two recovery attempts are made within the interval specified.

#### \*SYSVAL

The value in the QCMNRCYLMT system value is used.

#### *count limit*

Specify the number of second-level recovery attempts to be made. Valid values range from 0 through 99.

### Element 2: Recovery Time Interval

5

The specified number of recovery attempts is made within a 5-minute interval.

#### *time-interval*

Specify the time interval (in minutes) at which the specified number of second-level recoveries are attempted. Valid values range from 0 through 120. If the value specified for *count-limit* is not 0, the value 0 specifies infinite recovery.

More information on communication recovery is in the Communications Management book, SC41-5406.

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---

## Message queue (MSGQ)

Specifies the message queue to which operational messages are sent.

#### \*SYSVAL

Messages are sent to the message queue defined in the QCFGMSGQ system value.

#### \*SYSOPR

Messages are sent to the system operator message queue (QSYS/QSYSOPR).

### Qualifier 1: Message queue

*name* Specify the name of the message queue to which operational messages are sent.

### Qualifier 2: Library

*name* Specify the name of the library where the message queue is located.

---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### \*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### **\*EXCLUDE**

The user cannot access the object.

### **\*LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

**name** Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

---

## Examples

```
CRTCTLHOST  CTLD(HOST1)  LINKTYPE(*LAN)  SWTLINLST(LAN1)
             RMTCPNAME(CPX)  ADPTADR(056000000011)
```

This command creates a host controller on a local area network.

---

## Error messages

### \*ESCAPE Messages

#### **CPF26BB**

Extended wireless controller member not changed.

#### **CPF26BC**

Extended wireless controller member not displayed.

**CPF26BD**

Entry for barcode group not removed from extended wireless controller member.

**CPF26BE**

Entry for PTC group not removed from extended wireless controller member.

**CPF26BF**

Program QZXCINZ terminated abnormally. See previous messages.

**CPF26B3**

Extended wireless line member not added.

**CPF26B4**

Extended wireless line member not changed.

**CPF26B5**

Extended wireless line member not displayed.

**CPF26B8**

Extended wireless controller member not added.

**CPF2716**

Controller description &1 not created.

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## Create Ctl Desc (Local WS) (CRTCTLLWS)

Where allowed to run: All environments (\*ALL)  
 Threadsafte: No

Parameters  
 Examples  
 Error messages

The Create Controller Description (Local Work Station) (CRTCTLLWS) command creates a controller description for a local work station controller.

**Note:** Extended wireless controller configuration data is contained in the source file and member specified by the INZFILE and INZMBR parameters, respectively. When the controller is varied on, this configuration data is downloaded to the wireless adapter. It is recommended that INZPGM(QZXCINZ) and INZFILE(QEWCSRC) be used, and that a valid value be specified for the INZMBR parameter. For more information about downloading extended wireless controller configuration data, see the LAN, Frame-Relay and ATM Support book, SC41-5404 book.

More information about using this command is in the Local Device Configuration book, SC41-5121 book.

**Restriction:** You must have \*IOSYSCFG special authority to use this command.

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### Parameters

Keyword	Description	Choices	Notes
CTLD	Controller description	<i>Name</i>	Required, Positional 1
TYPE	Controller type	<i>Character value</i>	Required, Positional 2
MODEL	Controller model	<i>Character value, 1, 0001, 2, 0002</i>	Required, Positional 3
RSRCNAME	Resource name	<i>Name</i>	Required, Positional 4
ONLINE	Online at IPL	<b>*YES, *NO</b>	Optional
INZFILE	Initialization source file	<i>Qualified object name</i>	Optional
	Qualifier 1: Initialization source file	<i>Name, *NONE</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
INZMBR	Initialization source member	<i>Name, *NONE</i>	Optional
INZPGM	Initialization program	<i>Qualified object name</i>	Optional
	Qualifier 1: Initialization program	<i>Name, *NONE</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
TEXT	Text 'description'	<i>Character value, *BLANK</i>	Optional
DEV	Attached devices	Values (up to 120 repetitions): <i>Name</i>	Optional
DEVWAITTMR	Device wait timer	2-600, <b>10</b>	Optional
AUTOCFG	Auto-configuration controller	<b>*NO, *YES</b>	Optional
AUT	Authority	<i>Name, *CHANGE, *ALL, *USE, *EXCLUDE, *LIBCRTAUT</i>	Optional

Keyword	Description	Choices	Notes
MSGQ	Message queue	Single values: *SYSVAL, *SYSOPR Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Message queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i>	

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---

## Controller description (CTLD)

This is a required parameter.

Specifies the name of the controller description.

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---

## Controller type (TYPE)

This is a required parameter.

Specifies the type of controller for this description.

**2637**

The ASCII local work station controller on a 9402 system.

**2638**

The twinaxial local work station controller on a 9402 system.

**2661**

The twinaxial local work station controller on a 9402 system.

**266A**

The local work station controller for wireless devices is used.

**266C**

Local work station controller.

**2722**

Local work station controller.

**2746**

Twinaxial work station controller.

**2747**

Twinaxial work station controller.

**6040**

The twinaxial local work station controller on a 9406 system.

**6041**

**350** iSeries: Operating System/400 Commands Starting with CPYIGCTBL (Copy DBCS Font Table)

The ASCII local work station controller on a 9406 system.

**6050**

The twinaxial local work station controller on a 9402, 9404, or a 9406 system.

**6054**

The twinaxial local work station controller on a 9402, 9404, or a 9406 system.

**6055**

The twinaxial local work station controller on a 9402, 9404, or a 9406 system.

**6056**

The twinaxial local work station controller on a 9402, 9404, or a 9406 system.

**6140**

The twinaxial local work station controller on a 9404 system.

**6141**

The ASCII local work station controller on a 9404 system.

**6180**

Local work station controller.

**6A58**

The local work station controller on a 9401, 9402, 9404, or 9406 system.

**6A59**

The local work station controller on a 9401, 9402, 9404, or 9406 system.

**915A**

The local work station controller for the 9406-3XX system is used.

**916A**

The local work station controller for the 9406-3XX system is used.

**9173**

The LocalTalk work station adapter for the 9402-2xx system is used.

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## **Controller model (MODEL)**

This is a required parameter.

Specifies the model of the work station controller. For controller types 6A58 and 6A59, model 0001 is for the local work station controller and model 0002 is for the operations console. All other controller types use only model 0001.

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## Resource name (RSRCNAME)

Specifies the resource name that identifies the hardware this description represents. Use the WRKHDWRSC command to determine the resource name.

This is a required parameter.

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---

## Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

### \*YES

The controller is automatically varied on at IPL.

### \*NO

The controller is not automatically varied on at IPL.

Top

---

## Initialization source file (INZFILE)

Specifies the NAME of a source file containing configuration initialization data.

**Note:** The INZFILE and INZMBR parameters are required when downloading extended wireless controller configuration data to the wireless adapter as discussed at the beginning of this command description.

### \*NONE

No initialization file name is specified.

The NAME of the initialization file NAME can be qualified by one of the following library values:

\*LIBL All libraries in the library list for the current thread are searched until the first match is found.

### \*CURLIB

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

### *library-name*

Specify the name of the library to be searched.

### *initialization-file-NAME*

Specify the name of a source file containing the initialization data. A value of \*NONE is accepted for this parameter. If a source file name has not been added prior to varying on this controller description then the current IOP defaults are used for initialization.

Top



---

## Initialization source member (INZMBR)

Specifies the NAME of a source file member containing configuration initialization data (for a type 266A controller only).

**Note:** The INZFILE and INZMBR parameters are required when downloading extended wireless controller configuration data to the wireless adapter as discussed at the beginning of this command description.

### \*NONE

No source file member is specified.

*initialization-member-name*

Specify the name of a source file member containing the initialization data. A value of \*NONE is accepted for this parameter. If a source member name has not been added prior to varying on this controller description, then the current IOP defaults are used.

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---

## Initialization program (INZPGM)

Specifies the name of a program to manage configuration initialization data.

**Note:** For 2663 wireless adapters, it is recommended that INZPGM(QZXCINZ) be specified. This results in the values of INZFILE and INZMBR being passed to the Change Extended Wireless Line Member (CHGEWLM) command when the line is varied on.

### \*NONE

No initialization program name is specified.

The NAME of the initialization program NAME can be qualified by one of the following library values:

\*LIBL All libraries in the library list for the current thread are searched until the first match is found.

### \*CURLIB

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

*library-name*

Specify the name of the library to be searched.

*initialization-program-name*

Specify the name of a program to manage configuration initialization data. If a program name is specified, it is called when this controller description is created. The name of the source file and member containing configuration initialization data are passed to this program as parameters.

Top

---

## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

### \*BLANK

No text is specified.

*character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

---

## Attached devices (DEV)

Specifies the names of the devices that are attached to this controller. The device descriptions must already exist.

The following list shows the maximum number of device descriptions that can be attached to each controller and the number of devices that can be active for each controller.

### Controller

#### Device Descriptions/Active Devices

2661	120/40
266A	56/56
2637	24/24
2638	56/24
6040	56/40
6041	36/18
6050	120/40
6054	56/56
6055	56/56
6056	56/56
6140	56/40
6141	36/18
6A58	1/1
6A59	1/1
915A	56/40
916A	56/40

Top

---

## Device wait timer (DEVWAITTMR)

Specifies the device wait timeout value. This is used to limit the amount of time that a subsystem takes for the work station input/output to complete. The timeout value that is used for each device is obtained from the controller that it is attached to at vary on time. A change in this parameter value takes effect for attached devices when they are next varied on.

### 10

For local controllers, the subsystem waits a maximum of 10 seconds for the completion of the input/output of each work station attached to this controller.

#### *device-wait-timer*

Specify a value ranging from 2 through 600 that specifies the maximum number of seconds that the subsystem waits for work station input/output to complete for all work stations attached to this controller.

When selecting a value for this parameter, the types of devices attached to the controller should be taken into account. Locally attached work stations should have a low value for this parameter (10 seconds or less).

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---

## Auto-configuration controller (AUTOCFG)

Specifies whether this controller description is the one which should have devices attached when they are automatically configured. Although there can be more than one controller description for each controller, only one description can be an automatic configuration controller. When new devices are automatically configured on that controller, they are attached to the automatic configuration controller description.

### \*NO

This is not an automatic configuration controller.

### \*YES

This is an automatic configuration controller.

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---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### \*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

**\*EXCLUDE**  
The user cannot access the object.

**\*LIBCRTAUT**  
The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

**name** Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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---

## Message queue (MSGQ)

Specifies the message queue to which operational messages are sent.

**\*SYSVAL**  
Messages are sent to the message queue defined in the QCFGMSGQ system value.

**\*SYSOPR**  
Messages are sent to the system operator message queue (QSYS/QSYSOPR).

### Qualifier 1: Message queue

**name** Specify the name of the message queue to which operational messages are sent.

### Qualifier 2: Library

**name** Specify the name of the library where the message queue is located.

For more information about using this command, see the Communications Management book, SC41-5406.

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---

## Examples

```
CRTCTLLWS CTLD(MYCTLR) TYPE(6050) MODEL(1) RSRcname(CTL02)
           INZFILE(*LIBL/MYFILE) INZMBR(MBR2)
```

This command creates a 6050 Model 1 local work station controller description with the name MYCTLR, and a resource name of CTL02. The source member MBR2, in source file MYFILE, will contain configuration initialization data.

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---

## Error messages

### \*ESCAPE Messages

**CPD2761**  
Model not valid for controller type.

**CPD2787**

Too many devices attached for controller type.

**CPF26BB**

Extended wireless controller member not changed.

**CPF26BC**

Extended wireless controller member not displayed.

**CPF26BD**

Entry for barcode group not removed from extended wireless controller member.

**CPF26BE**

Entry for PTC group not removed from extended wireless controller member.

**CPF26BF**

Program QZXCINZ terminated abnormally. See previous messages.

**CPF26B3**

Extended wireless line member not added.

**CPF26B4**

Extended wireless line member not changed.

**CPF26B5**

Extended wireless line member not displayed.

**CPF26B8**

Extended wireless controller member not added.

**CPF2716**

Controller description &1 not created.

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---

## Create Ctl Desc (Network) (CRTCTLNET)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Controller Description (Network) (CRTCTLNET) creates a controller description for a network controller.

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---

### Parameters

Keyword	Description	Choices	Notes
CTLD	Controller description	<i>Name</i>	Required, Positional 1
ONLINE	Online at IPL	<b>*YES</b> , *NO	Optional
LINE	Attached line	<i>Name</i>	Optional
CNNRSPTMR	Connection response timer	1-3600, <b>170</b>	Optional
TEXT	Text 'description'	<i>Character value</i> , <b>*BLANK</b>	Optional
DEV	Attached devices	Values (up to 255 repetitions): <i>Name</i>	Optional
AUT	Authority	<i>Name</i> , <b>*CHANGE</b> , *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

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---

### Controller description (CTLD)

This is a required parameter.

Specifies the name of the controller description.

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---

### Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

#### \*YES

The controller is automatically varied on at IPL.

#### \*NO

The controller is not automatically varied on at IPL.

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---

## Attached line (LINE)

Specifies the name of the nonswitched lines to which this controller is attached. The line description must already exist.

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---

## Connection response timer (CNNRSPTMR)

Specifies the amount of time the system will wait before responding to an incoming connection request.

### 170

The system will wait 170 seconds before responding to an incoming connection request.

*connection-response-timer*

Specify the amount of time the system will wait before responding to an incoming connection request. The valid values range from 1 through 3600 seconds.

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---

## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

### \*BLANK

No text is specified.

*character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

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---

## Attached devices (DEV)

Specifies the NAMES of up to 255 devices which are attached to this controller. The device descriptions must already exist.

Top

---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### \*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

\*ALL The user can perform all operations except those limited to the owner or controlled by



authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

**\*EXCLUDE**  
The user cannot access the object.

**\*LIBCRTAUT**  
The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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## Examples

```
CRTCTLNET  CTLD(CTL0A)  LINE(LIN01)
```

This command creates a network controller description with the name CTL0A. An existing line, LIN01, is specified as the network line for the controller.

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---

## Error messages

### \*ESCAPE Messages

**CPF26BB**  
Extended wireless controller member not changed.

**CPF26BC**  
Extended wireless controller member not displayed.

**CPF26BD**  
Entry for barcode group not removed from extended wireless controller member.

**CPF26BE**  
Entry for PTC group not removed from extended wireless controller member.

**CPF26BF**  
Program QZXCINZ terminated abnormally. See previous messages.

**CPF26B3**  
Extended wireless line member not added.

**CPF26B4**  
Extended wireless line member not changed.

**CPF26B5**  
Extended wireless line member not displayed.

**CPF26B8**  
Extended wireless controller member not added.

**CPF2716**

Controller description &1 not created.

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## Create Ctl Desc (Retail) (CRTCTLRTL)

Where allowed to run: All environments (\*ALL)  
 Threadsafte: No

Parameters  
 Examples  
 Error messages

The Create Controller Description (Retail) (CRTCTLRTL) command creates a controller description for a retail controller.

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### Parameters

Keyword	Description	Choices	Notes
CTLD	Controller description	<i>Name</i>	Required, Positional 1
TYPE	Controller type	3651, 3684, 4680, 4684	Required, Positional 2
MODEL	Controller model	0	Required, Positional 3
LINKTYPE	Link type	*SDLC, *X25, *LAN	Required, Positional 4
ONLINE	Online at IPL	*YES, *NO	Optional
SWITCHED	Switched connection	*NO, *YES	Optional
SNBU	Switched network backup	*NO, *YES	Optional
LINE	Attached nonswitched line	<i>Name</i>	Optional
SWTLINLST	Switched line list	Values (up to 64 repetitions): <i>Name</i>	Optional
MAXFRAME	Maximum frame size	265-1994, 256, 265, 512, 521, 1024, 1033, 1994, *LINKTYPE	Optional
EXCHID	Exchange identifier	X'00100000'-X'FFFFFFFF'	Optional
INLCNN	Initial connection	*DIAL, *ANS	Optional
CNNNBR	Connection number	<i>Character value</i> , *ANY	Optional
ANSNBR	Answer number	*CNNNBR, *ANY	Optional
STNADR	Station address	X'01'-X'FE'	Optional
ADPTADR	LAN remote adapter address	X'000000000001'-X'FFFFFFFFFFFF'	Optional
DSAP	LAN DSAP	04, 08, 0C, 10, 14, 18, 1C, 20, 24, 28, 2C, 30, 34, 38, 3C, 40, 44, 48, 4C, 50, 54, 58, 5C, 60, 64, 68, 6C, 70, 74, 78, 7C, 80, 84, 88, 8C, 90, 94, 98, 9C	Optional
SSAP	LAN SSAP	04, 08, 0C, 10, 14, 18, 1C, 20, 24, 28, 2C, 30, 34, 38, 3C, 40, 44, 48, 4C, 50, 54, 58, 5C, 60, 64, 68, 6C, 70, 74, 78, 7C, 80, 84, 88, 8C, 90, 94, 98, 9C	Optional
NETLVL	X.25 network level	1980, 1984, 1988	Optional
LGLCHLID	X.25 logical channel ID	<i>Character value</i>	Optional
CNNPWD	X.25 connection password	<i>Character value</i> , *X''	Optional
TEXT	Text 'description'	<i>Character value</i> , *BLANK	Optional
DEV	Attached devices	Values (up to 254 repetitions): <i>Name</i>	Optional
CODE	Character code	*EBCDIC, *ASCII	Optional
SSCPID	SSCP identifier	X'000000000001'-X'FFFFFFFFFFFF', 050000000000	Optional
PREDIALDLY	Predial delay	0-254, 6	Optional

Keyword	Description	Choices	Notes
REDIALDLY	Redial delay	0-254, <u>120</u>	Optional
DIALRTY	Dial retry	0-254, <u>2</u>	Optional
SWTDSC	Switched disconnect	*YES, *NO	Optional
POLLPTY	SDLC poll priority	*NO, *YES	Optional
POLLMT	SDLC poll limit	0-4, <u>0</u>	Optional
OUTLMT	SDLC out limit	*POLLMT, 0, 1, 2, 3, 4	Optional
CNNPOLLRTY	SDLC connect poll retry	0-65534, *CALC, *NOMAX	Optional
NDMPOLLTMR	SDLC NDM poll timer	0-3000, *CALC	Optional
LANFRMRTY	LAN frame retry	0-254, *CALC	Optional
LANCNRRTY	LAN connection retry	0-254, *CALC	Optional
LANRSPTMR	LAN response timer	0-254, *CALC	Optional
LANCNTMR	LAN connection timer	0-254, *CALC	Optional
LANACKTMR	LAN acknowledgement timer	0-254, *CALC	Optional
LANINACTMR	LAN inactivity timer	0-255, *CALC	Optional
LANACKFRQ	LAN acknowledgement frequency	0-127, *CALC	Optional
LANMAXOUT	LAN max outstanding frames	1-127, *CALC	Optional
LANACPTY	LAN access priority	0-3, *CALC	Optional
LANWDWSTP	LAN window step	1-127, *NONE	Optional
SWTLINSLCT	X.25 switched line selection	*FIRST, *CALC	Optional
DFTPKTSIZE	X.25 default packet size	<i>Element list</i>	Optional
	Element 1: Transmit value	*LIND, 64, 128, 256, 512, 1024, 2048, 4096	
	Element 2: Receive value	*LIND, *TRANSMIT, 64, 128, 256, 512, 1024, 2048, 4096	
DFTWDWSIZE	X.25 default window size	<i>Element list</i>	Optional
	Element 1: Transmit value	1-15, *LIND	
	Element 2: Receive value	1-15, *LIND, *TRANSMIT	
USRGRPID	X.25 user group identifier	<i>Character value</i>	Optional
RVSCRG	X.25 reverse charging	*NONE, *REQUEST, *ACCEPT, *BOTH	Optional
X25FRMRTY	X.25 frame retry	0-21, <u>7</u>	Optional
X25CNRRTY	X.25 connection retry	0-21, <u>7</u>	Optional
X25RSPTMR	X.25 response timer	1-2550, <u>100</u>	Optional
X25CNTMR	X.25 connection timer	1-2550, <u>100</u>	Optional
X25DLYTMR	X.25 delayed connection timer	1-32767, *CALC	Optional
USRFCL	User facilities	<i>Character value</i>	Optional
CMNRCYLMT	Recovery limits	Single values: *SYSVAL Other values: <i>Element list</i>	Optional
	Element 1: Count limit	0-99, <u>2</u>	
	Element 2: Time interval	0-120, <u>5</u>	
AUT	Authority	<i>Name</i> , *CHANGE, *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

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---

## Controller description (CTLD)

This is a required parameter.

Specifies the name of the controller description.

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---

## Controller type (TYPE)

This is a required parameter.

Specifies the type of controller for this description.

### 3651

This description represents a 3651 controller.

### 3684

This description represents a 3684 controller.

### 4680

This description represents a 4680 controller.

### 4684

This description represents a 4684 controller.

**Note:** For a 4690, specify 4680 for the controller type.

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## Controller model (MODEL)

This is a required parameter.

Specifies the model number of the controller that is described. This number tells the system which features the controller has.

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---

## Link type (LINKTYPE)

Specifies the type of line to which this controller is attached.

This is a required parameter.

### \*SDLC

This controller is attached to a synchronous data link control (SDLC) line.

### \*X25

This controller is attached to an X.25 line.

### \*LAN

This controller is attached to a distributed data interface (DDI), Ethernet, or token-ring local area network line.

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---

## Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

### \*YES

The controller is automatically varied on at IPL.

### \*NO

The controller is not automatically varied on at IPL.

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---

## Switched connection (SWITCHED)

Specifies whether this controller is attached to a switched line, a token-ring network, Ethernet LAN, or an X.25 switched virtual circuit (SVC). \*NO must be specified for APPC controllers attached to a TDLC line.

### \*NO

This controller is attached to a nonswitched line. Specify this value for controllers attaching to an X.25 permanent virtual circuit (PVC).

### \*YES

This controller is attached to a switched line. Specify this value for controllers attached to an X.25 switched virtual circuit (SVC). Also specify this value for controllers attached to a local area network.

**Note:** If LINKTYPE is \*LAN, the SWITCHED parameter value must be \*YES or must not be specified.

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---

## Switched network backup (SNBU)

Specifies whether the remote system modem has the switched network backup (SNBU) feature. The backup feature is used to bypass a broken nonswitched (leased line) connection by establishing a switched connection. To activate SNBU, you must change the controller description of the modem from nonswitched to switched by specifying \*YES for the **Activate swt network backup (ACTSNBU)** parameter.

**Note:** If the modem model you are using is an IBM 386x, 586x, or 786x, you should not change the controller description. Instead, manually switch the modem to the unswitched mode, and manually dial the connection.

Both the local and remote modems must support the SNBU feature to perform a valid activation.

\*NO The remote system modem does not have the SNBU feature.

### \*YES

The remote system modem has the SNBU feature.

---

## Attached nonswitched line (LINE)

Specifies the name of the nonswitched lines to which this controller is attached. The line description must already exist.

**Note:** The associated line must be varied off before this command is entered. Specify this parameter for controllers attaching to an X.25 permanent virtual circuit (PVC).

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---

## Switched line list (SWTLINLST)

Specifies the names of the switched lines to which this controller attaches. The line descriptions must already exist. Up to 64 switched line names can be specified.

*\*switched-line-NAME*

Specify the names of up to 64 lines that are connected to this controller. The same line name can be used more than once. For each line name specified, a line description by that name must already exist.

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---

## Maximum frame size (MAXFRAME)

Specifies the maximum frame (path information unit (PIU)) size the controller can send or receive. This value is used to calculate the request unit (RU) sizes. Since the maximum PIU size that the controller can send or receive is negotiated at exchange identifier time, the maximum PIU size used at run time may be different. This value matches the corresponding value on the host system.

\*LINKTYPE

The frame size is 521 bytes for \*SDLC, 1024 bytes for \*X25, and 1994 bytes for \*LAN.

*maximum-frame-size*

Specify either 521, 1033, or 1994 bytes as the maximum frame size for this controller. Specify 1024 only if linktype is \*X25. Specify 1994 only if linktype is \*LAN.

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---

## Exchange identifier (EXCHID)

Specifies the exchange identifier of this controller. The controller sends (exchanges) its identifier to another location when a connection is established. The 8-digit hexadecimal identifier contains 3 digits for the block number and 5 digits for the identifier of the specific controller.

Controller	Block Number	Hexadecimal Identifier
3694	02F	xxxxx
4701	057	xxxxx
4702	057	xxxxx
4730	043	xxxxx
4731	043	xxxxx
4732	043	xxxxx

4736	043	xxxxx
*FBSS	000-FFF	xxxxx
3601 (configured as a 4701)	016	xxxxx

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---

## Initial connection (INLCNN)

Specifies the method used to establish a connection with this controller.

### \*DIAL

The system initiates outgoing calls and answers incoming calls.

### \*ANS

The connection is made by the iSeries system when it answers an incoming call from this controller. If a call is received from the remote controller and all necessary conditions are met, the incoming call is answered by the system.

For X.25 connections, the line attached to the controller requires switched virtual circuits (SVCs) configured on the LGLCHLE parameter of type OUT or BOTH(\*SVCOUT or \*SVCBOTH) for the connection to succeed.

The line can be changed using the Change Line Description (X.25) (CHGLINX25) command.

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---

## Connection number (CNNNBR)

Specifies the telephone number to dial to connect to this controller.

\*ANY The system accepts calls from any network address.

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---

## Answer number (ANSNBR)

Specifies the X.25 network address from which calls are accepted.

### \*CNNNBR

Calls from the X.25 network address specified on the CNNNBR parameter are accepted.

\*ANY

Calls are accepted from any X.25 network address.

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---

## Station address (STNADR)

Specifies the station address used when communicating with the controller.

Valid values range from 00 to FE.



**Note:** 00 can be specified only for APPC controllers when \*TDLC is specified for the **Link type (LINKTYPE)** parameter.

**Note:** If \*SEC is specified on the ROLE parameter, this is the station address of the remote controller. If \*PRI or \*NEG is specified on the ROLE parameter, this is the local station address.

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---

## LAN remote adapter address (ADPTADR)

Specifies the 12-character adapter address of the remote controller. This is the address to which the system sends data when it communicates with the remote controller. This value can be obtained from the remote controller's configuration record. Valid values range from hex 000000000001 through hex FFFFFFFF.

*adapter-address*

Specify the adapter address of the remote controller.

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---

## LAN DSAP (DSAP)

Specifies the destination service access point (DSAP). This is the logical address this system will send to when it communicates with the remote controller. This address allows the controller to properly route the data that comes from this system. The default value for the destination service access point is 04.

The value must match the value specified on the source service access point (SSAP) parameter in the remote controller's configuration record.

04

The destination service access point is the default 04.

*destination service access point*

Specify a hexadecimal value ranging from 04 through 9C, in increments of 4 (for example, 04, 08, 0C, 10) to represent the destination service access point.

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---

## LAN SSAP (SSAP)

Specifies the source service access point (SSAP). This is the logical address the local system uses when it sends data to the remote controller. This address allows the controller to properly route the data that comes from the local system. The default value for the source service access point is 04.

It must match the value assigned to the destination service access point (DSAP) in the remote controller's configuration record.

04

The system uses the logical address of 04.

*source service access point:*

Specify a hexadecimal value ranging from 04 through 9C, in increments of 4 (for example, 04, 08, 0C, 10) to represent the source service access point.

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---

## X.25 network level (NETLVL)

Specifies the level of the X.25 network used to access this controller. The level is specified by giving the year of the standard used by the X.25 network.

**Note:** Use of the lower value of the remote DTE or the network level is suggested; for example, if the remote DTE is using the CCITT standard of 1980 and the network 1984, specify 1980 for this parameter.

### 1980

The 1980 Standard is used.

### 1984

The 1984 Standard is used.

### 1988

The 1988 Standard is used.

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---

## X.25 logical channel ID (LGLCHLID)

Specifies the logical channel identifier used for the X.25 permanent virtual circuit (PVC) to this controller. The valid entry is xyy. Where:

- x = the logical group number, derived from your network subscription.
- yy = the logical channel number, derived from your subscription. The logical channel identifier must be one of the PVC logical channel identifiers that was defined in the X.25 line description. There is no default for this parameter.

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---

## X.25 connection password (CNNPWD)

Specifies the X.25 network password used for password exchange with the X.24 Call Request and Incoming Call packets (Call User Data field). This parameter is not valid for permanent virtual circuit (PVC) connections.

If you want to use a connection password that consists of characters whose hexadecimal value is less than 40, you must specify the password as a hexadecimal value. When less than 8 bytes are specified, the end of the password field is padded with blanks. A password of all blank is valid. All incoming call requests must match this password to establish a connection.

To specify a hexadecimal password, the digits must be specified in multiples of two, be no more than 16 digits long, be enclosed in apostrophes, and be preceded by an X. For example, X'0102030405' is a valid hexadecimal password.

**Note:** This connection password is highly recommended for controllers that operate with the Enhanced Logical Link Control (ELLC) protocol LINKPCL(\*ELLC) on switched virtual circuit (SVC) connections.

This enhanced protocol supports reconnection of virtual circuits after network errors which disconnect the line with a clear signal; however, this reconnection is not allowed to proceed without the password validation procedure being used as a unique identifier for the controller.

### *X.25-connection-password*

Specify the connection password. The password for each controller can consist of any alphanumeric characters represented by the hexadecimal values ranging from 40 through FF.

Top

---

## **Text 'description' (TEXT)**

Specifies the text that briefly describes the object.

### \*BLANK

No text is specified.

### *character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

---

## **Attached devices (DEV)**

Specifies the names of the devices that are attached to this controller. The device descriptions must already exist.

The maximum number of devices that can attach to this controller is 14 for a 3651 controller, 2 for a 3684 controller, 84 for a 4680 controller, and 254 for a 4684 controller.

The maximum number of devices that can be active is 14 for a 3651 controller, 2 for a 3684 controller, 40 for a 4680 controller, and 16 for a 4684 controller.

Top

---

## **Character code (CODE)**

Specifies whether the extended binary-coded decimal interchange code (\*EBCDIC) or the American National Standard Code for Information Interchange (\*ASCII) character code is used on the line.

### \*EBCDIC

The extended binary-coded decimal interchange code (EBCDIC) character code is used.

### \*ASCII

The ASCII character code is used.

Top

---

## SSCP identifier (SSCPID)

Specifies the system service control point identifier of the host system.

050000000000

The default value for the system service control point identifier.

*system-service-control-point-identifier*

Specify the system service control point identifier as a 12-digit hexadecimal value.

Top

---

## Predial delay (PREDIALDLY)

Specifies the time interval to wait (in 0.5 second intervals) before dialing a number.

6

The default value of 6 provides a 3-second delay.

*predial-delay*

Specify a value ranging from 0 to 254 units. Each unit represents 0.5 second. To indicate no delay, specify a value of 0.

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---

## Redial delay (REDIALDLY)

Specifies the time interval to wait (in 0.5 second intervals) before re-dialing when the call attempt is unsuccessful.

120 The default value of 120 provides a 60-second delay.

*redial-delay*

Specify a value from 0 to 254 units. Each unit represents 0.5 second. To indicate no delay, specify a value of 0.

Top

---

## Dial retry (DIALRTY)

Specifies the number of re-dial attempts made by the system before considering the dialing unsuccessful.

2 The default number of retries is 2.

*dial-retry*

Specify a value from 0 to 254 in 0.5-second intervals, for the number of times the dialing will be tried.

Top

---

## Switched disconnect (SWTDSC)

Specifies whether the switched connection to this controller is dropped when the last device is varied off.

\*NO

The switched connection is not dropped when the last device is varied off.

\*YES

The switched connection is varied off when the last device is varied off.

Top

---

## SDLC poll priority (POLLPTY)

Specifies whether this controller has priority when polled. This parameter can be specified only if SHM is \*NO.

\*NO

This controller does not have polling priority.

\*YES

This controller does have polling priority.

Top

---

## SDLC poll limit (POLLMT)

Specifies, for an SDLC secondary or negotiable controller, the number of consecutive polls issued to the same controller when the poll results in receiving frames. This parameter can be specified only if SHM is \*NO.

0

The default number of polls is zero.

*poll limit*

Specify a number of polls. Valid values range from 0 through 4.

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---

## SDLC out limit (OUTLMT)

Specifies the number of consecutive times SDLC allows the transmission of the maximum number of frames to a station, before allowing transmission to another station.

\*POLLMT

The value is the same as the one specified for the **SDLC poll limit (POLLMT)** parameter.

*out-limit*

Specify a value ranging from 0 through 4.

---

## SDLC connect poll retry (CNNPOLLRTY)

Specifies the number of times to retry connecting to a controller before reporting an error.

### \*CALC

The number of retries is 7 if the controller is switched, and \*NOMAX if the controller is nonswitched.

### \*NOMAX

The system will retry indefinitely.

### *connect-poll-retry*

Specify a value ranging from 0 to 65534 for the number of retries.

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---

## SDLC NDM poll timer (NDMPOLLTMR)

Specifies the minimum interval at which a secondary station should be polled if a poll from the primary to the secondary (which is in normal disconnect mode (NDM)) does not result in receiving the appropriate response.

This parameter is valid only if the link type is \*SDLC and the controller role is secondary or negotiable and \*NO is specified on the SHM parameter.

### \*CALC

The poll interval is calculated by the system.

### *NDM-poll-timer*

Specify a value ranging from 1 to 3000 units. Each unit represents 0.1 second. To indicate no timer, specify 0.

Top

---

## LAN frame retry (LANFRMRTY)

Specifies the number of times to retry a transmission when there is no acknowledgment from the remote controller in the time period specified by the LANRSPTMR parameter. This value is only used after a successful connection has been made.

### \*CALC

The system determines the LAN frame retry value based on the type of line that is lined to the controller.

### *LAN-frame-retry*

Specify a value ranging from 0 through 254 for the number of times a frame is transmitted before an acknowledgement is received.

Top

---

## LAN connection retry (LANCNRTRY)

Specifies the number of times a transmission is attempted before an acknowledgement is received. This value is used at connection time (unlike LANFRMRTY which is used after a connection has been made).

### \*CALC

The system determines the LAN connection retry value.

#### *LAN-connection-retry*

Specify a value ranging from 0 through 254 for the number of times the transmission is attempted before an acknowledgement is received.

Top

---

## LAN response timer (LANRSPTMR)

Specifies the time period used to determine an inoperative condition on the link when connected.

### \*CALC

The system determines the LAN response timer value.

#### *LAN-response-timer*

Specify a value from 1 to 254 units. Each unit represents 0.1 second. To indicate no timer, specify 0.

Top

---

## LAN connection timer (LANCNNTMR)

Specifies the time period used to determine an inoperative condition on the link at connection time.

### \*CALC

The system determines the LAN connection timer value.

#### *LAN-connection-timer*

Specify a value ranging from 1 through 254 in 0.1-second intervals for the amount of time the system waits before an inoperative condition occurs. To indicate no timer, specify 0.

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---

## LAN acknowledgement timer (LANACKTMR)

Specifies the time interval to delay sending acknowledgements for received frames.

### \*CALC

The system determines the LAN acknowledgement timer value.

#### *LAN-acknowledgement-timer*

Specify a value ranging from 1 to 254 units. Each unit represents 0.1 second. To indicate no timer, specify 0. If 0 is specified for the LAN acknowledgement frequency (LANACKFRQ) parameter, 0 must also be

specified for this parameter. If a non-zero number is specified for the LANACKFRQ parameter, a non-zero number must also be specified for this parameter.

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---

## LAN inactivity timer (LANINACTMR)

Specifies the time period used to determine an inactive condition for the controller.

### \*CALC

The system determines the LAN inactivity timer value.

### *LAN-inactivity-timer*

Specify a value ranging from 1 through 255 in 0.1-second intervals for the length of time used to determine an inactive condition for the controller. To indicate no timer, specify 0.

Top

---

## LAN acknowledgement frequency (LANACKFRQ)

Specifies the maximum number of frames received before sending an acknowledgement to the controller.

### \*CALC

The system determines the LAN acknowledgement frequency value.

### *LAN-acknowledge-frequency*

Specify a value from 0 to 127 for the number of frames received. If 0 is specified for the **LAN acknowledgement timer (LANACKTMR)** parameter, 0 must also be specified for this parameter. If a non-zero number is specified for the LANACKTMR parameter, a non-zero number must also be specified for this parameter.

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---

## LAN max outstanding frames (LANMAXOUT)

Specifies the maximum number of frames that can be sent before an acknowledgement is received from the remote system.

### \*CALC

The system determines the LAN maximum outstanding frames value.

### *LAN-maximum-outstanding-frames*

Specify a value ranging from 1 through 127 for the number of frames that can be sent before an acknowledgement is received.

Top

---

## LAN access priority (LANACCPTY)

Specifies the priority granted to the sending system for sending frames. The larger the number, the higher the priority.



### \*CALC

The system calculates the value to use.

### *LAN-access-priority*

Specify a value from 0 to 3 for the access priority for this controller on a local area network (LAN).

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---

## **LAN window step (LANWDWSTP)**

Specifies whether to reduce to 1 the maximum number of frames outstanding to the remote system during network congestion. This parameter (LAN Window Step) indicates the number of frames that must be successfully received by the remote system before the number of maximum outstanding frames can be increased by 1. The increase continues this way until the maximum number of outstanding frames reaches the value specified by the LAN maximum outstanding frames (LANMAXOUT) parameter.

### \*NONE

The number of outstanding frames is not reduced during network congestion.

### *LAN-window-step*

Specify a value from 1 to 127 for the number of frames that must be successfully received by the remote system before the maximum number of outstanding frames can be increased by 1.

Top

---

## **X.25 switched line selection (SWTLINSLCT)**

Specifies the method that is used to select lines from an X.25 switched line list.

### \*FIRST

Lines are selected beginning with the first line in the switched line list.

### \*CALC

The system determines which line in the switched line list will be selected.

Top

---

## **X.25 default packet size (DFTPKTSIZE)**

Specifies the default packet size used by the X.25 network for transmission and reception.

### **Element 1: Transmit Packet Size**

#### \*LIND

The value specified in the line description is the default value.

#### *transmit-packet-size*

Specify a default packet size for transmission. The valid values for the packet size are 64, 128, 256, 512, 1024, 2048, and 4096.

### **Element 2: Receive Packet Size**

### \*LIND

The value specified in the line description is the default value.

### **\*TRANSMIT**

The value specified as the default packet size for transmission is used as the default for reception.

#### *receive-packet-size*

Specify a default packet size for reception. The valid values for the packet size are 64, 128, 256, 512, 1024, 2048, and 4096.

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---

## **X.25 default window size (DFTWDWSIZE)**

Specifies the default window size for transmission and reception.

### **Element 1: Transmit Window Size**

#### \*LIND

The value specified in the line description is used as the default window size.

#### *transmit-window-size*

Specify the appropriate default window size. If you specified modulus 8, valid values range from 1 through 7. If you specified modulus 128, valid values range from 1 through 15. For switched virtual circuit (SVC) incoming calls, the system accepts the window size indicated in the Incoming Call packet facilities field.

### **Element 2: Receive Window Size**

#### \*LIND

The value specified in the line description is used as the default window size.

### **\*TRANSMIT**

The value specified as the default window size for transmission is used as the default for reception.

#### *receive-window-size*

Specify the appropriate default window size. If you specified modulus 8, valid values range from 1 through 7. If you specified modulus 128, valid values range from 1 through 15.

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---

## **X.25 user group identifier (USRGRPID)**

Specifies the closed user-group ID for contacting this switched virtual circuit (SVC) controller on the X.25 network.

Specify the 2-digit decimal value, from 00 through 99, as provided by the network subscription. This parameter is not valid for permanent virtual circuit (PVC) connections. It is valid only for SVC circuit outgoing call operations and is ignored for SVC incoming call connections.

---

## X.25 reverse charging (RVSCRG)

Specifies whether reverse charges are accepted or requested when contacting this controller.

### \*NONE

No reverse charging for network tariff billing is accepted.

### \*REQUEST

Charges are requested on outgoing call request packets.

### \*ACCEPT

Reverse charging for network tariff billing is accepted on incoming requests.

### \*BOTH

Both incoming and outgoing requests are accepted.

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---

## X.25 frame retry (X25FRMRTY)

Specifies the maximum number of times a frame is sent after the response timer ends when connected to this controller. The value for this parameter depends on the quality of service provided by the network and the connection to that network; that is, the frequency of lost link protocol data units.

7

The default for the maximum number of transmissions is 7.

### *X.25 frame retry*

Specify a value ranging from 0 through 21 for the number of times a frame is sent.

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---

## X.25 connection retry (X25CNNRTY)

Specifies the maximum number of times that a logical link control (LLC) protocol data unit is sent after the connect response timer expires when connecting to this controller.

7

The default for the maximum number of transmissions is 7.

### *X.25 connection retry*

Specify a value ranging from 0 through 21 for the number times a frame is sent.

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---

## X.25 response timer (X25RSPTMR)

Specifies the time period allowed to return an acknowledgement when an LLC protocol data unit is sent while connected to this controller.

100

The default amount of time is 10 seconds.

### *X.25 response-timer*

Specify an amount of time in tenths of a second. Valid values range from 1 through 2550 in 0.1-second intervals.

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---

## X.25 connection timer (X25CNNTMR)

Specifies the time period allowed to return an acknowledgement when an LLC protocol data unit is sent while connecting to this controller.

100

The default amount of time is 10 seconds.

### *connection-timer*

Specify an amount of time in tenths of a second. Valid values range from 1 through 2550 in 0.1 second intervals.

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---

## X.25 delayed connection timer (X25DLYTMR)

Specifies the time interval between attempts to establish a connection to the controller.

\*CALC

Use the values specified for the **X.25 connection timer (X25CNNTMR)** parameter and the **X.25 connection retry (X25CNNRTY)** parameter to determine how often and how many times to try establishing the connection.

### *X.25-delay-timer*

Specify a value ranging from 1 to 32767 units. Each unit represents 0.1 second. Connection attempts are repeated indefinitely at this time interval.

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---

## User facilities (USRFCL)

Specifies a string of hexadecimal characters sent to the X.25 network to request additional services. The system allows up to 218 hexadecimal characters.

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---

## Recovery limits (CMNRCYLMT)

Specifies the number of recovery attempts made by the system before an inquiry message is sent to the system operator. Also specifies the time (in minutes) that must elapse before the system sends an inquiry message to the system operator indicating that the recovery attempt count limit is reached.

### Element 1: Maximum Recovery Limit

2

Two recovery attempts are made within the interval specified.

#### **\*SYSVAL**

The value in the QCMNRCYLMT system value is used.

#### *count limit*

Specify the number of second-level recovery attempts to be made. Valid values range from 0 through 99.

### Element 2: Recovery Time Interval

5

The specified number of recovery attempts is made within a 5-minute interval.

#### *time-interval*

Specify the time interval (in minutes) at which the specified number of second-level recoveries are attempted. Valid values range from 0 through 120. If the value specified for *count-limit* is not 0, the value 0 specifies infinite recovery.

More information on communication recovery is in the Communications Management book, SC41-5406.

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## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

#### **\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

#### **\*EXCLUDE**

The user cannot access the object.

## \*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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## Examples

```
CRTCTLR05  CTLD(CTLR05)  TYPE(3651)  MODEL(0)  LINKTYPE(*SDLC)
            SWITCHED(*YES)  SWTLINLST(SWITCHED1)
            EXCHID(005000005)
            INLCNN(*ANS)  STNADR(E1)  CNNNBR(2553217)
```

This command creates a 3651 Model 0 retail controller description called CTLR05. The controller is on a SDLC switched line at telephone number 255-3217. Connection to the controller is initiated by an incoming call to the iSeries 400.

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---

## Error messages

### \*ESCAPE Messages

#### CPF26BB

Extended wireless controller member not changed.

#### CPF26BC

Extended wireless controller member not displayed.

#### CPF26BD

Entry for barcode group not removed from extended wireless controller member.

#### CPF26BE

Entry for PTC group not removed from extended wireless controller member.

#### CPF26BF

Program QZXCINZ terminated abnormally. See previous messages.

#### CPF26B3

Extended wireless line member not added.

#### CPF26B4

Extended wireless line member not changed.

#### CPF26B5

Extended wireless line member not displayed.

#### CPF26B8

Extended wireless controller member not added.

#### CPF2716

Controller description &1 not created.

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## Create Ctl Desc (Remote WS) (CRTCTLRWS)

Where allowed to run: All environments (\*ALL)  
 Threadsafte: No

Parameters  
 Examples  
 Error messages

The Create Controller Description (Remote Work Station) (CRTCTLRWS) command creates a controller description for a remote work station controller. For more information about using this command, see the Communications Configuration book, SC41-5401.

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### Parameters

Keyword	Description	Choices	Notes
CTLD	Controller description	<i>Name</i>	Required, Positional 1
TYPE	Controller type	3174, 3274, 5251, 5294, 5394, 5494, 5594	Required, Positional 2
MODEL	Controller model	0, 1, 0001, 2, 0002, 12, 0012, K01	Required, Positional 3
LINKTYPE	Link type	*LAN, *NONE, *SDLC, *X25	Required, Positional 4
ONLINE	Online at IPL	*YES, *NO	Optional
SWITCHED	Switched connection	*NO, *YES	Optional
SHM	Short hold mode	*NO, *YES	Optional
SNBU	Switched network backup	*NO, *YES	Optional
LINE	Attached nonswitched line	<i>Name</i>	Optional
SWTLINLST	Switched line list	Values (up to 64 repetitions): <i>Name</i>	Optional
MAXFRAME	Maximum frame size	265-1994, 256, 261, 265, 512, 517, 521, 1033, 1994, *LINKTYPE	Optional
RMTLOCNAME	Remote location	<i>Communications name</i>	Optional
LCLLOCNAME	Local location	<i>Communications name</i> , *NETATR	Optional
RMTNETID	Remote network identifier	<i>Communications name</i> , *NETATR, *NONE	Optional
EXCHID	Exchange identifier	X'00100000'-X'FFFFFFF'	Optional
INLCNN	Initial connection	*DIAL, *ANS	Optional
DIALINIT	Dial initiation	*LINKTYPE, *IMMED, *DELAY	Optional
CNNNBR	Connection number	<i>Character value</i> , *DC, *ANY	Optional
ANSNBR	Answer number	*CNNNBR, *ANY	Optional
CNNLSTOUT	Outgoing connection list	<i>Name</i>	Optional
CNNLSTOUTE	Connection list entry	<i>Name</i>	Optional
SHMDSCLMT	SHM disconnect limit	1-254, <u>10</u> , *NOMAX	Optional
SHMDSCTMR	SHM disconnect timer	2-3000, <u>50</u>	Optional
STNADR	Station address	X'01'-X'FE'	Optional
ADPTADR	LAN remote adapter address	X'0000000000001'-X'FFFFFFFFFFFF'	Optional
NETLVL	X.25 network level	1980, 1984, 1988	Optional
LINKPCL	X.25 link level protocol	*QLLC, *ELLC	Optional
LGLCHLID	X.25 logical channel ID	<i>Character value</i>	Optional

Keyword	Description	Choices	Notes
CNNPWD	X.25 connection password	<i>Character value, X''</i>	Optional
AUTOCRTDEV	Autocreate device	<i>*ALL, *NONE</i>	Optional
SWTDSC	Switched disconnect	<i>*YES, *NO</i>	Optional
TEXT	Text 'description'	<i>Character value, *BLANK</i>	Optional
DEV	Attached devices	Values (up to 254 repetitions): <i>Name</i>	Optional
CODE	Character code	<i>*EBCDIC, *ASCII</i>	Optional
DEVWAITTMR	Device wait timer	2-600, <u>120</u>	Optional
SSCPID	SSCP identifier	X'000000000001'-X'FFFFFFFFFFFF', <u>050000000000</u>	Optional
IDLCWDWSIZ	IDLC window size	1-31, <u>*LIND</u>	Optional
IDLCFRMRTY	IDLC frame retry	0-100, <u>*LIND</u>	Optional
IDLCRSPTMR	IDLC response timer	10-100, <u>*LIND</u>	Optional
IDLCCNNRTY	IDLC connect retry	1-100, <u>*LIND</u> , *NOMAX	Optional
PREDIALDLY	Predial delay	0-254, <u>6</u>	Optional
REDIALDLY	Redial delay	0-254, <u>120</u>	Optional
DIALRTY	Dial retry	0-254, <u>2</u>	Optional
POLLPTY	SDLC poll priority	<i>*NO, *YES</i>	Optional
POLLMT	SDLC poll limit	0-4, <u>0</u>	Optional
OUTLMT	SDLC out limit	<i>*POLLMT, 0, 1, 2, 3, 4</i>	Optional
CNNPOLLRTY	SDLC connect poll retry	0-65534, <i>*CALC</i> , *NOMAX	Optional
NDMPOLLTMR	SDLC NDM poll timer	0-3000, <i>*CALC</i>	Optional
DSAP	LAN DSAP	<u>04</u> , 08, 0C, 10, 14, 18, 1C, 20, 24, 28, 2C, 30, 34, 38, 3C, 40, 44, 48, 4C, 50, 54, 58, 5C, 60, 64, 68, 6C, 70, 74, 78, 7C, 80, 84, 88, 8C, 90, 94, 98, 9C	Optional
SSAP	LAN SSAP	<u>04</u> , 08, 0C, 10, 14, 18, 1C, 20, 24, 28, 2C, 30, 34, 38, 3C, 40, 44, 48, 4C, 50, 54, 58, 5C, 60, 64, 68, 6C, 70, 74, 78, 7C, 80, 84, 88, 8C, 90, 94, 98, 9C	Optional
LANFRMRTY	LAN frame retry	0-254, <i>*CALC</i>	Optional
LANCNNRTY	LAN connection retry	0-254, <i>*CALC</i>	Optional
LANRSPTMR	LAN response timer	0-254, <i>*CALC</i>	Optional
LANCNTMR	LAN connection timer	0-254, <i>*CALC</i>	Optional
LANACKTMR	LAN acknowledgement timer	0-254, <i>*CALC</i>	Optional
LANINACTMR	LAN inactivity timer	0-255, <i>*CALC</i>	Optional
LANACKFRQ	LAN acknowledgement frequency	0-127, <i>*CALC</i>	Optional
LANMAXOUT	LAN max outstanding frames	1-127, <i>*CALC</i>	Optional
LANACPTY	LAN access priority	0-3, <i>*CALC</i>	Optional
LANWDWSTP	LAN window step	1-127, <i>*NONE</i>	Optional
SWTLINSLCT	X.25 switched line selection	<i>*FIRST, *CALC</i>	Optional
DFTPFSIZE	X.25 default packet size	<i>Element list</i>	Optional
	Element 1: Transmit value	<i>*LIND, 64, 128, 256, 512, 1024, 2048, 4096</i>	
	Element 2: Receive value	<i>*LIND, *TRANSMIT, 64, 128, 256, 512, 1024, 2048, 4096</i>	
DFTWDSIZE	X.25 default window size	<i>Element list</i>	Optional
	Element 1: Transmit value	1-15, <i>*LIND</i>	
	Element 2: Receive value	1-15, <i>*LIND, *TRANSMIT</i>	
USRGRPID	X.25 user group identifier	<i>Character value</i>	Optional
RVSCRG	X.25 reverse charging	<i>*NONE, *REQUEST, *ACCEPT, *BOTH</i>	Optional



Keyword	Description	Choices	Notes
X25FRMRTY	X.25 frame retry	0-21, <u>7</u>	Optional
X25CNNRTY	X.25 connection retry	0-21, <u>7</u>	Optional
X25RSPTMR	X.25 response timer	1-2550, <u>100</u>	Optional
X25CNNTMR	X.25 connection timer	1-2550, <u>100</u>	Optional
X25DLYTMR	X.25 delayed connection timer	1-32767, <u>*CALC</u>	Optional
X25ACKTMR	X.25 acknowledgement timer	0-2550, <u>20</u>	Optional
X25INACTMR	X.25 inactivity timer	1-2550, <u>350</u>	Optional
USRFLC	User facilities	<i>Character value</i>	Optional
ALCRTYTMR	Allocation retry timer	1-9999, <u>180</u>	Optional
CMNRCYLMT	Recovery limits	Single values: *SYSVAL Other values: <i>Element list</i>	Optional
	Element 1: Count limit	0-99, <u>2</u>	
	Element 2: Time interval	0-120, <u>5</u>	
MSGQ	Message queue	Single values: *SYSVAL, *SYSOPR Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Message queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i>	
AUT	Authority	<i>Name</i> , <u>*CHANGE</u> , *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

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---

## Controller description (CTLD)

This is a required parameter.

Specifies the name of the controller description.

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---

## Controller type (TYPE)

This is a required parameter.

Specifies the type of controller for this description.

**3174**

This description represents a 3174 controller.

**3274**

This description represents a 3274 controller.

**5251**

This description represents a 5251 controller.

**5294**

This description represents a 5294 controller.

**5394**

This description represents a 5394 controller.

**5494**

This description represents a 5494 controller.

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## Controller model (MODEL)

This is a required parameter.

Specifies the model number of the controller that is described. This number tells the system which features the controller has.

**0**

The model number for a 3174 or 3274 controller.

**1**

The model number for a 5294, 5394, or 5494 Model 1 controller.

**2**

The model number for a 5394 or 5494 Model 2 controller.

**12**

The model number for a 5251 Model 12 controller.

**K01**

The model number for a 5294 Model K01 controller.

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## Link type (LINKTYPE)

Specifies the type of line to which this controller is attached.

This is a required parameter.

**\*LAN**

This controller is attached to a Local Area Network (LAN).

**\*NONE**

This controller description is not attached to a line.

**\*SDLC**

This controller is attached to a synchronous data link control (SDLC) line.

**\*X25**

This controller is attached to an X.25 line.

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## Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

### \*YES

The controller is automatically varied on at IPL.

### \*NO

The controller is not automatically varied on at IPL.

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---

## Switched connection (SWITCHED)

Specifies whether this controller is attached to a switched line, a token-ring network, Ethernet LAN, or an X.25 switched virtual circuit (SVC). \*NO must be specified for APPC controllers attached to a TDLC line.

### \*NO

This controller is attached to a nonswitched line. Specify this value for controllers attaching to an X.25 permanent virtual circuit (PVC).

### \*YES

This controller is attached to a switched line. Specify this value for controllers attached to an X.25 switched virtual circuit (SVC). Also specify this value for controllers attached to a local area network.

**Note:** If LINKTYPE is \*LAN, the SWITCHED parameter value must be \*YES or must not be specified.

Top

---

## Short hold mode (SHM)

Specifies whether this controller is to be used for X.21 short hold mode. To specify \*YES, you must also specify \*SDLC for the **Link type (LINKTYPE)** parameter, and \*YES for the **Switched connection (SWITCHED)** parameter.

### \*NO

This controller is not used for X.21 short hold mode.

### \*YES

This controller is used for X.21 short hold mode.

Top

---

## Switched network backup (SNBU)

Specifies whether the remote system modem has the switched network backup (SNBU) feature. The backup feature is used to bypass a broken nonswitched (leased line) connection by establishing a switched connection. To activate SNBU, you must change the controller description of the modem from nonswitched to switched by specifying \*YES for the **Activate swt network backup (ACTSNBU)** parameter.

**Note:** If the modem model you are using is an IBM 386x, 586x, or 786x, you should not change the controller description. Instead, manually switch the modem to the unswitched mode, and manually dial the connection.

Both the local and remote modems must support the SNBU feature to perform a valid activation.

**\*NO** The remote system modem does not have the SNBU feature.

**\*YES**

The remote system modem has the SNBU feature.

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---

## Attached nonswitched line (LINE)

Specifies the name of the nonswitched lines to which this controller is attached. The line description must already exist.

**Note:** The associated line must be varied off before this command is entered. Specify this parameter for controllers attaching to an X.25 permanent virtual circuit (PVC).

Top

---

## Switched line list (SWTLINLST)

Specifies the names of the switched lines to which this controller attaches. The line descriptions must already exist. Up to 64 switched line names can be specified.

*\*switched-line-NAME*

Specify the names of up to 64 lines that are connected to this controller. The same line name can be used more than once. For each line name specified, a line description by that name must already exist.

Top

---

## Maximum frame size (MAXFRAME)

Specifies the maximum frame (path information unit (PIU)) size the controller can send or receive. This value is used to calculate the request unit (RU) sizes. Since the maximum PIU size that the controller can send or receive is negotiated at exchange identifier time, the maximum PIU size used at run time may be different. This value matches the corresponding value on the host system.

**\*LINKTYPE**

For a 3174 controller with a link type of \*ISDN, a value of 521 is used. For a 3174 controller with a link type of \*LAN, a value of 1994 is used. For a 3174 controller with a link type of \*SDLC, a value of 265 is used. For a 3174 controller with a link type of \*X25, a value of 256 is used. For a 5394 controller with a link type of \*X25, a value of 512 is used. For a 5394 controller with a link type of \*SDLC, a value of 517 is used.

*maximum-frame-size*

For a 3174 controller with a link type of \*SDLC or \*X25, specify the value 265. For a 5394 controller with a link type of \*X25 line, specify 265 or 521. For a 5394 controller with a link type of \*SDLC, specify 261 or 517.

---

## Remote location (RMTLOCNAME)

Specifies the NAME of the remote location associated with the remote system.

Top

---

## Local location (LCLLOCNAME)

Specifies the local location name.

### \*NETATR

The LCLNETID value specified in the system network attributes is used.

*local-location-name*

Specify the name (8 characters maximum) by which the local system is known to the remote system.

Top

---

## Remote network identifier (RMTNETID)

Specifies the NAME of the remote network in which the adjacent control point resides.

### \*NETATR

The LCLNETID value specified in the system network attributes is used.

### \*NONE

No remote network identifier (ID) is used.

*remote-network-identifier*

Specify the remote network identifier.

Top

---

## Exchange identifier (EXCHID)

Specifies the exchange identifier of the controller. The controller sends (exchanges) its identifier to another location when a connection is made. The 8-digit hexadecimal identifier contains 3 digits for the block number and 5 digits for the identifier of the specific controller.

Top

---

## Initial connection (INLCNN)

Specifies the method used to establish a connection with this controller.

### \*DIAL

The system initiates outgoing calls and answers incoming calls.

### \*ANS

The connection is made by the iSeries system when it answers an incoming call from this controller. If a call is received from the remote controller and all necessary conditions are met, the incoming call is answered by the system.

For X.25 connections, the line attached to the controller requires switched virtual circuits (SVCs) configured on the LGLCHLE parameter of type OUT or BOTH(\*SVCOUT or \*SVCBOTH) for the connection to succeed.

The line can be changed using the Change Line Description (X.25) (CHGLINX25) command.

Top

---

## Dial initiation (DIALINIT)

Specifies the method used to make the initial dial on a switched line between the system and the remote controller.

### \*LINKTYPE

The type of dial connection initiated is specified on the LINKTYPE parameter. For LAN or SDLC short-hold mode connections, the default is to dial the connection as soon as the controller description is varied on. For all other link types, the default is to delay dialing.

### \*IMMED

The dial connection is initiated as soon as the controller description is varied on.

### \*DELAY

The dial connection is delayed until a job is initiated that requests the use of the remote controller resources.

Top

---

## Connection number (CNNNBR)

Specifies the telephone number to dial to connect to this controller.

### \*DC

Direct call is being used in an X.21 circuit switched network.

\*ANY The system accepts calls from any network address.

### *connection-number*

Specify the connection number.

Top

---

## Answer number (ANSNBR)

Specifies the X.25 network address from which calls are accepted.

### \*CNNNBR

Calls from the X.25 network address specified on the CNNNBR parameter are accepted.

### \*ANY

Calls are accepted from any X.25 network address.

Top

**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## Outgoing connection list (CNLSTOUT)

Specifies, for ISDN switched connections, the name of a connection list object that contains the ISDN assigned numbers for a dial out operation to the ISDN.

### *list-object*

Specify the name of a connection list object.

Top

**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## Connection list entry (CNLSTOUTE)

Specifies, for ISDN switched connections, the entry name from the connection list that is used to make a call to the ISDN. The connection list must have been identified on the **Outgoing connection list (CNLSTOUT)** parameter.

### *entry-name*

Specify an entry name.

Top

---

## SHM disconnect limit (SHMDSCLMT)

Specifies the number of consecutive nonproductive responses that are required from the remote station before the connection can be suspended for this X.21 short hold mode connection. This parameter is used only if \*YES is specified for the **Short hold mode (SHM)** parameter, and \*NEG or \*SEC is specified for the **Data link role (ROLE)** parameter.

### 10

10 consecutive nonproductive responses must be received before the connection can be suspended.

### \*NOMAX

There is no disconnect limit.

### *SHM-disconnect-limit*

Specify a number from 1 to 254, indicating the number of consecutive nonproductive responses that must be received before the connection can be suspended.

Top

---

## **SHM disconnect timer (SHMDSCTMR)**

Specifies, in tenths of a second, the minimum length of time that the primary system maintains the connection to the remote system for this X.21 short hold mode controller. This parameter is valid only if \*YES is specified for the **Short hold mode (SHM)** parameter, and \*NEG or \*SEC is specified for the **Data link role (ROLE)** parameter.

50

The primary maintains the connection to the remote system for a minimum of 5 seconds.

### *SHM-disconnect-timer*

Specify a value from 2 to 3000 in 0.1 second intervals.

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---

## **Station address (STNADR)**

Specifies the station address used when communicating with the controller.

Valid values range from 00 to FE.

**Note:** 00 can be specified only for APPC controllers when \*TDLC is specified for the **Link type (LINKTYPE)** parameter.

**Note:** If \*SEC is specified on the ROLE parameter, this is the station address of the remote controller. If \*PRI or \*NEG is specified on the ROLE parameter, this is the local station address.

Top

---

## **LAN remote adapter address (ADPTADR)**

Specifies the 12-character adapter address of the remote controller. This is the address to which the system sends data when it communicates with the remote controller. This value can be obtained from the remote controller's configuration record. Valid values range from hex 000000000001 through hex FFFFFFFF.

### *adapter-address*

Specify the adapter address of the remote controller.

Top

---

## **X.25 network level (NETLVL)**

Specifies the level of the X.25 network used to access this controller. The level is specified by giving the year of the standard used by the X.25 network.



**Note:** Use of the lower value of the remote DTE or the network level is suggested; for example, if the remote DTE is using the CCITT standard of 1980 and the network 1984, specify 1980 for this parameter.

#### 1980

The 1980 Standard is used.

#### 1984

The 1984 Standard is used.

#### 1988

The 1988 Standard is used.

Top

---

## X.25 link level protocol (LINKPCL)

Specifies the link level protocol used on the X.25 network to communicate with this controller.

### \*QLLC

The Qualified Logical Link Control (QLLC) protocol is used.

### \*ELLC

The Enhanced Logical Link Control (ELLC) protocol is used.

Top

---

## X.25 logical channel ID (LGLCHLID)

Specifies the logical channel identifier used for the X.25 permanent virtual circuit (PVC) to this controller. The valid entry is xyy. Where:

- x = the logical group number, derived from your network subscription.
- yy = the logical channel number, derived from your subscription. The logical channel identifier must be one of the PVC logical channel identifiers that was defined in the X.25 line description. There is no default for this parameter.

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---

## X.25 connection password (CNNPWD)

Specifies the X.25 network password used for password exchange with the X.24 Call Request and Incoming Call packets (Call User Data field). This parameter is not valid for permanent virtual circuit (PVC) connections.

If you want to use a connection password that consists of characters whose hexadecimal value is less than 40, you must specify the password as a hexadecimal value. When less than 8 bytes are specified, the end of the password field is padded with blanks. A password of all blank is valid. All incoming call requests must match this password to establish a connection.

To specify a hexadecimal password, the digits must be specified in multiples of two, be no more than 16 digits long, be enclosed in apostrophes, and be preceded by an X. For example, X'0102030405' is a valid hexadecimal password.

**Note:** This connection password is highly recommended for controllers that operate with the Enhanced Logical Link Control (ELLC) protocol LINKPCL(\*ELLC) on switched virtual circuit (SVC) connections. This enhanced protocol supports reconnection of virtual circuits after network errors which disconnect the line with a clear signal; however, this reconnection is not allowed to proceed without the password validation procedure being used as a unique identifier for the controller.

### *X.25-connection-password*

Specify the connection password. The password for each controller can consist of any alphanumeric characters represented by the hexadecimal values ranging from 40 through FF.

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## **Autocreate device (AUTOCRTDEV)**

Specifies whether device descriptions can be automatically created for this controller description.

### \*ALL

All dependent devices that can be automatically created for this controller, except APPC devices, are automatically created.

### \*NONE

Dependent devices on this controller are not automatically created.

Top

---

## **Switched disconnect (SWTDSC)**

Specifies whether the switched connection to this controller is dropped when the last device is varied off.

### \*NO

The switched connection is not dropped when the last device is varied off.

### \*YES

The switched connection is varied off when the last device is varied off.

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---

## **Text 'description' (TEXT)**

Specifies the text that briefly describes the object.

### \*BLANK

No text is specified.

### *character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

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## Attached devices (DEV)

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### Attached devices (DEV)

Specifies the names of the devices that are attached to this controller. The device descriptions must already exist.

The maximum number of devices that can be specified is 64, but varies for some types of controllers:

Controller	Maximum number of devices
5251	9
5294	8
5494	56

Top

---

## Character code (CODE)

Specifies whether the extended binary-coded decimal interchange code (\*EBCDIC) or the American National Standard Code for Information Interchange (\*ASCII) character code is used on the line.

### \*EBCDIC

The extended binary-coded decimal interchange code (EBCDIC) character code is used.

### \*ASCII

The ASCII character code is used.

Top

---

## Device wait timer (DEVWAITTMR)

Specifies the device wait timeout value. This is used to limit the amount of time that a subsystem takes for the work station input/output to complete. The timeout value that is used for each device is obtained from the controller that it is attached to at vary on time. A change in this parameter value takes effect for attached devices when they are next varied on.

### 10

For local controllers, the subsystem waits a maximum of 10 seconds for the completion of the input/output of each work station attached to this controller.

### *device-wait-timer*

Specify a value ranging from 2 through 600 that specifies the maximum number of seconds that the subsystem waits for work station input/output to complete for all work stations attached to this controller.

When selecting a value for this parameter, the types of devices attached to the controller should be taken into account. Locally attached work stations should have a low value for this parameter (10 seconds or less).

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## SSCP identifier (SSCPID)

Specifies the system service control point identifier of the host system.

050000000000

The default value for the system service control point identifier.

*system-service-control-point-identifier*

Specify the system service control point identifier as a 12-digit hexadecimal value.

Top

**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## IDLC window size (IDLCWDWSIZ)

Specifies the window size for transmission to and reception controllers attached to the IDLC line.

\*LIND

The value specified in the line description is used as the default window size.

*window-size*

Specify the window size. Valid values range from 1 through 31.

Top

**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## IDLC frame retry (IDLCFRMRTY)

Specifies the maximum number of attempts to transmit a frame before reporting an error.

\*LIND

The number of attempts specified in the line description is used.

*IDLC-frame-retry*

Specify a number of attempts. Valid values range from 0 through 100.

Top

**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## IDLC response timer (IDLCRSPTMR)

Specifies the amount of time, in tenths of a second, to wait before retransmitting a frame if acknowledgement has not been received.

### \*LIND

The time specified in the line description is used.

### *IDLC-response-timer*

Specify an amount of time. Valid values range from 10 through 100 tenths of a second. For example, 100 tenths of a second equals 10 seconds.

Top

**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## IDLC connect retry (IDLCCNNRTY)

Specifies the number of times to attempt retransmission at connection time.

### \*LIND

The number of attempts specified in the line description is used.

### \*NOMAX

Indicates to continue until a successful transmission has been made.

### *connect-retry*

Specify a number of attempts. Valid values range from 1 through 100.

Top

---

## Predial delay (PREDIALDLY)

Specifies the time interval to wait (in 0.5 second intervals) before dialing a number.

### 6

The default value of 6 provides a 3-second delay.

### *predial-delay*

Specify a value ranging from 0 to 254 units. Each unit represents 0.5 second. To indicate no delay, specify a value of 0.

Top

---

## Redial delay (REDIALDLY)

Specifies the time interval to wait (in 0.5 second intervals) before re-dialing when the call attempt is unsuccessful.

120 The default value of 120 provides a 60-second delay.

### *redial-delay*

Specify a value from 0 to 254 units. Each unit represents 0.5 second. To indicate no delay, specify a value of 0.

Top

---

## Dial retry (DIALRTY)

Specifies the number of re-dial attempts made by the system before considering the dialing unsuccessful.

2 The default number of retries is 2.

### *dial-retry*

Specify a value from 0 to 254 in 0.5-second intervals, for the number of times the dialing will be tried.

Top

---

## SDLC poll priority (POLLPTY)

Specifies whether this controller has priority when polled. This parameter can be specified only if SHM is \*NO.

### \*NO

This controller does not have polling priority.

### \*YES

This controller does have polling priority.

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---

## SDLC poll limit (POLLMT)

Specifies, for an SDLC secondary or negotiable controller, the number of consecutive polls issued to the same controller when the poll results in receiving frames. This parameter can be specified only if SHM is \*NO.

### 0

The default number of polls is zero.

### *poll limit*

Specify a number of polls. Valid values range from 0 through 4.

Top

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## SDLC out limit (OUTLMT)

Specifies the number of consecutive times SDLC allows the transmission of the maximum number of frames to a station, before allowing transmission to another station.

### \*POLLMT

The value is the same as the one specified for the **SDLC poll limit (POLLMT)** parameter.

*out-limit*

Specify a value ranging from 0 through 4.

Top

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## **SDLC connect poll retry (CNNPOLLRTY)**

Specifies the number of times to retry connecting to a controller before reporting an error.

\*CALC

The number of retries is 7 if the controller is switched, and \*NOMAX if the controller is nonswitched.

\*NOMAX

The system will retry indefinitely.

*connect-poll-retry*

Specify a value ranging from 0 to 65534 for the number of retries.

Top

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## **SDLC NDM poll timer (NDMPOLLTMR)**

Specifies the minimum interval at which a secondary station should be polled if a poll from the primary to the secondary (which is in normal disconnect mode (NDM)) does not result in receiving the appropriate response.

This parameter is valid only if the link type is \*SDLC and the controller role is secondary or negotiable and \*NO is specified on the SHM parameter.

\*CALC

The poll interval is calculated by the system.

*NDM-poll-timer*

Specify a value ranging from 1 to 3000 units. Each unit represents 0.1 second. To indicate no timer, specify 0.

Top

---

## **LAN DSAP (DSAP)**

Specifies the destination service access point (DSAP). This is the logical address this system will send to when it communicates with the remote controller. This address allows the controller to properly route the data that comes from this system. The default value for the destination service access point is 04.

The value must match the value specified on the source service access point (SSAP) parameter in the remote controller's configuration record.

**Note:** The \*OPC controller uses the value above for this field. The combination of RMTSYSNAME and DSAP defines a unique controller. This allows multiple controllers to exist between two systems.

04

The destination service access point is the default 04.

*destination service access point*

Specify a hexadecimal value ranging from 04 through 9C, in increments of 4 (for example, 04, 08, 0C, 10) to represent the destination service access point.

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---

## LAN SSAP (SSAP)

Specifies the source service access point (SSAP). This is the logical address the local system uses when it sends data to the remote controller. This address allows the controller to properly route the data that comes from the local system. The default value for the source service access point is 04.

It must match the value assigned to the destination service access point (DSAP) in the remote controller's configuration record.

04

The system uses the logical address of 04.

*source service access point:*

Specify a hexadecimal value ranging from 04 through 9C, in increments of 4 (for example, 04, 08, 0C, 10) to represent the source service access point.

Top

---

## LAN frame retry (LANFRMRTY)

Specifies the number of times to retry a transmission when there is no acknowledgment from the remote controller in the time period specified by the LANRSPTMR parameter. This value is only used after a successful connection has been made.

\*CALC

The system determines the LAN frame retry value based on the type of line that is lined to the controller.

*LAN-frame-retry*

Specify a value ranging from 0 through 254 for the number of times a frame is transmitted before an acknowledgement is received.

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---

## LAN connection retry (LANCNNRTY)

Specifies the number of times a transmission is attempted before an acknowledgement is received. This value is used at connection time (unlike LANFRMRTY which is used after a connection has been made).

\*CALC

The system determines the LAN connection retry value.

*LAN-connection-retry*



Specify a value ranging from 0 through 254 for the number of times the transmission is attempted before an acknowledgement is received.

Top

---

## LAN response timer (LANRSPTMR)

Specifies the time period used to determine an inoperative condition on the link when connected.

### \*CALC

The system determines the LAN response timer value.

### *LAN-response-timer*

Specify a value from 1 to 254 units. Each unit represents 0.1 second. To indicate no timer, specify 0.

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---

## LAN connection timer (LANCNNTMR)

Specifies the time period used to determine an inoperative condition on the link at connection time.

### \*CALC

The system determines the LAN connection timer value.

### *LAN-connection-timer*

Specify a value ranging from 1 through 254 in 0.1-second intervals for the amount of time the system waits before an inoperative condition occurs. To indicate no timer, specify 0.

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---

## LAN acknowledgement timer (LANACKTMR)

Specifies the time interval to delay sending acknowledgements for received frames.

### \*CALC

The system determines the LAN acknowledgement timer value.

### *LAN-acknowledgement-timer*

Specify a value ranging from 1 to 254 units. Each unit represents 0.1 second. To indicate no timer, specify 0. If 0 is specified for the **LAN acknowledgement frequency (LANACKFRQ)** parameter, 0 must also be specified for this parameter. If a non-zero number is specified for the LANACKFRQ parameter, a non-zero number must also be specified for this parameter.

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---

## LAN inactivity timer (LANINACTMR)

Specifies the time period used to determine an inactive condition for the controller.

### \*CALC

The system determines the LAN inactivity timer value.

#### *LAN-inactivity-timer*

Specify a value ranging from 1 through 255 in 0.1-second intervals for the length of time used to determine an inactive condition for the controller. To indicate no timer, specify 0.

Top

---

## LAN acknowledgement frequency (LANACKFRQ)

Specifies the maximum number of frames received before sending an acknowledgement to the controller.

### \*CALC

The system determines the LAN acknowledgement frequency value.

#### *LAN-acknowledge-frequency*

Specify a value from 0 to 127 for the number of frames received. If 0 is specified for the **LAN acknowledgement timer (LANACKTMR)** parameter, 0 must also be specified for this parameter. If a non-zero number is specified for the LANACKTMR parameter, a non-zero number must also be specified for this parameter.

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## LAN max outstanding frames (LANMAXOUT)

Specifies the maximum number of frames that can be sent before an acknowledgement is received from the remote system.

### \*CALC

The system determines the LAN maximum outstanding frames value.

#### *LAN-maximum-outstanding-frames*

Specify a value ranging from 1 through 127 for the number of frames that can be sent before an acknowledgement is received.

Top

---

## LAN access priority (LANACCPTY)

Specifies the priority used for accessing the remote controller. The larger the number the higher the priority for this controller. This parameter is only used when the controller attaches to TRLAN.

### \*CALC

The system determines the LAN access priority value.

#### *LAN-access-priority*

Specify a value from 0 to 3 for the access priority for this controller on a local area network (LAN).

Top

---

## LAN window step (LANWDWSTP)

Specifies whether to reduce to 1 the maximum number of frames outstanding to the remote system during network congestion. This parameter (LAN Window Step) indicates the number of frames that must be successfully received by the remote system before the number of maximum outstanding frames can be increased by 1. The increase continues this way until the maximum number of outstanding frames reaches the value specified by the LAN maximum outstanding frames (LANMAXOUT) parameter.

### \*NONE

The number of outstanding frames is not reduced during network congestion.

### *LAN-window-step*

Specify a value from 1 to 127 for the number of frames that must be successfully received by the remote system before the maximum number of outstanding frames can be increased by 1.

Top

---

## X.25 switched line selection (SWTLINSLCT)

Specifies the method that is used to select lines from an X.25 switched line list.

### \*FIRST

Lines are selected beginning with the first line in the switched line list.

### \*CALC

The system determines which line in the switched line list will be selected.

Top

---

## X.25 default packet size (DFTPCKTSIZE)

Specifies the default packet size used by the X.25 network for transmission and reception.

### Element 1: Transmit Packet Size

#### \*LIND

The value specified in the line description is the default value.

#### *transmit-packet-size*

Specify a default packet size for transmission. The valid values for the packet size are 64, 128, 256, 512, 1024, 2048, and 4096.

### Element 2: Receive Packet Size

#### \*LIND

The value specified in the line description is the default value.

## **\*TRANSMIT**

The value specified as the default packet size for transmission is used as the default for reception.

### *receive-packet-size*

Specify a default packet size for reception. The valid values for the packet size are 64, 128, 256, 512, 1024, 2048, and 4096.

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---

## **X.25 default window size (DFTWDWSIZE)**

Specifies the default window size for transmission and reception.

### **Element 1: Transmit Window Size**

#### **\*LIND**

The value specified in the line description is used as the default window size.

#### *transmit-window-size*

Specify the appropriate default window size. If you specified modulus 8, valid values range from 1 through 7. If you specified modulus 128, valid values range from 1 through 15. For switched virtual circuit (SVC) incoming calls, the system accepts the window size indicated in the Incoming Call packet facilities field.

### **Element 2: Receive Window Size**

#### **\*LIND**

The value specified in the line description is used as the default window size.

#### **\*TRANSMIT**

The value specified as the default window size for transmission is used as the default for reception.

#### *receive-window-size*

Specify the appropriate default window size. If you specified modulus 8, valid values range from 1 through 7. If you specified modulus 128, valid values range from 1 through 15.

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---

## **X.25 user group identifier (USRGRPID)**

Specifies the closed user-group ID for contacting this switched virtual circuit (SVC) controller on the X.25 network.

Specify the 2-digit decimal value, from 00 through 99, as provided by the network subscription. This parameter is not valid for permanent virtual circuit (PVC) connections. It is valid only for SVC circuit outgoing call operations and is ignored for SVC incoming call connections.

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---

## **X.25 reverse charging (RVSCRG)**

Specifies whether reverse charges are accepted or requested when contacting this controller.

### **\*NONE**

No reverse charging for network tariff billing is accepted.

### **\*REQUEST**

Charges are requested on outgoing call request packets.

### **\*ACCEPT**

Reverse charging for network tariff billing is accepted on incoming requests.

### **\*BOTH**

Both incoming and outgoing requests are accepted.

Top

---

## **X.25 frame retry (X25FRMRTY)**

Specifies the maximum number of times a frame is sent after the response timer ends when connected to this controller. The value for this parameter depends on the quality of service provided by the network and the connection to that network; that is, the frequency of lost link protocol data units.

7

The default for the maximum number of transmissions is 7.

### *X.25 frame retry*

Specify a value ranging from 0 through 21 for the number of times a frame is sent.

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---

## **X.25 connection retry (X25CNNRTY)**

Specifies the maximum number of times that a logical link control (LLC) protocol data unit is sent after the connect response timer expires when connecting to this controller.

7

The default for the maximum number of transmissions is 7.

### *X.25 connection retry*

Specify a value ranging from 0 through 21 for the number times a frame is sent.

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---

## X.25 response timer (X25RSPTMR)

Specifies the time period allowed to return an acknowledgement when an LLC protocol data unit is sent while connected to this controller.

300

The time allowed to return an acknowledgment is 30 seconds.

*X.25 response-timer*

Specify an amount of time in tenths of a second. Valid values range from 1 through 2550 in 0.1-second intervals.

Top

---

## X.25 connection timer (X25CNNTMR)

Specifies the time period allowed to return an acknowledgement when an LLC protocol data unit is sent while connecting to this controller.

100

The default amount of time is 10 seconds.

*connection-timer*

Specify an amount of time in tenths of a second. Valid values range from 1 through 2550 in 0.1 second intervals.

Top

---

## X.25 delayed connection timer (X25DLYTMR)

Specifies the time interval between attempts to establish a connection to the controller.

\*CALC

Use the values specified for the **X.25 connection timer (X25CNNTMR)** parameter and the **X.25 connection retry (X25CNNRTY)** parameter to determine how often and how many times to try establishing the connection.

*X.25-delay-timer*

Specify a value ranging from 1 to 32767 units. Each unit represents 0.1 second. Connection attempts are repeated indefinitely at this time interval.

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---

## X.25 acknowledgement timer (X25ACKTMR)

Specifies the amount of time to delay sending acknowledgements for received frames.

20

The time allowed to delay sending an acknowledgment is 2 seconds.

*X.25-acknowledgment-timer*

Valid values range from 1 to 2550 in 0.1 second intervals, or 0 to indicate no delay.

Top

---

## X.25 inactivity timer (X25INACTMR)

Specifies the time period used to determine an inactive condition for the controller. Valid values range from 1 to 2550 in 0.1 second intervals.

350

The time period used to determine an inactive condition for the controller is 3.5 seconds.

Top

---

## User facilities (USRFCL)

Specifies a string of hexadecimal characters sent to the X.25 network to request additional services. The system allows up to 218 hexadecimal characters.

Top

---

## Allocation retry timer (ALCRTYTMR)

Specifies the length of time, in seconds, the system waits between attempts to establish an LU6.2 session.

180

The system waits 180 seconds between attempts.

**1-9999**

Specify a length of time ranging from 1 through 9999 seconds.

Top

---

## Recovery limits (CMNRCYLMT)

Specifies the number of recovery attempts made by the system before an inquiry message is sent to the system operator. Also specifies the time (in minutes) that must elapse before the system sends an inquiry message to the system operator indicating that the recovery attempt count limit is reached.

### Element 1: Maximum Recovery Limit

2

Two recovery attempts are made within the interval specified.

**\*SYSVAL**

The value in the QCMNRCYLMT system value is used.

*count limit*

Specify the number of second-level recovery attempts to be made. Valid values range from 0 through 99.

### Element 2: Recovery Time Interval

The specified number of recovery attempts is made within a 5-minute interval.

*time-interval*

Specify the time interval (in minutes) at which the specified number of second-level recoveries are attempted. Valid values range from 0 through 120. If the value specified for *count-limit* is not 0, the value 0 specifies infinite recovery.

More information on communication recovery is in the Communications Management book, SC41-5406.

Top

## Message queue (MSGQ)

Specifies the message queue to which operational messages are sent.

**\*SYSVAL**

Messages are sent to the message queue defined in the QCFGMSGQ system value.

**\*SYSOPR**

Messages are sent to the system operator message queue (QSYS/QSYSOPR).

### Qualifier 1: Message queue

*name* Specify the name of the message queue to which operational messages are sent.

### Qualifier 2: Library

*name* Specify the name of the library where the message queue is located.

For more information about using this command, see the Communications Management book, SC41-5406.

Top

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

**\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.



### \*EXCLUDE

The user cannot access the object.

### \*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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---

## Examples

```
CRTCTLRWS  CTLD(CTL005)  TYPE(5294)  MODEL(1)  LINKTYPE(*SDLC)
            SWITCHED(*YES)  EXCHID(04500003)
            INLCNN(*ANS)  STNADR(03)
            CNNBR(5551234)  TEXT('Chicago branch')
```

This command creates a 5294 Model 1 remote controller description called CTL005. The controller is on a SDLC switched line at telephone number 555-1234. Connection to the controller is initiated by an incoming call to the iSeries 400.

Top

---

## Error messages

### \*ESCAPE Messages

#### CPF26BB

Extended wireless controller member not changed.

#### CPF26BC

Extended wireless controller member not displayed.

#### CPF26BD

Entry for barcode group not removed from extended wireless controller member.

#### CPF26BE

Entry for PTC group not removed from extended wireless controller member.

#### CPF26BF

Program QZXCINZ terminated abnormally. See previous messages.

#### CPF26B3

Extended wireless line member not added.

#### CPF26B4

Extended wireless line member not changed.

#### CPF26B5

Extended wireless line member not displayed.

#### CPF26B8

Extended wireless controller member not added.

#### CPF2716

Controller description &1 not created.



---

## Create Ctl Desc (Tape) (CRTCTLTAP)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Controller Description (Tape) (CRTCTLTAP) command creates a controller description for a tape controller.

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---

### Parameters

Keyword	Description	Choices	Notes
CTLD	Controller description	<i>Name</i>	Required, Key, Positional 1
TYPE	Controller type	<i>Character value, *RSRCNAME</i>	Optional, Key, Positional 2
MODEL	Controller model	<i>Character value, *RSRCNAME</i>	Optional, Key, Positional 3
RSRCNAME	Resource name	<i>Name, *NONE</i>	Optional, Key, Positional 4
ONLINE	Online at IPL	<i>*YES, *NO</i>	Optional
TEXT	Text 'description'	<i>Character value, *BLANK</i>	Optional
DEV	Attached devices	Values (up to 8 repetitions): <i>Name</i>	Optional
AUTOCFG	Auto-configuration controller	<i>*NO, *YES</i>	Optional
AUT	Authority	<i>Name, *CHANGE, *ALL, *USE, *EXCLUDE, *LIBCRTAUT</i>	Optional

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---

### Controller description (CTLD)

This is a required parameter.

Specifies the name of the controller description.

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---

### Controller type (TYPE)

This is a required parameter.

Specifies the type of controller for this description.

\*RSRCNAME

The device model is determined from the resource name parameter.

**Note:** This parameter is ignored, but can be specified for compatibility with earlier versions of the command.

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---

## Controller model (MODEL)

This is a required parameter.

Specifies the model number of the controller that is described. This number tells the system which features the controller has.

### \*RSRCNAME

The device model is determined from the resource name parameter.

**Note:** This parameter is ignored, but can be specified for compatibility with earlier versions of the command.

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---

## Resource name (RSRCNAME)

Specifies the resource name that identifies the hardware this description represents. Use the WRKHDWRSC command to determine the resource name.

### \*NONE

No resource name is specified at this time. A resource name must be provided before the device can be varied on.

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---

## Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

### \*YES

The controller is automatically varied on at IPL.

### \*NO

The controller is not automatically varied on at IPL.

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---

## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

### \*BLANK

No text is specified.

*character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

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---

## Attached devices (DEV)

Specifies the names of the devices that are attached to this controller. The device descriptions must already exist.

The maximum number of devices that can attach to this controller is 4 for a 3422 or 3430 controller, 8 for a 3480 or 3490 controller.

Top

---

## Auto-configuration controller (AUTOCFG)

Specifies whether this controller description is the one which should have devices attached when they are automatically configured. Although there can be more than one controller description for each controller, only one description can be an automatic configuration controller. When new devices are automatically configured on that controller, they are attached to the automatic configuration controller description.

### \*NO

This is not an automatic configuration controller.

### \*YES

This is an automatic configuration controller.

Top

---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### \*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### \*EXCLUDE

The user cannot access the object.

### \*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create**

**authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

**name** Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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## Examples

```
CRTCTLTAP  CTLD(TAP01)  TYPE(3422)  MODEL(A01)  SRCNAME(TAP01)
```

This command creates a controller description named TAP01 for a 3422 tape controller.

Top

---

## Error messages

### \*ESCAPE Messages

#### **CPF26BB**

Extended wireless controller member not changed.

#### **CPF26BC**

Extended wireless controller member not displayed.

#### **CPF26BD**

Entry for barcode group not removed from extended wireless controller member.

#### **CPF26BE**

Entry for PTC group not removed from extended wireless controller member.

#### **CPF26BF**

Program QZXCINZ terminated abnormally. See previous messages.

#### **CPF26B3**

Extended wireless line member not added.

#### **CPF26B4**

Extended wireless line member not changed.

#### **CPF26B5**

Extended wireless line member not displayed.

#### **CPF26B8**

Extended wireless controller member not added.

#### **CPF2716**

Controller description &1 not created.

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---

## Create Ctl Desc (Virtual WS) (CRTCTLVWS)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Controller Description (Virtual Work Station) (CRTCTLVWS) command creates a controller description for a virtual work station (pass-through) controller. For more information about using this command, see the Communications Configuration book, SC41-5401.

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---

### Parameters

Keyword	Description	Choices	Notes
CTLD	Controller description	<i>Name</i>	Required, Positional 1
ONLINE	Online at IPL	<u>*YES</u> , *NO	Optional
TEXT	Text 'description'	<i>Character value</i> , <u>*BLANK</u>	Optional
DEV	Attached devices	Values (up to 255 repetitions): <i>Name</i>	Optional
DEVWAITTMR	Device wait timer	2-120, <u>20</u>	Optional
MSGQ	Message queue	Single values: <u>*SYSVAL</u> , *SYSOPR Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Message queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i>	
AUT	Authority	<i>Name</i> , <u>*CHANGE</u> , *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

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---

### Controller description (CTLD)

This is a required parameter.

Specifies the name of the controller description.

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---

### Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

\*YES

The controller is automatically varied on at IPL.

\*NO

The controller is not automatically varied on at IPL.

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---

## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

### \*BLANK

No text is specified.

*character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

---

## Attached devices (DEV)

Specifies the names of the devices that are attached to this controller. The device descriptions must already exist.

A maximum of 255 devices can be specified.

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---

## Device wait timer (DEVWAITTMR)

Specifies the device wait timeout value. This is used to limit the amount of time that a subsystem takes for the work station input/output to complete. The timeout value that is used for each device is obtained from the controller that it is attached to at vary on time. A change in this parameter value takes effect for attached devices when they are next varied on.

### 10

For local controllers, the subsystem waits a maximum of 10 seconds for the completion of the input/output of each work station attached to this controller.

*device-wait-timer*

Specify a value ranging from 2 through 600 that specifies the maximum number of seconds that the subsystem waits for work station input/output to complete for all work stations attached to this controller.

When selecting a value for this parameter, the types of devices attached to the controller should be taken into account. Locally attached work stations should have a low value for this parameter (10 seconds or less).

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---

## Message queue (MSGQ)

Specifies the message queue to which operational messages are sent.

### \*SYSVAL

Messages are sent to the message queue defined in the QCFGMSGQ system value.

### \*SYSOPR

Messages are sent to the system operator message queue (QSYS/QSYSOPR).



### Qualifier 1: Message queue

*name* Specify the name of the message queue to which operational messages are sent.

### Qualifier 2: Library

*name* Specify the name of the library where the message queue is located.

For more information about using this command, see the Communications Management book, SC41-5406.

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---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### \*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### **\*EXCLUDE**

The user cannot access the object.

### **\*LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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## Examples

```
CRTCTLVWS  CTLD(VRTCTL325)  TEXT('S/325 virtual controller')
```

This command creates a controller description named VRTCTL325.

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---

## Error messages

### \*ESCAPE Messages

**CPF26BB**

Extended wireless controller member not changed.

**CPF26BC**

Extended wireless controller member not displayed.

**CPF26BD**

Entry for barcode group not removed from extended wireless controller member.

**CPF26BE**

Entry for PTC group not removed from extended wireless controller member.

**CPF26BF**

Program QZXCINZ terminated abnormally. See previous messages.

**CPF26B3**

Extended wireless line member not added.

**CPF26B4**

Extended wireless line member not changed.

**CPF26B5**

Extended wireless line member not displayed.

**CPF26B8**

Extended wireless controller member not added.

**CPF2716**

Controller description &1 not created.

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## Create DDM File (CRTDDMF)

Where allowed to run: All environments (\*ALL)  
 Threadsafes: No

Parameters  
 Examples  
 Error messages

The Create Distributed Data Management File (CRTDDMF) command creates a distributed data management (DDM) file.

A DDM file is used as a reference file to access a file located on a remote (target) system in the distributed data management network. The DDM file on the local system contains the name of the remote file and information identifying the remote system. It also specifies the method used to access the records in the remote file.

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### Parameters

Keyword	Description	Choices	Notes
FILE	DDM file	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: DDM file	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
RMFILE	Remote file	<i>Element list</i>	Required, Positional 2
	Element 1: File	Single values: *NONSTD Other values: <i>Qualified object name</i>	
	Qualifier 1: File	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
	Element 2: Nonstandard file 'name'	<i>Character value</i>	
RMTLOCNAME	Remote location	Single values: *RDB Other values: <i>Element list</i>	Required, Positional 3
	Element 1: Name or address	<i>Character value</i>	
	Element 2: Type	<i>*SNA, *IP</i>	
RDB	Relational database	<i>Name</i>	Optional
TEXT	Text 'description'	<i>Character value, *BLANK</i>	Optional
DEV	Device	<i>Element list</i>	Optional
	Element 1: APPC device description	<i>Name, *LOC</i>	
LCLLOCNAME	Local location	<i>Communications name, *LOC, *NETATR</i>	Optional
MODE	Mode	<i>Communications name, *NETATR</i>	Optional
RMTNETID	Remote network identifier	<i>Communications name, *LOC, *NETATR, *NONE</i>	Optional
PORT	Port number	1-65535, <i>*DRDA</i>	Optional
ACCMTH	Access method	Single values: <i>*RMFILE, *COMBINED</i> Other values: <i>Element list</i>	Optional
	Element 1: Remote file attribute	<i>*KEYED, *ARRIVAL</i>	
	Element 2: Local access method	<i>*BOTH, *RANDOM, *SEQUENTIAL</i>	
SHARE	Share open data path	<i>*NO, *YES</i>	Optional

Keyword	Description	Choices	Notes
PTCCNV	Protected conversation	*NO, *YES	Optional
LVLCHK	Record format level check	*RMTRFILE, *NO	Optional
AUT	Authority	Name, *LIBCRTAUT, *ALL, *CHANGE, *EXCLUDE, *USE	Optional
REPLACE	Replace file	*YES, *NO	Optional

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---

## DDM file (FILE)

Specifies the DDM file to be created.

This is a required parameter.

### Qualifier 1: DDM file

*name* Specify the name of the DDM file to be created.

### Qualifier 2: Library

#### \*CURLIB

The current library for the job is used to locate the DDM file. If no current library is specified as the current library for the job, QGPL is used.

*name* Specify the name of the library where the DDM file is located.

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---

## Remote file (RMTRFILE)

Specifies the name of the remote file as it is coded on the target system. This file name must be specified in code page 500. The remote file does not need to exist when the Distributed Data Management (DDM) file is created.

This is a required parameter.

### Element 1: File

#### Single values

#### \*NONSTD

The remote file name is not at standard iSeries file name. Specify the complete file name in apostrophes for the second element of this parameter.

#### Qualifier 1: File

*name* Specify the name of the remote file as it is known on the remote system. If the remote system is an iSeries system, specify the file name. The file name can be up to 10 characters in length. If the remote system is a System/36, the file name is the same as its System/36 file label. The file name can be up to eight characters in length. If the remote system is a System/38, a simple (unqualified) file name can be specified. The file name can be up to 10 characters in length. Labels for all other remote systems (including qualified file names for System/38) must use \*NONSTD followed by the remote file name in apostrophes.

### Qualifier 2: Library

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

#### **\*CURLIB**

The current library for the job is used to locate the file. If no library is specified as the current library for the job, QGPL is used.

*name* Specifies the library where the file is located.

**Note:** The library name is used only if the target system is an iSeries system. If \*CURLIB is specified, the current library in the called job on the target system is searched to locate the file. If \*LIBL is specified, the library list in the called job on the target system is searched to locate the file.

### Element 2: Nonstandard file 'name'

#### *character-value*

For target systems that allow naming conventions other than those used by the iSeries system and System/36, and when specifying a qualified System/38 file name and when specifying a *member* name of a remote iSeries or System/38 file, specify up to 255 characters for the name of the remote file to be accessed. The name must be coded in the form required by the target system. The name must always be enclosed in apostrophes, and may contain lowercase letters, blanks, periods, or any other special characters.

Names for the iSeries system, System/38, and System/36 must be in uppercase, and no blanks are allowed.

If the target system is an iSeries system or a System/38, a file name, library name, and member name can all be specified. If a member name is specified, the full file name must be enclosed in apostrophes and must follow the value \*NONSTD, and the member name must be enclosed in parentheses and immediately follow (with no space) either the library name (System/38) or the file name (iSeries).

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## Remote location (RMTLOCNAME)

Specifies the remote (target) system location name or address used with the distributed data management (DDM) file. The remote location name or address does not have to be defined before the DDM file is created, but it must be defined before the DDM file is opened. Multiple DDM files can use the same remote location for the target system.

This is a required parameter.

### Single values

**\*RDB** The remote location information from the relational database entry specified for the **Relational database (RDB)** parameter is used to determine the remote system.

### Element 1: Name or address

#### *character-value*

Specify the name or address of the remote location that is associated with the target system. The

remote location, which is used in accessing the target system, does not need to exist when the DDM file is created but must exist when the DDM file is opened. The remote location can take several forms:

- SNA remote location name (LU name). Specify a maximum of 8 characters for the remote location name. If this form is used, the address type of this parameter must be \*SNA (the default).
- SNA remote network identifier and remote location name separated by a period. Specify a maximum of 8 characters for the remote location name, and a maximum of 8 characters for the remote network identifier. If this form of the parameter is used, the address type of this parameter must be \*SNA (the default), and any value specified for the RMTNETID parameter must agree. If the RMTNETID parameter is not specified, the RMTNETID value will be set to agree with the RMTLOCNAME parameter.
- IP address in dotted decimal form. Specify an internet protocol address in the form nnn.nnn.nnn.nnn where each nnn is a number in the range 0 through 255. If this form is used, the address type of this parameter must be specified as \*IP.
- IP host domain name. Specify an internet host domain name of up to 254 characters in length. If this form is used, the address type of this parameter must be specified as \*IP.

If \*IP is specified for the address type, the DDM server at the remote location must support the use of TCP/IP, and the DEV, LCLLOCNAME, RMTNETID, and MODE parameters will be ignored.

If \*IP is not specified, the DDM server must support SNA connectivity, and the PORT parameter will be ignored.

## Element 2: Type

**\*SNA** The remote location has a Systems Network Architecture (SNA) address type.

**\*IP** The remote location has an Internet Protocol (IP) address type.

More information on remote locations is in the APPC Programming book, SC41-5443.

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## Relational database (RDB)

Specifies the relational database entry that is used to determine the remote location information for the DDM file.

**name** Specify the name of the relational database entry that identifies the target system or target auxiliary storage pool (ASP) group. The relational database name can refer to a remote system or an ASP group that is configured and available on a remote system. The relational database entry does not need to exist when the DDM file is created but must exist when the DDM file is opened. This parameter is required when \*RDB is specified for the **Remote location (RMTLOCNAME)** parameter.

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---

## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

**\*BLANK**

No text is specified.

*character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

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---

## Device (DEV)

Specifies the name of the source system communications device that is used with this distributed data management (DDM) file.

This parameter will be ignored if \*IP is specified for the **Remote location (RMTLOCNAME)** parameter.

**\*LOC** The communications device associated with the remote location is used. If several devices can be associated with the remote location, the system determines which device is used.

*name* Specify the name of a communications device that is associated with the remote location. If the device name is not valid for the remote location, an escape message is sent when the DDM file is opened.

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## Local location (LCLLOCNAME)

Specifies the local location name.

This parameter will be ignored if \*IP is specified for the **Remote location (RMTLOCNAME)** parameter.

**\*LOC** The local location name specified for the remote location is used.

**\*NETATR**

The LCLLOCNAME value specified in the system network attributes is used.

*communications-name*

Specifies the name of the local location used with the remote location name. The local location name is only specified to indicate a specific local location for the remote location.

More information on local location names is in the APPC Programming book, SC41-5443.

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## Mode (MODE)

Specifies the mode name that is used with the remote location name to communicate with the remote (target) system.

This parameter will be ignored if \*IP is specified for the **Remote location (RMTLOCNAME)** parameter.

**\*NETATR**

The mode in the network attributes is used.

**BLANK**

A mode name consisting of 8 blank characters is used.

*communications-name*

Specify the name of the mode.

More information on mode names is in the APPC Programming book, SC41-5443.

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---

## Remote network identifier (RMTNETID)

Specifies the identifier (ID) of the remote network in which the remote location resides. That ID is used to communicate with the remote (target) system.

If this parameter is specified, the **Remote location (RMTLOCNAME)** parameter must be consistent with this RMTNETID parameter. If the RMTLOCNAME parameter specified a network ID, this parameter must agree (otherwise, an error message will be issued). If the RMTLOCNAME parameter does not specify any network ID, there is no possibility of conflict with this parameter.

This parameter will be ignored if \*IP is specified for the RMTLOCNAME parameter.

**\*LOC** The remote network ID specified for the remote location is used.

**\*NETATR**

The remote network identifier specified in the network attributes is used.

**\*NONE**

No remote network ID is used.

*communications-name*

Specify the remote network ID that is used with the remote location name. The remote network ID is specified only to indicate a specific remote network ID for the remote location.

More information on remote network IDs is in the APPC Programming book, SC41-5443.

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## Port number (PORT)

Specifies the TCP/IP port that is used at the remote location to communicate with the system on which the remote file is located.

This parameter will be ignored if \*SNA is specified for the **Remote location (RMTLOCNAME)** parameter.

**\*DRDA**

The DRDA well-known port of 446 will be used. This is the port on which the iSeries DDM TCP/IP server listens.

**1-65535**

Specify the port number to be used.

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## Access method (ACCMTH)

Specifies the DDM access method used to open the remote file and access its records. This parameter is ignored if the remote (target) system is a System/38 or an iSeries system.

**\*RMTFILE**

The source system selects the access method that is compatible with both the specified remote file and the access methods supported for that file by the remote (target) system. For systems other than the iSeries system and System/38 target systems, if this value is used and the source system cannot select an access method when the file is opened, a message is sent to the program user. A different value must then be specified for this parameter, using the CHGDDMF command, after someone at the target system has been contacted about the appropriate access method information for the file.



**\*COMBINED**

The DDM combined access method is used for the remote file. This access method combines the file processing capabilities of both the *combined by key* (\*KEYED \*BOTH) and the *combined by record number* (\*ARRIVAL \*BOTH) access methods. The record can be selected with a key value or a record number. The position can then be set relatively or randomly by key value or by record number. If duplicate keys are present in the file, they are processed in the order defined by each target system's implementation of the DDM architecture.

**Element 1: Remote file attribute**

**\*KEYED**

Remote file is a keyed file.

**\*ARRIVAL**

Remote file is a non-keyed file.

**Element 2: Local access method**

**\*BOTH**

Remote file allows both sequential and random record access.

**\*RANDOM**

Remote file allows random record access.

**\*SEQUENTIAL**

Remote file allows sequential record access.

**Determining the Access Method**

The two elements of this parameter indicate the access method to be used to access the remote file. The following table shows the combinations of values for the ACCMTH parameter. The remote file attributes (in the far left column) refer to the type of file on the target system. The local access method (in the last three columns) refers to the way in which the source iSeries program intends to access the records in the remote file.

**Table 1. Figure: Access Method Combinations of Values**

Remote File Attributes	Local Access Method		
	*SEQUENTIAL	*RANDOM	*BOTH
*ARRIVAL	Relative by record number	Random by record number	Combined by record number
*KEYED	Relative by key	Random by key	Combined by key

**Relative by record number access method (\*ARRIVAL \*SEQUENTIAL):**

This method allows access to records relative to the current position in record number sequence. The record number is not specified to identify the record.

**Random by record number access method (\*ARRIVAL \*RANDOM):**

This method allows access to records by specifying a record number in a random sequence determined by the requester.

**Combined by record number access method (\*ARRIVAL \*BOTH):**

This method combines the capabilities of the relative by record number and random by record number access methods.

**Relative by key access method (\*KEYED \*SEQUENTIAL):**

This method allows records in a keyed file accessed in key value sequence. Records can be accessed by moving forward or backwards in key sequence from the current record. The key value is not specified to identify the record.

**Random by key access method (\*KEYED \*RANDOM):**

This method allows records in a keyed file accessed in a random sequence. Records are selected by their key value and not their position in the file.

**Combined by key access method (\*KEYED \*BOTH):**

This method combines the capabilities of the relative by key and random by key access methods.

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**Share open data path (SHARE)**

Specifies whether the open data path (ODP) is shared with other programs in the same routing step. When an ODP is shared, the programs accessing the file share facilities such as the file status and the buffer.

**\*NO** The ODP is not shared with other programs in the routing step. A new ODP for the file is created and used every time a program opens the file.

**\*YES** The same ODP is shared with each program in the job that also specifies \*YES when it opens the file.

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**Protected conversation (PTCCNV)**

Specifies whether the DDM conversation that is started for the DDM file is a protected conversation or not. A **protected conversation** is a conversation that uses two-phase commit protocols to ensure, even if a failure occurs, updates made on the remote system are synchronized with updates to other remote or local resources. A protected conversation is required to use two-phase commitment control with DDM. More information on using two-phase commitment control with DDM is in the Distributed Data Management information in the iSeries Information Center at <http://www.ibm.com/eserver/iseriess/infocenter>. PTCCNV(\*NO) must be specified if \*IP is specified for the **Remote location (RMTLOCNAME)** parameter.

**\*NO** The DDM conversation started, using this DDM file, is not a protected conversation.

**\*YES** The DDM conversation started, using this DDM file, is a protected conversation. Two-phase commitment control can be used with this DDM file.

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---

**Record format level check (LVLCHK)**

Specifies whether the level identifiers of the record formats in the remote file are checked when the DDM file is opened by a program. If so, the record format identifiers in the program must match those in the remote file. If they do not match, an error message is sent to the requesting program and neither the DDM file nor the associated remote file is opened. Files that have an error while being opened are automatically closed. This parameter can be overridden by an Override with Database File (OVRDBF) command before the remote file is opened.

**\*RMFILE**

The level identifiers of the record formats of the remote file (identified in the RMFILE parameter) are checked at the time the DDM file is opened.

If the target system is *not* an iSeries system and not a System/38, the source iSeries system creates a level check value based on the record length of the remote file and any key fields used in it. The created values are then compared to the values in the program, and they must match before the remote file can be opened. This reduces the chances of the wrong file being selected.

**Note:** Before this can be done for a system other than an iSeries system or a System/38, the program must be compiled (or recompiled) using the DDM file. During the compilation, the DDM file is used to establish communications with the target system, get the remote file's attributes from the target system, and generate the level identifier values so they can be included in the compiled program for later level checking.

**\*NO** The level identifiers are not checked when the file is opened.

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## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

**Note:** On the *target* system, the authority needed to access the remote file is also checked by using the user profile of the started job on the target system.

### \*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library command (CRTLIB) for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

### **\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### **\*EXCLUDE**

The user cannot access the object.

**name** Specify the name of an authorization list. Users included on the authorization list are granted authority to the object as specified by the list. The authorization list must exist when the object is created.

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---

## Replace file (REPLACE)

Specifies whether an existing file, other than a save or database file, is replaced.

**\*YES** An existing file is replaced if the creation of a new DDM file with the same name and library is successful.

**\*NO** The creation of a new DDM file is not allowed if there is an existing file with the same name and library.

---

## Examples

The following examples describe the creation of a DDM file.

### Example 1: Creating a DDM File to Access a File at Another iSeries 400

```
CRTDDMF FILE(SOURCE/SALES) RMTFILE(REMOTE/SALES)
        RMTLOCNAME(NEWYORK)
```

This command creates a DDM file named SALES, and stores it in the SOURCE library on the source system. This DDM file uses the remote location named NEWYORK to access a remote file named SALES stored in the REMOTE library on an iSeries 400 in New York.

### Example 2: Creating a DDM File to Access a File Member at Another IBM iSeries 400

```
CRTDDMF FILE(SOURCE/SALES) RMTLOCNAME(NEWYORK)
        RMTFILE(*NONSTD 'REMOTE/SALES(APRIL)')
```

This command creates the same file as in the previous example, except that now it accesses a specific member in the remote SALES file; the member is named APRIL.

### Example 3: Creating a DDM File to Access a File on a System/38

```
CRTDDMF FILE(OTHER/SALES) RMTLOCNAME(CHICAGO)
        RMTFILE(*NONSTD 'PAYROLL.REMOTE')
```

This command creates a DDM file named SALES, and stores it in the library OTHER on the source system. The remote location CHICAGO is used by the DDM file to access a remote file named PAYROLL in library REMOTE on a System/38.

### Example 4: Creating a DDM File to Access a File on a System/36

```
CRTDDMF FILE(OTHER/SALES) RMTFILE(PAYROLL)
        RMTLOCNAME(DENVER) LVLCHK(*NO)
```

This command creates a DDM file named SALES, and stores it in the library OTHER on the source system. The remote location DENVER is used by the DDM file to access a remote file named PAYROLL on a System/36 in Denver. No level checking is performed between the PAYROLL file and the application programs that access it. Because the ACCMTH parameter was not specified, the access method for the target system is selected by the source system when the DDM file is opened to access the remote file.

### Example 5: Creating a DDM File to Access a File through TCP/IP

```
CRTDDMF FILE(OTHER/SALES) RMTFILE(PAYROLL)
        RMTLOCNAME(ROCHESTER.XYZ.COM *IP) PORT(*DRDA)
```

This command creates a DDM file named SALES, and stores it in the library OTHER on the source system. The remote location ROCHESTER.XYZ.COM is used by the DDM file to access a remote file named PAYROLL on a TCP/IP host with the domain name of ROCHESTER.XYZ.COM. The host listens on the standard DRDA port of 446. (Since \*DRDA is the default port, the PORT parameter is not actually necessary in this case.)

### Example 6: Creating a DDM File to Access a File through TCP/IP using dotted decimal IP address and a numeric port number

```
CRTDDMF FILE(OTHER/SALES) RMTFILE(PAYROLL)
        RMTLOCNAME('9.5.36.17' *IP) PORT(5021)
```

This command creates a DDM file named SALES, and stores it in the library OTHER on the source system. The remote location 9.5.36.17 is used by the DDM file to access a remote file named PAYROLL on a TCP/IP host with an IP address of 9.5.36.17. The host listens on port 5021.

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## Error messages

### \*ESCAPE Messages

#### CPF7302

File &1 not created in library &2.

[Top](#)



## Create Device Desc (APPC) (CRTDEVAPPC)

Where allowed to run: All environments (\*ALL)  
 Threadsafte: No

Parameters  
 Examples  
 Error messages

The Create Device Description (APPC) (CRTDEVAPPC) command creates a device description for an Advanced Program-to-Program Communications (APPC) device.

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### Parameters

Keyword	Description	Choices	Notes
DEVDD	Device description	<i>Name</i>	Required, Positional 1
RMTLOCNAME	Remote location	<i>Communications name</i>	Required, Positional 2
ONLINE	Online at IPL	<b>*YES</b> , *NO	Optional
LCLLOCNAME	Local location	<i>Communications name</i> , <b>*NETATR</b>	Optional
RMTNETID	Remote network identifier	<i>Communications name</i> , <b>*NETATR</b> , *NONE	Optional
CTL	Attached controller	<i>Name</i>	Optional
MODE	Mode	Values (up to 14 repetitions): <i>Communications name</i> , <b>*NETATR</b>	Optional
MSGQ	Message queue	Single values: <b>*CTLD</b> , *SYSOPR Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Message queue	<i>Name</i> , <b>QSYSOPR</b>	
	Qualifier 2: Library	<i>Name</i> , <b>*LIBL</b> , *CURLIB	
APPN	APPN-capable	<b>*YES</b> , *NO	Optional
SNGSSN	Single session	Single values: <b>*NO</b> Other values: <i>Element list</i>	Optional
	Element 1: Single session capable	*YES	
	Element 2: Number of conversations	1-512, <b>10</b>	
LCLCTLSSN	Locally controlled session	<b>*NO</b> , *YES	Optional
PREESTSSN	Pre-established session	<b>*NO</b> , *YES	Optional
LOCPWD	Location password	<i>Character value</i> , <b>*NONE</b>	Optional
SECURELOC	Secure location	<b>*NO</b> , *YES, *VFYENCPWD	Optional
TEXT	Text 'description'	<i>Character value</i> , <b>*BLANK</b>	Optional
LOCADR	Local location address	X'00'-X'FF', <b>00</b>	Optional
AUT	Authority	<i>Name</i> , <b>*CHANGE</b> , *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

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---

## Device description (DEV D)

Specifies the name of the device description.

This is a required parameter.

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---

## Remote location (RMTLOCNAME)

Specifies the name of the remote location with which your program communicates.

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---

## Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

**\*YES** This device is varied on automatically at IPL.

**\*NO** This device is not varied on automatically at IPL.

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---

## Local location (LCLLOCNAME)

Specifies the unique location name that identifies the local system to remote devices. The name cannot be the same as that specified for the **Remote location (RMTLOCNAME)** parameter. If the values specified on the Remote network ID and Local network ID parameters are the same, the combination of the names specified for the LCLLOCNAME parameter and the RMTLOCNAME parameter must be unique for each device description attached to the same controller.

### **\*NETATR**

The LCLLOCNAME value specified in the system network attributes is used.

Use the Display Network Attributes (DSPNETA) command to determine the default local location name.

### *local-location-name*

Specify the name (8 characters maximum) by which the local system is known to the remote device.

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---

## Remote network identifier (RMTNETID)

Specifies the name of the remote network.

### **\*NETATR**

The remote network identifier specified in the network attributes is used.

### **\*NONE**

The remote network name is X'40'.

### *remote-network-ID*

Specify the 8-character remote network name.

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## Attached controller (CTL)

Specifies the name of the controller description to which this device is attached.

**Note:** To use this device for communicating with a remote location that resides on the same system as the local location, specify a controller description that was created with LINKTYPE (\*LOCAL) specified.

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---

## Mode (MODE)

Specifies the names of the modes that define the sessions on this device.

You can enter multiple values for this parameter.

### \*NETATR

The remote network identifier specified in the network attributes is used.

### *mode-name*

Specify the name of mode descriptions used by this device. The mode name cannot be CPSVCMG or SNASVCMG; these mode names are reserved for system use.

Specify up to 14 mode names.

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---

## Message queue (MSGQ)

Specifies the message queue to which operational messages for this device are sent.

### \*CTLD

Messages are sent to the message queue defined in the attached controller. The message queue is determined when the device is varied on.

### \*SYSOPR

Messages are sent to the system operator message queue (QSYS/QSYSOPR).

### *message-queue-name*

Specify the name of the message queue to which operational messages are sent.

**\*LIBL** All libraries in the job's library list are searched until the first match is found.

### \*CURLIB

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

### *library-name*

Specify the name of the library to be searched.

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## APPN-capable (APPN)

Specifies whether this device is for Advanced Peer-to-Peer Networking (APPN).

**\*YES** This device is for APPN.

**\*NO** This device is not for APPN.

---

## Single session (SNGSSN)

Specifies whether a single or multiple sessions are used with remote locations. If single sessions are used, the number of conversations must be specified.

### Single values

**\*NO** Multiple sessions are used.

### Element 1: Single session capable

**\*YES** Single sessions are used.

### Element 2: Number of conversations

**10** The default number of conversations is 10.

### *conversations*

Specify a valid value that ranges from 1 through 512 for the number of conversations.

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## Locally controlled session (LCLCTLSSN)

Specifies whether the session is a locally controlled session.

**\*NO** The single session is remotely controlled.

**\*YES** The single session is locally controlled.

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## Pre-established session (PREESTSSN)

Specifies whether the session is established when the connection with the remote system is established.

**\*NO** The session is not established automatically at connection time.

**\*YES** The session is established automatically at connection time.

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---

## Location password (LOCPWD)

Specifies the password to be used to validate a connection.

### **\*NONE**

There is no password.

### *location-password*

Specify the password as a string of hexadecimal characters.

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## Secure location (SECURELOC)

Specifies how security information is handled for program start requests received from remote systems. The value is sent to the remote system when sessions are established. It is used in determining how allocate or evoke requests should be built. The value only applies to conversations started with the SECURITY(SAME) level of security.

**\*NO** The remote system is not a secure location. Security validation done by the remote system is not accepted. SECURITY(SAME) conversations are treated as SECURITY(NONE). No security information will be sent with allocate or evoke requests.

**\*YES** The remote system is a secure location and the local system will accept security validation done by remote systems. For SECURITY(SAME) conversations, the local system allows the remote system to verify user passwords. On the remote system, user IDs are retrieved from the security manager. The user IDs are then sent with an already verified indicator in the allocate or evoke requests.

### **\*VFYENCPWD**

The remote system is not a secure location. For SECURITY(SAME) conversations, the remote system is not allowed to send the already verified indicator. On the remote system, user IDs and passwords are retrieved from the security manager. Passwords are then encrypted and sent with the user IDs in the allocate or evoke requests, to be verified by the local system. This value should only be used if the remote system is using OS/400 V3R2M0 or later. If the remote system does not support password protection then session establishment will not be allowed. For remote systems that support password protection, but do not support verification of encrypted passwords (VFYENCPWD), conversations will be treated as SECURITY(NONE).

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## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

### **\*BLANK**

No text is specified.

### *character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

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## Local location address (LOCADR)

Specifies the local location address for this device.

The possible values are 00 to FF.

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## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### **\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled

by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

**\*EXCLUDE**  
The user cannot access the object.

**\*LIBCRTAUT**  
The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

**name** Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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## Examples

```
CRTDEVAPPC  DEVD(APPC1)  LOCADR(00)  RMTLOCNAME(CHICAGO)
             CTL(CTLAPPC01)  SNGSSN(*YES)
```

This command creates a device description for an APPC communications device named APPC1. The device has a location address of X'00' and is in Chicago, attached to controller CTLAPPC01. This device is limited to one session at a time.

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## Error messages

Unknown

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## Create Device Desc (Async) (CRTDEVASC)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Device Description Asynchronous (CRTDEVASC) command creates a device description for an asynchronous (ASYNC) device.

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### Parameters

Keyword	Description	Choices	Notes
DEV	Device description	<i>Name</i>	Required, Positional 1
RMTLOCNAME	Remote location	<i>Communications name</i> , *NONE	Required, Positional 2
ONLINE	Online at IPL	* <u>YES</u> , *NO	Optional
CTL	Attached controller	<i>Name</i>	Optional
TEXT	Text 'description'	<i>Character value</i> , * <u>BLANK</u>	Optional
AUT	Authority	<i>Name</i> , * <u>CHANGE</u> , *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

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---

### Device description (DEV)

Specifies the name of the device description.

This is a required parameter.

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### Remote location (RMTLOCNAME)

Specifies the name of the remote location with which your program communicates.

\*NONE

There is no remote location name. This device can represent any remote location.

*remote-location-name*

Specify the name of the remote location.

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### Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

\*YES This device is varied on automatically at IPL.

\*NO This device is not varied on automatically at IPL.

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## Attached controller (CTL)

Specifies the name of the controller description to which this device is attached.

**Note:** To use this device for communicating with a remote location that resides on the same system as the local location, specify a controller description that was created with LINKTYPE (\*LOCAL) specified.

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---

## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

### \*BLANK

No text is specified.

### *character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

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---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### \*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

\*ALL The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

\*USE The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### \*EXCLUDE

The user cannot access the object.

### \*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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## Examples

```
CRTDEVASC  DEVD(ASC001)  RMTLOCNAME(NYC)  CTL(CTLASCNYC)
```

This command creates an asynchronous communications device. The device is located in New York City and is attached to controller CTLASCNYC.

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## Error messages

### \*ESCAPE Messages

#### CPF261A

Device description &1 not created due to errors.

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## Create Device Desc (ASP) (CRTDEVASP)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Device Description (ASP) (CRTDEVASP) command creates a device description for an auxiliary storage pool (ASP) device.

More information about independent disk pools, see the iSeries Information Center at <http://www.ibm.com/eserver/series/infocenter>

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### Parameters

Keyword	Description	Choices	Notes
DEV D	Device description	<i>Name</i>	Required, Key, Positional 1
RSRCNAME	Resource name	<i>Name</i>	Required, Key, Positional 2
RDB	Relational database	<i>Name</i> , *GEN	Optional
MSGQ	Message queue	Single values: *SYSOPR Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Message queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
TEXT	Text 'description'	<i>Character value</i> , *BLANK	Optional
AUT	Authority	<i>Name</i> , *CHANGE, *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

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---

### Device description (DEV D)

Specifies the name of the device description being created.

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---

### Resource name (RSRCNAME)

Specifies the resource name that identifies the auxiliary storage pool (ASP) by which a collection of disks is known.

*resource-name*

Specify the name that identifies the ASP by which a collection of disks is known.

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### Relational database (RDB)

Specifies the relational database (RDB) name to associate with the auxiliary storage pool (ASP) device.

**\*GEN** The RDB name will be generated by the operating system after a successful vary on of the device. If the device is the primary ASP of an ASP group, the RDB name will be the same as the device name. If the ASP device is a secondary ASP, or a user-defined file system (UDFS) ASP, the RDB name will be set to blanks.

*relational-database-name*

Specify the RDB name to associate with the ASP device. The specified RDB name will not be used if the ASP device description is a secondary ASP or UDFS ASP. If the ASP device description is the primary ASP of an ASP group, when the ASP group is varied on, the specified RDB name will become the name by which the relational database is known on this system and other systems which connect to this system.

Top

---

## Message queue (MSGQ)

Specifies the message queue to which operational messages for this device are sent.

The possible qualified names are:

**\*SYSOPR**

Messages are sent to the QSYSOPR message queue in QSYS.

*message-queue-name*

Specify the name of the message queue to which operational messages are sent.

**\*LIBL** All libraries in the job's library list are searched until the first match is found.

**\*CURLIB**

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

*library-name*

Specify the name of the library to be searched.

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---

## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

**\*BLANK**

No text is specified.

*character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

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---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

**\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can

change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

**\*EXCLUDE**  
The user cannot access the object.

**\*LIBCRTAUT**  
The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

**name** Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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---

## Examples

### Example 1: Create an Independent ASP Device

```
CRTDEVASP  DEVD(COMPANY1)  RSRNAME(COMPANY1)
```

This command creates a device description for an independent ASP named COMPANY1. The resource name for the device description is also named COMPANY1. Operational messages for independent ASP COMPANY1 will be sent to message queue QSYSOPR in library QSYS.

### Example 2: Create a Primary ASP Device

```
CRTDEVASP  DEVD(WAREHOUSE2)  RSRNAME(WAREHOUSE2)  
           RDB(WAREHOUSE_NUMBER_2)  MSGQ(INVENTORY/WH2)
```

This command creates a device description for a primary ASP named WAREHOUSE2. The resource name for the device description is also named WAREHOUSE2. The relational database (RDB) name that will be associated with the ASP group when this primary ASP device is varied on is WAREHOUSE\_NUMBER\_2. Operational messages for independent ASP WAREHOUSE2 will be sent to message queue WH2 in library INVENTORY.

Top

---

## Error messages

### \*ESCAPE Messages

#### CPF261A

Device description &1 not created due to errors.

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## Create Device Desc (BSC) (CRTDEVBSO)

Where allowed to run: All environments (\*ALL)  
 Threadsafte: No

Parameters  
 Examples  
 Error messages

The Create Device Description (BSC) (CRTDEVBSO) command creates a device description for a binary synchronous communications (BSC) device.

Top

### Parameters

Keyword	Description	Choices	Notes
DEVD	Device description	<i>Name</i>	Required, Positional 1
LOCADR	Local location address	X'00'-X'FE'	Required, Positional 2
RMTLOCNAME	Remote location	<i>Communications name</i>	Required, Positional 3
ONLINE	Online at IPL	*YES, *NO	Optional
CTL	Attached controller	<i>Name</i>	Optional
CNN	Connection type	*PP, *MPTRIB	Optional
APPTYPE	Application type	*BSC <u>EL</u> , *RJE, *EML, *BSC38, *RPGT	Optional
CTNWIN	Contention resolution winner	*SEC, *PRI	Optional
BLOCK	Blocking type	*NONE, *ITB, *IRS, *NOSEP, *USER, *SEP	Optional
SEPCHAR	Separator character	00, 04, 05, 06, 07, 08, 09, 0A, 0B, 0C, 0D, 0E, 0F, 11, 12, 13, 14, 15, 16, 17, 18, 19, 1A, 1B, 1C, <u>1E</u> , 20, 21, 22, 23, 24, 25, 27, 28, 29, 2A, 2B, 2C, 2E, 2F, 30, <u>31</u> , 33, 34, 35, 36, 38, 39, 3A, 3B, 3C, 3E, 3F, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 4A, 4B, 4C, 4D, 4E, 4F, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 5A, 5B, 5C, 5D, 5E, 5F, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 6A, 6B, 6C, 6D, 6E, 6F, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 7A, 7B, 7C, 7D, 7E, 7F, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 8A, 8B, 8C, 8D, 8E, 8F, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 9A, 9B, 9C, 9D, 9E, 9F, A0, A1, A2, A3, A4, A5, A6, A7, A8, A9, AA, AB, AC, AD, AE, AF, B0, B1, B2, B3, B4, B5, B6, B7, B8, B9, BA, BB, BC, BD, BE, BF, C0, C1, C2, C3, C4, C5, C6, C7, C8, C9, CA, CB, CC, CD, CE, CF, D0, D1, D2, D3, D4, D5, D6, D7, D8, D9, DA, DB, DC, DD, DE, DF, E0, E1, E2, E3, E4, E5, E6, E7, E8, E9, EA, EB, EC, ED, EE, EF, F0, F1, F2, F3, F4, F5, F6, F7, F8, F9, FA, FB, FC, FD, FE, FF	Optional
RMTBSC <u>EL</u>	Remote BSC <u>EL</u>	*NO, *YES	Optional
RCDLEN	Record length	1-8192, <u>512</u>	Optional
BLKLEN	Block length	1-8192, <u>512</u>	Optional
TRNSPY	Transmit in transparent mode	*NO, *YES	Optional
DTACPR	Compress and decompress data	*NO, *YES	Optional
TRUNC	Truncate trailing blanks	*NO, *YES	Optional
GRPSEP	Group separator type	*EOT, *OFCSYS, *DEV3740	Optional

Keyword	Description	Choices	Notes
EMLDEV	Emulated device	<u>3278</u> , 3284, 3286, 3287, 3288, 3289	Optional
EMLKBD	Emulated keyboard	* <u>UPPER</u> , *LOWER	Optional
EMLNUMLCK	Emulated numeric lock	* <u>NO</u> , *YES	Optional
EMLWRKSTN	Emulation work station	Name, * <u>ANY</u>	Optional
TEXT	Text 'description'	Character value, * <u>BLANK</u>	Optional
AUT	Authority	Name, * <u>CHANGE</u> , *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

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---

## Device description (DEV D)

Specifies the name of the device description.

This is a required parameter.

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---

## Local location address (LOCADR)

Specifies the local location address for this device.

Valid values range from 00 to FE.

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---

## Remote location (RMTLOCNAME)

Specifies the name of the remote location with which your program communicates.

Top

---

## Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

\*YES This device is varied on automatically at IPL.

\*NO This device is not varied on automatically at IPL.

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---

## Attached controller (CTL)

Specifies the name of the controller description to which this device is attached.

**Note:** To use this device for communicating with a remote location that resides on the same system as the local location, specify a controller description that was created with LINKTYPE (\*LOCAL) specified.

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---

## Connection type (CNN)

Specifies the connection type for this device.

- \***PP** A point-to-point connection type is used.
- \***MPTRIB**  
A multipoint tributary connection type is used.

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---

## Application type (APPTYPE)

Specifies the application type used by this device.

- \***BSCSEL**  
The application is Binary Synchronous Communications Equivalence Link (BSCSEL). This parameter is specified to communicate with other BSC systems or devices supported by this system.
- \***RJE** The application is BSC Remote Job Entry (RJE).
- \***EML** The application is 3270 device emulation, using the 3270 Device Emulation Utility, or the 3270 program interface support provided in the System/38 environment.
- \***BSC38**  
The application is a System/38 environment program. This parameter is specified for a device that communicates with other BSC systems or devices when the application uses a BSC device file or Mixed device file which is used in the System/38 environment.
- \***RPGT**  
This parameter is specified for applications using RPG II Telecommunications (BSCA) in the System/36 environment.  
  
**Note:** This value can also be specified when the application uses ICF support, but does not need Evoke capability or program-start request capability. If this value is specified, the value of the **Remote BSCSEL (RMTBSCSEL)** parameter is automatically set to \*NO. If the application uses ICF, make sure there is no requirement for Evoke or program-start request support before you try to use this value, or unpredictable results will occur.

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---

## Contention resolution winner (CTNWIN)

Specifies which BSC station will gain control when line contention occurs.

- \***SEC** Specifies that the local system is the secondary station. It will give way to the other station when line contention occurs.
- \***PRI** Specifies that the local system is the primary station. It gets control when contention occurs.

Top

---

## Blocking type (BLOCK)

Specifies if the system or user blocks and deblocks transmitted records.

- \***NONE**  
No blocking or deblocking is done by the system.

**\*ITB** Records are blocked or deblocked based on the location of an intermediate text block (ITB) control character.

**\*IRS** Records are blocked or deblocked, based on the location of an interrecord separator (IRS) character.

**\*NOSEP**

No record separator character is in the transmission block sent to or received from the device. The system blocks and deblocks the records by a fixed record length, as specified in the DDS format specifications.

**\*USER**

The user program provides all control characters, including record separator characters, BSC framing characters, transparency characters, and any other characters needed to transmit records.

**\*SEP** Records are blocked or deblocked based on the location of a user-specified record separator character.

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---

## Separator character (SEPCHAR)

Specifies a unique one-byte record separator character.

Valid values range from 00 to FF; BSC control characters are not allowed.

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---

## Remote BSCCEL (RMTBSCCEL)

Specifies the type of BSCCEL session with the remote system.

**\*NO** The remote system or device cannot recognize BSCCEL commands. ICF operations and return codes are used.

**\*YES** The remote system can recognize BSCCEL start and end commands, and BSCCEL online messages.

Top

---

## Record length (RCDLEN)

Specifies the maximum record length allowed when communicating with this device.

The value must be at least the size of the largest record to be sent, but must not exceed the buffer size specified on the line description (MAXBUFFER parameter) to which this device is attached.

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---

## Block length (BLKLEN)

Specifies the maximum block length allowed when communicating with this device.

The value must be at least the size of the largest record to be sent, but must not exceed the buffer size specified on the line description (MAXBUFFER parameter) to which this device is attached.

**512** The record length is 512.



**Note:** This parameter is valid only if APPTYPE(\*BSCSEL) or APPTYPE(\*RPGT) is specified.

*block-length*

Specify the maximum block length (in bytes) of records sent. The value must be at least the size of the largest record sent. Valid values range from 1 through 32767.

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---

## Transmit in transparent mode (TRNSPY)

Specifies whether the text transparency feature is used when sending blocked records. This feature permits the transmission of all 256 EBCDIC character codes; you should use this feature when transmitting packed or binary data fields.

**\*NO** The text transparency feature is not used.

**\*YES** The text transparency feature is to be used, which permits the transmission of all 256 EBCDIC character codes.

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---

## Compress and decompress data (DTACPR)

Specifies whether data compression is performed.

**Note:** DTACPR(\*YES) cannot be specified if TRNSPY(\*YES) or TRUNC(\*YES) is specified. This parameter is valid only if APPTYPE(\*BSCSEL) or APPTYPE(\*RPGT) is specified.

**\*NO** No data compression or decompression occurs.

**\*YES** Data is compressed for output and decompressed for input.

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---

## Truncate trailing blanks (TRUNC)

Specifies whether trailing blanks are removed from output records.

**\*NO** Trailing blanks are not removed from output records.

**\*YES** Trailing blanks are removed from output records.

Top

---

## Group separator type (GRPSEP)

Specifies a separator for groups of data, such as data sets and documents.

**\*EOT** An end of transmission (EOT) control character is used.

**\*OFCSYS**

A transmission block ending with an end of text (ETX) control character is used.

**\*DEV3740**

A null record (STX ETX) is used.

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---

## Emulated device (EMLDEV)

Specifies that this program device entry is used to send and receive 3270 data streams. The emulation device parameter consists of an emulation device type and an emulation device data format. The emulation device data format specifies the format of the type 3270 data stream being sent or received. A 20- or 32-byte common header that contains type 3270 command and data flow information is located at the start of the I/O buffer that is sending or receiving the type 3270 data stream. This parameter applies only to SNUF communications. This parameter can be specified as a list of two values (elements) or as a single value (\*NONE).

**3278** This device is used to emulate a 3278 display device.

**3284** This device is used to emulate a 3284 printer device.

**3286** This device is used to emulate a 3286 printer device.

**3287** This device is used to emulate a 3287 printer device.

**3288** This device is used to emulate a 3288 printer device.

**3289** This device is used to emulate a 3289 printer device.

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---

## Emulated keyboard (EMLKBD)

Specifies the type of 3278 display keyboard that is emulated. This parameter is valid only when \*EML is specified for the **Application type (APPTYPE)** parameter.

**\*UPPER**

A 3270 display device keyboard is emulated with uppercase characters only.

**\*LOWER**

A 3270 display device keyboard is emulated with uppercase and lowercase characters.

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---

## Emulated numeric lock (EMLNUMLCK)

Specifies whether numeric input fields only allow numeric data on a 5250 keyboard. The value can be specified for this parameter only if \*EML is specified for the **Application type (APPTYPE)** parameter.

**\*NO** 3270 emulation allows any data to be typed in the numeric input fields.

**\*YES** 3270 emulation allows only numeric data to be typed in the numeric input fields. Valid numeric data include the characters 0 through 9 and symbols + - , . and blank.

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---

## Emulation work station (EMLWRKSTN)

The emulation work station associates an emulation device with a real display or printer device. The device address is reserved for use exclusively by that work station. If no device or \*ANY is specified, any work station can use the emulation device.

**\*ANY** Any work station can use the emulation device.

*work-station*

Specify the name for the work station that is to use this emulation device.

---

## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

### \*BLANK

No text is specified.

### *character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### \*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### \*EXCLUDE

The user cannot access the object.

### \*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

***name*** Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

---

## Examples

```
CRTDEVBS  DEVD(BSC001)  LOCADR(27)  RMTLOCNAME(BSC001LC)
           CTL(CTLBSC001)  CNN(*PP)  APPTYPE(*RJE)
```

This command creates a binary synchronous communications device named BSC001. Its address is X'27' and it is attached to the controller CTLBSC001. The connection type of the device is \*PP and it uses the RJE application.

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---

## Error messages

### \*ESCAPE Messages

#### CPF261A

Device description &1 not created due to errors.

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---

## Create Device Desc (Crypto) (CRTDEVCRP)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Device Description (Crypto) (CRTDEVCRP) command creates a device description for a cryptographic device.

Top

---

### Parameters

Keyword	Description	Choices	Notes
DEV	Device description	<i>Name</i>	Required, Key, Positional 1
RSRCNAME	Resource name	<i>Name</i> , *NONE	Required, Key, Positional 2
APPTYPE	Application type	*CCA, *CCAUDX, *NONE	Optional
ONLINE	Online at IPL	*NO, *YES	Optional
MSGQ	Message queue	Single values: *SYSVAL, *SYSOPR Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Message queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
PKAKEYFILE	PKA key store file	Single values: *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: PKA key store file	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
DESKEYFILE	DES key store file	Single values: *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: DES key store file	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
TEXT	Text 'description'	<i>Character value</i> , *BLANK	Optional
AUT	Authority	<i>Name</i> , *CHANGE, *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

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---

### Device description (DEV)

Specifies the name of the device description being created.

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---

### Resource name (RSRCNAME)

Specifies the resource name that identifies the hardware that the description represents.

**\*NONE**

No resource name is specified. A resource name must be provided before the device can be varied on.

***resource-name***

Specify the name that identifies the crypto device hardware on the system.

**Note:** Use the Work with Hardware Resources (WRKHDWRSC) command with TYPE(\*CRP) specified to determine the resource name.

Top

---

## Application type (APPTYPE)

Specifies the application that runs inside of the secure computing environment on the cryptographic device.

**\*CCA** The flash memory in the cryptographic device is initialized with the Common Cryptographic Architecture (CCA) application.

**Note:** This value is valid only for 4758 and 4764 device types.

**\*CCAUDX**

The flash memory in the cryptographic device is initialized only if the system does not detect the CCA application or a CCA User Defined Extension (UDX) application within the flash memory of the device.

**Note:** This value is valid only for 4758 and 4764 device types.

**\*NONE**

The cryptographic device does not support flash memory applications.

**Note:** This value is valid only for 2058 device type.

Top

---

## Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

**\*NO** This device is not varied on automatically at IPL.

**\*YES** This device is varied on automatically at IPL.

Top

---

## Message queue (MSGQ)

Specifies the qualified name of the message queue to which messages are sent.

The possible qualified names are:

**\*SYSVAL**

The messages are sent to the message queue specified by the system value.

**\*SYSOPR**

Messages are sent to the QSYSOPR message queue in QSYS.

***message-queue-name***

Specify the name of the message queue to which operational messages are sent.

**\*LIBL** All libraries in the job's library list are searched until the first match is found.

**\*CURLIB**

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

*library-name*

Specify the name of the library to be searched.

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---

## PKA key store file (PKAKEYFILE)

Specifies the name of the database file containing the PKA (Public Key Algorithm) keys.

**Single values**

**\*NONE**

No default PKA key database is used.

**Other values**

*PKA-key-store-file-name*

Specifies the name of the default PKA key database.

The possible library values are:

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

**\*CURLIB**

The current library for the thread is searched. If no library is specified as the current library for the thread, the QGPL library is searched.

*library-name*

Specify the library where the object is located.

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---

## DES key store file (DESKEYFILE)

Specifies the name of the database file containing the DES (Data Encryption Standard) keys used for this device.

**Single values**

**\*NONE**

No default DES key database is used.

**Other values**

*DES-key-store-file-name*

Specifies the name of the default DES key database.

The possible library values are:

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

**\*CURLIB**

The current library for the thread is searched. If no library is specified as the current library for the thread, the QGPL library is searched.

*library-name*

Specify the library where the object is located.

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---

## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

**\*BLANK**

No text is specified.

*character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

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---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

**\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

**\*EXCLUDE**

The user cannot access the object.

**\*LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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---

## Examples

```
CRTDEVC RP DEVD(CRP01) RSRNAME(CRP01)
```



This command creates a device description for a cryptographic device that is named CRP01. The device type is determined from the resource name.

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## Error messages

None

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## Create Device Desc (Diskette) (CRTDEVDKT)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Device Description (Diskette) (CRTDEVDKT) command creates a device description for a diskette unit.

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---

### Parameters

Keyword	Description	Choices	Notes
DEV D	Device description	<i>Name</i>	Required, Positional 1
TYPE	Device type	<i>Character value</i> , 6131, 6132, 6133, 9331	Required, Positional 2
MODEL	Device model	<i>Character value</i> , 0, 1, 2, 11, 12	Required, Positional 3
RSRCNAME	Resource name	<i>Name</i>	Required, Positional 4
ONLINE	Online at IPL	*NO, *YES	Optional
TEXT	Text 'description'	<i>Character value</i> , *BLANK	Optional
AUT	Authority	<i>Name</i> , *CHANGE, *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

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---

### Device description (DEV D)

Specifies the name of the device description.

This is a required parameter.

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---

### Device type (TYPE)

Specifies the type of device this description represents.

6131 5-1/4 inch diskette

6132 8 inch diskette

6133 5-1/4 inch diskette

9331

**Model 1**

8 inch diskette

**Model 2**

5-1/4 inch diskette

---

## Device model (MODEL)

Specifies the model number of the device for this description.

**TYPE**    **MODEL**

6131    0000

6132    0000

6133    0000

9331-1  0001

9331-2  0002

9331-11  
          0011

9331-12  
          0012

---

## Resource name (RSRCNAME)

Specifies the resource name that identifies the hardware this description represents. Use the WRKHDWRSC command to determine the resource name.

---

## Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

**\*YES**    This device is varied on automatically at IPL.

**\*NO**     This device is not varied on automatically at IPL.

---

## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

**\*BLANK**  
          No text is specified.

*character-value*  
          Specify no more than 50 characters of text, enclosed in apostrophes.

---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### \*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### **\*EXCLUDE**

The user cannot access the object.

### **\*LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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## Examples

```
CRTDEVDKT  DEVD(DKT01)  TYPE(9331)  MODEL(0002)
           RSRCTYPE(DKT01)
```

This command creates a device description for a 9331 Model 0002 diskette drive. The system resources manager (SRM) has assigned a resource name of DKT01.

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## Error messages

### \*ESCAPE Messages

#### CPF261A

Device description &1 not created due to errors.

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## Create Device Desc (Display) (CRTDEV DSP)

Where allowed to run: All environments (\*ALL)  
 Threadsafes: No

Parameters  
 Examples  
 Error messages

The Create Device Description (Display) (CRTDEV DSP) command creates a device description for a display device.

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### Parameters

Keyword	Description	Choices	Notes
DEV D	Device description	<i>Name</i>	Required, Positional 1
DEVCLS	Device class	*LCL, *RMT, *VRT, *SNPT	Required, Positional 2
TYPE	Device type	3101, 3151, 3161, 3162, 3163, 3164, 3179, 3180, 3196, 3197, 3277, 3278, 3279, 3476, 3477, 3486, 3487, 5150, 5251, 5291, 5292, 5555, D220, T910, T925, T955, V100, V220, W30, W50, W60, *CALC, *NVT	Required, Positional 3
MODEL	Device model	0, 1, 2, 4, 5, 11, 3, 12, 23, 31, 32, 41, *ASCII, *DHCF, A1, A2, B1, B2, BA, B01, C01, E01, F01, G01, G02, C1, C2, D1, D2, EA, FA, FC, FD, EC, FE, FG, FW, HC, HG, HA, HW, W1, W2, 0000, 0001, 0002, 0004, 0005, 0011, 0003, 0012, 0023, 0031, 0032, 0041	Required, Positional 4
EMLDEV	Emulated twinaxial device	3196A2, 3197D2, *TYPE	Optional
PORT	Port number	0-17	Optional
SWTSET	Switch setting	0, 1, 2, 3, 4, 5, 6	Optional
SHRSSNNBR	Shared session number	0, 1, 2, 3	Optional
LOCADR	Local location address	X'00'-X'FE'	Optional
EMLASCII	Emulating ASCII device	*NO, *YES	Optional
ATTACH	Physical attachment	*DIRECT, *PTT, *MODEM, *WIRE3, *WIRE4, *EIA422	Optional
ONLINE	Online at IPL	*YES, *NO	Optional
CTL	Attached controller	<i>Name</i>	Optional
KBDTYPE	Keyboard language type	*SYSVAL, AGB, AGE, AGI, AGM, ALI, ALM, BGB, BGE, BLI, BLM, BRB, BRE, CAB, CAE, CAI, CAM, CLB, CLE, CSB, CSE, CYB, DMB, DME, DMI, DMM, ESB, FAB, FAE, FAI, FAM, FNB, FNE, FNI, FNM, FQB, FQI, GKB, GNB, GNE, HIB, HNB, HNE, ICB, ICE, ICI, ICM, INB, INI, IRB, ITB, ITE, ITI, ITM, JEB, JEI, JKB, JPB, JPE, JUB, KAB, KOB, LAB, LAE, LTB, LVB, MKB, MKE, NCB, NCE, NEB, NEE, NEI, NEM, NWB, NWE, NWI, NWM, PLB, PLE, PKB, PKE, PRB, PRE, PRI, PRM, RCB, RMB, RME, ROB, ROE, RUB, RUE, SFI, SFM, SGI, SGM, SKB, SKE, SPB, SPE, SPI, SPM, SQB, SQE, SSB, SSE, SSM, SSI, SWB, SWE, SWI, SWM, TAB, THB, THE, TKB, TKE, TRB, TRE, UAB, UAE, UKB, UKE, UKI, UKM, USB, USE, USI, USM, VNB, VNE, YGI, YGM	Optional
DROP	Drop line at signoff	*YES, *NO	Optional
ALWBLN	Allow blinking cursor	*YES, *NO	Optional

Keyword	Description	Choices	Notes
AUXDEV	Auxiliary device	Values (up to 31 repetitions): <i>Element list</i>	Optional
	Element 1: Auxiliary device type	6180, 6182, 6184, 6185, 6186M1, 6186M2, 7371, 7372	
	Element 2: Auxiliary device address	1-31	
PRINTER	Printer	<i>Name</i>	Optional
MAXLENRU	Maximum length of request unit	* <u>CALC</u> , 241, 245, 247, 256	Optional
APPTYPE	Application type	* <u>NONE</u> , *NRF, *CTLSSN, *DEVINIT, *APPINIT	Optional
ACTTMR	Activation timer	1-2550, <u>170</u>	Optional
INACTTMR	Inactivity timer	1-30, * <u>ATTACH</u> , *NOMAX, *SEC15, *SEC30	Optional
SNPTDEV	SNA pass-through device desc	<i>Name</i> , * <u>NONE</u>	Optional
SNPTGRP	SNA pass-through group name	<i>Name</i> , * <u>NONE</u>	Optional
LOGON	Host signon/logon command	<i>Character value</i> , * <u>NONE</u>	Optional
LINESPEED	Line speed	* <u>TYPE</u> , *CALC, 150, 300, 600, 1200, 1800, 2400, 3600, 4800, 7200, 9600, 19200, 38400	Optional
WORDLEN	Word length	* <u>TYPE</u> , *CALC, 7, 8	Optional
PARITY	Type of parity	* <u>TYPE</u> , *CALC, *EVEN, *ODD, *NONE, *MARK, *SPACE	Optional
STOPBITS	Stop bits	* <u>TYPE</u> , 1, 2	Optional
MAXOUT	Maximum outstanding frames	1-7, <u>7</u>	Optional
IDLTMR	Idle timer	10-250, <u>40</u>	Optional
NRM POLLTMR	NRM poll timer	2-100, <u>3</u>	Optional
FRAMERTY	Frame retry	5-64, <u>15</u>	Optional
RMTLOCNAME	Remote location	<i>Communications name</i>	Optional
LCLLOCNAME	Local location	<i>Communications name</i> , * <u>NETATR</u>	Optional
RMTNETID	Remote network identifier	<i>Communications name</i> , * <u>NETATR</u> , *NONE	Optional
IGCFEAT	DBCS feature	<i>Element list</i>	Optional
	Element 1: Device features	<i>Character value</i>	
	Element 2: Last code point	X'4141'-X'FFFE'	
TEXT	Text 'description'	<i>Character value</i> , * <u>BLANK</u>	Optional
DEPLOCNAME	Dependent location name	<i>Communications name</i> , * <u>NONE</u>	Optional
CHRID	Character identifier	Single values: *SYSVAL, * <u>KBDTYPE</u> Other values: <i>Element list</i>	Optional
	Element 1: Graphic character set	1-32767	
	Element 2: Code page	1-32767	
PRTDEV	Print device	<i>Name</i> , * <u>SYSVAL</u>	Optional
OUTQ	Output queue	Single values: * <u>DEV</u> Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Output queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , * <u>LIBL</u> , *CURLIB	
PRTFILE	Printer file	<i>Qualified object name</i>	Optional
	Qualifier 1: Printer file	<i>Name</i> , * <u>QSYSPRT</u>	
	Qualifier 2: Library	<i>Name</i> , * <u>LIBL</u> , *CURLIB	



Keyword	Description	Choices	Notes
WSCST	Workstation customizing object	Single values: <b>*NONE</b> Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Workstation customizing object	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , <b>*LIBL</b> , <b>*CURLIB</b>	
AUT	Authority	<i>Name</i> , <b>*CHANGE</b> , <b>*ALL</b> , <b>*USE</b> , <b>*EXCLUDE</b> , <b>*LIBCRTAUT</b>	Optional

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## Device description (DEV D)

Specifies the name of the device description.

This is a required parameter.

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## Device class (DEVCLS)

Specifies the device class for this display station or printer.

- \*LCL** This device description is for a device connected to a local work station controller.
- \*RMT** This device description is for a device connected to a remote work station controller.
- \*VRT** This device description is for a virtual display station. Through a virtual display station, users can access (pass through to) their own system from a remote system. A virtual display station allows the remote system or a personal computer to emulate the interface of the user's own system.
- \*SNPT** This device description is for a display station connected to an SNA pass-through advanced program-to-program communications (APPC) controller. SNA pass-through support allows the user to connect this display station with host logical unit (LU) types 0 through 3 applications.

**Note:** ASCII devices must be configured with a device class of **\*LCL** (including ASCII devices attached with modems). To use ASCII display stations as virtual devices, create a virtual device description with the device type of the twinaxial display station that the ASCII display station emulates (for example, a virtual device of device type 3196 for an ASCII display station).

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## Device type (TYPE)

Specifies the type of device which the description represents.

- 3179
- 3180
- 3196
- 3197
- 3277
- 3278
- 3279

- 3476
- 3477
- 3486
- 3487
- 5150 (any display station attached by a TDLC link)
- 5251
- 5291
- 5292
- 5555 (Double-Byte Character Set)
- \*NVT (Network Virtual Terminal)

The following type codes are valid for ASCII devices:

- 3101
- 3151
- 3161
- 3162
- 3163
- 3164
- \*CALC

**Note:** Specifying \*CALC allows port sharing for ASCII devices. ASCII port sharing allows different device types, using different physical parameters, to use the same port (at different times) without needing to manually reconfigure the port. If \*CALC is specified for this parameter, the system automatically calculates the device types for displays attached to this port.

More information on ASCII port sharing is in the Local Device Configuration book, SC41-5121 book or the ASCII Work Station Reference, SA41-3130.

The following are trademarks of Data General, TeleVideo, DEC, Wyse and are valid for ASCII devices:

**TYPE Description**

<b>D220</b>	Data General Dasher D220
<b>T910</b>	TeleVideo 910
<b>T925</b>	TeleVideo 925
<b>T955</b>	TeleVideo 955
<b>V100</b>	DEC VT-100
<b>V220</b>	DEC VT-220
<b>W30</b>	Wyse WY30
<b>W50</b>	Wyse WY50
<b>W60</b>	Wyse WY60

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## Device model (MODEL)

Specifies the model number of the device for this description.

This is a required parameter.

The possible values for the device model for each device type are:

TYPE	MODEL
3179	2
3180	2
3196	A1, A2, B1, B2
3197	C1, C2, D1, D2, W1, W2
3277	0, *DHCF
3278	0, 4, 5, *DHCF
3279	0, 5, *DHCF
3476	EA, EC
3477	FA, FC, FD, FE, FG, FW
3486	BA
3487	HA, HC, HG, HW
5150	1, 2, 3, 4, A1
5251	11
5291	1, 2
5292	1, 2
5555	B01, E01, C01, F01, G01, G02
*NVT	0000

For ASCII devices only:

### \*ASCII

Specify this value if the model number cannot be easily determined for this display station. The system will assign a model number (if the device has a model number). The model number assigned by the system may not be the actual model number of your display station; see the following table to determine the model number which will be assigned by using \*ASCII. It is recommended that you determine your display station's model number if at all possible, and enter that number.

The possible choices are:

TYPE	MODEL
3101	23 (*ASCII)
3151	11 (*ASCII), 31, 41
3161	11 (*ASCII), 12
3162	11 (*ASCII), 12, 31, 32
3163	11 (*ASCII), 12
3164	11 (*ASCII), 12

**\*CALC**  
(\*ASCII)

The following devices are trademarks by Data General, TeleVideo, DEC, Wyse and must have a model number of \*ASCII specified:

<b>TYPE</b>	<b>Description</b>
<b>D220</b>	Data General Dasher D220
<b>T910</b>	TeleVideo 910
<b>T925</b>	TeleVideo 925
<b>T955</b>	TeleVideo 955
<b>V100</b>	DEC VT-100
<b>V220</b>	DEC VT-220
<b>W30</b>	Wyse WY30
<b>W50</b>	Wyse WY50
<b>W60</b>	Wyse WY60

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## **Emulated device (EMLDEV)**

Specifies the twinaxial device emulation to be used by an IBM 3151 or IBM 3162 display. The available emulations are 3196A2, which permits an 80-column display, and 3197D2, which permits a 132-column display.

**Note:** 3197D2 emulation for an IBM 3151 model 31/41 requires the installation of a "cartridge for expansion" (part number 81X5575) in addition to the appropriate setting of this parameter.

**\*TYPE** The default value for this parameter is 3196A2.

**3196A2**  
An 80-column display is used.

**3197D2**  
A 132-column display is used.

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## **Port number (PORT)**

Specifies the port number for local devices.

For twinaxial devices: Possible values range from 0 through 7.

For ASCII devices: Possible values range from 0 through 17 and indicate the port on the ASCII work station controller to which this device is attached. Without the 12-port expansion feature, ports 0 through 5 are valid. With the 12-port expansion feature, ports 6 through 17 are added.

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## Switch setting (SWTSET)

Specifies the switch setting for local twinaxial devices.

Valid values range from 0 to 6.

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## Shared session number (SHRSSNBR)

Specifies the shared session number for a twinaxial display station. This parameter is valid only for 3486 and 3487 configured device types.

**Note:** Displays that share session addresses can be attached only to the 2661, 6050, 9146, or the 915A local work station controllers, or to the 5494 remote work station controller.

- 0      The shared session number is 0.
- 1      The shared session number is 1.
- 2      The shared session number is 2.
- 3      The shared session number is 3.

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## Local location address (LOCADR)

Specifies the local location address for this device.

The possible values range from 00 to FE. The type of controller to which the device is being attached determines which values are valid.

### Controller

#### Valid Values

- 5251    00, 02-09
- 5294    00-1B
- 5394    00-14
- 5494    00-37
- 3174    02-41
- 3274    02-41

### SNA Host

- 01-FE
- 4701    02-FE
- 4702    02-FE
- 4680    02-54
- 4684    02-FE
- FBSS    02-FE

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## Emulating ASCII device (EMLASCII)

Specifies, for ASCII devices, whether the device being configured is emulating a supported ASCII device type (TYPE parameter). When an ASCII device is configured, choices for the following parameters are restricted to the valid range for that device:

- ATTACH (Physical attachment)
- LINESPEED (Line speed)
- WORDLEN (Word length)
- PARITY (Type of parity)
- STOPBITS (Stop bits)

For ASCII devices emulating supported ASCII device types, these restrictions may not be applicable (the emulating device might have a wider range of choices for these parameters than the emulated ASCII device does). When EMLASCII(\*YES) is specified, these parameter restrictions are not enforced; the user is allowed to enter the full range of values for these parameters, but also is responsible for verifying that the values selected are valid for the device being configured.

**\*NO** Specifies that the device being configured is one of the supported ASCII device types **Device type (TYPE)** parameter, and that the device-specific restrictions for the physical attachment, line speed, word length, type of parity, and stop bits parameters are to be enforced.

**\*YES** Specifies that the device being configured is emulating one of the supported ASCII device types (TYPE parameter), and that the device-specific restrictions for the physical attachment, line speed, word length, type of parity, and stop bits parameters are not enforced.

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## Physical attachment (ATTACH)

Specifies, for ASCII display stations, the physical attachment of the display station to the ASCII workstation controller.

**\*EIA422**

The EIA-422 attachment (valid only for models 3101, 3151, 3161, 3162, 3163, and 3164) is used.

**\*DIRECT**

Specifies EIA-232 Direct attachment.

**\*MODEM**

Specifies EIA-232 modem attachment.

**\*PTT** Specifies Post Telephone and Telegraph (PTT) attachment.

**\*WIRE3**

Specifies EIA-232 3-wire attachment.

**\*WIRE4**

Specifies EIA-232 4-wire attachment.

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## Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

**\*YES** This device is varied on automatically at IPL.

**\*NO** This device is not varied on automatically at IPL.

**Note:** This parameter is ignored when specified on the console or alternate console description.

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## Attached controller (CTL)

Specifies the name of the controller description to which this device is attached.

**Note:** To use this device for communicating with a remote location that resides on the same system as the local location, specify a controller description that was created with LINKTYPE (\*LOCAL) specified.

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## Keyboard language type (KBDTYPE)

Specifies the country keyboard language identifier for this display station.

### NOTES:

1. When DEVCLS(\*RMT) is specified and when TYPE(3277), TYPE(3278), or TYPE(3279) is specified, the following values can be specified: \*SYSVAL, AGI, ALI, BGB, BLI, CAI, CSB, DMI, FNI, FAI, HNB, IRB, ITI, JPB, MKB, NWI, PLB, PRI, RMB, RUB, SKB, SPI, SQB, SSI, SWI, TRB, USB, USI, or YGI. Otherwise, this parameter is not valid when DEVCLS(\*RMT) is specified.
2. When TYPE(3486) or TYPE(3487) is specified, the following values can be specified: \*SYSVAL, AGB, AGI, ALI, BGB, BLI, CAB, CAI, CLB, CSB, DMB, DMI, FAB, FAI, FNB, FNI, GNB (or GKB), HNB, ICB, ICI, IRB, ITB, ITI, JPB, KAB, MKB, NCB, NEB, NEI, NWB, PLB, PRB, PRI, RMB, RUB, SFI, SGI, SKB, SPB, SPI, SQB, SSB, SSI, SWB, SWI, TKB, TRB, UKB, UKI, USB, USI, or YGI.
3. This parameter is optional for the combination of DEVCLS(\*LCL) and TYPE(5150).

### \*SYSVAL

Instructs the system to use the QKBDTYPE system value.

### *keyboard language-type*

Specify the 3-character country identifier (used for EBCDIC and ASCII) for this display station.

The following two tables can be used to confirm the appropriate value for this parameter, or to determine which ASCII display devices can be used with a specified language.

- The keyboard mapping table shows valid country identifiers, the language represented by each identifier, and the ASCII device groups, if applicable, for each language.
- The ASCII displays and device groups table shows the valid display devices and their associated ASCII device groups.

For example, assume a user wants to create a 3101 display device. The ASCII displays and device groups table shows that a 3101 display supports ASCII device group A. The Keyboard Mapping table shows that the valid language identifiers that can be used with device group A include AGB, AGI, CAB, CAI, FAB, FAI, ITB, ITI, UKB, UKI, USB, and USI.

The following keyboards can be specified by ASCII displays only if a customizing object is also used: ALI, BGB, CSB, ESB, HNB, LTB, LVB, MKB, PKB, PLB, RMB, RUB, SKB, SQB, TRB, UAB, and YGI.

### Identifier

#### Language(Country) - ASCII Device Groups

<b>ALI</b>	Albania
<b>ALM</b>	Albania Euro Currency
<b>CLB</b>	Arabic X/Basic - D*

**CLE** Arabic X/Basic Euro Currency  
**AGB** Austria/Germany - A, B  
**AGE** Austria/Germany Euro Currency  
**AGI** Austria/Germany Multinational - A, B  
**AGM** Austria/Germany Multinational Euro Currency  
**BLI** Belgium Multinational - B  
**BLM** Belgium Multinational Euro Currency  
**BRB** Brazilian Portuguese  
**BRE** Brazilian Portuguese Euro Currency  
**BGB** Bulgaria  
**BGE** Bulgaria Euro Currency  
**CAB** Canadian French - A, B  
**CAE** Canadian French Euro Currency  
**CAI** Canadian French Multinational - A, B  
**CAM** Canadian French Multinational Euro Currency  
**SPB** Catalan  
**RCB** Chinese (Simplified)  
**TAB** Chinese (Traditional)  
**YGI** Croatia  
**YGM** Croatia Euro Currency  
**CYB** Cyrillic  
**CSB** Czech Republic  
**CSE** Czech Republic Euro Currency  
**DMB** Denmark - B  
**DME** Denmark Euro Currency  
**DMI** Denmark Multinational - B  
**DMM** Denmark Multinational Euro Currency  
**ESB** Estonia  
**FNB** Finland/Sweden - B  
**FNE** Finland/Sweden Euro Currency  
**FNI** Finland/Sweden Multinational - B  
**FNM** Finland/Sweden Multinational Euro Currency  
**FAB** France (Azerty) - A, B  
**FAE** France (Azerty) Euro Currency  
**FAI** France (Azerty) Multinational - A, B  
**FAM** France (Azerty) Multinational Euro Currency  
**FQB** France (Qwerty)



**FQI** France (Qwerty) International  
**GNB** Greek (see note)  
**GNE** Greek Euro Currency  
**NCB** Hebrew - D\*  
**NCE** Hebrew Euro Currency  
**HIB** Hindi  
**HNB** Hungary  
**HNE** Hungary Euro Currency  
**ICB** Iceland  
**ICE** Iceland Euro Currency  
**ICI** Iceland Multinational  
**ICM** Iceland Multinational Euro Currency  
**INB** International  
**INI** International Multinational  
**IRB** Iran (Farsi)  
**ITB** Italy - A, B  
**ITE** Italy Euro Currency  
**ITI** Italy Multinational - A, B  
**ITM** Italy Multinational Euro Currency  
**JEB** Japan English  
**JEI** Japan English Multinational  
**JKB** Japan Kanji  
**JPB** Japan Latin Extended  
**JPE** Japan Latin Extended Euro Currency  
**JUB** Japan U.S. Basic  
**KAB** Japan Katakana  
**KOB** Korea  
**LAB** Lao People's Democratic Republic  
**LAE** Lao People's Democratic Republic Euro Currency  
**ROB** Latin-2/ROECE  
**ROE** Latin-2/ROECE Euro Currency  
**LVB** Latvia  
**LTB** Lithuania  
**MKB** FYR Macedonia (Former Yugoslav Republic)  
**MKE** FYR Macedonia Euro Currency  
**NEB** Netherlands  
**NEE** Netherlands Euro Currency

**NEI** Netherlands Multinational  
**NEM** Netherlands Multinational Euro Currency  
**NWB** Norway - B  
**NWE** Norway Euro Currency  
**NWI** Norway Multinational - B  
**NWM** Norway Multinational Euro Currency  
**PLB** Poland  
**PLE** Poland Euro Currency  
**PRB** Portugal - B  
**PRE** Portugal Euro Currency  
**PRI** Portugal Multinational - B  
**PRM** Portugal Multinational Euro Currency  
**RMB** Romania  
**RME** Romania Euro Currency  
**RUB** Russia  
**RUE** Russia Euro Currency  
**SQB** Serbia (Cyrillic)  
**SQE** Serbia (Cyrillic) Euro Currency  
**YGI** Serbia (Latin)  
**YGM** Serbia (Latin) Euro Currency  
**SKB** Slovakia  
**SKE** Slovakia Euro Currency  
**YGI** Slovenia  
**YGM** Slovenia Euro Currency  
**SPB** Spain - B  
**SPE** Spain Euro Currency  
**SPI** Spain Multinational - B  
**SPM** Spain Multinational Euro Currency  
**SSB** Spanish Speaking - B  
**SSE** Spanish Speaking Euro Currency  
**SSI** Spanish Speaking Multinational - B  
**SSM** Spanish Speaking Multinational Euro Currency  
**SWB** Sweden - B  
**SWE** Sweden Euro Currency  
**SWI** Sweden Multinational - B  
**SWM** Sweden Multinational Euro Currency  
**SFI** Switzerland/France Multinational - B

**SFM** Switzerland/France Multinational Euro Currency  
**SGI** Switzerland/Germany Multinational - B  
**THB** Thailand  
**THE** Thailand Euro Currency  
**TKB** Turkey (Qwerty)  
**TKE** Turkey (Qwerty) Euro Currency  
**TRB** Turkey (F)  
**TRE** Turkey (F) Euro Currency  
**UAB** Ukraine  
**UAE** Ukraine Euro Currency  
**UKB** United Kingdom - A, B  
**UKE** United Kingdom Euro Currency  
**UKI** United Kingdom Multinational - A, B  
**UKM** United Kingdom Multinational Euro Currency  
**USB** United States/Canada - A, B, C  
**USE** United States/Canada Euro Currency  
**USI** United States/Canada Multinational - A, B, C  
**USM** United States/Canada Multinational Euro Currency  
**PKB** Urdu  
**PKE** Urdu Euro Currency  
**VNB** Vietnam  
**VNE** Vietnam Euro Currency  
**YGI** Languages of the former Yugoslavia  
**YGM** Languages of the former Yugoslavia Euro Currency

**Note:** The GNB code is the current identifier for Greece. The GKB code was used prior to V2R1, and continues to be supported, but provides fewer characters than the recommended GNB code.

### ASCII Displays and Devices Groups

#### Display

	ASCII Device Group
3101	A
3151	B
3161	B
3162	B
3163	B
3164	B

The following devices are trademarks by TeleVideo, DEC, or Wyse, and must only specify languages in ASCII Device Group C or D:

## Display

### Description

<b>D220</b>	Data General Dasher D220
<b>T910</b>	TeleVideo 910
<b>T925</b>	TeleVideo 925
<b>T955</b>	TeleVideo 955
<b>V100</b>	DEC VT-100
<b>V220</b>	DEC VT-220 (supports ASCII Device Group D and C)
<b>W30</b>	Wyse WY30
<b>W50</b>	Wyse WY50
<b>W60</b>	Wyse WY60

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## Drop line at signoff (DROP)

Specifies, for remote display stations, whether the line is disconnected by the system when all devices on the line are no longer in use.

The value specified in the device description can be overridden by a user signing off at the device if the user specifies the **Drop line at signoff (DROP)** parameter on the SIGNOFF command.

**\*YES** The switched line to the controller to which this device is attached is disconnected when this device and all other attached devices are no longer in use.

**\*NO** The switched line is not disconnected from the controller when all of its attached devices are no longer in use.

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## Allow blinking cursor (ALWBLN)

Specifies whether the (program controlled) blinking cursor is suppressed.

**Note:** The value specified for this parameter can be overridden by display stations that have a keyboard setup capability that allows the blinking cursor attribute to be changed.

**\*YES** Allows the cursor to blink for the 3179, 3180, 3196, 3197, 3476, 3477, 3486, 3487, 5251, 5291, and 5292 display devices.

**\*NO** The blinking cursor is suppressed.

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## Auxiliary device (AUXDEV)

Specifies the device type and address of an additional device (if any) that is attached to the IEEE-488 port on the 5292 Model 2 device. Up to 31 plotters can be attached to the same IEEE-488 AUXDEV port on the 5292 Model 2, but at different IEEE-488 addresses. The valid additional device types are: 7371 (IBM 7371 Plotter), the 7372 (IBM 7372 Plotter), the 6180 (IBM 6180 Plotter), the 6182 (IBM 6182 Plotter), the 6184 (IBM 6184 Plotter), the 6185 (IBM 6185 Plotter), the 6186M1 (IBM 6186M1 Plotter), and the 6186M2 (IBM 6186M2 Plotter). The valid additional device address is a number from 1 to 31.

You can enter multiple values for this parameter.

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## Printer (PRINTER)

Specifies, for a remote display station, the device name of the printer associated with the display device. The device description of the work station printer named in this parameter must have already been created and must currently exist on the system. Both the printer and the display device must be attached to the same controller.

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## Maximum length of request unit (MAXLENRU)

Specifies, for remote display stations and printers, the maximum request unit (RU) length (in bytes) allowed.

### \*CALC

The system determines the best value to use. A value of \*CALC must be specified for those devices not attached to an X.25 network. \*CALC may be specified for devices attached to an X.25 network. In all instances, \*CALC is the recommended value.

### *maximum-length-request-unit*

Specify 241 or 247. These values are valid only for devices attached to X.25 networks. If the recommended value of \*CALC is not specified, it is recommended that 241 be used for ELLC and 247 be used for QLLC. The values 245 and 256 can be specified, but the result is the same as specifying \*CALC.

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## Application type (APPTYPE)

Specifies the application type used by this device.

### \*NONE

The device is not used for any application.

**\*NRF** The device is used for the Network Routing Facility application.

### **\*CTLSSN**

The device controls the sessions with \*DEVINIT devices.

### **\*DEVINIT**

The device starts (initiates) the session.

### **\*APPINIT**

The application program starts (initiates) the session.

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## Activation timer (ACTTMR)

Specifies, for switched connections, the amount of time (in seconds) that the SNA pass-through support waits for the device to respond to the activation request from the host iSeries system. If the device does not respond within this time, it is considered not available.

This parameter is valid only when \*SNPT is specified for the DEVCLS parameter.

**170** Specifies the activate time of 170 seconds.

### *activate-time*

Specify a number ranging from 1 through 2550 indicating the number of seconds before the device is considered not available.

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## Inactivity timer (INACTTMR)

Specifies an inactivity timer (time-out) value for display devices. This parameter also specifies what happens when the time-out value is exceeded, dependent on other attributes of the device:

- For display stations attached to an ASCII work station controller, the user's job is canceled when the display station is inactive (no data is sent or received) for a period of time that exceeds the time-out value. The display station is automatically varied off and on again, resulting in a new sign-on display.
- For display devices connected using SNA pass-through (SNPT) support, the user is informed by a message to QSYSOPR and the session is ended when the amount of time that the device is not bound to a host application exceeds the time-out value. The user must reestablish the connection and session.
- For display devices with an application type value of \*APPINIT, \*DEVINIT, or \*NRF, the session is ended when the device is inactive (the file opened against the device is closed and no additional requests to open files are received for the device) for a period of time that exceeds the time-out value.

**Note:** This timer is not used by devices allocated to a subsystem (normal interactive use) because the subsystem always has a file open for the device. The timer is used by batch jobs that open and close files for the device.

For a connection using SNA pass-through (\*SNPT) device class support, the default of \*ATTACH maps to \*NOMAX.

For a device with an application type value of \*APPINIT, \*CLTSSN, \*DEVINIT, or \*NRF, the default of \*ATTACH maps to 1 minute.

For Post Telephone and Telegraph (\*PTT) attachment, valid inactivity timer values are \*SEC15 (15 seconds), \*SEC30 (30 seconds), and 1 to 10 minutes. The default of \*ATTACH maps to \*SEC30 (30 seconds).

For all other attachments, valid inactivity timer values are 1 to 30 minutes and \*NOMAX. The default of \*ATTACH maps to \*NOMAX for these attachments.

### **\*ATTACH**

This value varies by the value specified on the **Physical attachment (ATTACH)** parameter and certain values on the **Application type (APPTYPE)** parameter and **Device class (DEVCLS)** parameter.

### **\*NOMAX**

No maximum inactivity time is tracked (no inactivity timer is to be enforced).

### **\*SEC15**

A 15-second time-out period is used.

**\*SEC30**

A 30-second time-out period is used.

*inactivity-timer*

Specifies a time-out value in minutes.

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## **SNA pass-through device desc (SNPTDEV)**

Specifies the name of the associated SNA pass-through device that is attached to a host or advanced program-to-program communications (APPC) controller.

**\*NONE**

No name is specified.

*associated-device-name*

Specify the name of a device that is attached to a host or an APPC controller that is associated with this device.

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## **SNA pass-through group name (SNPTGRP)**

Specifies the name configured for a group of host devices in a configuration list. This indicates that this device is associated with any one of the devices in that group which is available.

**\*NONE**

No name is specified.

*group-name*

Specify the name configured for a group of host devices that must be associated with this device.

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## **Host signon/logon command (LOGON)**

Specifies the sign-on (logon) text. This parameter is allowed when DEVCLS(\*SNPT) or APPTYPE(\*NRF) is specified. APPTYPE(\*NRF) specifies the logon string that is sent to the host system when a request is made to establish a session. DEVCLS(\*SNPT) specifies the sign-on (logon) text that is sent to the host system after starting SNA pass-through support.

This parameter also specifies the logon string that is sent to the system services control point (SSCP) on the host network when the file is opened for \*NRF.

**\*NONE**

No text is sent to the host system.

*host-logon-command*

Specify text that is sent to the host system. The text must be enclosed in apostrophes if it contains blanks or other special characters. All apostrophes within the text must be represented by two apostrophes. A maximum of 256 characters can be specified.

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## Line speed (LINESPEED)

Specifies the line speed in bits per second (bps).

**\*TYPE** The system uses the suggested setting for this device type. \*TYPE selects 19200 bits per second for all display stations except the 3101 display station for which 9600 bits per second is selected. For a 5150 A1 device or a device type of \*CALC, \*TYPE selects 1200 bits per second.

### \*CALC

The system automatically calculates the line speed for displays attached to this port. If \*CALC is specified, it must also be specified on the **Type of parity (PARITY)** parameter and the **Word length (WORDLEN)** parameter.

**Note:** Specifying \*CALC allows port sharing for ASCII devices. ASCII port sharing allows different device types, using different physical parameters, to use the same port (at different times) without needing to manually reconfigure the port.

More information on ASCII port sharing is in the Local Device Configuration book, SC41-5121 book or the ASCII Work Station Reference, SA41-3130.

### *line-speed*

Specify the line speed. Valid values are: 150, 300, 600, 1200, 1800, 2400, 3600, 4800, 7200, 9600, 19200, or 38400.

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## Word length (WORDLEN)

Specifies, for ASCII devices, the word length (bits per character) used to communicate over the attachment between the ASCII work station controller and the device. For modem and Post Telephone and Telegraph (PTT) attachments, the word length must be the same as the word length selected for the modem. For auxiliary printers connected to the auxiliary port of a display station, the word length must be the same as the word length specified for the display's device description.

Some devices do not support all word lengths; verify that your device supports the word length you intend to use.

**\*TYPE** The system uses the suggested setting for this device type. \*TYPE selects 8 bit word lengths for all display stations except the 3101 and D220 display stations which select 7 bit word lengths.

7 Specifies 7 bit word lengths.

8 Specifies 8 bit word lengths.

### \*CALC

Specifies port sharing. If \*CALC is specified, the system automatically calculates the word lengths for displays attached to this port.

More information on ASCII port sharing is in the Local Device Configuration book, SC41-5121 book or the ASCII Work Station Reference, SA41-3130.

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## Type of parity (PARITY)

Specifies, for ASCII devices, the type of parity used to communicate over the attachment between the ASCII work station controller and the device. For modem and Post Telephone and Telegraph (PTT) attachments, the type of parity must be the same as the type of parity selected for the modem. For auxiliary printers connected to the auxiliary port of a display station, the type of parity must be the same as the type of parity specified for the display's device description.

Some devices do not support all types of parity; verify that your device supports the type of parity you intend to use.

**\*TYPE** The system uses the suggested setting for this device type. \*TYPE selects \*EVEN (Even parity) for all display stations except for the D220 which selects \*MARK. For a 5150 A1 device, \*TYPE selects \*NONE for an 8 bit word length and \*EVEN for a 7 bit word length. If \*CALC is specified for the **Device type (TYPE)** parameter, \*TYPE selects \*NONE.

**\*CALC**  
Specifies port sharing. If \*CALC is specified, the system automatically calculates the parity for displays attached to this port.

**\*EVEN**  
Even parity is used.

**\*ODD** Odd parity is used.

**\*NONE**  
Specifies that no parity bit is used.

**\*MARK**  
Mark parity (1 is used for the parity) is used.

**\*SPACE**  
Space parity (0 is used for the parity) is used.

More information on ASCII port sharing is in the Local Device Configuration book, SC41-5121 book and the ASCII Work Station Reference, SA41-3130.

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## Stop bits (STOPBITS)

Specifies, for ASCII devices, the number of stop bits used to communicate over the attachment between the ASCII work station controller and the device. For modem and Post Telephone and Telegraph (PTT) attachments, the number of stop bits must be the same as the number of stop bits selected for the modem. For auxiliary printers connected to the auxiliary port of a display station, the number of stop bits must be the same as the number of stop bits specified for the display's device description.

Some devices do not support all numbers of stop bits; verify that your device supports the number of stop bits you intend to use.

**\*TYPE** The system uses the suggested setting for this device type. \*TYPE selects 1 stop bit for all displays except the DEC VT-100 display station, for which a setting of 2 stop bits is selected.

**1** Specifies 1 stop bit.

**2** Specifies 2 stop bits.

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## Maximum outstanding frames (MAXOUT)

Specifies the maximum number of frames that are sent sequentially to a remote system before the remote system (the 5150 work station) must respond. The maximum number of frames must be between 1 and 7. This parameter is valid only if 5150 is specified for the **Device type (TYPE)** parameter and A1 is specified for the **Device model (MODEL)** parameter or if ASCII port sharing is being used.

7 The default number of frames sent is 7.

*maximum-outstanding-frames*

Specify a value from 1 to 7 for the number of frames.

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## Idle timer (IDLTMR)

Specifies the time (in 0.1 second intervals) that the system waits for a response. If no response is received in the specified amount of time, then error recovery procedures are started. This parameter is valid only if the number is between 10 and 250, and if 5150 is specified for the **Device type (TYPE)** parameter and A1 is specified for the **Device model (MODEL)** parameter, or if ASCII port sharing is being used.

40 The default is 4.0 seconds.

*idle-timer*

Specify a value from 10 to 250 in 0.1 second intervals.

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## NRM poll timer (NRMPOLLTMR)

Specifies the interval (in 0.1 second intervals) for polling this device when it is in normal response mode (NRM). This parameter is valid only if 5150 is specified for the **Device type (TYPE)** parameter and A1 is specified for the **Device model (MODEL)** parameter or if ASCII port sharing is being used.

3 The default is 0.3 seconds.

*NRM-poll-timer*

Specify a value from 2 to 100 in 0.1 second intervals.

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## Frame retry (FRAMERTY)

Specifies the number of retries for an unanswered command frame or unacknowledged information frame. This parameter is valid only if 5150 is specified for the **Device type (TYPE)** parameter and A1 is specified for the **Device model (MODEL)** parameter or if ASCII port sharing is being used.

15 The default value is 15 retries.

*frame-retry*

Specify a value from 5 to 64 for the number of retries.

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## Remote location (RMTLOCNAME)

Specifies the remote location name of the system with which this object communicates.

**Note:** This parameter is required for APPTYPE(\*APPINIT) devices. The remote location name for APPTYPE(\*APPINIT) devices is the VTAM/NCP (Virtual Telecommunications Access Method/Network Control Program) name of the physical device.

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## Local location (LCLLOCNAME)

Specifies the local location name. When this parameter is specified with APPTYPE(\*CTLSSN) or APPTYPE(\*APPINIT), the remote location name is the name of the independent logical unit (LU) in the network control program (NCP).

### \*NETATR

The LCLLOCNAME value specified in the system network attributes is used.

### *local-location-name*

Specify the local location name.

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## Remote network identifier (RMTNETID)

Specifies the name of the remote network identifier (ID). This parameter can be specified for APPTYPE(\*APPINIT) devices.

### \*NETATR

The RMTNETID value specified in the system network attributes is used.

### \*NONE

No remote network identifier (ID) is used.

### *remote-network-ID*

Specify the name of the remote network identifier.

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## DBCS feature (IGCFEAT)

Specifies which double-byte character set (DBCS) table is used in DBCS feature code format expressing device features and the last code point value. The table at the end of this parameter description shows valid device features and last code point values for DBCS-capable devices.

**Note:** This parameter is valid for DBCS-capable devices only.

### Element 1: Features of the DBCS-Capable Devices

#### *device-features*

Specify the device character resolution, language, and relative buffer size device features using the format SSSSLR, where:

#### SSSS =

The resolution (number of matrix points used to create) of the character. For example, 2424 would be 24 matrix points of height and 24 matrix points of width available to formulate the character.

L = The language code. The 4 language codes currently supported are:

- J = Japanese
- K = Korean

- C = Traditional Chinese
  - S = Simplified Chinese
- R =** The relative buffer size. The valid values are: 0, 1, 2, and 4.

## Element 2: Last Code Point

### *last-code-point*

Specify the 4-digit code point of the last double-byte character. This value can be blank.

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## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

### **\*BLANK**

No text is specified.

### *character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

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## Dependent location name (DEPLOCNAME)

Specifies the dependent local location name used for Dependent LU Requester (DLUR), providing additional security for the connection. If this name is filled in, an activation request (SNA ACTLU) from a Dependent LU Server (DLUS) node must reference this name or it is rejected.

Remote DLUS nodes may optionally accept unsolicited reply PSIDs (Product Set IDs) from the iSeries for auto-definition of LUs at the DLUS node. If so, then this name will be sent to the DLUS node in the reply PSID and it will be returned on the ACTLU request.

If unsolicited reply PSIDs are not supported by the DLUS node, then there will have to be close coordination of the PU name definitions on both systems.

### **\*NONE**

No location name is defined.

### *dependent-location-name*

Specify the dependent location name used for DLUR applications.

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## Character identifier (CHRID)

Specifies the character identifier (graphic character set and code page) that a work station display device supports.

### **\*KBDTYPE**

The system determines the graphic character set and code page value that corresponds to the country keyboard language identifier value specified for the **Keyboard language type (KBDTYPE)** parameter.

### \*SYSVAL

The system determines the graphic character set and code page values for the command parameters from the QCHRID system value.

### *graphic-character-set code-page*

Specify the graphic character set and code page values that match the attributes of this display device. The graphic character set and code page values must be numbers in the range of 1 through 32767.

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## Print device (PRTDEV)

Specifies the qualified name of the default printer device for this workstation. If the printer file being used to create the output specifies to spool the file, the spooled file is placed on the device's output queue, which is named the same as the device.

**Note:** This assumes the defaults are specified on the OUTQ parameter for the printer file, job description, user profile and workstation.

### \*SYSVAL

The default system printer specified in the system value QPRTDEV is used.

### *printer-device-name*

Specify the name of a printer that is used to print the output.

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## Output queue (OUTQ)

Specifies the output queue (\*OUTQ) object.

The possible **output queue name** values are:

\*DEV The output queue associated with the printer specified on the DEV parameter of the printer file is used. The output queue has the same name as the printer. (The printer file DEV parameter is determined by the CRTPRTE, CHGPRTE, or the OVRPRTE command).

**Note:** This assumes the defaults were specified on the OUTQ parameter for the printer file, job description, user profile, and workstation.

### *output-queue-name*

Specify the name of the output queue.

The possible library values are:

\*LIBL All libraries in the library list for the current thread are searched until the first match is found.

### \*CURLIB

The current library is used to locate the output queue. If no current library entry exists in the library list, QGPL is used.

### *library-name*

Specify the name of the library where the output queue is located.

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## Printer file (PRTFILE)

Specifies an alternative printer device file to be used for processing the Print key on this display station.

The printer file is specified by its qualified name (library-name/print-file-name).

The possible library values are:

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

**\*CURLIB**

The current library for the thread is searched. If no library is specified as the current library for the thread, the QGPL library is searched.

*library-name*

Specify the library where the object is located.

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## Workstation customizing object (WSCST)

Specifies the qualified name of a work station customizing object to be created.

**\*NONE**

No work station customizing object is specified.

*work-station-customizing-object*

Specify the work station customizing object.

**Note:** If a work station customizing object is specified for the WSCST parameter, all country keyboard identifiers are valid for ASCII devices except for the following: FQB, FQL, INB, INI, JEB, JEL, JKB, JUB, KAB, KOB, RCB, and TAB.

The possible library values are:

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

**\*CURLIB**

The current library for the thread is searched. If no library is specified as the current library for the thread, the QGPL library is searched.

*library-name*

Specify the library where the object is located.

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## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

**\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by

authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

**\*EXCLUDE**

The user cannot access the object.

**\*LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

**name** Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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## Examples

```
CRTDEV DSP  DEVD(DSP4) TYPE(3180) MODEL(2)
           DEVCLS(*LCL) PORT(0)
           SWTSET(4) CTL(CTL01) KBDTYPE(USB)
```

This command creates a 3180 Model 2 local device description called DSP4. The display station is located on port 0 of the local work station controller CTL01. The device has an address of 4, with a United States/Canadian keyboard.

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## Error messages

### \*ESCAPE Messages

**CPF261A**

Device description &1 not created due to errors.

**CPF2631**

Device type &2 not valid.

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## Create Device Desc (Finance) (CRTDEVFNC)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Device Description (Finance) (CRTDEVFNC) command creates a device description for a finance device.

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### Parameters

Keyword	Description	Choices	Notes
DEVVD	Device description	<i>Name</i>	Required, Positional 1
TYPE	Device type	3624, 3694, 4704, *FNCICF	Required, Positional 2
LOCADR	Local location address	X'01'-X'FF'	Required, Positional 3
RMTLOCNAME	Remote location	<i>Communications name</i>	Optional
ONLINE	Online at IPL	*YES, *NO	Optional
CTL	Attached controller	<i>Name</i>	Optional
MAXLENRU	Maximum length of request unit	8-4096, *CALC	Optional
DEVCLS	Device class	*NONE, *SNPT	Optional
ACTTMR	Activation timer	1-2550, 170	Optional
INACTTMR	Inactivity timer	1-30, *NOMAX, *SEC15, *SEC30	Optional
SNPTDEV	SNA pass-through device desc	<i>Name</i> , *NONE	Optional
SNPTGRP	SNA pass-through group name	<i>Name</i> , *NONE	Optional
TEXT	Text 'description'	<i>Character value</i> , *BLANK	Optional
AUT	Authority	<i>Name</i> , *CHANGE, *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

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### Device description (DEVVD)

Specifies the name of the device description.

This is a required parameter.

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### Device type (TYPE)

Specifies the type of device this description represents.

## TYPE Code

### Description

3624 Consumer Transaction Facility (System/38 compatible finance)

3694 Document Processor (System/38 compatible finance)

4704 Finance Display Station (System/38 compatible finance)

### \*FNCICF

Finance ICF (ICF compatible)

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## Local location address (LOCADR)

Specifies the local location address for this device.

The type of controller to which the device is being attached determines which values are valid.

### Controller

#### Valid Values

FBSS 01-FF

4701 01-FF

4702 01-FF

3694 01-04

4730 01-03

4731 01-02

4732 01-02

4736 01-02

LOCADR 01 is used only to communicate with the system monitor session and is valid only if \*FNCICF is specified for the **Device type (TYPE)** parameter.

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## Remote location (RMTLOCNAME)

Specifies the name of the remote location associated with the remote system with which this device communicates.

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## Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

**\*YES** This device is varied on automatically at IPL.

**\*NO** This device is not varied on automatically at IPL.

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## Attached controller (CTL)

Specifies the name of the controller description to which this device is attached.

**Note:** To use this device for communicating with a remote location that resides on the same system as the local location, specify a controller description that was created with LINKTYPE (\*LOCAL) specified.

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## Maximum length of request unit (MAXLENRU)

Specifies the maximum request unit (RU) length allowed.

### \*CALC

The system calculates the value to use.

### *maximum-length-request-unit*

Specify a value in the range of 8 through 4096 bytes as the maximum length for incoming request units.

**Note:** \*CALC is the only allowed value for a 3624, 3694, or 4704 device type. If \*FNCICF is specified for the **Device type (TYPE)** parameter and attached to either a 3694, 4730, 4731, 4732, or 4736 controller, \*CALC or 256 are the only allowed values.

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## Device class (DEVCLS)

Specifies the device class for this device.

### \*NONE

This device description does not use SNA pass-through support.

### \*SNPT

This device description is for a display station connected to an SNA pass-through advanced program-to-program communications (APPC) controller. SNA pass-through support allows the user to connect this display station with host logical unit (LU) types 0 through 3 applications.

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## Activation timer (ACTTMR)

Specifies, for switched lines, the amount of time that the SNA pass-through support waits for the device to respond to the activation request from the host iSeries system. If the device does not respond within this time, it is considered not available.

This parameter is valid only when \*SNPT is specified for the DEVCLS parameter.

**170** Specifies the activate time of 170 seconds.

### *activation-timer*

Specify a number ranging from 1 through 2550 indicating the number of seconds before the device is considered not available.

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## Inactivity timer (INACTTMR)

Specifies, for devices connected using SNA pass-through support, a timeout value that measures the amount of time that the device is not bound to a host application. When the timeout value is exceeded, the session is ended.

### \*NOMAX

No maximum inactivity time is tracked (no inactivity timer is be enforced).

### \*SEC15

A 15-second timeout period is used.

### \*SEC30

A 30-second timeout period is used.

### *inactivity-timer*

Specifies a timeout value in minutes.

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## SNA pass-through device desc (SNPTDEV)

Specifies the name of the associated SNA pass-through device that is attached to a host or advanced program-to-program communications (APPC) controller.

This parameter is valid only when \*SNPT is specified for the DEVCLS parameter.

### \*NONE

No name is specified.

### *associated-device-name*

Specify the name of a device that is attached to a host or APPC controller that is associated with this device.

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## SNA pass-through group name (SNPTGRP)

Specifies the name configured for a group of host devices in a configuration list (see CRTCFGL command). This indicates that this device is tied to any one of the devices in that group which is available.

This parameter is valid only when \*SNPT is specified for the DEVCLS parameter.

### \*NONE

No name is specified.

### *group-name*

Specify the name configured for a group of host devices that must be associated with this device.

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## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

### \*BLANK

No text is specified.

### *character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### **\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### **\*EXCLUDE**

The user cannot access the object.

### **\*LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

**name** Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

---

## Examples

### **Example 1: Changing a Finance Device Description**

```
CHGDEVFNC  DEVD(FNCDSP1)  ONLINE(*YES)
```

This command changes the device description for the finance device FNCDSP1 so that the device will be varied on at IPL.

### **Example 2: Creating a Finance Device Description**

```
CRTDEVFNC  DEVD(FNCDSP1)  TYPE(*FNCICF)  LOCADR(01)  
CTL(FNCCTL1)
```

This command creates a finance device description named FNCDSP1. This is an ICF finance device with an address of X'01'. It is attached to the finance controller FNCCTL1.

Top

---

## Error messages

### \*ESCAPE Messages

#### CPF261A

Device description &1 not created due to errors.

[Top](#)

---

## Create Device Desc (SNA Host) (CRTDEVHOST)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Device Description (SNA Host) (CRTDEVHOST) command creates a device description for a Systems Network Architecture (SNA) host system device.

Top

---

### Parameters

Keyword	Description	Choices	Notes
DEV D	Device description	<i>Name</i>	Required, Positional 1
LOCADR	Local location address	X'01'-X'FF'	Required, Positional 2
RMTLOCNAME	Remote location	<i>Communications name</i>	Required, Positional 3
ONLINE	Online at IPL	<u>*YES</u> , *NO	Optional
CTL	Attached controller	<i>Name</i>	Optional
APPTYPE	Application type	<u>*RJE</u> , *EML, *PGM	Optional
MAXLENRU	Maximum length of request unit	*CALC, 241, 245, 247, 256, 497, 501, 503, 512, 768, 1009, 1015, 1024, 1280, 1536, 1792, 2048, 2304, 2560, 2816, 3072, 3328, 3584, 3840, 4096	Optional
EMLDEV	Emulated device	<u>3278</u> , 3284, 3286, 3287, 3288, 3289	Optional
EMLKBD	Emulated keyboard	<u>*UPPER</u> , *LOWER	Optional
EMLNUMLCK	Emulated numeric lock	<u>*NO</u> , *YES	Optional
EMLWRKSTN	Emulation work station	<i>Name</i> , <u>*ANY</u>	Optional
ENDSSNHOST	End session with host	<u>*UNBIND</u> , *RSHUTD	Optional
TEXT	Text 'description'	<i>Character value</i> , <u>*BLANK</u>	Optional
DEPLOCNAME	Dependent location name	<i>Communications name</i> , <u>*NONE</u>	Optional
AUT	Authority	<i>Name</i> , <u>*CHANGE</u> , *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

Top

---

### Device description (DEV D)

Specifies the name of the device description.

This is a required parameter.

Top

---

## Local location address (LOCADR)

Specifies the local location address for this device.

Valid values range from 01 to FF.

Top

---

## Remote location (RMTLOCNAME)

Specifies the name of the remote location with which your program communicates.

Top

---

## Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

**\*YES** This device is varied on automatically at IPL.

**\*NO** This device is not varied on automatically at IPL.

Top

---

## Attached controller (CTL)

Specifies the name of the controller description to which this device is attached.

**Note:** To use this device for communicating with a remote location that resides on the same system as the local location, specify a controller description that was created with LINKTYPE (\*LOCAL) specified.

Top

---

## Application type (APPTYPE)

Specifies what application type is used by this device.

**\*RJE** This device is used by Remote Job Entry (RJE).

**\*EML** This device is used by 3270 Device Emulation.

**\*PGM** This device is used for program-to-program communications.

Top

---

## Maximum length of request unit (MAXLENRU)

Specifies the maximum request unit (RU) length allowed.

**\*CALC**

The system determines the best value to use. This is the recommended value.

*maximum-length-request-unit*

Specify a value, 256 through 4096, in amounts of 256, to be used as the maximum length for incoming request units. Values 241, 247, 497, 503, 1009, and 1015 can also be specified but are valid only if the device is attached to an X.25 network.



---

## Emulated device (EMLDEV)

Specifies that this program device entry is used to send and receive 3270 data streams. The emulation device parameter consists of an emulation device type and an emulation device data format. The emulation device data format specifies the format of the type 3270 data stream being sent or received. A 20- or 32-byte common header that contains type 3270 command and data flow information is located at the start of the I/O buffer that is sending or receiving the type 3270 data stream. This parameter applies only to SNUF communications. This parameter can be specified as a list of two values (elements) or as a single value (\*NONE).

- 3278** This device is used to emulate a 3278 display device.
- 3284** This device is used to emulate a 3284 printer device.
- 3286** This device is used to emulate a 3286 printer device.
- 3287** This device is used to emulate a 3287 printer device.
- 3288** This device is used to emulate a 3288 printer device.
- 3289** This device is used to emulate a 3289 printer device.

Top

---

## Emulated keyboard (EMLKBD)

Specifies the type of 3278 display keyboard that is emulated. This parameter is valid only when \*EML is specified for the **Application type (APPTYPE)** parameter.

### \*UPPER

A 3270 display device keyboard is emulated with uppercase characters only.

### \*LOWER

A 3270 display device keyboard is emulated with uppercase and lowercase characters.

Top

---

## Emulated numeric lock (EMLNUMLCK)

Specifies whether numeric input fields only allow numeric data on a 5250 keyboard. The value can be specified for this parameter only if \*EML is specified for the **Application type (APPTYPE)** parameter.

### \*NO

3270 emulation allows any data to be typed in the numeric input fields.

### \*YES

3270 emulation allows only numeric data to be typed in the numeric input fields. Valid numeric data include the characters 0 through 9 and symbols + - , . and blank.

Top

---

## Emulation work station (EMLWRKSTN)

The emulation work station associates an emulation device with a real display or printer device. The device address is reserved for use exclusively by that work station. If no device or \*ANY is specified, any work station can use the emulation device.

\*ANY Any work station can use the emulation device.

*work-station*

Specify the name for the work station that is to use this emulation device.

Top

---

## End session with host (ENDSSNHOST)

Specifies how the host device ends a session with the host system.

**\*UNBIND**

The host device sends the SNA command requesting the iSeries system to end the session.

**\*RSHUTD**

The host device sends the SNA command requesting the host system to end the session.

Top

---

## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

**\*BLANK**

No text is specified.

*character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

---

## Dependent location name (DEPLOCNAME)

Specifies the dependent local location name used for Dependent LU Requester (DLUR), providing additional security for the connection. If this name is filled in, an activation request (SNA ACTLU) from a Dependent LU Server (DLUS) node must reference this name or it is rejected.

Remote DLUS nodes may optionally accept unsolicited reply PSIDs (Product Set IDs) from the iSeries for auto-definition of LUs at the DLUS node. If so, then this name will be sent to the DLUS node in the reply PSID and it will be returned on the ACTLU request.

If unsolicited reply PSIDs are not supported by the DLUS node, then there will have to be close coordination of the PU name definitions on both systems.

**\*NONE**

No location name is defined.

*dependent-location-name*

Specify the dependent location name used for DLUR applications.

Top

---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### \*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### **\*EXCLUDE**

The user cannot access the object.

### **\*LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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---

## Examples

```
CRTDEVHOST  DEVD(COMMDSP1)  LOCADR(FE)
             RMTLOCNAME(SYS) CTL(HOSTCTL001)
             APPTYPE(*EML)  EMLDEV(3284)
```

This command creates a device description for an SNA host communications device named COMMDSP1. The address of the device is X'FE'. It is attached to the controller HOSTCTL001 and communicates with SYS. This device uses 3270 emulation to emulate a 3284 printer.

Top

---

## Error messages

### \*ESCAPE Messages

#### **CPF261A**

Device description &1 not created due to errors.

Top



---

## Create Device Desc (Intra) (CRTDEVINTR)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Device Description (Intrasystem) (CRTDEVINTR) command creates an intrasystem (INTRA) device which allows two programs to communicate with each other within the same system as though communicating across a transmission protocol (TP) line.

Top

---

### Parameters

Keyword	Description	Choices	Notes
DEV D	Device description	<i>Name</i>	Required, Positional 1
RMTLOCNAME	Remote location	<i>Communications name</i>	Required, Positional 2
ONLINE	Online at IPL	<u>*YES</u> , *NO	Optional
TEXT	Text 'description'	<i>Character value</i> , *SAME, <u>*BLANK</u>	Optional
AUT	Authority	<i>Name</i> , <u>*CHANGE</u> , *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

Top

---

### Device description (DEV D)

Specifies the name of the device description.

This is a required parameter.

Top

---

### Remote location (RMTLOCNAME)

Specifies the name of the remote location with which your program communicates.

Top

---

### Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

\*YES This device is varied on automatically at IPL.

\*NO This device is not varied on automatically at IPL.

Top

---

## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

### **\*BLANK**

No text is specified.

### *character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

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---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### **\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### **\*EXCLUDE**

The user cannot access the object.

### **\*LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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---

## Examples

```
CRTDEVINTR  DEVD(INTRALOC)  RMTLOCNAME(INTRARMT)
```

This command creates a device description named INTRALOC for intrasystem communications with a remote location named INTRARMT.

Top

---

## Error messages

### \*ESCAPE Messages

#### CPF261A

Device description &1 not created due to errors.

[Top](#)





# Create Device Desc (Media Lib) (CRTDEVMLB)

Where allowed to run: All environments (\*ALL)  
 Threadsafte: No

Parameters  
 Examples  
 Error messages

The Create Device Description (Media Library) (CRTDEVMLB) command creates a device description for a media library device.

Initially, all tape drive resources associated with this device description are allocated for use by this system. To change the allocation of drive resources within a tape library, use the Work with Media Library Status (WRKMLBSTS) command or the Vary Configuration (VRYCFG) command.

**Note:** Allocating drives is only allowed when DEVCLS(\*TAP) is specified.

More information about using this command is in the Local Device Configuration book, SC41-5121.

**Restriction:** The user of this command must have \*IOSYSCFG authority.

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## Parameters

Keyword	Description	Choices	Notes
DEVDD	Device description	<i>Name</i>	Required, Key, Positional 1
DEVCLS	Device class	*OPT, *TAP	Required, Key, Positional 2
RSRCNAME	Resource name	<i>Name</i> , *NONE	Required, Key, Positional 3
TYPE	Device type	<i>Character value</i> , *RSRCNAME	Optional, Key
ONLINE	Online at IPL	*YES, *NO	Optional
UNLOADWAIT	Unload wait time	<i>Character value</i> , *SYSGEN	Optional
MAXDEVTIME	Maximum device wait time	<i>Character value</i> , *SYSGEN	Optional
RSCALCPTY	Resource allocation priority	<i>Character value</i> , *JOB	Optional
INLMNTWAIT	Initial mount wait time	<i>Character value</i> , *JOB, *IMMED, *NOMAX	Optional
EOVMNTWAIT	End of volume mount wait time	<i>Character value</i> , *JOB, *IMMED, *NOMAX	Optional
GENCTGID	Generate cartridge ids	*VALID, *SYSGEN	Optional
ROBOTDEV	Robot device descriptions	Single values: *NONE Other values (up to 2 repetitions): <i>Name</i>	Optional
ROBOTHOST	Robot host	Single values: *NONE Other values (up to 2 repetitions): <i>Character value</i>	Optional
LCLINTNETA	Local internet address	<i>Character value</i> , *NONE	Optional
MSGQ	Message queue	Single values: *SYSOPR Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Message queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
TEXT	Text 'description'	<i>Character value</i> , *BLANK	Optional
AUT	Authority	<i>Name</i> , *CHANGE, *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

---

## Device description (DEVVD)

Specifies the name of the device description.

This is a required parameter.

---

## Device class (DEVCLS)

Specifies the class of the media library being created.

**\*OPT** The device is an optical media library.

**\*TAP** The device is a tape media library.

---

## Resource name (RSRCNAME)

Specifies the resource name that identifies the hardware that the description represents. A resource name must be provided before the device can be varied on.

**\*NONE**

No resource name is specified at this time.

*resource-name*

Specify the name that identifies the media library device hardware on the system.

**Note:** Use the Work with Hardware Resources (WRKHDWRSC) command with TYPE(\*STG) specified to determine the resource name.

---

## Device type (TYPE)

Specifies the type of device that this description represents.

**Note:** The device type is used to support prompting of this command; the value is not saved as part of the device description.

**\*RSRCNAME**

The device type is determined from the resource name parameter.

Any of the following device types, listed in numeric order, are valid:

- 3494
- 3495
- 3570
- 3590
- 3995
- 399F
- 9427

- 9429

**Note:** Device types 3995 and 399F are valid only when DEVCLS(\*OPT) is specified.

Top

---

## Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

**\*YES** This device is varied on automatically at IPL.

**\*NO** This device is not varied on automatically at IPL.

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---

## Unload wait time (UNLOADWAIT)

Specifies the amount of time the system waits for another request to use the mounted volume before unloading the volume if there are outstanding requests for an available drive.

**Note:** This parameter is valid only when DEVCLS(\*OPT) is specified.

**\*SYSGEN**

The system default value is used.

*unload-wait-time*

Specify the number of seconds to wait. Valid values range from 1 through 120.

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---

## Maximum device wait time (MAXDEVTIME)

Specifies the maximum number of minutes a volume can remain mounted in an internal device if there are requests for other volumes.

**Note:** This parameter is valid only when DEVCLS(\*OPT) is specified, and is ignored for DEVCLS(\*TAP).

**\*SYSGEN**

The system default value is used. This allows a maximum device wait time to be specified for each library device user rather than the same value for each user of the library device.

**\*NOMAX**

The requests will wait until a tape resource is available.

**Note:** This value is valid for tape devices only.

*max-device-time*

For optical devices, specify the number of minutes the volume can remain mounted. Valid values range from 1 through 60. For tape devices, specify the number of minutes a request will wait for allocation of a tape resource. Valid values range from 1 through 600.

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---

## Resource allocation priority (RSCALCPTY)

Specifies the resource allocation priority.

**Note:** This parameter is valid only when DEVCLS(\*TAP) is specified.

**\*JOB** The priority of the job is used as the resource allocation priority.

### *resource-allocation-priority*

Specify the priority this job is given when requesting a resource. Valid values range from 1 (highest) through 99 (lowest).

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---

## Initial mount wait time (INLMNTWAIT)

Specifies the maximum amount of time a request will wait for allocation of a tape resource for the initial mount.

**Note:** This parameter is valid only when DEVCLS(\*TAP) is specified.

**\*JOB** The allocation wait time is determined by the default wait time attribute of the job requesting the allocation, rounded up to the nearest minute.

### **\*IMMED**

The request will not wait for a tape resource to become available.

### **\*NOMAX**

The request will wait until a tape resource is available.

### *initial-mount-wait-time*

Specify the number of minutes a request will wait for allocation of a tape resource. Valid values range from 1 through 600 minutes.

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---

## End of volume mount wait time (EOVMNTWAIT)

Specifies the maximum amount of time a request will wait for allocation of a tape resource for the end of volume mount.

**Note:** This parameter is valid only when DEVCLS(\*TAP) is specified.

**\*JOB** The allocation wait time is determined by the default wait time attribute of the job requesting the allocation, rounded up to the nearest minute.

### **\*IMMED**

The request will not wait for a tape resource to become available.

### **\*NOMAX**

The request will wait until a tape resource is available.

### *end-of-volume-mount-wait-time*

Specify the number of minutes a request will wait for allocation of a tape resource. Valid values range from 1 through 600 minutes.

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---

## Generate cartridge ids (GENCTGID)

Specifies how the cartridge identifiers are assigned to each volume for tape libraries without bar code readers.

### \*VOLID

The volume identifier is used as the cartridge identifier. Cartridge identifiers can be assigned by mounting each volume and reading the volume identifier.

### \*SYSGEN

The system generates the cartridge identifiers for each volume. If system-generated identifiers are used, tape operations must use the generated cartridge identifiers. The cartridge identifiers are assigned sequentially in the form SLT001, SLT002, SLT003, and so on.

Top

---

## Robot device descriptions (ROBOTDEV)

Specifies the name of the device description representing the robot for library devices with separate robots.

Top

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## Robot host (ROBOTHOST)

Specifies the TCP/IP host name or Internet address of the robotic library manager. A maximum of 2 robot library managers can be specified.

### \*NONE

No robotic host is specified at this time.

### *host-name*

The specified name of the robotic library manager. The user may enter the robot host name by entering the robot host name or the domain qualified robot host name. The domain qualified robot host name allows input of 255 bytes.

### *host-internet-address*

The specified address of the robotic library manager. The internet address must be of the form ddd.ddd.ddd.ddd where ddd is a decimal number ranging from 0 to 255. This decimal number should not contain leading zeros. If the host internet address is entered from a command line, the address must be enclosed in apostrophes.

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## Local internet address (LCLINTNETA)

Specifies the local internet address of the interface that is connecting to the robot library manager. This is the interface the operating system will start when TCP/IP needs to be started to use the tape media library.

### \*NONE

No TCP/IP address is specified at this time.

### *local-ip-address*

Specify the local internet address to be started. The internet address must be of the form ddd.ddd.ddd.ddd where ddd is a decimal number ranging from 0 to 255. This decimal number should not contain leading zeros. If the local internet address is entered from a command line, the address must be enclosed in apostrophes.

---

## Message queue (MSGQ)

Specifies the qualified name of the message queue to which messages are sent.

The possible qualified names are:

### **\*SYSOPR**

Messages are sent to the QSYSOPR message queue in QSYS library.

### *message-queue-name*

Specify the name of the message queue to which operational messages are sent.

**\*LIBL** All libraries in the job's library list are searched until the first match is found.

### **\*CURLIB**

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

### *library-name*

Specify the name of the library to be searched.

Top

---

## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

### **\*BLANK**

No text is specified.

### *character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

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---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### **\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

#### \*EXCLUDE

The user cannot access the object.

#### \*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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---

## Examples

```
CRTDEVMLB  DEVD(LIB01)  DEVCLS(*OPT)
           RSRNAME(LIB01)  ONLINE(*YES)
```

This command creates a device description for a media library device named LIB01. The library is an optical library and the physical resource name is LIB01. The device description is varied on at IPL.

Top

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## Error messages

### \*ESCAPE Messages

#### CPF67B0

Tape resource &2 not in specified library device

#### CPF67D1

Library device description not created

Top





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## Create Device Desc (Network) (CRTDEVNET)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Device Description (Network) (CRTDEVNET) command creates a device description for a network device.

Top

---

### Parameters

Keyword	Description	Choices	Notes
DEVN	Device description	<i>Name</i>	Required, Positional 1
TYPE	Device type	*TCPIP, *USRDFN	Required, Positional 2
ONLINE	Online at IPL	*YES, *NO	Optional
CTL	Attached controller	<i>Name</i>	Optional
TEXT	Text 'description'	<i>Character value</i> , *BLANK	Optional
AUT	Authority	<i>Name</i> , *CHANGE, *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

Top

---

### Device description (DEVN)

Specifies the name of the device description.

This is a required parameter.

Top

---

### Type (TYPE)

Specifies the type of network the description represents.

#### \*TCPIP

\*TCPIP - Transmission Control Protocol/Internet Protocol

#### \*USRDFN

This device is attached to a network that is supported by a program using the user-defined communications Application Program Interface.

Top

---

### Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

\*YES This device is varied on automatically at IPL.

\*NO This device is not varied on automatically at IPL.

Top

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## Attached controller (CTL)

Specifies the name of the controller description to which this device is attached.

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## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

### \*BLANK

No text is specified.

### *character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

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---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### \*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

\*ALL The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

\*USE The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### \*EXCLUDE

The user cannot access the object.

### \*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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## Examples

```
CRTDEVNET  DEVD(NETDEV02)  TYPE(*TCP/IP)
```

This command creates a device description for a network device named NETDEV02.

[Top](#)

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## Error messages

### \*ESCAPE Messages

#### CPF261A

Device description &1 not created due to errors.

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## Create Device Desc (Optical) (CRTDEVOPT)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Device Description (Optical) (CRTDEVOPT) command creates a device description for an optical device. More information about using this command is in the Local Device Configuration book, SC41-5121.

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---

### Parameters

Keyword	Description	Choices	Notes
DEV D	Device description	<i>Name</i>	Required, Key, Positional 1
RSRCNAME	Resource name	<i>Name</i> , *NONE, *VRT	Required, Key, Positional 2
TYPE	Device type	<i>Character value</i> , *RSRCNAME, 6320, 6321, 632A, 632B, 6330, 6336	Optional, Key
ONLINE	Online at IPL	*YES, *NO	Optional
MSGQ	Message queue	Single values: *SYSOPR Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Message queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
TEXT	Text 'description'	<i>Character value</i> , *BLANK	Optional
AUT	Authority	<i>Name</i> , *CHANGE, *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

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---

### Device description (DEV D)

Specifies the name of the device description being created.

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---

### Resource name (RSRCNAME)

Specifies the resource name that identifies the hardware that the description represents.

#### \*NONE

No resource name is specified. A resource name must be provided before the device can be varied on.

**\*VRT** The resource name will be generated by the operating system at the time the device description is created. The resource name will represent virtual (not physical) hardware. Once the iSeries has created the maximum number of virtual hardware resources, the last created resource will be used for the device description.

**Note:** The resource name will not be removed if a device description is deleted. You may create a new device description for existing resources by specifying the resource by name.

*resource-name*

Specify the name that identifies the optical device hardware on the system.

**Note:** Use the Work with Hardware Resources (WRKHDWRSC) command with TYPE(\*STG) specified to determine the resource name.

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---

## Device type (TYPE)

Specifies the type of device that this description represents.

**Note:** If the type (TYPE) parameter specified is not valid for the resource name (RSRCNAME) parameter specified, the OS will automatically configure the TYPE parameter.

**\*RSRCNAME**

The device type is determined from the resource name (RSRCNAME) parameter.

- 6320 The device type is a CD-ROM drive.
- 6321 The device type is a CD-ROM drive.
- 632A The device type is a generic (Non-IBM) optical drive.
- 632B The device type is a virtual optical drive.
- 6330 The device type is a DVD-RAM drive.
- 6336 The device type is a DVD-ROM drive.

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## Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

- \*YES** This device is varied on automatically at IPL.
- \*NO** This device is not varied on automatically at IPL.

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---

## Message queue (MSGQ)

Specifies the message queue to which operational messages for this device are sent.

The possible qualified names are:

**\*SYSOPR**

Messages are sent to the QSYSOPR message queue in QSYS.

*message-queue-name*

Specify the name of the message queue to which operational messages are sent.

**\*LIBL** All libraries in the job's library list are searched until the first match is found.

**\*CURLIB**

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

*library-name*

Specify the name of the library to be searched.

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---

## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

**\*BLANK**

No text is specified.

*character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

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## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

**\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

**\*EXCLUDE**

The user cannot access the object.

**\*LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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## Examples

### Example 1: Create an Optical Device Description

```
CRTDEVOPT  DEVD(OPT01)  RSRNAME(*OPT01)  TYPE(*RSRCNAME)
```

This command creates a device description for an optical device that is named OPT01. The device type is determined from the resource name.

**Example 2: Create a Virtual Optical Device Description**

```
CRTDEVOPT DEVD(VRTOPT01) RSRCTYPE(*VRT) TYPE(*RSRCTYPE)
```

This command creates a device description for a virtual optical device that is named VRTOPT01. The device type is determined from the resource name. All virtual optical devices will be assigned a **TYPE** value of 632B.

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## Error messages

None

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## Create Device Desc (Printer) (CRTDEVPRT)

Where allowed to run: All environments (\*ALL)  
 Threadsafte: No

Parameters  
 Examples  
 Error messages

The Create Device Description (Printer) (CRTDEVPRT) command creates a device description for a printer device.

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### Parameters

Keyword	Description	Choices	Notes
DEVDD	Device description	<i>Name</i>	Required, Key, Positional 1
DEVCLS	Device class	*LCL, *RMT, *VRT, *SNPT, *LAN	Required, Key, Positional 2
TYPE	Device type	3287, 3812, 4019, 4201, 4202, 4207, 4208, 4214, 4216, 4224, 4234, 4245, 4247, 5204, 5219, 5224, 5225, 5256, 5262, 5553, 5583, 6252, 6404, 6408, 6412, *IPDS	Required, Key, Positional 3
MODEL	Device model	0, 1, 2, 3, 4, 10, 13, 200, 301, 302, 3E3, *ASCII, *POST, AS8, B01, CTA, D1, D2, T08, T12, T20, *IPDS, *LU3, 0000, 0001, 0002, 0003, 0004, 0010, 0013, 0200, 0301, 0302	Required, Key, Positional 4
LANATTACH	LAN attachment	*LEXLINK, *IP, *USRDFN	Optional
SWTLINLST	Switched line list	Values (up to 8 repetitions): <i>Name</i>	Optional
ADPTADR	LAN remote adapter address	X'000000000001'-X'FFFFFFFFFE'	Optional
ADPTTYPE	Adapter type	*INTERNAL, *EXTERNAL	Optional
ADPTCNNTYP	Adapter connection type	*PARALLEL, *SERIAL	Optional
EMLDEV	Emulated twinaxial device	3812, 5219, 5224, 5256	Optional
AFP	Advanced function printing	*NO, *YES	Optional
AFPATTACH	AFP attachment	*WSC, *APPC	Optional
PORT	Port number	0-65535	Optional
SWTSET	Switch setting	0, 1, 2, 3, 4, 5, 6	Optional
LOCADR	Local location address	X'00'-X'FE'	Optional
AUXPRT	Auxiliary printer	*YES, *NO	Optional
EMLASCII	Emulating ASCII device	*NO, *YES	Optional
ATTACH	Physical attachment	*DIRECT, *PTT, *MODEM, *WIRE3, *WIRE4, *EIA422	Optional
ONLINE	Online at IPL	*YES, *NO	Optional
CTL	Attached controller	<i>Name</i>	Optional
LNGTYPE	Language type	*SYSVAL, AGB, AGI, ALI, BGB, BLI, BRB, CAB, CAI, CLB, CSB, CYB, DMB, DMI, ESB, FAB, FAI, FNB, FNI, GKB, GNB, HNB, ICB, ICI, IRB, ITB, ITI, JPB, LTB, LVB, MKB, NCB, NEB, NEI, NWB, NWI, PKB, PLB, PRB, PRI, RMB, ROB, RUB, SFI, SGI, SKB, SPB, SPI, SQB, SSB, SSI, SWB, SWI, THB, TKB, TRB, UAB, UKB, UKI, USB, USI, YGI	Optional
PRTQLTY	Print quality	*STD, *DRAFT, *NLQ	Optional

Keyword	Description	Choices	Notes
FONT	Font	<i>Element list</i>	Optional
	Element 1: Identifier	<i>Character value, 2, 3, 5, 8, 10, 11, 12, 13, 18, 19, 20, 21, 25, 26, 30, 31, 38, 39, 40, 41, 42, 43, 44, 46, 49, 50, 51, 52, 55, 61, 62, 63, 66, 68, 69, 70, 71, 72, 74, 75, 76, 80, 84, 85, 86, 87, 91, 92, 95, 96, 98, 99, 101, 102, 103, 109, 110, 111, 112, 154, 155, 157, 158, 159, 160, 162, 163, 164, 167, 168, 173, 174, 175, 178, 179, 180, 181, 182, 183, 186, 187, 188, 189, 190, 191, 194, 195, 204, 205, 211, 212, 221, 222, 223, 225, 226, 229, 230, 232, 233, 234, 244, 245, 247, 248, 249, 252, 253, 254, 255, 256, 258, 259, 279, 281, 282, 285, 290, 300, 400, 434, 435, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 1051, 1053, 1056, 1351, 1653, 1803, 2103, 4407, 4427, 4535, 4919, 4939, 5047, 5067, 5687, 5707, 5815, 5835, 5943, 6199, 6219, 6327, 6347, 8503, 8523, 8631, 8651, 8759, 8779, 8887, 8907, 12855, 12875, 16951, 16971, 17079, 17099, 33335, 33355, 33463, 33483, 33591, 33601, 33719, 33729, 34103, 34123, 34231, 34251, 37431, 41783, 41803</i>	
	Element 2: Point size	0.1-999.9, *NONE	
FORMFEED	Form feed	*TYPE, *CONT, *CONT2, *CUT, *AUTOCUT	Optional
SEPDRAWER	Separator drawer	1-255, *FILE	Optional
SEPPGM	Separator program	Single values: *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Separator program	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
NBRDRAWER	Number of drawers	1, 2, 3	Optional
PRTERMSG	Printer error message	*INQ, *INFO	Optional
MSGQ	Message queue	Single values: *CTLD, *SYSOPR Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Message queue	<i>Name, QSYSOPR</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
MAXLENRU	Maximum length of request unit	*CALC, 241, 245, 247, 256	Optional
APPTYPE	Application type	*NONE, *NRF, *DEVINIT, *APPINIT	Optional
ACTTMR	Activation timer	1-2550, 170, *NOMAX	Optional
INACTTMR	Inactivity timer	1-30, *ATTACH, *NOMAX, *SEC15, *SEC30	Optional
SNPTDEV	SNA pass-through device desc	<i>Name, *NONE</i>	Optional
SNPTGRP	SNA pass-through group name	<i>Name, *NONE</i>	Optional
LOGON	Host signon/logon command	<i>Character value, *NONE</i>	Optional
PACING	Pacing	1-7, 7	Optional
LINESPEED	Line speed	*TYPE, 150, 300, 600, 1200, 1800, 2400, 3600, 4800, 7200, 9600, 19200, 38400	Optional
WORDLEN	Word length	*TYPE, 7, 8	Optional
PARITY	Type of parity	*TYPE, *EVEN, *ODD, *NONE, *MARK, *SPACE	Optional
STOPBITS	Stop bits	*TYPE, 1, 2	Optional
TRANSFORM	Host print transform	*NO, *YES	Optional
MFRTYPMDL	Manufacturer type and model	<i>Character value</i>	Optional

Keyword	Description	Choices	Notes
PPRSRC1	Paper source 1	*MFRTYPMDL, *LETTER, *LEGAL, *EXECUTIVE, *LEDGER, *A3, *A4, *A5, *B4, *B5, *CONT80, *CONT132, *NONE	Optional
PPRSRC2	Paper source 2	*MFRTYPMDL, *LETTER, *LEGAL, *EXECUTIVE, *LEDGER, *A3, *A4, *A5, *B4, *B5, *CONT80, *CONT132, *NONE	Optional
ENVELOPE	Envelope source	*MFRTYPMDL, *MONARCH, *NUMBER9, *NUMBER10, *B5, *C5, *DL, *NONE	Optional
ASCII899	ASCII code page 899 support	*NO, *YES	Optional
IMGCFG	Image configuration	Character value, *NONE	Optional
MAXPNDRQS	Maximum pending requests	1-31, 6	Optional
PRTCVT	Print while converting	*NO, *YES	Optional
PRTRQSTMR	Print request timer	1-3600, *NOMAX	Optional
FORMDF	Form definition	Qualified object name	Optional
	Qualifier 1: Form definition	Name, F1C10110	
	Qualifier 2: Library	Name, *LIBL, *CURLIB	
CHRID	Character identifier	Single values: *SYSVAL Other values: Element list	Optional
	Element 1: Graphic character set	1-32767	
	Element 2: Code page	1-32767	
RMTLOCNAME	Remote location	Element list	Optional
	Element 1: Name or address	Character value	
LCLLOCNAME	Local location	Communications name, *NETATR	Optional
MODE	Mode	Communications name, *QSPWTR, *NETATR	Optional
IGCFEAT	DBCS feature	Element list	Optional
	Element 1: Device features	Character value	
	Element 2: Last code point	X'4141'-X'FFFE'	
USRDFNOPT	User-defined options	Single values: *NONE Other values (up to 4 repetitions): Character value	Optional
USRDFNOBJ	User-defined object	Single values: *NONE Other values: Element list	Optional
	Element 1: Object	Qualified object name	
	Qualifier 1: Object	Name	
	Qualifier 2: Library	Name, *LIBL, *CURLIB	
	Element 2: Object type	*DTAARA, *DTAQ, *FILE, *USRIDX, *PSFCFG, *USRQ, *USRSPC	
USRDTATFM	Data transform program	Single values: *NONE Other values: Qualified object name	Optional
	Qualifier 1: Data transform program	Name	
	Qualifier 2: Library	Name, *LIBL, *CURLIB	
USRDRVPGM	User-defined driver program	Single values: *NONE Other values: Qualified object name	Optional
	Qualifier 1: User-defined driver program	Name	
	Qualifier 2: Library	Name, *LIBL, *CURLIB	
SYSDRVPGM	System driver program	Character value, *HPPJLDRV, *IBMPJLDRV, *NETSTNDRV, *IBMSNMPDRV, *IBMIPDRV	Optional
SECURECNN	Secure connection	*NO, *YES	Optional

Keyword	Description	Choices	Notes
VLDL	Validation list	Single values: <b>*NONE</b> Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Validation list	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
PUBLISHINF	Publishing information	<i>Element list</i>	Optional
	Element 1: Support duplex	<b>*UNKNOWN, *SIMPLEX, *DUPLEX</b>	
	Element 2: Support color	<b>*UNKNOWN, *NOCOLOR, *COLOR</b>	
	Element 3: Pages per minute black	1-32767, <b>*UNKNOWN</b>	
	Element 4: Pages per minute color	1-32767, <b>*UNKNOWN</b>	
	Element 5: Location	<i>Character value, *BLANK, X''</i>	
	Element 6: Data streams supported	Single values: <b>*UNKNOWN</b> Other values (up to 5 repetitions): <b>*PCL, *PS, *PDF, *IPDS, *SCS</b>	
TEXT	Text 'description'	<i>Character value, *BLANK</i>	Optional
DEPLOCNAME	Dependent location name	<i>Communications name, *NONE</i>	Optional
RMTNETID	Remote network identifier	<i>Communications name, *NETATR, *NONE</i>	Optional
WSCST	Workstation customizing object	Single values: <b>*NONE</b> Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Workstation customizing object	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
AUT	Authority	<i>Name, *CHANGE, *ALL, *USE, *EXCLUDE, *LIBCRTAUT</i>	Optional

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## Device description (DEV D)

Specifies the name of the device description.

This is a required parameter.

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## Device class (DEVCLS)

Specifies the device class for this display station or printer.

**\*LCL** This device description is for a device connected to a local work station controller.

**\*RMT** This device description is for a device connected to a remote work station controller.

**\*VRT** This device description is for a virtual device.

**\*SNPT**

This device description is for a printer connected to an SNA pass-through advanced program-to-program communications (APPC) controller. SNA pass-through support allows the user to connect this printer with host logical unit (LU) types 0 through 3 applications.

**\*LAN** The device description is for a printer connected directly to a local area network (LAN).

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## Device type (TYPE)

Specifies the type of printer this device description represents.

This is a required parameter.

The valid values are:

- 3287
- 3812
- 4214
- 4234
- 4245
- 4247
- 5219
- 5224
- 5225
- 5256
- 5262
- 5553 (double-byte character set printer)
- 5583 (double-byte character set printer)
- 6252
- 6404
- 6408
- 6412
- \*IPDS

For ASCII devices only: The following device types are listed with their more common descriptions:

Type	Description
4019	IBM LaserPrinter
4201	IBM Proprinter II
4202	IBM Proprinter XL
4207	IBM Proprinter X24
4208	IBM Proprinter XL24
4216	IBM Personal Pageprinter
4224	IBM 4224 Printer
4234	IBM 4234 Printer
5204	IBM Quickwriter
6252	IBM ImpactWriter

**Note:** Proprinter, Quickwriter, and ImpactWriter are registered trademarks of International Business Machines.

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## Device model (MODEL)

Specifies the model number of the device.

### TYPE MODEL

3287	0
3812	1
4214	2
4234	2
4245	T12, T20
4247	CTA
5219	D1, D2
5224	1, 2
5225	1, 2, 3, 4
5256	1, 2, 3
5262	1
5553	B01
5583	200
6252	T08
*IPDS	0
6404	CTA
6408	CTA
6412	CTA

For ASCII devices only:

### \*ASCII

Specify this value if the model number cannot be easily determined for this printer. The system will assign a model number (if the device has a model number). The model number assigned by the system may not be the actual model number of your printer; see the following table to determine the model number which will be assigned by using \*ASCII. It is recommended that you determine your printer's model number if at all possible, and enter that number.

The possible choices are:

### TYPE MODEL

4019	1 (*ASCII)_
4201	2 (*ASCII), 3
4202	1 (*ASCII), 2, 3
4207	1 (*ASCII), 2
4208	1 (*ASCII), 2
4216	10 (*ASCII)
4224	301 (*ASCII), 302, 3E3
4234	13 (*ASCII)

5204 1 (\*ASCII)  
6252 AS8 (\*ASCII)

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## LAN attachment (LANATTACH)

Specifies the attachment of a printer when DEVCLS(\*LAN) is specified.

### \*LEXLINK

The printer is attached to lexlink.

\*IP The printer is attached to TCP/IP.

### \*USRDFN

The printer attachment is user-defined; either lexlink or TCP/IP.

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## Switched line list (SWTLINLST)

Specifies the name of the switched lines to which the printer is associated when DEVCLS(\*LAN) and LANATTACH(\*LEXLINK) or LANATTACH(\*USRDFN) are specified. The types of switched lines this printer may associate with are: frame relay direct, Token-Ring, Ethernet IEEE 802.3, and Ethernet with all standards specified. A maximum of 8 switched lines can be specified.

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## LAN remote adapter address (ADPTADR)

Specifies the 12-character hexadecimal LAN address of the remote printer when DEVCLS(\*LAN) and LANATTACH(\*LEXLINK) or LANATTACH(\*USRDFN) are specified. Valid values range from 000000000001 through FFFFFFFF00FE.

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## Adapter type (ADPTTYPE)

Specifies the type of LAN printer adapter to be used when DEVCLS(\*LAN) and LANATTACH(\*LEXLINK) or LANATTACH(\*USRDFN) are specified.

### \*INTERNAL

The printer has an internal LAN adapter.

### \*EXTERNAL

The printer has an external LAN adapter.

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---

## Adapter connection type (ADPTCNNTYP)

Specifies the type of ports supported by the external LAN printer adapter when DEVCLS(\*LAN) and ADPTTYPE(\*EXTERNAL) are specified.

**Note:** This parameter is ignored when ADPTTYPE(\*INTERNAL) is specified.

### \*PARALLEL

The LAN printer adapter supports one or more parallel ports.

### \*SERIAL

The LAN printer adapter supports one or more serial ports.

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## Emulated twinaxial device (EMLDEV)

Specifies, for ASCII printers, the twinaxial printer type that the ASCII printer will emulate.

**3812** 3812 model 1 emulation is valid for the following ASCII printers: 4019, 4216, and 5204.

**5219** 5219 model D2 emulation is valid for all ASCII printers except 4201, 4202, and 4234.

**5224** 5224 model 1 emulation is valid for all ASCII printers.

**5256** 5256 model 3 emulation is valid for all ASCII printers.

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## Advanced function printing (AFP)

Specifies whether or not this printer does advanced function printing. Most IPDS printers can be configured with AFP(\*YES) or AFP(\*NO). Most non-IPDS printers can be configured only with AFP(\*NO). This parameter is only used if \*LCL, \*RMT, or \*LAN is specified on the **Device class (DEVCLS)** parameter and \*IPDS is specified on the **Device type (TYPE)** parameter.

\*NO This printer is not used for advanced function printing.

\*YES This printer is used for advanced function printing.

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## AFP attachment (AFPATTACH)

Specifies the type of attachment used for a printer. This parameter is used only if \*YES is specified for the **Advanced function printing (AFP)** parameter.

\*WSC 3812 or 3816 printers are attached to a local or remote work station controller.

### \*APPC

3820, 3825, 3827, or 3835 printers are attached by LU 6.2 using APPC/APPN.

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## Port number (PORT)

Specifies the port number for printer devices. Valid values range from 0 through 65535. Some printer devices may further restrict the valid value range.

For twinaxial attached printers: Valid values range from 0 through 7.

For printers attached to a TCP/IP network, where DEVCLS(\*LAN), TYPE(3812), and LANATTACH(\*IP) are specified:

**Note:** If the device supports the Simple Network Management Protocol (SNMP), SYSDRVPGM(\*IBMSNMPDRV), or the HP Printer Job Language (PJP), SYSDRVPGM(\*IBMPJLDRV), refer to the device's documentation, or contact the device manufacturer to determine the port number.

If the device supports the Internet Printing Protocol (IPP), SYSDRVPGM(\*IBMIPPDRV), the well known port number is 631.

For printers attached to the ASCII workstation controller: Valid values range from 0 through 17 and indicate the port of the ASCII workstation controller to which the printer is attached. Without the 12-port expansion feature, only ports 0 through 5 are valid. With the 12-port expansion feature, ports 6 through 17 are added.

For printers attached to a LAN, where DEVCLS(\*LAN) TYPE(3812), and LANATTACH(\*LEXLINK) or LANATTACH(\*USRDFN):

**Note:** If ADPTTYPE(\*EXTERNAL) is specified, the port number value indicates which parallel or serial port to use, if there is more than one port on the external LAN adapter. Valid values range from 0 - 17.

If ADPTTYPE(\*INTERNAL) is specified, the port number is not required.

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## Switch setting (SWTSET)

Specifies the switch setting for local twinaxial devices.

Valid values range from 0 to 6.

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## Local location address (LOCADR)

Specifies the local location address for this device.

The possible values range from 00 to FE. The type of controller to which the device is being attached determines which values are valid.

### Controller

	Valid Values
5251	00, 02-09
5294	00-1B
5394	00-14
5494	00-37

3174 02-41

3274 02-41

#### SNA Host

01-FE

4701 02-FE

4702 02-FE

4680 02-54

4684 02-FE

FBSS 02-FE

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## Auxiliary printer (AUXPRT)

Specifies, for ASCII printers, whether or not this printer description is for an auxiliary printer. An auxiliary printer is attached to an ASCII display station, instead of being physically cabled to the ASCII work station controller. All data sent to the printer passes through the display station.

**\*YES** Specifies that this printer is attached to the auxiliary port of an ASCII display.

**\*NO** Specifies that this printer is physically cabled to the ASCII work station controller.

For auxiliary printers, the following parameters must match those specified for the ASCII display to which this printer is attached:

- ATTACH (Physical attachment)
- LINESPEED (Line speed)
- WORDLEN (Word length)
- PARITY (Type of parity)
- STOPBITS (Stop bits)

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## Emulating ASCII device (EMLASCII)

Specifies, for ASCII devices, whether the device being configured is emulating a supported ASCII device type (TYPE parameter). When an ASCII device is configured, choices for the following parameters are restricted to the valid range for that device:

- ATTACH (Physical attachment)
- LINESPEED (Line speed)
- WORDLEN (Word length)
- PARITY (Type of parity)
- STOPBITS (Stop bits)

For ASCII devices emulating supported ASCII device types, these restrictions may not be applicable (the emulating device might have a wider range of choices for these parameters than the emulated ASCII device does). When EMLASCII(\*YES) is specified, these parameter restrictions are not enforced; the user is allowed to enter the full range of values for these parameters, but also is responsible for verifying that the values selected are valid for the device being configured.

**\*NO** Specifies that the device being configured is one of the supported ASCII device types for the

**Device type (TYPE)** parameter, and that the device-specific restrictions for the physical attachment, line speed, word length, type of parity, and stop bits parameters are to be enforced.

- \***YES** Specifies that the device being configured is emulating one of the supported ASCII device types (TYPE parameter), and that the device-specific restrictions for the physical attachment, line speed, word length, type of parity, and stop bits parameters are not enforced.

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## Physical attachment (ATTACH)

For ASCII printers, specifies the physical attachment of the printer to the ASCII work station controller.

### \*EIA422

Specifies EIA-422 attachment (valid for all auxiliary printers, and the following non-auxiliary printers: 4201-3, 4202-3, 4207-2, 4208-2, 4224, 4234).

### \*DIRECT

Specifies EIA-232 Direct attachment.

### \*MODEM

Specifies EIA-232 modem attachment (valid for auxiliary printers only).

- \***PTT** Specifies Post Telephone and Telegraph (PTT) attachment (valid for auxiliary printers only).

### \*WIRE3

Specifies EIA-232 3-wire attachment.

### \*WIRE4

Specifies EIA-232 4-wire attachment.

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## Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

- \***YES** This device is varied on automatically at IPL.

- \***NO** This device is not varied on automatically at IPL.

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## Attached controller (CTL)

Specifies the name of the controller description to which this device is attached.

**Note:** To use this device for communicating with a remote location that resides on the same system as the local location, specify a controller description that was created with LINKTYPE (\*LOCAL) specified.

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## Language type (LNGTYPE)

For ASCII printers, describes the default country keyboard language identifier for this printer.

The following languages can be used by ASCII devices only if either host print transform or work station customization are also used: ALI, BGB, CSB, ESB, HNB, IRB, JPB, LTB, LVB, MKB, PKB, PLB, RMB, RUB, SKB, SQB, TRB, UAB, and YGI.

**\*SYSVAL**

The system uses the QKBDTYPE system value.

***language-type***

Specify the correct country keyboard language identifier for this printer from the following table.

**Identifier**

**Language(Country) - ASCII Device Groups**

<b>ALI</b>	Albania
<b>CLB</b>	Arabic X/Basic - D*
<b>AGB</b>	Austria/Germany - A, B
<b>AGI</b>	Austria/Germany Multinational - A, B
<b>BLI</b>	Belgium Multinational - B
<b>BRB</b>	Brazilian Portuguese
<b>BGB</b>	Bulgaria
<b>CAB</b>	Canadian French - A, B
<b>CAI</b>	Canadian French Multinational - A, B
<b>SPB</b>	Catalan
<b>YGI</b>	Croatia/Serbia (Latin)/Slovenia
<b>CYB</b>	Cyrillic
<b>CSB</b>	Czech Republic
<b>DMB</b>	Denmark - B
<b>DMI</b>	Denmark Multinational - B
<b>ESB</b>	Estonia
<b>FNB</b>	Finland/Sweden - B
<b>FNI</b>	Finland/Sweden Multinational - B
<b>FAB</b>	France (Azerty) - A, B
<b>FAI</b>	France (Azerty) Multinational - A, B
<b>GNB</b>	Greek (see note)
<b>NCB</b>	Hebrew - D*
<b>HNB</b>	Hungary
<b>ICB</b>	Iceland
<b>ICI</b>	Iceland Multinational
<b>IRB</b>	Iran (Farsi)
<b>ITB</b>	Italy - A, B
<b>ITI</b>	Italy Multinational - A, B
<b>JPB</b>	Japan Latin Extended
<b>ROB</b>	Latin-2/ROECE

**LVB** Latvia  
**LTB** Lithuania  
**MKB** FYR Macedonia (Former Yugoslav Republic)  
**NEB** Netherlands  
**NEI** Netherlands Multinational  
**NWB** Norway - B  
**NWI** Norway Multinational - B  
**PLB** Poland  
**PRB** Portugal - B  
**PRI** Portugal Multinational - B  
**RMB** Romania  
**RUB** Russia  
**SQB** Serbia (Cyrillic)  
**SKB** Slovakia  
**SPB** Spain - B  
**SPI** Spain Multinational - B  
**SSB** Spanish Speaking - B  
**SSI** Spanish Speaking Multinational - B  
**SWB** Sweden - B  
**SWI** Sweden Multinational - B  
**SFI** Switzerland/France Multinational - B  
**SGI** Switzerland/Germany Multinational - B  
**THB** Thailand  
**TKB** Turkey (Qwerty)  
**TRB** Turkey (F)  
**UAB** Ukraine  
**UKB** United Kingdom - A, B  
**UKI** United Kingdom Multinational - A, B  
**USB** United States/Canada - A, B, C  
**USI** United States/Canada Multinational - A, B, C  
**PKB** Urdu  
**YGI** Languages of the former Yugoslavia

**Note:** The GNB code is the current identifier for Greece. The GKB code was used prior to V2R1, and continues to be supported, but provides fewer characters than the recommended GNB code.

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## Print quality (PRTQLTY)

Specifies whether the default print quality for ASCII printers should be draft (\*DRAFT), standard (\*STD), or near-letter quality (\*NLQ), from least to best quality. All ASCII printer types (with all emulations) support this parameter. If the printer is emulating a 5219 (EMLDEV parameter), this quality setting is overridden by individual printer files sent to this printer.

**Note:** All twinaxial printer emulations support this parameter. If the ASCII printer is emulating a 5219 twinaxial printer, then this print quality setting can be overridden by individual print files sent to this printer.

**\*STD** Specifies standard quality setting.

**\*DRAFT**  
Specifies draft quality setting.

**\*NLQ** Specifies near letter quality setting.

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## Font identifier (FONT)

Specifies the font identifier and the point size used by the 3812, 3816, 5219 printers (including ASCII printers emulating the 5219 printer), and IPDS printers. A font identifier (up to 10 digits) is used with this printer file. Each font identifier has an implied characters-per-inch (CPI) value. If an identifier or point size is not specified, the system automatically sets one.

**Note:** Some fonts may be substituted by the printer. Consult the various printer reference guides for details.

### Element 1: Font identifier

*identifier*  
Specify the font identifier associated with this printer.

### Element 2: Point size

**\*NONE**  
The point size is supplied by the system and is determined by the specified font identifier.

*point-size*  
Specify a point size ranging from 0.1 through 999.9.

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## Form feed (FORMFEED)

Specifies the form feed attachment used for this spooled file. This parameter determines how forms are fed into the printer. Not all printers support this parameter. Refer to the Create Printer File (CRTPRTF) command to determine if this parameter is supported.

**Note:** The FORMFEED parameter is overridden by the value specified on the PPRSRC1 parameter when the host print transform function is enabled.

**\*TYPE** Form feed value is determined by the system based on printer type. For MODEL(\*IPDS), this value cannot be determined accurately. You must select a value that is appropriate for the printer: \*CONT, \*CONT2, \*CUT, or \*AUTOCUT.

**\*CONT**

Continuous forms are used by the printer. Some printers (3812, 4216) don't have tractor feed attachments (they don't actually support continuous forms). But in some cases, \*CONT must be specified to match what the emulated twinaxial printer supports.

**\*CONT2**

Continuous forms are used by the printer. The form is fed from the secondary tractor feed attachment. The secondary tractor feed attachment must be on the printer device. This value is allowed for 4214, 4234, 4247, and \*IPDS printers.

**\*CUT** Single-cut sheets are used by the printer. For cut sheets, the forms alignment message is not sent. This value is valid for all ASCII printers, except the 4216 Printer emulating a SCS 5219 Printer.

**\*AUTOCUT**

Single-cut sheets are fed into the printer automatically. The printer must have the sheet feed attachment. The \*AUTOCUT feature is valid for 4207, 4208, 4216, 4224, and 5204 printers that are emulating a 5219 printer.

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## Separator drawer (SEPDRAWER)

Specifies which drawer is selected for printing separators.

**\*FILE** The separator pages are printed on paper from the same drawer as the rest of the spooled file.

*separator-drawer*

Specify a value ranging from 1 through 255 to indicate the drawer from which the separator pages are printed.

**Note:** For some printers, SEPDRAWER(3) implies an envelope drawer.

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## Separator program (SEPPGM)

Specifies a style of separator page by allowing you to call a user exit program while printing job and file separators.

**\*NONE**

The separator pages are not changed.

*exit-program-name*

Specify an exit program name.

The possible library values are:

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

**\*CURLIB**

The current library for the job is used to locate the exit program. If no library is specified as the current library for the job, the QGPL library is used.

*library-name*

Specify the name of the library where the exit program is located.

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## Number of drawers (NBRDRAWER)

Specifies, for ASCII printers defined with \*AUTOCUT for the form feed (FORMFEED parameter), whether the printer's sheet feed attachment supports 1, 2, or 3 drawers. This parameter is not applicable if form feed is \*CONT or \*CUT.

**Note:** The number of drawers parameter specifies how many drawers the printer physically supports, not which drawer the paper is selected from. The individual print files sent to the printer will dictate which drawer is selected.

- 1 One drawer is physically supported.
- 2 Two drawers are physically supported.
- 3 Three drawers are physically supported.

For the printers that support FORMFEED(\*AUTOCUT), the following number of drawers are supported:

1. For 4207-1 and 4208 printers, only NBRDRAWER(1) is valid.
2. For a 4224 printer, only NBRDRAWER(3) is valid.
3. For 4207-2, 4216, and 5204 printers, NBRDRAWER values of 1, 2, and 3, are supported.

**Note:** NBRDRAWER(3) implies that two paper drawers and an envelope drawer are used.

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## Printer error message (PRTERMSG)

Specifies whether the device has inquiry messages or informational messages for recoverable errors. This parameter is not applicable for printers attached to ASCII work station controllers.

**\*INQ** Inquiry messages are sent for recoverable errors.

**\*INFO**  
Informational messages are sent for recoverable errors.

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## Message queue (MSGQ)

Specifies the message queue to which operational messages for this device are sent.

**\*CTLD**  
Messages are sent to the message queue defined in the attached controller. The message queue is determined when the device is varied on.

**\*SYSOPR**  
Messages are sent to the system operator message queue (QSYS/QSYSOPR).

*message-queue-name*  
Specify the name of the message queue to which operational messages are sent.

**\*LIBL** All libraries in the job's library list are searched until the first match is found.

**\*CURLIB**  
The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

*library-name*  
Specify the name of the library to be searched.



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## Maximum length of request unit (MAXLENRU)

Specifies, for remote display stations and printers, the maximum request unit (RU) length (in bytes) allowed.

### \*CALC

The system determines the best value to use. A value of \*CALC must be specified for those devices not attached to an X.25 network. \*CALC may be specified for devices attached to an X.25 network. In all instances, \*CALC is the recommended value.

### *maximum-length-request-unit*

Specify 241 or 247. These values are valid only for devices attached to X.25 networks. If the recommended value of \*CALC is not specified, it is recommended that 241 be used for ELLC and 247 be used for QLLC. The values 245 and 256 can be specified, but the result is the same as specifying \*CALC.

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## Application type (APPTYPE)

Specifies the application type used by this device.

### \*NONE

The device is not used for any application.

**\*NRF** The device is used for the network routing facility application.

### **\*DEVINIT**

The device starts (initiates) the session.

### **\*APPINIT**

The application program starts (initiates) the session.

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## Activation timer (ACTTMR)

Specifies the amount of time (in seconds) to wait for the device to respond to the activation request from the host iSeries system. If the device does not respond within this time, it is considered not available.

**170** The device waits 170 seconds.

### **\*NOMAX**

The device waits forever.

**Note:** \*NOMAX is valid only when DEVCLS(\*LAN) and AFP(\*YES), or when is specified.

### *activation-timer*

Specify a number indicating the number of seconds before the device is considered not available.

**Note:** If LANATTACH is \*LEXLINK, and the specified number of seconds has elapsed, an inquiry message is issued.

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## Inactivity timer (INACTTMR)

Specifies an inactivity timer (time-out) value. This parameter also specifies what happens when the time-out value is exceeded, dependent on other attributes of the device:

- For devices connected using SNA pass-through (SNPT) support, the user is informed by a message to QSYSOPR and the session is ended when the amount of time that the device is not bound to a host application exceeds the time-out value. The user must reestablish the connection and session.
- For devices with an application type value of \*APPINIT, \*DEVINIT, or \*NRF, the session is ended when the device is inactive (the file opened against the device is closed and no additional requests to open files are received for the device) for a period of time that exceeds the time-out value.

**Note:** This timer is not used by devices allocated to a subsystem (normal interactive use) because the subsystem always has a file open for the device. The timer is used by batch jobs that open and close files for the device.

For all other attachments, valid values range from 1 through 30 minutes.

### \*ATTACH

This value varies by the value on the physical attachment (ATTACH parameter) and certain values on the device class (DEVCLS) and application type (APPTYPE) parameters.

1. For DEVCLS(\*SNPT) or APPTYPE(\*DEVINIT) support, \*ATTACH maps to \*NOMAX.
2. For DEVCLS(\*LAN), \*ATTACH maps to \*SEC15.
3. For APPTYPE(\*NRF) and APPTYPE(\*APPINIT) support, \*ATTACH maps to 1 minute.

### \*NOMAX

Maximum inactivity time is not tracked.

### \*SEC15

A 15-second time-out period is used.

### \*SEC30

A 30-second time-out period is used.

### *inactivity-timer*

Specify a time-out value.

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## SNA pass-through device desc (SNPTDEV)

Specifies the name of the associated SNA pass-through device that is attached to a host or advanced program-to-program communications (APPC) controller.

### \*NONE

No name is specified.

### *associated-device-name*

Specify the name of a device that is attached to a host or an APPC controller that is associated with this device.

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## SNA pass-through group name (SNPTGRP)

Specifies the name configured for a group of host devices in a configuration list. This indicates that this device is tied to any one of the devices in that group which is available.

**\*NONE**

No name is specified.

***group-name***

Specify the name configured for a group of host devices that must be associated with this device.

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## Host signon/logon command (LOGON)

Specifies the sign-on (logon) text. This parameter is allowed when DEVCLS(\*SNPT) or APPTYPE(\*NRF) is specified. APPTYPE(\*NRF) specifies the logon string that is sent to the host system when a request is made to establish a session. DEVCLS(\*SNPT) specifies the sign-on (logon) text that is sent to the host system after starting SNA pass-through support.

Specifies the logon string that is sent to the system services control point (SSCP) on the host network when the file is opened.

**\*NONE**

No text is sent to the host system.

***host-logon-command***

Specify text that is sent to the host system. The text must be enclosed in apostrophes if it contains blanks or other special characters. All apostrophes within the text must be represented by two apostrophes. A maximum of 256 characters can be specified.

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## Pacing value (PACING)

Specifies the SNA pacing value used for request/response units (RUs).

**7** A value of 7 is used as the RU pacing value.

***spacing-value***

Specify a value, ranging from 1 through 7.

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## Line speed (LINESPEED)

Specifies the line speed in bits per second (bps).

**\*TYPE** The system uses the suggested setting for this device type. \*TYPE will select 19200 bits per second for all printers.

***line-speed***

Valid values are: 150, 300, 600, 1200, 1800, 2400, 3600, 4800, 7200, 9600, 19200, and 38400 bits per second.

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## Word length (WORDLEN)

Specifies, for ASCII devices, the word length (bits per character) used to communicate over the attachment between the ASCII work station controller and the device. For modem and Post Telephone and Telegraph (PTT) attachments, the word length must be the same as the word length selected for the modem. For auxiliary printers connected to the auxiliary port of a display station, the word length must be the same as the word length specified for the display's device description.

Some devices do not support all word lengths; verify that your device supports the word length you intend to use.

**\*TYPE** The system uses the suggested setting for this device type. \*TYPE selects 8-bit word lengths for all printers.

**7** Specifies 7-bit word lengths.

**8** Specifies 8-bit word lengths.

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## Type of parity (PARITY)

Specifies, for ASCII devices, the type of parity used to communicate over the attachment between the ASCII work station controller and the device. For modem and Post Telephone and Telegraph (PTT) attachments, the type of parity must be the same as the type of parity selected for the modem. For auxiliary printers connected to the auxiliary port of a display station, the type of parity must be the same as the type of parity specified for the display's device description.

Some devices do not support all types of parity; verify that your device supports the type of parity you intend to use.

**\*TYPE** The system uses the suggested setting for this device type. \*TYPE will select \*EVEN (Even parity) for all printers.

**\*EVEN**  
Specifies Even parity.

**\*ODD** Specifies Odd parity.

**\*NONE**  
Specifies that no parity bit is used.

**\*MARK**  
Specifies Mark parity (1 is used for the parity).

**\*SPACE**  
Specifies Space parity (0 is used for the parity).

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## Stop bits (STOPBITS)

Specifies, for ASCII devices, the number of stop bits used to communicate over the attachment between the ASCII work station controller and the device. For modem and Post Telephone and Telegraph (PTT) attachments, the number of stop bits must be the same as the number of stop bits selected for the modem. For auxiliary printers connected to the auxiliary port of a display station, the number of stop bits must be the same as the number of stop bits specified for the display's device description.

Some devices do not support all numbers of stop bits; verify that your device supports the number of stop bits you intend to use.

**\*TYPE** The system uses the suggested setting for this device type. \*TYPE will select 1 stop bit for all printers.

- 1 Specifies 1 stop bit.
- 2 Specifies 2 stop bits.

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## Host print transform (TRANSFORM)

Specifies whether the printer uses host print transform support.

**\*NO** The printer does not use host print transform support.

**\*YES** The printer uses host print transform support.

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## Manufacturer type and model (MFRTYPMDL)

Specifies the manufacturer, type, and model for a printer using the host print transform function.

### *character-value*

Specify the corresponding manufacturer, type, and model for a printer.

The following list shows the values to be specified for the device you are using:

**Note:** If \*WSCSTxxx is specified for MFRTYPMDL, a workstation customizing object must be specified.

### Manufacturer Type and Model Table

*IBM2380	IBM 2380 Personal Printer Series II IBM 2380 Plus Printer
*IBM2381	IBM 2381 Personal Printer Series II, IBM 2381 Plus Printer
*IBM2390	IBM 2390 Personal Printer Series II IBM 2390 Plus Printer
*IBM2391	IBM 2391 Personal Printer Series II IBM 2391 Plus Printer
*IBM3112	IBM 3112 Page Printer
*IBM3116	IBM 3116 Page Printer
*IBM3130	IBM 3130 Advanced Function Printer
*IBM3812	IBM 3812 Pageprinter
*IBM3816	IBM 3816 Pageprinter
*IBM3912HP	IBM 3912 Page Printer (HP Mode)
*IBM3916HP	IBM 3916 Page Printer (HP Mode)
*IBM39302	IBM 39302 IBM 3930-02S Page Printer IBM 39302 IBM 3930-02D Page Printer
*IBM39303	IBM 39303 IBM 3930-03S Page Printer IBM 39303 IBM 3930-03D Page Printer
*IBM4019	IBM 4019 LaserPrinter IBM 4019E LaserPrinter E
*IBM4019HP	IBM 4019 LaserPrinter (HP Mode) IBM 4019E LaserPrinter E (HP Mode)
*IBM4029	IBM 4029-010 LaserPrinter 5E IBM 4029-020 LaserPrinter 6 IBM 4029-030 LaserPrinter 10 IBM 4029-040 LaserPrinter 10L
*IBM4029HP	IBM 4029-010 LaserPrinter 5E (HP Mode)

	IBM 4029-020 LaserPrinter 6 (HP Mode)
	IBM 4029-030 LaserPrinter 10 (HP Mode)
	IBM 4029-040 LaserPrinter 10L (HP Mode)
*IBM4037	IBM 4037 5E Printer
*IBM4039HP	IBM 4039 LaserPrinter 10D (HP Mode)
	IBM 4039 LaserPrinter 10D Plus (HP Mode)
	IBM 4039 LaserPrinter 10R (HP Mode)
	IBM 4039 LaserPrinter 10R Plus (HP Mode)
	IBM 4039 LaserPrinter 12R (HP Mode)
	IBM 4039 LaserPrinter 12R Plus (HP Mode)
	IBM 4039 LaserPrinter 12L (HP Mode)
	IBM 4039 LaserPrinter 12L Plus (HP Mode)
	IBM 4039 LaserPrinter 16L (HP Mode)
	IBM 4039 LaserPrinter 16L Plus (HP Mode)
*IBM4070	IBM 4070 IJ (IBM Mode)
*IBM4070EP	IBM 4070 IJ (Epson Mode)
*IBM4072	IBM 4072 ExecJet
*IBM4076	IBM 4076 ExecJet II Printer (HP Mode)
*IBM42011	IBM 4201-1 Proprinter
*IBM42012	IBM 4201-2 Proprinter II
*IBM42013	IBM 4201-3 Proprinter III
*IBM42021	IBM 4202-1 Proprinter XL
*IBM42022	IBM 4202-2 Proprinter II XL
*IBM42023	IBM 4202-3 Proprinter III XL
*IBM42071	IBM 4207-1 Proprinter X24
*IBM42072	IBM 4207-2 Proprinter X24E
*IBM42081	IBM 4208-1 Proprinter XL24
*IBM42082	IBM 4208-2 Proprinter XL24E
*IBM4212	IBM 4212 Proprinter 24P
*IBM4216	IBM 4216-10 Personal Pageprinter
*IBM4226	IBM 4226-302 Printer
*IBM4230	IBM 4230-4S3 Printer (IBM Mode)
	IBM 4230-4I3 Printer (IBM Mode)
*IBM4232	IBM 4232-302 Printer (IBM Mode)
*IBM4244ASF	IBM4244 Printer (single tractor feed and ASF)
*IBM4244DUAL	IBM4244 Printer (dual tractor feeds)
*IBM4244MAN	IBM4244 Printer (single tractor or manual feed selection)
*IBM4247ASF	IBM4247 Printer (single tractor feed and ASF)
*IBM4247DUAL	IBM4247 Printer (dual tractor feeds)
*IBM4247MAN	IBM4247 Printer (single form feed or manual selection)
*IBM4308	IBM Infoprint Color 8
*IBM4312	IBM Network Printer 12
*IBM4317	IBM Network Printer 17
*IBM4320	IBM InfoPrint 20
*IBM4322	IBM InfoPrint 21
*IBM4324	IBM Network Printer 24
*IBM4332	IBM InfoPrint 32
*IBM4340	IBM InfoPrint 40
*IBM47121	IBM 4712-1 Transaction Printer
*IBM47122	IBM 4712-2 Transaction Printer
*IBM47221	IBM 4722-1 Document Printer
*IBM47222	IBM 4722-2 Document Printer
*IBM4770	IBM 4770 InkJet Transaction Printer
*IBM4912	IBM InfoPrint 12
*IBM5152	IBM 5152 Graphics Printer
*IBM5201	IBM 5201-2 Quietwriter
*IBM5202	IBM 5202-1 Quietwriter III
*IBM5204	IBM 5204-1 Quickwriter
*IBM5216	IBM 5216 Wheelprinter
*IBM5575	IBM 5579-H02 Printer
	IBM 5579-K02 Printer
	IBM 5577-T02 Printer
	IBM 5579-S02 Printer
	IBM 5577-K02 Printer
	IBM 5577-J02 Printer

IBM 5577-G02 Printer  
 IBM 5577-H02 Printer  
 IBM 5577-F02 Printer  
 IBM 5577-B02 Printer  
 IBM 5575-H02 Printer  
 IBM 5575-F02 Printer (with SBCS Cartridge)  
 IBM 5575-B02 Printer (with SBCS Cartridge)  
 IBM 5573-K02 Printer  
 IBM 5573-J02 Printer  
 IBM 5573-H02 Printer  
 IBM 5573-G02 Printer  
 IBM 5572-B02 Printer  
 IBM 5417-011 Printer  
 IBM 5407-011 Printer  
 IBM 5327-011 Printer  
 IBM 4208-502 Printer  
 \*IBM6400 IBM 6400 Printers (IBM Mode)  
 \*IBM6400EP IBM 6400 Printers (Epson Mode)  
 \*IBM6404 IBM 6404 Printers (IBM Mode)  
 \*IBM6404EP IBM 6404 Printers (Epson Mode)  
 \*IBM6408 IBM 6408-A00 Printer (IBM Mode)  
 IBM 6408-CTA Printer (IBM Mode)  
 \*IBM6408EP IBM 6408-A00 Printer (Epson Mode)  
 IBM 6408-CTA Printer (Epson Mode)  
 \*IBM6412 IBM 6412-A00 Printer (IBM Mode)  
 IBM 6412-CTA Printer (IBM Mode)  
 \*IBM6412EP IBM 6412-A00 Printer (Epson Mode)  
 IBM 6412-CTA Printer (Epson Mode)  
 \*IBMPAGES IBM 5589-H01 Printer  
 IBM 5588-H02 Printer  
 IBM 5587-H01 Printer  
 IBM 5586-H02 Printer  
 IBM 5585-H01 Printer  
 IBM 5584-K02 Printer  
 IBM 5584-H02 Printer  
 IBM 5584-G02 Printer  
 \*IBMPAGESNPB Same as \*IBMPAGES, but without text  
 positioning adjustments for a no-print border  
 \*IBMPAGES300 IBM Network Printer 12 (with PAGES feature)  
 IBM Network Printer 17 (with PAGES feature)  
 IBM Network Printer 24 (with PAGES feature)  
 IBM Infoprint 20 (with PAGES feature)  
 IBM Infoprint 32 (with PAGES feature)  
 IBM Infoprint 40 (with PAGES feature)  
 \*IBMPAGES300NPB Same as \*IBMPAGES300, but without text  
 positioning adjustments for a no-print border  
 \*INFOPRINT8C IBM Infoprint Color 8  
 \*INFOPRINT12 IBM Infoprint 12  
 \*INFOPRINT20 IBM Infoprint 20  
 \*INFOPRINT21 IBM Infoprint 21  
 \*INFOPRINT32 IBM Infoprint 32  
 \*INFOPRINT40 IBM Infoprint 40  
 \*INFOPRINT70 IBM Infoprint 70  
 \*INFOPRINT85 IBM Infoprint 2085  
 \*INFOPRINT105 IBM Infoprint 2105  
 \*INFOPRINT1116 IBM Infoprint 1116  
 \*INFOPRINT1120 IBM Infoprint 1120  
 \*INFOPRINT1125 IBM Infoprint 1125  
 \*INFOPRINT1130 IBM Infoprint 1130  
 \*INFOPRINT1140 IBM Infoprint 1140  
 \*INFOPRINT1145 IBM Infoprint 1145  
 \*INFOPRINT1220C IBM Infoprint 1220C  
 \*INFOPRINT1222 IBM Infoprint 1222  
 \*INFOPRINT1226 IBM Infoprint 1226  
 \*INFOPRINT1228C IBM Infoprint 1228C  
 \*INFOPRINT1312 IBM Infoprint 1312  
 \*INFOPRINT1332 IBM Infoprint 1332

\*INFOPRINT1352 IBM Infoprint 1352  
 \*INFOPRINT1357C IBM Infoprint 1357C  
 \*INFOPRINT1372 IBM Infoprint 1372  
 \*INFOPRINT2000 IBM Infoprint 2000  
 \*INFOPRINT2085 IBM Infoprint 2085  
 \*INFOPRINT2105 IBM Infoprint 2105  
 \*CANLIPS3 Canon LIPS3 DBCS Printers  
 \*CANLIPS3NPB Same as \*CANLIPS3, but without text  
 positioning adjustments for a no-print border  
 \*CPQPM15 COMPAQ\*\* PageMark 15 (HP Mode)  
 \*CPQPM20 COMPAQ PageMark 20 (HP Mode)  
 \*EPAP2250 Epson ActionPrinter 2250  
 \*EPAP3250 Epson ActionPrinter 3250  
 \*EPAP5000 Epson ActionPrinter 5000  
 \*EPAP5500 Epson ActionPrinter 5500  
 \*EPDFX5000 Epson DFX-5000  
 \*EPDFX8000 Epson DFX-8000  
 \*EPEPL7000 Epson EPL-7000  
 \*EPEPL8000 Epson EPL-8000  
 \*EPFX850 Epson FX-850  
 \*EPFX870 Epson FX-870  
 \*EPFX1170 Epson FX-1170  
 \*EPLQ510 Epson LQ-510  
 \*EPLQ570 Epson LQ-570  
 \*EPLQ860 Epson LQ-860  
 \*EPLQ870 Epson LQ-870  
 \*EPLQ1070 Epson LQ-1070  
 \*EPLQ1170 Epson LQ-1170  
 \*EPLQ2550 Epson LQ-2550  
 \*EPLX810 Epson LX-810  
 \*EPSQ870 Epson SQ-870  
 \*EPSQ1170 Epson SQ-1170  
 \*ESCPDBCS Epson ESC/P DBCS Printers  
 \*HP11 HP LaserJet\*\* Series II  
 \*HP11D HP LaserJet IID  
 \*HP11P HP LaserJet IIP  
 \*HP11I HP LaserJet III  
 \*HP11ID HP LaserJet IIID  
 \*HP11IP HP LaserJet IIIP  
 \*HP11ISI HP LaserJet IIISi  
 \*HP4 HP LaserJet 4  
 \*HP5 HP LaserJet 5 series  
 \*HP5SI HP LaserJet 5Si  
 \*HP6 HP LaserJet 6 series  
 \*HP310 HP DeskJet 310  
 \*HP320 HP DeskJet 320  
 \*HP500 HP DeskJet 500  
 \*HP520 HP DeskJet 520  
 \*HP540 HP DeskJet 540  
 \*HP550C HP DeskJet 550C  
 \*HP560C HP DeskJet 560C  
 \*HP1100 HP LaserJet 1100 series  
 \*HP1200C HP DeskJet 1200C  
 \*HP1600C HP DeskJet 1600C  
 \*HP4000 HP LaserJet 4000 series  
 \*HP5000 HP LaserJet 5000 series  
 \*HP8000 HP LaserJet 8000 series  
 \*HPCOLORLJ HP Color LaserJet 5  
 \*HPDBCS HP LaserJet-compatible printers for  
 Double Byte Character Set (DBCS) input.  
 \*HPPAINT HP PaintJet  
 HP PaintJet XL  
 HP PaintJet XL300  
 \*LEX2380 Lexmark Forms Printer 2380 Plus  
 \*LEX2381 Lexmark Forms Printer 2381 Plus  
 \*LEX2390 Lexmark Forms Printer 2390 Plus  
 \*LEX2391 Lexmark Forms Printer 2391 Plus



*LEX4227	Lexmark 4227 Forms Printer
*LEXMARKC750	Lexmark C750 Color Printer
*LEXMARKC910	Lexmark C910 Color Printer
*LEXMARKC912	Lexmark C912 Color Printer
*LEXMARKE322	Lexmark E322 Printer
*LEXMARKE323	Lexmark E323 Printer
*LEXMARKT420	Lexmark T420 Printer
*LEXMARKT520	Lexmark T520 Printer
*LEXMARKT522	Lexmark T522 Printer
*LEXMARKT620	Lexmark T620 Printer
*LEXMARKT622	Lexmark T622 Printer
*LEXMARKT630	Lexmark T630 Printer
*LEXMARKT632	Lexmark T632 Printer
*LEXMARKT634	Lexmark T634 Printer
*LEXMARKW812	Lexmark W812 Printer
*LEXMARKW820	Lexmark W820 Printer
*LEXOPTRA	Lexmark Optra Family (HP Mode)
*LEXOPTRAC	Lexmark Optra C Color Printer
*LEXOPTRAN	Lexmark Optra N Printer
*LEXOPTRAS	Lexmark Optra S Printer family
*LEXOPTRASC	Lexmark Optra SC Color Printer
	Lexmark Optra Color 1200 Printer
*LEXOPTRAT	Lexmark Optra T Printer series
*LEXOPTRAW	Lexmark Optra W Printer series
*NECP2	NEC P2 Pinwriter
*NECP2200	NEC P2200 Pinwriter
*NECP2200XE	NEC P2200 XE Pinwriter
*NECP5200	NEC P5200 Pinwriter
*NECP5300	NEC P5300 Pinwriter
*NECP6200	NEC P6200 Pinwriter
*NECP6300	NEC P6300 Pinwriter
*NECPCPR201	NEC PC-PR101 DBCS Printer
	NEC PC-PR201 DBCS Printer
*NONE	Printer supports page-descriptor language generated by the CVTIMG API. NOTE: Spoolfiles with device type of *SCS or *AFPDS cannot be processed by the Host Print Transform function for these printers.
*OKI184IBM	Okidata Microline 184 Turbo (IBM Mode)
*OKI320IBM	Okidata Microline 320 (IBM Mode)
*OKI321IBM	Okidata Microline 321 (IBM Mode)
*OKI390IBM	Okidata Microline 390 Plus (IBM Mode)
*OKI391IBM	Okidata Microline 391 Plus (IBM Mode)
*OKI393IBM	Okidata Microline 393 Plus (IBM Mode)
*OKI590IBM	Okidata Microline 590 (IBM Mode)
*OKI591IBM	Okidata Microline 591 (IBM Mode)
*OKI400	Okidata OL400 LED Page Printer
*OKI800	Okidata OL800 LED Page Printer
*OKI810	Okidata OL810 LED Page Printer
*OKI820	Okidata OL820 LED Page Printer
*OKI3410	Okidata Pacemark 3410
*PAN1123EP	Panasonic KX-P1123 (Epson Mode)
*PAN1124EP	Panasonic KX-P1124 (Epson Mode)
*PAN1124IEP	Panasonic KX-P1124i (Epson Mode)
*PAN1180EP	Panasonic KX-P1180 (Epson Mode)
*PAN1180IEP	Panasonic KX-P1180i (Epson Mode)
*PAN1191EP	Panasonic KX-P1191 (Epson Mode)
*PAN1624EP	Panasonic KX-P1624 (Epson Mode)
*PAN1654EP	Panasonic KX-P1654 (Epson Mode)
*PAN1695EP	Panasonic KX-P1695 (Epson Mode)
*PAN2123EP	Panasonic KX-P2123 (Epson Mode)
*PAN2124EP	Panasonic KX-P2124 (Epson Mode)
*PAN2180EP	Panasonic KX-P2180 (Epson Mode)
*PAN2624EP	Panasonic KX-P2624 (Epson Mode)
*PAN4410HP	Panasonic KX-P4410 (HP Mode)
*PAN4420HP	Panasonic KX-P4420 (HP Mode)
*PAN4430HP	Panasonic KX-P4430 (HP Mode)

*PAN4450IHP	Panasonic KX-P4450i (HP Mode)
*PAN4451HP	Panasonic KX-P4451 (HP Mode)
*PANASONIC3510	Panasonic DP-3510 Printer (HP Mode)
*PANASONIC4510	Panasonic DP-4510 Printer (HP Mode)
*PANASONIC6010	Panasonic DP-6010 Printer (HP Mode)
*XR4215MRP	Xerox 4215/MRP (HP Mode)
*XR4219MRP	Xerox 4219/MRP (HP Mode)
*XR4220MRP	Xerox 4220/MRP (HP Mode)
*XR4230MRP	Xerox 4230/MRP (HP Mode)
*XR4235	Xerox 4235 LaserPrinting (HP Mode)
*XR4700II	Xerox 4700 II Color Document Printer (HP Mode)
*WSCSTA3	Printer not listed (A3-sized paper)
*WSCSTA4	Printer not listed (A4-sized paper)
*WSCSTA5	Printer not listed (A5-sized paper)
*WSCSTB4	Printer not listed (B4-sized paper)
*WSCSTB5	Printer not listed (B5-sized paper)
*WSCSTCONT80	Printer not listed (8-inch continuous forms)
*WSCSTCONT132	Printer not listed (13.2 inch continuous forms)
*WSCSTEXECUTIVE	Printer not listed (executive-sized paper)
*WSCSTLEDGER	Printer not listed (ledger-sized paper)
*WSCSTLEGAL	Printer not listed (legal-sized paper)
*WSCSTLETTER	Printer not listed (letter-sized paper)
*WSCSTNONE	Printer not listed (paper size not specified)
*WSCST	Printer not listed

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## Paper source 1 (PPRSRC1)

Specifies the type of paper used in paper source one.

### \*MFRYPMDL

The system uses the suggested setting for this printer.

### \*LETTER

The paper for this source is letter-sized (8.5 x 11 inches).

### \*LEGAL

The paper for this source is legal-sized (8.5 x 14 inches).

### \*LEDGER

The paper for this source is ledger-sized (11 x 17 inches).

### \*EXECUTIVE

The paper for this source is executive-sized (7.25 x 10.5 inches).

\*A3 The paper for this source is A3-sized (297mm x 420mm).

\*A4 The paper for this source is A4-sized (210mm x 297mm).

\*A5 The paper for this source is A5-sized (148 x 210mm).

\*B4 The paper for this source is B4-sized (257 x 364mm).

\*B5 The paper for this source is B5-sized (182 x 257mm).

### \*CONT80

The paper for this source is continuous form (8.0 inches).

### \*CONT132

The paper for this source is continuous form (13.2 inches).

### \*NONE

No paper source number one is specified.

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## Paper source 2 (PPRSRC2)

Specifies the type of paper used in paper source two.

### \*MFRTYPMDL

The system uses the suggested setting for this printer.

### \*LETTER

The paper for this source is letter-sized (8.5 x 11 inches).

### \*LEGAL

The paper for this source is legal-sized (8.5 x 14 inches).

### \*LEDGER

The paper for this source is ledger-sized (11 x 17 inches).

### \*EXECUTIVE

The paper for this source is executive-sized (7.25 x 10.5 inches).

\*A3 The paper for this source is A3-sized (297mm x 420mm).

\*A4 The paper for this source is A4-sized (210mm x 297mm).

\*A5 The paper for this source is A5-sized (148 x 210mm).

\*B4 The paper for this source is B4-sized (257 x 364mm).

\*B5 The paper for this source is B5-sized (182 x 257mm).

### \*NONE

No paper source number two is specified.

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## Envelope source (ENVELOPE)

Specifies the type of envelopes used in the third paper source.

### \*MFRTYPMDL

The system uses the suggested setting for this printer.

### \*MONARCH

The envelopes for this source are monarch-sized (3.875 x 7.5 inches).

### \*NUMBER9

The envelopes for this source are number 9-sized (3.875 x 8.875 inches).

### \*NUMBER10

The envelopes for this source are number 10-sized (4.125 x 9.5 inches).

\*B5 The envelope for this source is B5-sized (176 x 250mm).

\*C5 The envelopes for this source are C5-sized (162mm x 229mm).

\*DL The envelopes for this source are DL-sized (110mm x 220mm).

### \*NONE

No envelope source is specified.

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## ASCII code page 899 support (ASCII899)

Specifies whether the printer has ASCII code page 899 installed.

**\*NO** The printer does not have ASCII code page 899 installed.

**\*YES** The printer has ASCII code page 899 installed.

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## Image configuration (IMGCFG)

Specifies the image configuration for this printer. An image configuration object provides transform services for a variety of image and print datastream formats.

### **\*NONE**

No image configuration specified.

### *image-configuration*

Specify image configuration for a printer.

The following lists include the image configuration objects provided and suggested image configuration objects for many popular printers.

### Image Configuration Object Table

----- HP PCL Datastream -----	
*IMGA01	PCL 300-dpi printer
*IMGA02	PCL 600-dpi printer
*IMGA03	PCL 1200-dpi printer
*IMGA04	PCL 300-dpi color printer
*IMGA05	PCL 600-dpi color printer
*IMGA06	PCL 1200-dpi color printer
*IMGA07	PCL 75-dpi printer (No compression)
*IMGA08	PCL 600-dpi color printer with larger no-print border
*IMGA09	PCL 300-dpi printer (No compression)
----- Postscript Datastream -----	
*IMGB01	Postscript 300-dpi printer
*IMGB02	Postscript 600-dpi printer
*IMGB03	Postscript 1200-dpi printer
*IMGB04	Postscript 300-dpi color printer
*IMGB05	Postscript 600-dpi color printer
*IMGB06	Postscript 1200-dpi color printer
*IMGB07	Postscript 600x300-dpi color printer
*IMGB08	Postscript 1200x300-dpi color printer
*IMGB09	Postscript 360-dpi color printer
*IMGB10	Postscript 720-dpi color printer
*IMGB11	Postscript 1440x720-dpi color printer
*IMGB12	Postscript 400-dpi printer
*IMGB13	Postscript 800-dpi color printer
*IMGB14	Postscript 600-dpi color printer with larger no-print border
*IMGB15	Postscript 300-dpi color printer with larger no-print border
----- IPDS Datastream -----	
*IMGC01	IPDS 240-dpi printer
*IMGC02	IPDS 300-dpi printer
*IMGC03	IPDS 600-dpi printer
*IMGC04	IPDS 1200-dpi printer
*IMGC05	IPDS 240-dpi printer with no-print border
*IMGC06	IPDS 300-dpi printer with no-print border
*IMGC07	IPDS 600-dpi printer with no-print border
*IMGC08	IPDS 1200-dpi printer with no-print border

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*IMGC09    IPDS 240-dpi printer (IM/1 image only)
*IMGC10    IPDS 240-dpi printer with no-print border
            (IM/1 image only)
*IMGC11    IPDS 240-dpi printer (CCITT G4 compression)
----- PCL and Postscript Datastreams -----
*IMGD01    PCL/Postscript 300-dpi printer
*IMGD02    PCL/Postscript 600-dpi printer
*IMGD03    PCL/Postscript 1200-dpi printer
*IMGD04    PCL/Postscript 300-dpi color printer
*IMGD05    PCL/Postscript 600-dpi color printer
*IMGD06    PCL/Postscript 1200-dpi color printer
*IMGD07    PCL 300-dpi/Postscript 600-dpi printer
*IMGD08    PCL 300-dpi/Postscript 1200-dpi printer
*IMGD09    PCL 600-dpi/Postscript 300-dpi printer
*IMGD10    PCL 600-dpi/Postscript 1200-dpi printer
*IMGD11    PCL/Postscript 600-dpi color printer
            with larger no-print border

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### Recommended Image Configuration Objects by Printer Table

Compaq Pagemarc 20	*IMGD01
Epson EPCL-4 Printer	*IMGA01
Epson EPCL-5 Printer	*IMGA02
Epson Stylus Photo with Postscript	*IMGB10
Epson Stylus Color 600, 800 with Postscript	*IMGB11
HP Color Laserjet 5	*IMGA04
HP Color Laserjet 5M	*IMGD04
HP Deskjet 560C, 820C, 1200C	*IMGA04
HP Deskjet 500, 600, 1200	*IMGA01
HP Deskjet 1600C, 1600CN	*IMGA04
HP Deskjet 1600CM	*IMGD04
HP Laserjet II, IID, IIP	*IMGA09
HP Laserjet II, IID, IIP with Postscript	*IMGB01
HP Laserjet III, IIID, IIISi, 4L	*IMGA01
HP Laserjet III, IIID, IIISi, 4L with Postscript	*IMGD01
HP Laserjet 4, 4P, 4V, 4Si, 4 Plus	*IMGA02
HP Laserjet 4M, 4MP, 4MV, 4Si MX, 4M Plus	*IMGD02
HP Laserjet 5, 5P, 5Si	*IMGA02
HP Laserjet 5M, 5MP, 5Si MX	*IMGD02
HP Laserjet 6, 6P, 6L	*IMGA02
HP Laserjet 6M, 6MP	*IMGD02
IBM 3112, 3116 Page Printer with IPDS feature	*IMGD02
IBM 3112, 3116 Page Printer (ASCII/LAN)	*IMGA02
IBM 3112, 3116 Page Printer with Postscript	*IMGD02
IBM 3130, 3160-1 AF Printer (240-pe1 mode)	*IMGC01
IBM 3130 AF Printer (300-pe1 mode)	*IMGC02
IBM InfoPrint 20 with IPDS feature	*IMGC02
IBM InfoPrint 20 (ASCII)	*IMGA02
IBM InfoPrint 32 with IPDS feature	*IMGC02
IBM InfoPrint 32 (ASCII)	*IMGA02
IBM InfoPrint 60	*IMGC03
IBM InfoPrint 62 Model 2	*IMGC05
IBM InfoPrint 62 Model 3	*IMGC06
IBM InfoColor 70	*IMGB05
IBM InfoPrint 4000	*IMGC05
IBM InfoPrint 4000 High Resolution	*IMGC06
IBM 3825, 3827, 3828 AF Printer	*IMGC09
IBM 3825, 3827, 3828 AF Printer (with AFIG)	*IMGC01
IBM 3829 AF Printer	*IMGC01
IBM 3835-001 AF Printer	*IMGC10
IBM 3835-001 AF Printer (with AFIG)	*IMGC05
IBM 3835-002, 3900 AF Printer	*IMGC05
IBM 3912, 3916 Page Printer (ASCII/LAN)	*IMGA01
IBM 3912, 3916 Page Printer with IPDS feature (twinax)	*IMGC06
IBM 3930-02 Page Printer (IPDS diskette)	*IMGC01
IBM 3930-03 Page Printer	*IMGA01
IBM 3930-03 Page Printer with Postscript	*IMGD01

IBM 3935 AF Printer	*IMGC02
IBM 4019 LaserPrinters (HP mode)	*IMGA09
IBM 4019 LaserPrinters with Postscript	*IMGB01
IBM 4028 LaserPrinters	*IMGC06
IBM 4029 LaserPrinters	*IMGA01
IBM 4029 LaserPrinters with Postscript	*IMGB02
IBM 4039 LaserPrinters	*IMGA01
IBM 4039 LaserPrinters with Postscript	*IMGD07
IBM 4049 LaserPrinters	*IMGA02
IBM 4049 LaserPrinters with Postscript	*IMGD02
IBM 4079 Color Jetprinter PS	*IMGB09
IBM 4303 Network Color Printer	*IMGB05
IBM 4312, 4317, 4324 NP with IPDS feature (twinax)	*IMGC06
IBM 4312, 4317, 4324 NP with IPDS feature (LAN)	*IMGC06
IBM 4312, 4317, 4324 NP (ASCII/LAN)	*IMGA02
IBM 4312, 4317, 4324 NP with Postscript (ASCII/LAN)	*IMGD02
Lexmark 4039Plus	*IMGB02
Lexmark Optra C Color Printer	*IMGD11
Lexmark Optra E, E+	*IMGA02
Lexmark Optra N	*IMGD02
Lexmark Optra R+, Rx+, Lx+, Lxn+	*IMGD02
Lexmark Optra S Printers	*IMGD02
Lexmark Optra SC Color Printer	*IMGD05
Okidata OL400 LED Page Printer	*IMGA01
Okidata OL800, OL810 LED Page Printers	*IMGA02
QMS 2025, 3225	*IMGB12
QMS Magicolor CX	*IMGD04
Tektronix Phaser 140	*IMGB09
Tektronix Phaser 300	*IMGB04
Tektronix Phaser 400	*IMGB05
Tektronix Phaser 540, 550	*IMGB05
Tektronix Phaser 560	*IMGB06
Xerox 4219/MRP	*IMGA01
Xerox 4220/MRP	*IMGA02
Xerox 4230 DocuPrinter	*IMGA02
Xerox 4512, 4517 Network Printer	*IMGA02
Xerox 4520mp Printer	*IMGB13
Xerox 4700 II Color Document Printer	*IMGD04
Xerox 4915 Color Laser Printer	*IMGB08
Xerox 4920, 4925 Color Laser Printer	*IMGB05

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## Maximum pending requests (MAXPNDRQS)

Specifies the maximum number of print requests that may be queued for printers. This parameter is used only if \*YES is specified for the **Advanced function printing (AFP)** parameter.

**6** Up to 6 print requests can be queued.

### *maximum-print-requests*

Specify a number from 1 to 31, indicating the maximum number of print requests that can be queued.

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## Print while converting (PRTCVT)

Specifies whether a file using AFP must be completely converted to IPDS before printing can begin.

**\*YES** Printing begins prior to complete IPDS conversion.

**\*NO** Printing does not begin prior to complete IPDS conversion.

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## Print request timer (PRTRQSTMR)

Specifies the number of seconds to wait, after a print request has been sent to a printer using continuous forms, before the last pages of the output are forced out of the printer into the paper stacker. This parameter is used only if \*YES is specified for the **Advanced function printing (AFP)** parameter and \*CONT is specified for the **Form feed (FORMFEED)** parameter.

### \*NOMAX

No timer is used.

### *print-request-timer*

Specify the number of seconds, from 1 to 3600, to wait after a print request has been sent before forcing the last pages of the output out of the printer.

---

## Form definition (FORMDF)

Specifies the name of the form definition to be used in the absence of any other form definition specification for a print request. This parameter is used only if \*YES is specified for the **Advanced function printing (AFP)** parameter.

### F1C10110

Use form definition F1C10110.

### *form-definition-name*

Specify the name of the form definition to be used.

The possible library values are:

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

### **\*CURLIB**

The current library for the job is used to locate the form definition. If no current library exists in the library list, QGPL is used.

### *library-name*

Specify the library where the form definition is located.

---

## Character identifier (CHRID)

Specifies, for printers, the character identifier (graphic character set and code page) indicating which font is used to print the job and file separator pages when no separator page font is explicitly specified. This parameter is used only if \*YES is specified for the **Advanced function printing (AFP)** parameter and \*APPC is specified for the **AFP attachment (AFPATTACH)** parameter, or if \*YES is specified for the **Host print transform (TRANSFORM)** parameter.

### \*SYSVAL

The system determines the graphic character set and code page values for the command parameters from the QCHRID system value.

### Element 1: Character Set

### *graphic-character-set*

Specify the graphic character set values that match the attributes of this printer. Valid values range from 1 through 32767.

### **Element 2: Code Page**

#### *code-page*

Specify the code page set values that match the attributes of the printer. Valid values range from 1 through 32767.

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## **Remote location (RMTLOCNAME)**

Specifies the remote location name of the printer device. This value may be an SNA network ID and control point name, an internet protocol (IP) host name, or an internet address.

An SNA remote location name is specified using the format nnnnnnnn.cccccc, where nnnnnnnn is the network ID and cccccc is the control point name. If only the control point name is specified, the RMTNETID parameter value is used as the value of the network ID.

An IP remote location name must be from 1 to 255 characters in length.

**Note:** This parameter is valid if AFP(\*YES) and AFPATTACH(\*APPC) both are specified, or when LANATTACH(\*IP) or LANATTACH(\*USRDFN) is specified. This parameter is required when APPTYPE(\*APPINIT) is specified. The remote location name for an APPTYPE(\*APPINIT) device is the Virtual Telecommunications Access Method/IBM Network Control Program (VTAM/NCP) name of the physical device.

#### *remote-location-name*

Specify the remote location name, remote system name, or internet address.

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## **Local location (LCLLOCNAME)**

Specifies the local location name. This parameter is valid only when AFP(\*YES) and AFPATTACH(\*APPC) are specified, or when APPTYPE(\*APPINIT) is specified. The local location name for an APPTYPE(\*APPINIT) device is the name of the independent logical unit (LU) in the IBM Network Control Program (NCP).

#### \*NETATR

The LCLLOCNAME value specified in the system network attributes is used.

#### *local-location-name*

Specify the local location name.

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## **Mode (MODE)**

Specifies the name of the mode used to define the session limits and session characteristics for this device.

#### QSPWTR

The mode which exists specifically for use with printers.



#### \*NETATR

The mode in the network attributes is used.

#### *mode-name*

Specify the name of the mode description to be used by this device.

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## DBCS feature (IGCFEAT)

Specifies which double-byte character set (DBCS) table is used in DBCS feature code format expressing device features and the last code point value. The table at the end of this parameter description shows valid device features and last code point values for DBCS-capable devices.

**Note:** This parameter is valid for DBCS-capable devices only.

### Element 1: Features of the DBCS-Capable Devices

#### *device-features*

Specify the device character resolution, language, and relative buffer size device features using the format SSSSLR, where:

#### SSSS =

The resolution (number of matrix points used to create) of the character. For example, 2424 would be 24 matrix points of height and 24 matrix points of width available to formulate the character.

**L =** The language code. The 4 language codes currently supported are:

- J = Japanese
- K = Korean
- C = Traditional Chinese
- S = Simplified Chinese

**R =** The relative buffer size. The valid values are: 0, 1, 2, and 4.

### Element 2: Last Code Point

#### *last-code-point*

Specify the 4-digit code point of the last double-byte character. This value can be blank.

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## User-defined options (USRDFNOPT)

Specifies, for spooled output only, one or more user-defined options to be used by user applications or user-specified programs that process spooled files. A maximum of four user-defined options can be specified.

#### \*NONE

No user-defined option is specified.

#### *user-defined-option*

Specify the user-defined option to be used by user applications that process spooled files. All characters are acceptable.

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## User-defined object (USRDFNOBJ)

Specifies, for spooled output only, the user-defined object to be used by user applications or user-specified programs that process spooled files.

The possible Name of User-Defined Object values are:

### \*NONE

No user-defined object name is specified .

### *user-defined-object-name*

Specify the name of the user-defined object to be used by user applications or user-specified programs that process spooled files.

## Element 1: Object

### Qualifier 1: Object

*name* Specify the name of the user-defined object.

### Qualifier 2: Library

\*LIBL All libraries in the library list for the current thread are searched until the first match is found.

### \*CURLIB

The current library for the thread is searched. If no library is specified as the current library for the thread, the QGPL library is searched.

*name* Specify the name of the library to be searched.

## Element 2: Object type

### *object-type*

The user object type can be one of the following:

### \*DTAARA

Data Area

### \*DTAQ

Data Queue

### \*FILE File

### \*PSFCFG

PSF Configuration

### \*USRIDX

User Index

### \*USRQ

User Queue

### \*USRSPC

User Space

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## Data transform program (USRDTATFM)

Specifies the user-defined data program that is used to transform the spooled file data.

### \*NONE

No user-defined data transform program name is specified.

### *user-defined-data-transform-program-name*

Specify the name of a user-defined data transform program.

The possible library values are:

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

### **\*CURLIB**

The current library for the thread is searched. If no library is specified as the current library for the thread, the QGPL library is searched.

*name* Specify the name of the library to be searched.

---

## User-defined driver program (USRDRVPGM)

Specifies the qualified name of a user-defined driver program.

**Note:** This parameter is not valid when AFP(\*YES) is specified, or when DEVCLS(\*LAN), TYPE(3812) and LANATTACH(\*IP) are specified.

### \*NONE

No user-defined driver program is specified.

### *user-defined-driver-program-name*

Specify the name of a user-defined driver program.

The possible library values are:

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

### **\*CURLIB**

The current library for the thread is searched. If no library is specified as the current library for the thread, the QGPL library is searched.

*name* Specify the name of the library to be searched.

---

## System driver program (SYSDRVPGM)

Specifies the name of a system-defined driver program, which provides the capability to send iSeries printer output to a printer attached over a TCP/IP network.

**Note:** This parameter is only valid when DEVCLS(\*LAN), TYPE(3812) and LANATTACH(\*IP) are specified.

### **\*HPPJLDRV**

An HP-compatible printer driver program is used.

**\*IBMPJLDRV**

An IBM network printer driver program is used.

**\*NETSTNDRV**

A network station driver program is used.

**\*IBMSNMPDRV**

An IBM SNMP printer driver program is used.

**\*IBMIPPDRV**

An IBM IPP printer driver program is used.

Top

---

## Secure connection (SECURECNN)

Specifies whether a secure connection is established with the printer. A secure connection provides an encrypted communications session to ensure print data that passes over the connection remains private.

**Note:** This parameter is only valid when SYSDRVPGM(\*IBMIPPDRV) is specified.

**\*NO** The connection with the printer is not secure.

**\*YES** The connection with the printer is secure. The printer must support SSL(Secure Sockets Layer) or TLS(Transport Layer Security) and must have a system digital certificate. More information about the secure connection can be found in the Printer Device Programming book.

Top

---

## Validation list (VLDDL)

Specifies a validation list that is used if the printer requests authentication. The validation list is checked for the name of the user who created the spooled file, the name of the printer device, or the name of the system. Authentication information associated with the name is returned to the printer. More information about building a validation list can be found in the Printer Device Programming book.

**Note:** This parameter is only valid when SYSDRVPGM(\*IBMIPPDRV) is specified.

**\*NONE**

No validation list is specified.

*validation-list-name*

Specify the name of the validation list which contains authentication information.

The possible library values are:

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

**\*CURLIB**

The current library for the thread is searched. If no library is specified as the current library for the thread, the QGPL library is searched.

*name* Specify the name of the library to be searched.

Top

Specifies information about the printer device that could be **published** to a Lightweight Directory Access Protocol (LDAP) directory.

### Element 1: Support Duplex

Specifies whether the printer supports printing on both sides of a sheet of paper.

**\*UNKNOWN**

The value for this field is unknown.

**\*SIMPLEX**

The printer device only supports printing on one side of a sheet of paper.

**\*DUPLEX**

The printer device supports printing on both sides of a sheet of paper.

**Element 2: Support Color**

Specifies whether the printer device supports color ink printing.

**\*UNKNOWN**

The value for this field is unknown.

**\*COLOR**

The printer device does support color ink printing.

**\*NOCOLOR**

The printer device does not support color ink printing.

**Element 3: Pages per minute black**

The number of pages per minute in black ink that the printer device can produce.

**\*UNKNOWN**

The value for this field is unknown.

*pages-count-black*

The number of pages per minute in black ink that the printer device can produce. This field is an integer value ranging from 1 to 32767.

**Element 4: Pages Per Minute Color**

The number of pages per minute in color ink that the printer device can produce.

**Note:** The number of pages per minute in color ink is valid only when \*COLOR is specified for element 2.

**\*UNKNOWN**

The value for this field is unknown.

*page-count-color*

The number of pages per minute in color ink that the printer device can produce. This field is an integer value ranging from 1 to 32767.

**Element 5: Location**

Briefly describes the location of the printer device.

**\*BLANK**

The location of the printer device is not specified.

*location*

Specify no more than 30 characters of text, enclosed in apostrophes, to describe where the printer is located.

**Element 6: Data Streams Supported**

Specifies the data stream formats supported by the printer device.

**\*UNKNOWN**

The value for this field is unknown.

**\*PCL** The printer device supports PCL (Printer Command Language).

**\*PS** The printer device supports PostScript.

**\*PDF** The printer device supports PDF (Portable Document Format).

**\*IPDS** The printer device supports IPDS (Intelligent Printer Data Stream).

**\*SCS** The printer device supports SCS (SNA Character String).

Top

---

## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

**\*BLANK**

No text is specified.

*character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

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---

## Dependent location name (DEPLOCNAME)

Specifies the dependent local location name used for Dependent LU Requester (DLUR), providing additional security for the connection. If this name is filled in, an activation request (SNA ACTLU) from a Dependent LU Server (DLUS) node must reference this name or it is rejected.

Remote DLUS nodes may optionally accept unsolicited reply PSIDs (Product Set IDs) from the iSeries for auto-definition of LUs at the DLUS node. If so, then this name will be sent to the DLUS node in the reply PSID and it will be returned on the ACTLU request.

If unsolicited reply PSIDs are not supported by the DLUS node, then there will have to be close coordination of the PU name definitions on both systems.

**\*NONE**

No location name is defined.

*dependent-location-name*

Specify the dependent location name used for DLUR applications.

Top

---

## Remote network identifier (RMTNETID)

Specifies the identifier (ID) of the remote network. This parameter is required when AFP(\*YES) and AFPATTACH(\*APPC) are specified, or when APPTYPE(\*APPINIT) is specified.

**\*NETATR**

The remote network identifier specified in the network attributes is used.

**\*NONE**

No remote network ID is used.

*remote-network-ID*

Specify the ID of the remote network.

Top

---

## Workstation customizing object (WSCST)

Specifies the qualified name of a work station customizing object to be created.

**Note:** This parameter is ignored when AFP(\*YES) is specified.

### \*NONE

No work station customizing object is specified.

### *work-station-customizing-object*

Specify the work station customizing object. If a work station customizing object is specified for the WSCST parameter, all country keyboard identifiers are valid for ASCII devices except for the following: FQB, FQI, INB, INI, JEB, JEL, JKB, JUB, KAB, KOB, RCB, and TAB.

The possible library values are:

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

### **\*CURLIB**

The current library for the thread is searched. If no library is specified as the current library for the thread, the QGPL library is searched.

### *library-name*

Specify the library where the object is located.

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---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### \*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### **\*EXCLUDE**

The user cannot access the object.

### **\*LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library

containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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## Examples

### Example 1: Creating a Local Printer Device Description

```
CRTDEVPRT  DEVD(PRT1) TYPE(5219) DEVCLS(*LCL)
           MODEL(D1) PORT(0)
           SWTSET(1) CTL(CTL01) FONT(011)
```

This command creates a device description for a local printer named PRT1. It is a 5219 Model D1 Printer attached to Port 0 of CTL01. It has an address of 1 and uses the Courier font.

### Example 2: Creating a LAN Printer Device Description

```
CRTDEVPRT  DEVD(PRT2) DEVCLS(*LAN) TYPE(3812) MODEL(1)
           ADPTADR(999999999999) FONT(011)
           MFRTYPMDL(*IBM3812)
```

This command creates a device description for a LAN printer named PRT2. It is a 3812 Model 1 Printer attached to IBM 3812 Pageprinter. It has an adapter address of 999999999999 and uses the Courier font.

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---

## Error messages

### \*ESCAPE Messages

#### CPDB12C

Remote location name &2 not in correct format.

#### CPF261A

Device description &1 not created due to errors.

#### CPF2631

Device type &2 not valid.

#### CPDB1B8

Combination of parameters not valid. Reason code is &2.

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## Create Device Desc (Retail) (CRTDEVRTL)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Device Description (Retail) (CRTDEVRTL) command creates a device description for a retail device.

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---

### Parameters

Keyword	Description	Choices	Notes
DEV D	Device description	<i>Name</i>	Required, Positional 1
LOCADR	Local location address	X'01'-X'FE'	Required, Positional 2
RMTLOCNAME	Remote location	<i>Communications name</i>	Required, Positional 3
ONLINE	Online at IPL	<b>*YES</b> , *NO	Optional
CTL	Attached controller	<i>Name</i>	Optional
PACING	Pacing value	0-7, <u>7</u>	Optional
MAXLENRU	Maximum length of request unit	<b>*CALC</b> , 247, 256, 503, 512, 1015, 1024	Optional
APPTYPE	Application type	<b>*OTHER</b> , *RCMS, *SBMRTLPGM	Optional
DEVCLS	Device class	<b>*NONE</b> , *SNPT	Optional
ACTTMR	Activation timer	1-2550, <u>170</u>	Optional
INACTTMR	Inactivity timer	1-30, <b>*NOMAX</b> , *SEC15, *SEC30	Optional
SNPTDEV	SNA pass-through device desc	<i>Name</i> , <b>*NONE</b>	Optional
SNPTGRP	SNA pass-through group name	<i>Name</i> , <b>*NONE</b>	Optional
TEXT	Text 'description'	<i>Character value</i> , <b>*BLANK</b>	Optional
AUT	Authority	<i>Name</i> , <b>*CHANGE</b> , *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

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---

### Device description (DEV D)

Specifies the name of the device description.

This is a required parameter.

Top

---

## Local location address (LOCADR)

Specifies the local location address for this device.

Valid values range from 01 to FE.

Top

---

## Remote location (RMTLOCNAME)

Specifies the name of the remote location with which your program communicates.

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---

## Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

**\*YES** This device is varied on automatically at IPL.

**\*NO** This device is not varied on automatically at IPL.

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---

## Attached controller (CTL)

Specifies the name of the controller description to which this device is attached.

**Note:** To use this device for communicating with a remote location that resides on the same system as the local location, specify a controller description that was created with LINKTYPE (\*LOCAL) specified.

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---

## Pacing value (PACING)

Specifies the SNA pacing value used for request/response units (RUs).

7 A value of 7 is used as the RU pacing value.

*spacing-value*

Specify a value, ranging from 1 through 7.

Top

---

## Maximum length of request unit (MAXLENRU)

Specifies the maximum request unit (RU) length allowed.

**\*CALC**

The system calculates the value to use.

*maximum-length-request-unit*

Specify 247, 256, 503, 512, 1015, or 1024 bytes as the maximum length for incoming request units.

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---

## Application type (APPTYPE)

Specifies the application type used by this device.

### **\*OTHER**

This device communicates with either HCP, if 01 is specified for the **Local location address (LOCADR)** parameter, or an application on the controller. \*OTHER should always be specified when 01 is specified for LOCADR parameter. For a 4684 controller, this parameter should not be specified if the LOCADR parameter is any value other than 01.

### **\*RCMS**

This device communicates with the remote change management server (RCMS). \*RCMS should only be specified for a 4680 or a 4684 controller. For a 4684 controller, \*RCMS should be specified if the LOCADR parameter is any value other than 01.

### **\*SBMRTLPGM**

This device is used with the Submit Retail Program (SBMRTLPGM) command to start a program on the retail controller using the ADCS SUP (Start User Program) support. This value is valid only when the Retail Point-of-Sale Communications Facility Licensed Program is being used on the controller. \*SBMRTLPGM should not be specified for a 4684 controller.

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---

## Device class (DEVCLS)

Specifies the device class for this device.

### **\*NONE**

This device description will not be using SNA pass-through support.

### **\*SNPT**

This device description is for a device station connected to an SNA pass-through advanced program-to-program communications (APPC) controller. SNA pass-through support allows the user to connect this device station with host logical unit (LU) types 0 through 3 applications.

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---

## Activation timer (ACTTMR)

Specifies, for switched lines, the amount of time (in seconds) that the SNA pass-through support waits for the device to respond to the activation request from the host iSeries system. If the device does not respond within this time, it is considered not available.

This parameter is valid only when \*SNPT is specified for the DEVCLS parameter.

**170** Specifies the activate time of 170 seconds.

### *activate-time*

Specify a number ranging from 1 through 2550 indicating the number of seconds before the device is considered not available.

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---

## Inactivity timer (INACTTMR)

Specifies, for devices connected using SNA pass-through support, a timeout value that measures the amount of time that the device is not bound to a host application. When the timeout value is exceeded, the session is ended.

Valid values range from 1 through 30 minutes.

### \*NOMAX

No maximum inactivity time is tracked (no inactivity timer is be enforced).

### \*SEC15

A 15-second timeout period is used.

### \*SEC30

A 30-second timeout period is used.

### *inactivity-timer*

Specifies a timeout value in minutes.

Top

---

## SNA pass-through device desc (SNPTDEV)

Specifies the name of the associated SNA pass-through device that is attached to a host or advanced program-to-program communications (APPC) controller.

### \*NONE

No name is specified.

### *associated-device-name*

Specify the name of a device that is attached to a host or an APPC controller that is associated with this device.

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---

## SNA pass-through group name (SNPTGRP)

Specifies the name configured for a group of host devices in a configuration list. This indicates that this device is tied to any one of the devices in that group which is available.

### \*NONE

No name is specified.

### *group-name*

Specify the name configured for a group of host devices that must be associated with this device.

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---

## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

### \*BLANK

No text is specified.

### *character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### \*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### **\*EXCLUDE**

The user cannot access the object.

### **\*LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

**name** Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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---

## Examples

```
CRTDEVRTL  DEVD(RTL1)  LOCADR(05)
           RMTLOCNAME(DETROIT) CTL(CTL4)
```

This command creates a retail device description named RTL1. The location address of the retail device is X'05'. The remote-location name is Detroit, and the device is attached to the retail controller CTL4.

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---

## Error messages

### \*ESCAPE Messages

#### CPF261A

Device description &1 not created due to errors.

Top



---

## Create Device Desc (SNPT) (CRTDEVSNPT)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Device Description (SNA Pass-Through) (CRTDEVSNPT) command creates a device description for an SNA pass-through device.

[Top](#)

---

### Parameters

Keyword	Description	Choices	Notes
DEV D	Device description	<i>Name</i>	Required, Positional 1
LOCADR	Local location address	X'00'-X'FE'	Required, Positional 2
SNPTCLS	SNA pass-through class	*UP, *DOWN	Required, Positional 3
ONLINE	Online at IPL	*YES, *NO	Optional, Positional 4
CTL	Attached controller	<i>Name</i>	Optional
ACTTMR	Activation timer	1-2550, <u>170</u>	Optional
SNPTDEV	SNA pass-through device desc	<i>Name</i> , *NONE	Optional
SNPTGRP	SNA pass-through group name	<i>Name</i> , *NONE	Optional
TEXT	Text 'description'	<i>Character value</i> , *BLANK	Optional
DEPLOCNAME	Dependent location name	<i>Communications name</i> , *NONE	Optional
AUT	Authority	<i>Name</i> , *CHANGE, *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

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---

### Device description (DEV D)

Specifies the name of the device description.

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---

### Local location address (LOCADR)

Specifies the local location address for this SNA pass-through device. Specify two hexadecimal characters with values ranging from 01 through FF.

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---

## SNA pass-through class (SNPTCLS)

Specifies whether this device is attached to a SNA pass-through host controller or to a SNA pass-through downstream (APPC) controller.

**\*UP** Specifies device to be attached to a SNA pass-through host controller.

**\*DOWN**  
Specifies device to be attached to a SNA pass-through downstream (APPC) controller.

Top

---

## Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

**\*YES** The device is automatically varied on at initial program load (IPL).

**\*NO** This device is not automatically varied on at IPL.

Top

---

## Attached controller (CTL)

Specifies the name of the controller description to which this object is attached.

Top

---

## Activation timer (ACTTMR)

Specifies, for switched connections, the amount of time (in seconds) that the SNA pass-through support waits for the device to respond to the activation request from the host iSeries system. If the device does not respond within this time, it is considered not available.

**170** Specifies the activate time of 170 seconds.

***activation-timer***

Specify a number ranging from 1 through 2550 indicating the number of seconds before the device is considered not available.

Top

---

## SNA pass-through device desc (SNPTDEV)

Specifies the name of the associated SNA pass-through device that is attached to a host or advanced program-to-program communications (APPC) controller.

**\*NONE**  
No name is specified.

***associated-device-name***

Specify the name of a device that is attached to a host or an APPC controller that is associated with this device.

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---

## SNA pass-through group name (SNPTGRP)

Specifies the name configured for a group of host devices in a configuration list. This indicates that this device is tied to any one of the devices in that group which is available.

### \*NONE

No name is specified.

### *group-name*

Specify the name configured for a group of host devices that must be associated with this device.

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---

## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

### \*BLANK

Text is not specified.

### *'description'*

Specify no more than 50 characters of text, enclosed in apostrophes.

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---

## Dependent location name (DEPLOCNAME)

Specifies the dependent local location name used for Dependent LU Requester (DLUR), providing additional security for the connection. If this name is filled in, an activation request (SNA ACTLU) from a Dependent LU Server (DLUS) node must reference this name or it is rejected.

Remote DLUS nodes may optionally accept unsolicited reply PSIDs (Product Set IDs) from the iSeries for auto-definition of LUs at the DLUS node. If so, then this name will be sent to the DLUS node in the reply PSID and it will be returned on the ACTLU request.

If unsolicited reply PSIDs are not supported by the DLUS node, then there will have to be close coordination of the PU name definitions on both systems.

### \*NONE

No location name is defined.

### *dependent-location-name*

Specify the dependent location name used for DLUR applications.

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---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### \*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

**\*EXCLUDE**  
The user cannot access the object.

**\*LIBCRTAUT**  
The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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## Examples

```
CRTDEVSNPT  DEVD(SNPTDEV1)  LOCADR(05) SNPTCLS(*UP)
             CTL(MYCTL)  SNPTDEV(DOWNDEV1)
```

This command creates a SNA pass-through device description named SNPTDEV1. The location address of the device is X'05'. The device is attached to controller MYCTL. The SNA pass-through class is \*UP and the device name associated with this device is DOWNDEV1.

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## Error messages

### \*ESCAPE Messages

**CPF261A**  
Device description &1 not created due to errors.

**CPF2654**  
Device description &1 created but possibly not usable.

Top

---

## Create Device Desc (SNUF) (CRTDEVSNUF)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Device Description (SNUF) (CRTDEVSNUF) command creates a device description for a Systems Network Architecture Upline Facility (SNUF) device.

Top

---

### Parameters

Keyword	Description	Choices	Notes
DEVVD	Device description	<i>Name</i>	Required, Positional 1
LOCADR	Local location address	X'01'-X'FF'	Required, Positional 2
RMTLOCNAME	Remote location	<i>Communications name</i>	Required, Positional 3
ONLINE	Online at IPL	*YES, *NO	Optional
CTL	Attached controller	<i>Name</i>	Optional
PGMSTRRQS	Program start request capable	*NO, *YES	Optional
SPCHOSTAPP	Special host application	*NONE, *FLASH	Optional
APPID	Application identifier	<i>Name</i>	Optional
HOST	Host type	*CICS, *IMS, *IMSRTR, *ADCS	Optional
RCDLEN	Record length	1-32767, <b>512</b>	Optional
BLKLEN	Block length	1-32767, <b>512</b>	Optional
DFTPGM	Default program	<i>Qualified object name</i>	Optional
	Qualifier 1: Default program	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
HCPPEML	HCP emulation	<i>Character value</i> , *STRUSRPGM, 3651, 3684, <b>4680</b> , 4684	Optional
TEXT	Text 'description'	<i>Character value</i> , *BLANK	Optional
DEPLOCNAME	Dependent location name	<i>Communications name</i> , *NONE	Optional
AUT	Authority	<i>Name</i> , *CHANGE, *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

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---

### Device description (DEVVD)

Specifies the name of the device description.

This is a required parameter.

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---

## Local location address (LOCADR)

Specifies the local location address for this device.

Valid values range from 01 to FF.

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---

## Remote location (RMTLOCNAME)

Specifies the name of the remote location with which your program communicates.

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---

## Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

**\*YES** This device is varied on automatically at IPL.

**\*NO** This device is not varied on automatically at IPL.

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---

## Attached controller (CTL)

Specifies the name of the controller description to which this device is attached.

**Note:** To use this device for communicating with a remote location that resides on the same system as the local location, specify a controller description that was created with LINKTYPE (\*LOCAL) specified.

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---

## Program start request capable (PGMSTRRQS)

Specifies whether this device is reserved for host system call through a Program Start Request (PSR).

**\*NO** This device is not reserved for a PSR request.

**\*YES** This device is reserved for a PSR request.

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---

## Special host application (SPCHOSTAPP)

Specifies whether SNUF customizes support for special host applications outside the Customer Information Control System for Virtual Storage (CICS/VS) or Information Management System for Virtual Storage (IMS/VS) application layer.

**\*NONE**

SNUF does not customize support for special host applications.

**\*FLASH**

SNUF customizes support for the Federal Reserve Flash application.

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## Application identifier (APPID)

Specifies the VTAM Application Identifier sent with the log-on message.

Top

---

## Host type (HOST)

Specifies the type of host system with which the device will communicate.

\***CICS** The host system type is CICS/VS.

\***IMS** The host system type is IMS/VS.

\***IMSRTR**

The Information Management System is the host system. RTR (return-to-ready) commands will be used in communicating with the host system.

\***ADCS**

The Advanced Data Communications for Stores is the host system.

Top

---

## Record length (RCDLEN)

Specifies the maximum record length allowed when communicating with this device.

Valid values range from 1 to 32767.

The value must be at least the size of the largest record to be sent, but must not exceed the buffer size specified on the line description (MAXBUFFER parameter) to which this device is attached.

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---

## Block length (BLKLEN)

Specifies the maximum block length allowed when communicating with this device.

The possible values are from 1 to 32767.

The value must be at least the size of the largest record to be sent, but must not exceed the buffer size specified on the line description (MAXBUFFER parameter) to which this device is attached.

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---

## Default program (DFTPGM)

Specifies the name of the program called if a program start request is received and no program is specified.

The program is specified by its qualified name (library-name/program-name).

The possible library values are:

\***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

### **\*CURLIB**

The current library for the thread is searched. If no library is specified as the current library for the thread, the QGPL library is searched.

#### *library-name*

Specify the library where the object is located.

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---

## **HCP emulation (HCPEML)**

Specifies the Host Command Processor (HCP) emulation to be performed.

**3651** The host is running ADCS and will use this device description for a 3651 HCP emulated session.

**3684** The host is running ADCS and will use this device description for a 3684 HCP emulated session.

**4680** The host is running ADCS and will use this device description for a 4680 HCP emulated session.

**4684** The host is running ADCS and will use this device description for a 4684 HCP emulated session.

### **\*STRUSRPGM**

The host is running ADCS and will use this device description for the Start User Program (SUP) emulated session.

Top

---

## **Text 'description' (TEXT)**

Specifies the text that briefly describes the object.

### **\*BLANK**

No text is specified.

#### *character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

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---

## **Dependent location name (DEPLOCNAME)**

Specifies the dependent local location name used for Dependent LU Requester (DLUR), providing additional security for the connection. If this name is filled in, an activation request (SNA ACTLU) from a Dependent LU Server (DLUS) node must reference this name or it is rejected.

Remote DLUS nodes may optionally accept unsolicited reply PSIDs (Product Set IDs) from the iSeries for auto-definition of LUs at the DLUS node. If so, then this name will be sent to the DLUS node in the reply PSID and it will be returned on the ACTLU request.

If unsolicited reply PSIDs are not supported by the DLUS node, then there will have to be close coordination of the PU name definitions on both systems.

### **\*NONE**

No location name is defined.

#### *dependent-location-name*

Specify the dependent location name used for DLUR applications.

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---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### \*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### **\*EXCLUDE**

The user cannot access the object.

### **\*LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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## Examples

```
CRTDEVSNUF  DEVD(SNUFDEV02)  LOCADR(FE)  RMTLOCNAME(DETROIT)
             CTL(SNUFCTL01)  PGMSTRRQS(*YES)  DFTPGM(PAYROLL)
```

This command creates a device description for a SNUF communications device named SNUFDEV02. The device is attached to the communications controller SNUFCTL01 in Detroit, and is at location address X'FE'. The device will be program start request-capable and the default program is PAYROLL.

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---

## Error messages

### \*ESCAPE Messages

#### CPF261A

Device description &1 not created due to errors.

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## Create Device Desc (Tape) (CRTDEVTAP)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Device Description (Tape) (CRTDEVTAP) command creates a device description for a tape device.

[Top](#)

---

### Parameters

Keyword	Description	Choices	Notes
DEVVD	Device description	<i>Name</i>	Required, Key, Positional 1
TYPE	Device type	<i>Character value</i> , *RSRCNAME	Optional, Key, Positional 2
MODEL	Device model	<i>Character value</i> , *RSRCNAME	Optional, Key, Positional 3
RSRCNAME	Resource name	<i>Name</i> , *NONE	Optional, Key, Positional 4
SWTSET	Switch setting	<i>Character value</i>	Optional
ONLINE	Online at IPL	*YES, *NO	Optional
CTL	Attached controller	<i>Name</i>	Optional
ASSIGN	Assign device at vary on	*YES, *NO	Optional
UNLOAD	Unload device at vary off	*YES, *NO	Optional
MSGQ	Message queue	Single values: *SYSOPR Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Message queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
TEXT	Text 'description'	<i>Character value</i> , *BLANK	Optional
AUT	Authority	<i>Name</i> , *CHANGE, *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

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---

### Device description (DEVVD)

Specifies the name of the device description.

This is a required parameter.

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---

### Device type (TYPE)

Specifies the type of device this description represents.

### \*RSRCNAME

The device type is determined from the resource name parameter.

**Note:** When \*RSRCNAME is used, the resource name must be an existing tape resource.

For a list of the device types that are valid on this parameter, press F4 (Prompt) from the TYPE prompt.

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---

## Device model (MODEL)

Specifies the model number of the device for this description.

**Note:** This parameter is ignored, but can be specified for compatibility with earlier versions of this command.

### \*RSRCNAME

The device model is determined from the resource name parameter.

#### *device-model*

Specify a device model for this description.

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---

## Resource name (RSRCNAME)

Specifies the resource name that identifies the hardware this description represents. Use the WRKHDWRSC command to determine the resource name.

### \*NONE

No resource is specified at this time. A resource name must be provided before the device can be varied on.

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---

## Switch setting (SWTSET)

Specifies the switch setting for tape devices.

For 3422, 3480, and 3490 tape devices the possible values are 0 to F.

For 3430 tape devices the possible values are 0 to 3.

**Note:** This parameter is no longer valid. Specify the RSRCTYPE parameter for all tape devices. The SWTSET parameter is provided for compatibility with earlier versions of this command. If specified, the SWTSET parameter is converted to a resource name by the system.

Top

---

## Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

**\*YES** This device is varied on automatically at IPL.

**\*NO** This device is not varied on automatically at IPL.

---

## Attached controller (CTL)

Specifies the name of the controller description to which this device is attached.

**Note:** To use this device for communicating with a remote location that resides on the same system as the local location, specify a controller description that was created with LINKTYPE (\*LOCAL) specified.

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---

## Assign device at vary on (ASSIGN)

Specifies whether the tape drive is assigned to the system when it is varied on.

**Note:** This parameter is valid only for 3480, 3490, and 3590 device types.

**\*YES** The tape drive is assigned when the device is varied on.

**\*NO** The tape drive is not assigned when the device is varied on.

Top

---

## Unload device at vary off (UNLOAD)

Specifies whether the tape drive is unloaded when the device is varied off.

**\*YES** The tape drive is unloaded when the device is varied off.

**\*NO** The tape drive is not unloaded when the device is varied off. The tape is rewound, but not past the beginning-of-tape marker.

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---

## Message queue (MSGQ)

Specifies the message queue to which operational messages for this device are sent.

The possible qualified names are:

**\*SYSOPR**

Messages are sent to the QSYSOPR message queue in QSYS.

***message-queue-name***

Specify the name of the message queue to which operational messages are sent.

**\*LIBL** All libraries in the job's library list are searched until the first match is found.

**\*CURLIB**

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

***library-name***

Specify the name of the library to be searched.

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---

## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

### **\*BLANK**

No text is specified.

### *character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

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---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### **\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### **\*EXCLUDE**

The user cannot access the object.

### **\*LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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---

## Examples

```
CRTDEVTAP  DEVD(TAP01) TYPE(9347) MODEL(0001)
           RSRcname(TAP01)
```

This command creates a device description for a tape drive named TAP01. It is a 9347 Model 0001 tape drive with a resource name of TAP01.

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---

## Error messages

### \*ESCAPE Messages

#### CPF261A

Device description &1 not created due to errors.

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## Create Directory (CRTDIR)

**Where allowed to run:** All environments (\*ALL)  
**Threadsafe:** No

Parameters  
Examples  
Error messages

The Create Directory (CRTDIR) command adds a new directory to the system.

A directory is an object that contains the names of other objects. Libraries and folders are types of directories. When a directory is created, a link is added to the directory prefix. The directory must have been created before any objects can be placed into it.

This command can also be issued using the following alternative command names:

- MD
- MKDIR

For more information about integrated file system commands, see the Integrated file system information in the iSeries Information Center at <http://www.ibm.com/eserver/iseries/infocenter>.

### Restrictions:

1. The following restriction applies when the directory to be created is a library in the QSYS.LIB or independent ASP QSYS.LIB file system, or a directory within the "root" (/), QOpenSys, or user-defined file systems:
  - The audit (\*AUDIT) special authority is required when specifying a value other than \*SYSVAL on the **Auditing value for objects (CRTOBJAUD)** parameter.
2. The following restriction applies when the directory to be created is a folder in an existing folder in QDLS:
  - The change (\*CHANGE) authority is required for the existing folder.
3. The user must have execute (\*X) authority to each directory in the path.
4. When creating a directory in the "root" (/), QOpenSys or user\_defined file system, the user must have write, execute (\*WX) authority to the directory that contains the new directory.
5. When creating a directory, the owner ID (UID) is the user creating the directory.

If the directory is to be created in the "root" (/), QOpenSys, and user-defined file systems, the following applies. If the S\_ISGID bit of the parent directory is off, the group ID (GID) is set to the effective GID of the thread creating the directory. If the S\_ISGID bit of the parent directory is on, the group ID (GID) of the new directory is set to the GID of the parent directory.

If the directory is to be created in the QSYS.LIB or independent ASP QSYS.LIB file system, the GID is obtained from the primary user profile. For all other file systems, the GID is obtained from the parent directory.
6. The user must have all object (\*ALLOBJ) and security administrator (\*SECADM) special authorities to specify a value for the **Scanning option for objects (CRTOBJSCAN)** parameter other than \*PARENT.

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## Parameters

Keyword	Description	Choices	Notes
DIR	Directory	<i>Path name</i>	Required, Positional 1

Keyword	Description	Choices	Notes
DTAAUT	Public authority for data	Name, *INDIR, *RWX, *RW, *RX, *WX, *R, *W, *X, *EXCLUDE, *NONE	Optional
OBJAUT	Public authority for object	Single values: *INDIR, *NONE, *ALL Other values (up to 4 repetitions): *OBJEXIST, *OBJMGT, *OBJALTER, *OBJREF	Optional
CRTOBJAUD	Auditing value for objects	*SYSVAL, *NONE, *USRPRF, *CHANGE, *ALL	Optional
CRTOBJSCAN	Scanning option for objects	*PARENT, *YES, *NO, *CHGONLY	Optional
RSTDRNMUNL	Restricted rename and unlink	*NO, *YES	Optional

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---

## Directory (DIR)

Specifies the path name of the directory to be created.

For more information on specifying path names, refer to "Object naming rules" in "CL concepts and reference" in the CL concepts and reference topic in the iSeries Information Center at <http://www.ibm.com/eserver/series/infocenter>.

**Note:** Do not use a name that begins with the character Q. The system assumes that libraries or directories with those names are system libraries or directories.

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---

## Public authority for data (DTAAUT)

Specifies the public data authority given to the user for the directory, or specifies that all authorities are inherited from the directory it is to be created in.

### \*INDIR

The authority for the directory to be created is determined by the directory it is to be created in. The directory immediately preceding the new directory determines the authority. A directory created in the "root" (/), QOpenSys, or user-defined file system is assigned the same public, private and primary group authority, authorization list, and primary group as the directory it is to be created in. A directory created in QDLS for a folder defaults to \*EXCLUDE for a first level folder. If created in the second level or greater, the authority of the previous level is used. The QOpenSys and "root" (/) file systems use the parent directory's Data Authority value. If the value \*INDIR is specified for either the **Public authority for object (OBJAUT)** parameter or the DTAAUT parameter, then \*INDIR must be specified for both parameters.

**\*RWX** The user can change the object and perform basic functions on the object except those limited to the owner or controlled by object existence (\*OBJEXIST), object management (\*OBJMGT), object alter (\*OBJALTER) and object reference (\*OBJREF) authorities. Read, write, execute (\*RWX) authority provides object operational (\*OBJOPR) and all data authorities.

**\*RW** The user can view and change the contents of an object. Read, write (\*RW) authority provides \*OBJOPR and data read (\*READ), add (\*ADD), update (\*UPD) and delete (\*DLT) authorities.

**\*RX** The user can perform basic operations on the object, such as run a program or display the contents of a file. The user is prevented from changing the object. Read, execute (\*RX) authority provides \*OBJOPR and data \*READ and execute (\*EXECUTE) authorities.



- \*WX** The user can change the contents of an object and run a program or search a library or directory. Write, execute (\*WX) authority provides \*OBJOPR and data \*ADD, \*UPD, \*DLT, and \*EXECUTE authorities.
- \*R** The user can view the contents of an object. Read (\*R) authority provides \*OBJOPR and data \*READ authorities.
- \*W** The user can change the contents of an object. Write (\*W) authority provides \*OBJOPR and data \*ADD, \*UPD, and \*DLT authorities.
- \*X** The user can run a program or search a library or directory. Execute (\*X) authority provides \*OBJOPR and data \*EXECUTE authorities.
- \*EXCLUDE**  
The user cannot access the object. The OBJAUT value must be \*NONE, if this special value is used.
- \*NONE**  
The user is given no data authorities to the objects. This value cannot be used with the OBJAUT value of \*NONE.

***authorization-list-name***

Specify the name of the authorization list used. The format of the authorization list name remains the current ten-character format. The OBJAUT value must be \*NONE, if this special value is used.

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## Public authority for object (OBJAUT)

Specifies the public object authority given to users for the directory, or specifies that all authorities are inherited from the directory it is to be created in.

**\*INDIR**

The object authority is based on the authority for the directory where this directory is to be created. A directory created in the "root" (/), QOpenSys, or user-defined file system is assigned the same public, private and primary group authority, authorization list, and primary group as the directory it is to be created in. If the value \*INDIR is specified for either the OBJAUT parameter or the **Public authority for data (DTAAUT)** parameter, then \*INDIR must be specified for both parameters.

**\*NONE**

None of the other object authorities (\*OBJEXIST, \*OBJMGT, \*OBJALTER or \*OBJREF) are given to the users. If \*EXCLUDE or an authorization list is specified for the DTAAUT parameter, \*NONE must be specified. This value cannot be used with the DTAAUT value of \*NONE.

- \*ALL** All of the other object authorities (\*OBJEXIST, \*OBJMGT, \*OBJALTER or \*OBJREF) are given to the users.

**The user can specify up to four of the following values:**

**\*OBJEXIST**

The user is given object existence (\*OBJEXIST) authority to the object. The user can delete the object, free storage of the object, perform save and restore operations for the object, and transfer ownership of the object.

**\*OBJMGT**

The user is given object management (\*OBJMGT) authority to the object. With this authority the user can specify security for the object, move or rename the object and add members to database files.

**\*OBJALTER**

The user is given object alter (\*OBJALTER) authority to the object. The user is able to alter the

attributes of the objects. On a database file, the user can add and remove triggers, add and remove referential and unique constraints, and change the attributes of the database file. With this authority on an SQL package, the user can change the attributes of the SQL package. Currently, this authority is used only for database files and SQL packages.

#### **\*OBJREF**

The user is given object reference (\*OBJREF) authority to objects. Used only for database files, the user can reference an object from another object such that operations on that object may be restricted by the other object. On a physical file, the user can add a referential constraint in which the physical file is the parent.

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## **Auditing value for objects (CRTOBJAUD)**

Specifies the auditing value of objects created in this directory.

Values for this parameter other than \*SYSVAL may not be supported by some file systems.

#### **\*SYSVAL**

The object auditing value for the objects in the directory is determined by the system auditing value (QCRTOBJAUD).

#### **\*NONE**

Using or changing this object does not cause an audit entry to be sent to the security journal.

#### **\*USRPRF**

The user profile of the user accessing this object is used to determine if an audit record is sent for this access. The OBJAUD parameter of the Change User Auditing (CHGUSRAUD) command is used to turn on auditing for a specific user.

#### **\*CHANGE**

All change accesses to this object by all users are logged.

**\*ALL** All change or read accesses to this object by all users are logged.

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## **Scanning option for objects (CRTOBJSCAN)**

Specifies whether the objects created in a directory will be scanned when exit programs are registered with any of the integrated file system scan-related exit points.

The integrated file system scan-related exit points are:

- QIBM\_QP0L\_SCAN\_OPEN - Integrated File System Scan on Open Exit Program
- QIBM\_QP0L\_SCAN\_CLOSE - Integrated File System Scan on Close Exit Program

For details on these exit points, see the System API Reference information in the iSeries Information Center at <http://www.ibm.com/eserver/series/infocenter>.

This attribute can only be specified for directories created in the "root" (/), QOpenSys and user-defined file systems. For all other file systems, \*PARENT should be specified and it will be ignored. Even though this attribute can be set for \*TYPE1 and \*TYPE2 directories, only objects which are in \*TYPE2 directories will actually be scanned, no matter what value is set for this attribute.

#### **\*PARENT**

The create object scanning attribute value for this directory is copied from the create object scanning attribute value of the parent directory.

**\*YES** After an object is created in the directory, the object will be scanned according to the rules described in the scan-related exit programs if the object has been modified or if the scanning software has been updated since the last time the object was scanned.

**\*NO** After an object is created in the directory, the object will not be scanned by the scan-related exit programs.

**Note:** If the Scan file systems control (QSCANFCTL) value \*NOPOSTRST is not specified when an object with this attribute is restored, the object will be scanned at least once after the restore.

**\*CHGONLY**

After an object is created in the directory, the object will be scanned according to the rules described in the scan-related exit programs only if the object has been modified since the last time the object was scanned. It will not be scanned if the scanning software has been updated. This attribute only takes effect if the Scan file systems control (QSCANFCTL) system value has \*USEOCOATR specified. Otherwise, it will be treated as if the attribute is \*YES.

**Note:** If the Scan file systems control (QSCANFCTL) value \*NOPOSTRST is not specified when an object with this attribute is restored, the object will be scanned at least once after the restore.

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## Restricted rename and unlink (RSTDRNMUNL)

Specifies whether special restrictions apply for rename and unlink operations performed on objects within a directory. This attribute is equivalent to the S\_ISVTX mode bit and can only be set for a directory in the Network File System (NFS), QFileSvr.400, "root" (/), QOpenSys, or user-defined file systems. Both the NFS and QFileSvr.400 file systems support this attribute by passing it to the server and surfacing it to the caller.

**\*NO** No additional restrictions for renaming or unlinking objects from this directory.

**\*YES** Objects within this directory may be renamed or unlinked only if one or more of the following are true for the user performing the operation:

1. The user is the owner of the object.
2. The user is the owner of the directory.
3. The user has all object (\*ALLOBJ) special authority.

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## Examples

### Example 1: Creating a Directory

```
CRTDIR DIR('MYDIR')
```

This command creates the directory MYDIR and adds it to the current directory. The defaults are used for the remaining parameters.

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---

## Error messages

### \*ESCAPE Messages

#### CPFA085

Home directory not found for user &1.

**CPFA089**  
Pattern not allowed in path name.

**CPFA09C**  
Not authorized to object. Object is &1.

**CPFA09D**  
Error occurred in program &1.

**CPFA0A0**  
Object already exists. Object is &1.

**CPFA0A1**  
An input or output error occurred.

**CPFA0A3**  
Path name resolution causes looping.

**CPFA0A6**  
Number of links exceeds maximum allowed for the file system.

**CPFA0A7**  
Path name too long.

**CPFA0A9**  
Object not found. Object is &1.

**CPFA0AA**  
Error occurred while attempting to obtain space.

**CPFA0AB**  
Operation failed for object. Object is &1.

**CPFA0AD**  
Function not supported by file system.

**CPFA0B1**  
Requested operation not allowed. Access problem.

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## Create Diskette File (CRTDKTF)

Where allowed to run: All environments (\*ALL)  
 Threadsafes: No

Parameters  
 Examples  
 Error messages

The Create Diskette File (CRTDKTF) command creates a diskette device file.

A diskette unit file is used to read and write records on diskettes that have been initialized in the basic, H, or I exchange format. The diskette unit file identifies the diskette unit used and the spooling requirements. It does not contain data.

**Note:** This command is not used to create device files for use in save/restore operations. User-created device files are not needed for save/restore operations.

All the information in the diskette file description is contained in the command that creates it; there is no data description specifications (DDS) for diskette device files. The diskette file has only one record format for input/output operations. The record format consists of one character field containing the input data retrieved from the device or the output data written to the device. The program using the device file must describe the fields in the record format so that the program can arrange the data either received from or sent to the device in the manner specified by the diskette file description.

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### Parameters

Keyword	Description	Choices	Notes
FILE	File	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: File	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
DEV	Device	<i>Element list</i>	Optional
	Element 1: Diskette device	<i>Name, *NONE</i>	
VOL	Volume identifier	Single values: <i>*NONE</i> Other values (up to 50 repetitions): <i>Character value</i>	Optional
LABEL	Diskette label	<i>Character value, *NONE</i>	Optional
FILETYPE	File type	<i>*DATA, *SRC</i>	Optional
IGCDTA	User specified DBCS data	<i>*NO, *YES</i>	Optional
TEXT	Text 'description'	<i>Character value, *BLANK</i>	Optional
EXCHTYPE	Diskette file exchange type	<i>*STD, *BASIC, *H, *I</i>	Optional
CODE	Code	<i>*EBCDIC, *ASCII</i>	Optional
CRTDATE	Creation date	<i>Date, *NONE</i>	Optional
EXPDATE	File expiration date	<i>Date, *NONE, *PERM</i>	Optional
SPOOL	Spool the data	<i>*NO, *YES</i>	Optional
OUTQ	Spooled output queue	<i>Qualified object name</i>	Optional
	Qualifier 1: Spooled output queue	<i>Name, <u>QDKT</u></i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
MAXRCDS	Max spooled output records	1-500000, <b>100000</b> , *NOMAX	Optional

Keyword	Description	Choices	Notes
SCHEDULE	Spooled output schedule	*FILEEND, *JOBEND, *IMMED	Optional
HOLD	Hold spooled file	*NO, *YES	Optional
SAVE	Save spooled file	*NO, *YES	Optional
OUTPTY	Output priority (on OUTQ)	*JOB, 1, 2, 3, 4, 5, 6, 7, 8, 9	Optional
USRDTA	User data	Character value, *BLANK	Optional
WAITFILE	Maximum file wait time	Integer, *IMMED, *CLS	Optional
SHARE	Share open data path	*NO, *YES	Optional
AUT	Authority	Name, *LIBCRTAUT, *ALL, *CHANGE, *EXCLUDE, *USE	Optional
REPLACE	Replace file	*YES, *NO	Optional

Top

---

## File (FILE)

Specifies the file to be created. If the file is used by a high-level language (HLL) program, the file name must be consistent with the naming rules of that language; otherwise, the file must be renamed in the program.

This is a required parameter.

### Qualifier 1: File

*name* Specify the name of the diskette file to be created.

### Qualifier 2: Library

#### \*CURLIB

The file is located in the current library for the job. If no library is specified as the current library for the job, QGPL is used.

*name* Specify the library where the diskette file is located.

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---

## Device (DEV)

Specifies the name of the diskette unit that is used with this diskette unit file to perform input/output data operations. The device name of the IBM-supplied diskette device description is QDKT. This parameter is ignored if SPOOL(\*YES) is specified for the file when it is opened.

#### \*NONE

No diskette unit name is specified. The name of the diskette unit must be specified later in a Change Diskette File (CHGDKTF) or Override with Diskette File (OVRDKTF) command, or in the high level language program that opens the file.

*name* Specify the name of the diskette device that is used with this diskette device file.

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---

## Volume identifier (VOL)

Specifies one or more volume identifiers used by the file.

### Single values

#### \*NONE

The diskette volume identifiers are not specified for this file.

### Other values (up to 50 repetitions)

#### *character-value*

Specify the identifiers of one or more diskette volumes in the order in which they are placed in the diskette device and used by this device file. Each identifier can have up to 6 alphanumeric characters.

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---

## Diskette label (LABEL)

Specifies the data file identifier, or all the identifiers, of the data files on the diskette being shown. The data file identifier is stored in the volume label area of the diskette, and it specifies the identifier of the file that exists on the diskette.

#### \*NONE

The data file label is not specified.

#### *character-value*

Specify the identifier (8 characters maximum) of the data file used with this diskette unit file.

Top

---

## File type (FILETYPE)

Specifies whether the diskette unit file being created describes data records or describes source records (statements) for a program or another file.

#### \*DATA

The diskette file describes data records.

**\*SRC** The diskette file describes source records.

Top

---

## User specified DBCS data (IGCDTA)

Specifies whether the file processes double-byte character set (DBCS) data.

\*NO The file does not process double-byte character set (DBCS) data.

**\*YES** The file processes double-byte character set (DBCS) data.

Top

---

## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

**\*BLANK**

No text is specified.

***character-value***

Specify no more than 50 characters of text, enclosed in apostrophes.

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---

## Diskette file exchange type (EXCHTYPE)

Specifies, for diskette output files only, the exchange type used by the diskette unit file when the system is writing diskette data.

**\*STD** The BASIC exchange format is used for a type 1 or a type 2 diskette. The H exchange type is used for a type 2D diskette.

**\*BASIC**

The BASIC exchange type is used.

**\*H** The H exchange type is used.

**\*I** The I exchange type is used.

Top

---

## Code (CODE)

Specifies the type of character code used when diskette data is read or written by a job that uses this diskette unit file.

**\*EBCDIC**

The EBCDIC character code is used with this device file.

**\*ASCII**

The ASCII character code is used.

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---

## Creation date (CRTDATE)

Specifies when the diskette data file was created on a diskette. If the creation date written on the diskette containing the data file does not match the date specified for the device file when it is opened, an error message is sent to the user program.

**\*NONE**

The creation date is not specified.

***date*** Specify the creation date of the data file used by this diskette device file.

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---

## File expiration date (EXPDATE)

Specifies, for diskette output data files only, the expiration date of the data file used by this device file. If a date is specified, the data file is protected and cannot be written over until the day after the specified expiration date.

**\*NONE**

No expiration date for the data file is specified. The file is protected for only one day.



**\*PERM**

The data file is protected permanently. The date written on the diskette is 999999.

*date* Specify the expiration date of the data file.

Top

---

## Spool the data (SPOOL)

Specifies whether the input or output data for the diskette unit file is spooled. If \*NO is specified, the other parameters on this command related to spooling are ignored.

**\*NO** The data is not spooled. If this file is opened for input, the data is read directly from the diskette. If this is an output file, the data is written directly to the diskette.

**\*YES** The data is spooled.

Top

---

## Spooled output queue (OUTQ)

Specifies the output queue (\*OUTQ) object.

### Qualifier 1: Spooled output queue

**QDKT**

The spooled output data is sent to the output queue named QDKT.

*name* Specify the name of the output queue.

### Qualifier 2: Library

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

**\*CURLIB**

The current job library is used for the job is used to locate the output queue. If no library is specified as the current library for the job, QGPL is used.

*name* Specify the library where the output queue is located.

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---

## Max spooled output records (MAXRCDS)

Specifies, for spooled output files only, the maximum number of diskette records that the spooled output file can contain.

**100000** A maximum of 100000 diskette records can be contained in the spooled output file.

**\*NOMAX**

The system maximum of 500000 diskette records is used.

***1-500000***

Specify the maximum number of diskette records that can be contained in the spooled output file.

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---

## Spooled output schedule (SCHEDULE)

Specifies, for spooled output files only, when the spooled output file is available to a writer.

### \*FILEEND

The spooled output file is available to the writer as soon as the file is closed.

### \*JOBEND

The spooled output file is available to the writer after the job is completed.

### \*IMMED

The spooled output file is made available to the writer as soon as the file is opened in the program.

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---

## Hold spooled file (HOLD)

Specifies whether this job is held at the time that it is put on the job queue. A job placed on the job queue in the hold state is held until it is released by the Release Job (RLSJOB) command or ended, either by the End Job (ENDJOB) command or by the Clear Job Queue (CLRJOBQ) command.

\*NO The spooled output file is not held by the output queue.

\*YES The spooled output file is held until it is released by the Release Spooled File (RLSSPLF) command.

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---

## Save spooled file (SAVE)

Specifies, for spooled output files only, whether the spooled file is saved (left on the output queue) after the output has been produced.

\*NO The spooled file data is not saved on the output queue.

\*YES The spooled file data is saved on the output queue until the spooled file is deleted.

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---

## Output priority (on OUTQ) (OUTPTY)

Specifies the output priority for spooled output files that are produced by this job. The highest priority is 1 and the lowest priority is 9.

\*JOB The output priority associated with the job that created the spooled file is used.

*1-9* Specify a number ranging from 1 (high) through 9 (low).

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---

## User data (USRDTA)

Specifies, for spooled output, user-specified data that identifies the file.

### \*BLANK

A value consisting of 10 blanks is used.

*character-value*

Specify up to 10 characters of user-specified text.

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---

## Maximum file wait time (WAITFILE)

Specifies the number of seconds that the program waits for the file resources to be allocated when the file is opened, or the device or session resources to be allocated when an acquire operation is performed to the file. If the file resources cannot be allocated in the specified wait time, an error message is sent to the program.

### \*IMMED

The program does not wait. Immediate allocation of file resources is required.

**\*CLS** The job default wait time is used as the wait time for the file resources to be allocated.

### 1-32767

Specify the number of seconds to wait for file resources to be allocated.

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---

## Share open data path (SHARE)

Specifies whether the open data path (ODP) is shared with other programs in the same routing step. When an ODP is shared, the programs accessing the file share facilities such as the file status and the buffer.

**\*NO** The ODP is not shared with other programs in the routing step. A new ODP for the file is created and used every time a program opens the file.

**\*YES** The same ODP is shared with each program in the job that also specifies \*YES when it opens the file.

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---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### \*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library command (CRTLIB) for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

### \*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence,

specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

**\*EXCLUDE**

The user cannot access the object.

**name** Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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## Replace file (REPLACE)

Specifies whether an existing file, other than a save or database file, is replaced.

**\*YES** An existing file is replaced if the creation of the new diskette unit file with the same name and library is successful.

**\*NO** The creation of a new diskette unit file is not allowed if there is an existing file with the same name and library.

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## Examples

### Example 1: Creating Diskette Device File

```
CRTDKTF FILE(DSPHST)
```

This command creates a diskette device file named DSPHST. The defaults for all the other parameters are assumed. The device name, diskette volume, file label, and the creation date of the data file on diskette must be specified in another CL command or in each program that uses the device file. The device file describes diskette data files that are in EBCDIC code and that are spooled for both input and output. Output goes to the QDKT output queue and then onto diskette as soon as the file is closed by the program. When output is produced from the output queue, only one copy is produced.

### Example 2: Specifying DBCS Data Processing

```
CRTDKTF FILE(IGCLIB/IGCDKT) IGCDTA(*YES)
```

This command creates a diskette device file named IGCDKT, which is stored in the library IGCLIB, and it can process double-byte character set (DBCS) data.

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## Error messages

### \*ESCAPE Messages

CPF7302

File &1 not created in library &2.

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## Create Document (CRTDOC)

**Where allowed to run:** Interactive environments (\*INTERACT  
\*IPGM \*IREXX \*EXEC)  
**Threadsafe:** No

Parameters  
Examples  
Error messages

The Create Document (CRTDOC) command allows you to create a new document when using OfficeVision/400.

First the Create Document Details display is shown. Then, if the Enter key is pressed on this display, the Edit display is shown.

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---

### Parameters

Keyword	Description	Choices	Notes
DOC	Document	<i>Character value</i>	Required, Positional 1
FLR	Folder	<i>Character value, *PRV</i>	Optional, Positional 2
TXTPRF	Text profile	<i>Name, *DFT, *SYSTEM</i>	Optional, Positional 3
TEXT	Document description	<i>Character value, *DFT</i>	Optional, Positional 4
DETAILS	Document details	<i>*YES, *NO</i>	Optional, Positional 5
EDIT	Edit document	<i>*YES, *NO</i>	Optional, Positional 6
EXITPNL	Display exit panel	<i>*YES, *NO</i>	Optional, Positional 7

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### Document (DOC)

Specifies the name of the document to be created. A maximum of 12 characters can be specified in the required format (document.ext).

This is a required parameter.

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---

### Folder (FLR)

Specifies the name of the folder that will contain the document being created.

**\*PRV** The name of the folder used in your last session will contain the document.

*folder-name*

Specify the name of the folder that will contain the document being created.

---

## Text profile (TXTPRF)

Specifies the text profile used as the base for the document.

**\*DFT** The default text profile is used.

**\*SYSTEM**

The system text profile is used.

*profile-name*

Specify the name of the text profile to use. A maximum of 12 characters can be specified.

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## Document description (TEXT)

Specifies the document description.

**\*DFT** A default description is specified for the document.

*description*

Specify a maximum of 44 characters, enclosed in apostrophes.

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---

## Document details (DETAILS)

Specifies whether to request or bypass the Document Details display.

**\*YES** The Document Details display is shown.

**\*NO** The Document Details display is not shown.

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---

## Edit document (EDIT)

Specifies whether document editing is bypassed.

**\*YES** The document is edited after being created.

**\*NO** The document is not edited after being created.

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---

## Display exit panel (EXITPNL)

Specifies whether the Exit Document display is shown when F3(Exit) or F12(Cancel) is pressed to end the editing.

**\*YES** The Exit Document display is shown when F3(Exit) or F12(Cancel) is pressed to end the editing.

**\*NO** The Exit Document display is not shown when F3(Exit) or F12(Cancel) is pressed to end the editing.

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## Examples

CRTDOC DOC(NEWDOC) FLR(MYFLR)

This command creates a new document called NEWDOC in folder MYFLR.

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---

## Error messages

### \*ESCAPE Messages

#### OFCFFFC

User storage capacity exceeded.

#### OFCFFFD

Damaged object found.

#### OFC8EA3

OfficeVision for AS/400 editor is not available to resolve to a display.

#### OFC80B5

OfficeVision for OS/400 editor is not available on the system.

#### OFC800A

Folder is in use.

#### OFC800E

&1 already exists as document or folder.

#### OFC800F

Display does not support text.

#### OFC8006

Folder not found.

#### OFC8008

Request not allowed with folder.

#### OFC801D

Maximum number of text sessions active.

#### OFC801E

DW editor or text assist cannot be loaded.

#### OFC8017

Folder directory is full.

#### OFC8019

Required module not on system.

#### OFC802E

Request failed for PC editor.

#### OFC821B

Document &1 needs to be reclaimed.

#### OFC9811

Folder needs to be reclaimed.

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# Create Display File (CRTDSPF)

Where allowed to run: All environments (\*ALL)  
 Threadsafte: No

Parameters  
 Examples  
 Error messages

The Create Display File (CRTDSPF) command creates a display device file. The device file contains the file description, which identifies the device used and, optionally, the record formats used by the device (if specified in data description specifications (DDS)); the device file does not contain data. The display device file sends records to one or more display devices associated with the device file, and to receive records from the display devices.

The display file description contains of information that is specified in two places: (1) in the source file that contains the DDS (if used); and (2) in the CRTDSPF command. The DDS contains the specifications for each record format in the device file and for the fields in each record format.

The Change Display File (CHGDSPF) or Override Display File (OVRDSPF) command is used in a program to change or override the parameter values specified in the display file description; the override command must be run before the display file is opened by the program. Overridden values are changed only for the running of the program; once the program ends, the original parameter values specified for the display file are used.

**Note:** If an application program attempts to acquire a work station on a switched line and the line connection has been lost or has never been established, the application program waits indefinitely until the connection is established.

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## Parameters

Keyword	Description	Choices	Notes
FILE	File	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: File	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
SRCFILE	Source file	Single values: *NONE Other values: <i>Qualified object name</i>	Optional, Positional 2
	Qualifier 1: Source file	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
SRCMBR	Source member	<i>Name, *FILE</i>	Optional, Positional 3
GENLVL	Generation severity level	0-30, <b>20</b>	Optional
FLAG	Flagging severity level	0-30, <b>0</b>	Optional
DEV	Display device	Single values: *NONE Other values (up to 50 repetitions): <i>Name, *REQUESTER</i>	Optional
IGCDTA	User specified DBCS data	<b>*NO, *YES</b>	Optional
IGCEXNCHR	DBCS extension characters	<b>*YES, *NO</b>	Optional
TEXT	Text 'description'	<i>Character value, *SRCMBRTXT, *BLANK</i>	Optional
OPTION	Source listing options	Values (up to 4 repetitions): *SRC, *NOSRC, *SOURCE, *NOSOURCE, *LIST, *NOLIST, *SECLVL, *NOSECLVL, *EVENTF, *NOEVENTF	Optional, Positional 4

Keyword	Description	Choices	Notes
MAXDEV	Maximum devices	1-256, <u>1</u>	Optional
ENHDSP	Enhanced display	<u>*YES</u> , *NO	Optional
RSTDSP	Restore display	*NO, <u>*YES</u>	Optional
DFRWRT	Defer write	<u>*YES</u> , *NO	Optional
CHRID	Character identifier	Single values: <u>*DEV</u> , *SYSVAL, *JOBCCSID, *CHRIDCTL Other values: <i>Element list</i>	Optional
	Element 1: Graphic character set	<i>Integer</i>	
	Element 2: Code page	<i>Integer</i>	
DECfmt	Decimal format	*FILE, <u>*JOB</u>	Optional
SFLENDTXT	SFLEND text	*FILE, <u>*MSG</u>	Optional
WAITFILE	Maximum file wait time	<i>Integer</i> , <u>*IMMED</u> , *CLS	Optional
WAITRCD	Maximum record wait time	<i>Integer</i> , <u>*NOMAX</u> , *IMMED	Optional
DTAQ	Data queue	Single values: <u>*NONE</u> Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Data queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , <u>*LIBL</u> , *CURLIB	
SHARE	Share open data path	<u>*NO</u> , *YES	Optional
SRTSEQ	Sort sequence	Single values: <u>*JOB</u> , *LANGIDSHR, *LANGIDUNQ, *HEX Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Sort sequence	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , <u>*LIBL</u> , *CURLIB	
LANGID	Language ID	<i>Character value</i> , <u>*JOB</u>	Optional
LVLCHK	Record format level check	<u>*YES</u> , *NO	Optional
AUT	Authority	<i>Name</i> , <u>*LIBCRTAUT</u> , *ALL, *CHANGE, *EXCLUDE, *USE	Optional
REPLACE	Replace file	<u>*YES</u> , *NO	Optional

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## File (FILE)

Specifies the display device file to be created.

If the display device file is used in a high-level language program, the file name should be consistent with the naming rules of that language. Otherwise, the file must be renamed in the program.

This is a required parameter.

### Qualifier 1: File

*name* Specify the name of the display file to be created.

### Qualifier 2: Library

#### \*CURLIB

The current library for the job is used to locate the display device file. If no library is specified as the current library for the job, QGPL is used.

*name* Specify the library where the display file is created.

---

## Source file (SRCFILE)

Specifies the source file (if specified) containing the data description specifications (DDS) source used to create the display device file.

### Single values

#### \*NONE

There is no DDS source for this display device file.

### Qualifier 1: Source file

*name* Specify the name of the source file that contains the DDS used to create the display device file.

### Qualifier 2: Library

\*LIBL All libraries in the library list for the current thread are searched until the first match is found.

#### \*CURLIB

The current library for the job is used to locate the file. If no library is specified as the current library for the job, QGPL is used.

*name* Specifies the library where the file is located.

---

## Source member (SRCMBR)

Specifies the source file member that contains the DDS source for the display device file being created.

\*FILE The source file member name is the same as the name specified for the **File (FILE)** parameter.

*name* Specify the name of the member in the source file.

---

## Generation severity level (GENLVL)

Specifies the severity level of data description specifications (DDS) messages that cause file creation to fail. This parameter applies only to messages created while processing DDS source files.

20 If errors occur in the DDS source file processing with a severity level greater than or equal to 20, the file is not created.

*0-30* Specify the desired severity level value. If 0 is specified, the file is not created. The value specified must be greater than or equal to the value specified for the **Flagging severity level (FLAG)** parameter.

---

## Flagging severity level (FLAG)

Specifies the minimum severity level of messages to be listed.

0 All messages are to be listed.

**0-30** Specify a number indicating the minimum severity of messages to be listed. The value specified must be less than or equal to the value specified for the **Generation severity level (GENLVL)** parameter.

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---

## Display device (DEV)

Specifies the names of one or more display devices that are used with this display file to pass data records between the users of the display devices and their jobs.

### Single values

#### **\*NONE**

No display device name is specified. The name of the display device must be specified later in a Change Display File (CHGDSPF) command or Override with Display File (OVRDSPF) command, or in the high-level language program that opens the file.

### Other values (up to 50 repetitions)

#### **\*REQUESTER**

The display device from which the program is called is the device assigned to the file when the file is opened.

*name* Specify the names of one or more display devices. \*REQUESTER can be specified as one of the names. A maximum of 50 device names (including \*REQUESTER) can be specified, but the total number cannot exceed the number specified for the **Maximum devices (MAXDEV)** parameter when the file is opened.

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## User specified DBCS data (IGCDTA)

Specifies, for program-described files, whether the file processes double-byte character set (DBCS) data. Specifies, for externally described files, the DBCS attributes of the file.

### For program-described files

**\*NO** The file does not process double-byte character set (DBCS) data.

**\*YES** The file processes double-byte character set (DBCS) data.

### For externally-described files

**\*NO** The only double-byte character set (DBCS) attributes of the file are those specified in the data description specifications (DDS).

**\*YES** DBCS attributes, in addition to those specified in the DDS, include: (1) putting the DDS keyword for alternative data type (IGCALTTYP) into effect and (2) identifying DBCS attributes of fields, values, or messages.

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## DBCS extension characters (IGCEXNCHR)

Specifies whether the system processes double-byte character set (DBCS) extended characters. When processing DBCS extended characters, the device requires the assistance of the system. The system must tell the device what the character looks like before the device can display or print the character. Extended characters are stored in a DBCS font table, not in the DBCS device. Extended character processing is a function of the operating system that is required to make characters stored in a DBCS font table available to a DBCS device.

**\*YES** The system processes DBCS extended characters.

**\*NO** The system does not process DBCS extended characters; it displays extended characters as the undefined character.

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## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

### **\*SRCMBRTXT**

If the source file is a database file, the text is taken from the source file member used to create the file. If the source file is an inline file or a device file, the text is blank.

### **\*BLANK**

No text is specified.

### *character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

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## Source listing options (OPTION)

Specifies the type of output produced when the file is created. A maximum of four of the following values can be specified in any order on this parameter. If neither or both of the values on an option are specified, the first value listed for the option is used.

**Note:** The first values on each option are similar to, but are not actually default values, and therefore, cannot be changed with the CHGCMDDFT (Change Command Default) command.

### Source Listing Option

#### **\*SRC or \*SOURCE**

A printout of the source statements, including a list of errors, is created.

#### **\*NOSRC or \*NOSOURCE**

No printout of the source statements is created unless errors are detected. If errors are detected, they are listed along with the keyword or record format that caused the error.

### Program Listing Option

**\*LIST** An expanded source printout is created, showing a detailed list of the file specifications and the references to other file descriptions.

#### **\*NOLIST**

The expanded source printout is not created.

### Second-Level Message Text Option

### **\*NOSECLVL**

The messages section of the data description specifications (DDS) printout does not contain the online help information for messages issued during DDS processing.

### **\*SECLVL**

The online help information appears in the DDS printout.

## **Event File Creation Option**

### **\*NOEVENTF**

The compiler does not produce an event file for the CoOperative Development Environment/400 (CODE for OS/400) product.

### **\*EVENTF**

The compiler produces an event file that can be used by the CODE for OS/400 product. The event file is created as a member in the file EVFEVENT in your object library. The CODE for OS/400 product uses this file to offer error feedback integrated with the CODE for OS/400 editor. This value is normally specified by the CODE for OS/400 product on your behalf.

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## **Maximum devices (MAXDEV)**

Specifies the maximum number of display devices that can be connected to the display device file at the same time while the file is open.

**1** Only one device name, or \*REQUESTER, can be specified for this display device file.

**1-256** Specify the maximum number of devices that can be connected to the display device file at the same time.

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## **Enhanced display (ENHDSP)**

Specifies whether the data being shown at a display station by this display file is using the enhanced capabilities available on the display station.

**\*YES** The data for the display file is shown using any enhanced capabilities available on the display station. These capabilities can include mnemonics, selection cursor, and graphical window borders.

**\*NO** The data for this display file is shown as it would be on a 5250 display station. No enhanced capabilities that are available on the display, such as mnemonics, selection cursor, or graphical window borders, are used. This value is normally used to preserve character-based interaction across all display stations.

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## **Restore display (RSTDSP)**

Specifies whether data being shown at a display device by this display file is saved at the time the file is suspended (made temporarily inactive) so that another display file can show different data on the same device. If the data for this file is saved, it is restored to the display of the device when the file is used again.

**\*NO** The data being shown by this file is not saved when the file is suspended.

**\*YES** The data being shown when this file is suspended is saved, and it is restored to the device display when the file is used again.

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## Defer write (DFRWRT)

Specifies that the writing of data is delayed until it is written out with other data when a read request is made. Control is returned to the program immediately after the data is received.

**\*YES** When the program issues a write request, control is returned after the buffer is processed. This may result in improved performance.

**\*NO** After a write operation, the user program does not regain control until the input/output is completed.

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## Character identifier (CHRID)

Specifies the type of character conversions that may occur for the display file. When necessary, the system converts character data sent to and received from the device. This ensures that the correct hexadecimal byte values of characters are sent to the device and are returned to the application program.

### Single values

#### **\*DEV**

Specifies the CHRID of the device is used to represent the CCSID of the field data for every named field with the CHRID DDS keyword. No conversion will ever occur since the CCSID of the field data will always be the same as the CHRID of the device.

#### **\*SYSVAL**

Specifies the QCHRID system value is used to represent the CCSID of the field data for every named field with the CHRID DDS keyword. Conversion will only occur for these specific fields when CCSID of the field data is different than the CHRID of the device.

#### **\*JOBCCSID**

Specify character conversion occurs when a difference exists between the device CHRID, job CCSID or display file CCSID values. On input, character data is converted from the device CHRID to the job CCSID when necessary. On output, character data is converted from the job CCSID to the device CHRID when necessary. On output, constant character data in the display file is converted from the display file CCSID to the device CHRID when necessary.

**Note:** The \*JOBCCSID special value, either specified directly on the CHRID command parameter or on the CHRIDCTL job attribute when the \*CHRIDCTL special value is specified for the CHRID command parameter, is not allowed if the file was created on a system at an earlier release level than V2R3M0. A file created prior to V2R3M0 will not be tagged with a CCSID and can not be used in combination with the \*JOBCCSID support.

#### **\*CHRIDCTL**

Specifies that the system checks the CHRIDCTL job attribute to determine whether to use the \*JOBCCSID or \*DEV special values on the CHRID command parameter for this display file.

### Element 1: Graphic character set

#### *integer*

Specify the number of the graphic character set to be used. Valid values range from 1 through 32767.

## Element 2: Code page

### *integer*

Specify the number of the code page to be used. Valid values range from 1 through 32767.

**Note:** The graphic character set and code page specifies the value used to represent the CCSID of the field data for every named field with the CHRID DDS keyword. Conversion will only occur for these specific fields when CCSID of the field data is different than the CHRID of the device.

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## Decimal format (DECFMT)

Specifies which decimal format value is used when editing numeric fields with the EDTCDE DDS keyword. The decimal format value determines the use of commas and periods for the decimal position and three digit positional separators on edited fields.

**\*JOB** Use the decimal format value from the DECFMT job attribute when the file is opened.

**\*FILE** Use the decimal format value stored with the file when the file was created.

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## SFLEND text (SFLENDTXT)

Specifies where the 'More...' and 'Bottom' text is retrieved from when displaying a subfile. The 'More...' and 'Bottom' text is displayed in a subfile when the SFLEND(\*MORE) DDS keyword is specified on the subfile control record.

**\*MSG** Use the 'More...' and 'Bottom' text retrieved from messages CPX6AB1 and CPX6AB2 which exist in the current active language of the system when the file is opened.

**\*FILE** Use the 'More...' and 'Bottom' text that is stored in the file during file creation. This text was retrieved from messages CPX6AB1 and CPX6AB2 which exist in the active language of the system when the file was created.

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## Maximum file wait time (WAITFILE)

Specifies the number of seconds that the program waits for the file resources to be allocated when the file is opened, or the device or session resources to be allocated when an acquire operation is performed to the file. If the file resources cannot be allocated in the specified wait time, an error message is sent to the program.

### **\*IMMED**

The program does not wait. Immediate allocation of file resources is required.

**\*CLS** The job default wait time is used as the wait time for the file resources to be allocated.

### **1-32767**

Specify the number of seconds to wait for file resources to be allocated.

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## Maximum record wait time (WAITRCD)

Specifies the number of seconds the program waits for the completion of a read-from-invited-devices operation to a multiple device file in a high-level language program. Refer to the high-level language reference manual to determine when a file is treated as a multiple device file. The program performing the read operation waits for the input from all invited devices currently accessing the file. If a record is not returned from any of the invited program devices in the specified amount of time, a notify message is sent to the program. This parameter has no effect on an input operation directed to a single device.

### \*NOMAX

There is no limit on the time the system waits for the completion of the operation.

### \*IMMED

The program does not wait. If a record is not available when the read-from-invited-devices operation is done, a notify message is sent to the program.

### *integer*

Specify the maximum number of seconds that the program waits. Valid values range from 1 through 32767 seconds.

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## Data queue (DTAQ)

Specifies the data queue on which entries are placed. The specified data queue must have a minimum length of 80 characters. The data queue need not exist when the display file is created since the name specified for this parameter is not evaluated until the file is used.

**Note:** Keyed data queues are not supported for this parameter. If a keyed data queue is specified, a run-time error will occur; but because it is not required that a data queue exist at the time the command is issued, the error will not be flagged.

### Single values

#### \*NONE

No data queue is specified.

### Qualifier 1: Data queue

*name* Specify the name of the data queue on which entries are placed.

### Qualifier 2: Library

\*LIBL All libraries in the library list for the current thread are searched until the first match is found.

#### \*CURLIB

The current library is used to locate the data queue. If no library is specified as the current library for the job, QGPL is used.

*name* Specify the library where the data queue is located.

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## Share open data path (SHARE)

Specifies whether the open data path (ODP) is shared with other programs in the same routing step. When an ODP is shared, the programs accessing the file share facilities such as the file status and the buffer.

- \*NO** The ODP is not shared with other programs in the routing step. A new ODP for the file is created and used every time a program opens the file.
- \*YES** The same ODP is shared with each program in the job that also specifies \*YES when it opens the file.

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## Sort sequence (SRTSEQ)

Specifies the sort sequence used for this user profile. The sort sequence is used in conjunction with the LANGID parameter to determine which sort sequence table is used.

### Single values

- \*JOB** The SRTSEQ value specified on the job attribute is used.
- \*LANGIDSHR**  
The sort sequence table can contain the same weight for multiple characters, and is the shared weighted table associated with the language specified in the LANGID parameter.
- \*LANGIDUNQ**  
The sort sequence table must contain a unique weight for each character in the code page.
- \*HEX** A sort sequence table is not used, and the hexadecimal values of the characters are used to determine the sort sequence.

### Qualifier 1: Sort sequence

*name* Specify the name of the sort sequence table to be used.

### Qualifier 2: Library

- \*LIBL** All libraries in the library list for the current thread are searched until the first match is found.
- \*CURLIB**  
The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.
- name* Specify the name of the library to be searched.

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## Language ID (LANGID)

Specifies the language identifier used when \*LANGIDSHR or \*LANGIDUNQ is specified for the **Sort sequence (SRTSEQ)** parameter. The language identifier is used with the SRTSEQ parameter to determine which sort sequence table the file uses.

- \*JOB** The language identifier specified for the job is used.

### *character-value*

Specify a language identifier. To see a complete list of identifiers when prompting this command, position the cursor on the field for this parameter and press F4 (Prompt).

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## Record format level check (LVLCHK)

Specifies whether the level identifiers of the record formats in the display device file are checked when the file is opened by a program.

**\*YES** The level identifiers of the record formats are checked. If the level identifiers do not all match, an open error message is sent to the program requesting the open operation.

**\*NO** The level identifiers are not checked when the file is opened.

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## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### **\*LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library command (CRTLIB) for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

### **\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### **\*EXCLUDE**

The user cannot access the object.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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## Replace file (REPLACE)

Specifies whether an existing file, other than a save or database file, is replaced.

**Note:** The existing file cannot be replaced if it is in use by this job or another job.

**Note:** The authority value for the file is determined by the user profile of the user. If an existing file is replaced, the authority value for the new file is copied from the replaced file.

- \*YES** An existing file is replaced if the creation of the new display device file with the same name and library is successful.
- \*NO** The creation of a new display device file is not allowed if there is an existing display device file with the same name and library.

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## Examples

### Example 1: Specifying Default Optional Parameters

```
CRTDSPF FILE(DSPHIST) SRCFILE(PRSNNL/JOBHIST)
```

This command creates a display device file named DSPHIST which is stored in the current library using the source file named JOBHIST that is stored in the PRSNNL library. The defaults for all the other parameters are assumed. Only the device requesting the program that uses this device file (that is, \*REQUESTER) is assigned to the device file. The level identifiers of the record formats are checked when the file is opened. The public has only object operational authority for the device file.

### Example 2: Specifying DBCS Data Processing

```
CRTDSPF FILE(IGCDSP) SRCFILE(IGCLIB/IGCSRC) IGCDTA(*YES)
```

This command creates the display file IGCDSP from the source file IGCSRC in the library IGCLIB. The file processes double-byte character set (DBCS) data.

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## Error messages

### \*ESCAPE Messages

#### CPF7302

File &1 not created in library &2.

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## Create Distribution List (CRTDSTL)

**Where allowed to run:** All environments (\*ALL)  
**Threadsafe:** No

[Parameters](#)  
[Examples](#)  
[Error messages](#)

The Create Distribution List (CRTDSTL) command allows you to create a new distribution list, which is a list of entries from the distribution directory. It can include entries for local users, remote users, indirect users, and programmable work station users. It can also include remote distribution lists, but not local distribution lists. The Create Distribution List (CRTDSTL) command creates the distribution list with no entries. The Add Distribution List Entry (ADDDSTLE) command is used to add entries to the distribution list.

**Restriction:** The list identifier (ID) must be unique to all local user IDs, as well as to other list IDs in the directory.

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### Parameters

Keyword	Description	Choices	Notes
LSTID	List identifier	<i>Element list</i>	Required, Positional 1
	Element 1: List ID	<i>Character value</i>	
	Element 2: List ID qualifier	<i>Character value</i>	
LSTD	List description	<i>Character value</i>	Required, Positional 2
CMDCHRID	Command character identifier	Single values: *SYSVAL, *DEVVD Other values: <i>Element list</i>	Optional
	Element 1: Graphic character set	<i>Integer</i>	
	Element 2: Code page	<i>Integer</i>	

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### List identifier (LSTID)

Specifies the unique, two-part list identifier of the distribution list. The same rules and restrictions that apply to user ID and address also apply to the distribution list ID. A maximum of 8 characters can be specified for each part.

This is a required parameter.

If any lowercase characters are specified, the system changes them to, and stores them as, uppercase characters.

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## List description (LSTD)

Specifies the description of the distribution list that further identifies the distribution list. A maximum of 50 characters can be specified.

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## Command character identifier (CMDCHRID)

Specifies the character identifier (graphic character set and code page) for the data being entered as command parameter values.

### Note:

- Only the user ID and address, system name and group, department, and the X.400 O/R parameters are translated to the graphic character set identifier (GCID) specified on this parameter. All other parameter values that you specify are stored exactly as they are entered; the GCID value is stored with them.
- If this command is run interactively, the default GCID value is taken from the display device description. If it is run in batch, the default GCID value is taken from the QCHRID system value. You can override these values by specifying a specific character set and code page on this parameter.

### Single values

#### \*SYSVAL

The system determines the graphic character set and code page values for the command parameters from the QCHRID system value.

#### \*DEVDD

The system determines the graphic character set and code page values from the display device description where this command was entered. This option is valid only when entered from an interactive job. If this option is specified in a batch job, an error occurs.

### Element 1: Graphic character set

1-32767

Specify the graphic character set to use.

### Element 2: Code page

1-32767

Specify the code page to use.

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## Examples

```
CRTDSTL  LSTID(DEPT48K DLIST)
          LSTD('Department 48K Distribution List')
```

This command creates a distribution list that contains the members of Department&rb1.48K. If this list ID is unique, the distribution list is created.

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## Error messages

### \*ESCAPE Messages

#### CPF9009

System requires file &1 in &2 be journaled.

#### CPF905C

Error occurred trying to find a translation table.

#### CPF9088

List &1 &2 not created in the directory.

#### CPF9096

Cannot use CMDCHRID(\*DEV), DOCCHRID(\*DEV) in batch job.

#### CPF9838

User profile storage limit exceeded.

#### CPF9845

Error occurred while opening file &1.

#### CPF9846

Error while processing file &1 in library &2.

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## Create Data Area (CRTDTAARA)

**Where allowed to run:** All environments (\*ALL)  
**Threadsafe:** Conditional

Parameters  
Examples  
Error messages

The Create Data Area (CRTDTAARA) command creates a data area and stores it in a specified library. It also specifies the attributes of the data. The data area can also be initialized to a specific value.

Data areas are used to communicate and store data used by several programs either within a job or between jobs. A program can use the value of a data area by using the Retrieve Data Area (RTVDTAARA) command.

If a data area is not used by more than one job at a time, it can be explicitly allocated to the appropriate job. If a data area is used by two or more jobs at the same time, it is protected from simultaneous changes occurring from different jobs. A data area is changed by using the Change Data Area (CHGDTAARA) command. The system does not allow two commands to change the same data area at the same time.

A data area is updated in auxiliary storage any time it is changed. This ensures that the changes are not lost in the event of a program or system failure.

The CRTDTAARA command can optionally create a distributed data management (DDM) data area. This is done by specifying \*DDM for the TYPE parameter. The DDM data area is used as a reference data area by programs to access data areas located on a remote (target) system in the DDM network. Programs on the local (source) system reference a remote data area by the DDM data area's name, not by the remote data area's name. The DDM data area name can be the same as the remote data area name).

The DDM data area on the source system contains the name of the remote data area and the name of the remote (target) system on which the remote data area is located.

The DDM data area can be used with the RTVDTAARA and CHGDTAARA commands to retrieve and update data areas on remote systems.

### Restrictions:

1. To use this command, the user must have object operational and add authority for the library in which the data area is placed.
2. This command is conditionally threadsafe. The following restrictions apply:
  - a. Creating DDM data areas in a job that allows multiple threads is not threadsafe.
  - b. Creating DDM data areas will fail when more than one thread is active in a job.

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## Parameters

Keyword	Description	Choices	Notes
DTAARA	Data area	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Data area	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	

Keyword	Description	Choices	Notes
TYPE	Type	*DEC, *CHAR, *LGL, *DDM	Required, Positional 2
LEN	Length	<i>Element list</i>	Optional, Positional 3
	Element 1: Length	1-2000	
	Element 2: Decimal positions	0-9	
VALUE	Initial value	<i>Not restricted</i>	Optional, Positional 4
RMTDTAARA	Remote data area	<i>Qualified object name</i>	Optional
	Qualifier 1: Remote data area	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
RMTLOCNAME	Remote location	<i>Communications name, *RDB</i>	Optional
RDB	Relational database	<i>Name</i>	Optional
DEV	APPC device description	<i>Name, *LOC</i>	Optional
LCLLOCNAME	Local location	<i>Communications name, *LOC, *NETATR</i>	Optional
MODE	Mode	<i>Communications name, *NETATR</i>	Optional
RMTNETID	Remote network identifier	<i>Communications name, *LOC, *NETATR, *NONE</i>	Optional
TEXT	Text 'description'	<i>Character value, *BLANK</i>	Optional
AUT	Authority	<i>Name, *LIBCRTAUT, *CHANGE, *ALL, *USE, *EXCLUDE</i>	Optional

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## Data area (DTAARA)

Specifies the name and library of the data area being created.

This is a required parameter.

### Qualifier 1: Data area

*name* Specify the name of the data area being created.

### Qualifier 2: Library

#### \*CURLIB

The data area is created in the current library for the thread. If no library is specified as the current library for the thread, the QGPL library is used.

*name* Specify the library where the data area is created.

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## Type (TYPE)

Specifies the type of value contained in the data area being created. The type can contain a character value, a decimal value, or a logical value (1 or 0), or a distributed data management (DDM) data area can be created.

This is a required parameter.

\*DEC This data area contains a decimal value.

**\*CHAR**

This data area contains a character string value.

**\*LGL** This data area contains a logical value of either one (1) or zero (0) that can be used to represent two opposing conditions such as on/off, true/false, or yes/no.

**\*DDM**

The data area being created is a DDM data area. The data area contains the name of the remote data area accessed and the name of the remote (target) system that the data area is located on.

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## Length (LEN)

Specifies the length of the data area being created. If it is a decimal data area, the number of decimal digits to the right of the decimal point can be optionally specified. The type of data area determines the maximum length that a value in that area can have and the default length that is assumed when a length is not specified. The maximum lengths and the defaults for each of the three types are as follows:

- Decimal
  - Maximum — 24 digits, 9 decimal positions
  - Default — 15 digits, 5 decimal positions
- Character
  - Maximum — 2000 characters
  - Default — 32 characters
- Logical — Maximum and default, 1 character

**Note:** For character types, the default length is the same as the length of the initial value, if one is specified for the **Initial value (VALUE)** parameter.

### Element 1: Length

**1-2000** Specify the length that the value in this data area can have. The length of the value in the data area includes the number of decimal positions in the value. The maximum length of the decimal value is 24 digits, of which no more than 9 can be to the right of the decimal point. In order to use the data area in CL programs, the total length must be limited to 15 digits.

### Element 2: Decimal positions

**0-9** Specify the number of digits to the right of the decimal point for **decimal (\*DEC)** data areas. If this is not specified, a value of 0 is assumed.

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## Initial value (VALUE)

Specifies the initial value that is assigned to the data area when it is created. The value must be of the type specified for the **Type (TYPE)** parameter of this command. If no value is specified, a character data area is initialized to blanks, a decimal data area is initialized to a value of 0, and a logical data area is initialized to 0.

***unrestricted-value***

Specify the initial value of the data area.

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## Remote data area (RMTDTAARA)

Specifies the name of the remote data area on the target system. The data area does not need to exist when the DDM data area is created.

### Qualifier 1: Remote data area

*name* Specify the name of the remote data area.

### Qualifier 2: Library

\***LIBL** The library list of the called thread on the target system is searched to locate the data area.

#### \***CURLIB**

The current library of the called thread on the target system is searched to locate the data area. If the called thread does not have a current library, the QGPL library is used.

*name* Specify the library where the remote data area is located.

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## Remote location (RMTLOCNAME)

Specifies the name of the remote location that is used with this object.

**Note:** Multiple DDM data areas can use the same remote location for the target system. The remote locations used must point to iSeries systems that are at a release of OS/400 that supports remote data areas.

\***RDB** The remote location information from the relational database entry specified for the **Relational database (RDB)** parameter is used to determine the remote system.

#### *communications-name*

Specify the name of the remote location that is associated with the target system. The remote location, which is used in accessing the target system, does not need to exist when the DDM data area is created but must exist when the DDM data area is accessed.

More information on remote locations is in the APPC Programming book, SC41-5443.

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## Relational database (RDB)

Specifies the relational database entry that is used to determine the remote location information for the DDM data area.

#### *communications-name*

Specify the name of the relational database entry that identifies the target system or target ASP group. The relational database name can refer to a remote system or an ASP group that is configured and available on a remote system. The relational database entry does not need to exist when the DDM data area is created but must exist when the DDM data area is opened. This parameter is required when \*RDB is specified for the **Remote location (RMTLOCNAME)** parameter.

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## APPC device description (DEV)

Specifies the name of the APPC device description on the source system that is used with this DDM data area. The device description does not need to exist when the DDM data area is created.

**\*LOC** The device associated with the remote location is used. If several devices are associated with the remote location, the system determines which device is used.

*name* Specify the name of a communications device associated with the remote location. If the device name is not valid for the remote location, a message is sent when the program device entry is acquired. More information on device names is in the APPC Programming book, SC41-5443.

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## Local location (LCLLOCNAME)

Specifies the local location name.

**\*LOC** The device associated with the remote location is used. If several devices are associated with the remote location, the system determines which device is used.

**\*NETATR**

The **Default local location name (LCLLOCNAME)** specified in the system network attributes is used.

*communications-name*

Specify the name of the local location that is associated with the remote location. The local location name is specified only if the user indicates a specific local location for the remote location. If the local location name is not valid for the remote location, an escape message is sent when the DDM data area is accessed. More information on local location names is in the APPC Programming book, SC41-5443.

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## Mode (MODE)

Specifies the mode name that is used with the remote location name to communicate with the target system.

**\*NETATR**

The **Default mode (DFTMODE)** specified in the system network attributes is used.

*communications-name*

Specify the name of the mode that is used. If the mode name is not valid for any combination of remote location and local location, an escape message is sent when the DDM data area is accessed.

More information on mode names is in the APPC Programming book, SC41-5443.

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## Remote network identifier (RMTNETID)

Specifies the remote network identifier (ID) in which the remote location resides that is used to communicate with the target system.

**\*LOC** The remote network ID associated with the remote location is used. If several remote network IDs are associated with the remote location, the system determines which remote network ID is used.

**\*NETATR**

The **Local network ID (LCLNETID)** specified in the system network attributes is used.

**\*NONE**

A remote network ID is not used.

*communications-name*

Specify the remote network ID that is associated with the remote location. The remote network ID is specified only if the user indicates a specific remote network ID for the remote location. If the remote network ID is not valid for the remote location, an escape message is sent when the DDM data area is accessed.

More information on remote network IDs is in the APPC Programming book, SC41-5443.

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## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

**\*BLANK**

No text is specified.

*'description'*

Specify no more than 50 characters of text, enclosed in apostrophes.

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## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

**\*LIBCRTAUT**

The authority for the object is taken from the value specified for the **Create authority (CRTAUT)** parameter of the library in which the object is being created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

**\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

## \*EXCLUDE

The user cannot access the object.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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## Examples

### Example 1: Creating a Data Area with a Value of Zero

```
CRTDTAARA  DTAARA(TOTSALES)  TYPE(*DEC)  LEN(15 2)
           VALUE(0)  TEXT('Total sales accumulator')
```

This command creates a data area named TOTSALES and stores it in the current library specified for the thread. TOTSALES has the following data attributes: it is a 15-position numeric data area with two decimal positions and with an initial value of 0.

### Example 2: Creating a Data Area Initialized to Blanks

```
CRTDTAARA  DTAARA(CUSTOMER)  TYPE(*CHAR)  LEN(148)
           TEXT('Customer name area')
```

This command creates the data area named CUSTOMER. It can contain as many as 148 characters in the character string. Because no initial value is specified, the data area is initialized to blanks.

### Example 3: Creating a DDM Data Area to Access a Data Area at Another iSeries 400

```
CRTDTAARA  DTAARA(SOURCE/SALES)  TYPE(*DDM)
           RMTDTAARA(REMOTE/SALES)  RMTLOCNAME(NEWYORK)
```

This command creates a DDM data area named SALES, and stores it in the SOURCE library on the source system. This DDM data area uses the remote location named NEWYORK to access a remote data area named SALES stored in the REMOTE library on an iSeries 400 in New York.

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## Error messages

### \*ESCAPE Messages

#### CPF1008

Data area &2 not created.

#### CPF1015

Data area &1 in &2 not found.

#### CPF1021

Library &1 not found for data area &2.

#### CPF1022

No authority to library &1 data area &2.

#### CPF1023

Data area &1 exists in &2.

#### CPF1024

TYPE and VALUE parameters not compatible.

**CPF1025**  
LEN and VALUE parameters not compatible.

**CPF1026**  
VALUE parameter must be '0' or '1'.

**CPF1047**  
Length not valid for data area &1 in &2

**CPF1062**  
Null string not valid as character value.

**CPF1092**  
Cannot create data area &2 in library &1.

**CPF180B**  
Function &1 not allowed.

**CPF9802**  
Not authorized to object &2 in &3.

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## Create Data Dictionary (CRTDTADCT)

**Where allowed to run:** All environments (\*ALL)  
**Threadsafe:** No

Parameters  
Examples  
Error messages

The Create Data Dictionary (CRTDTADCT) command creates a data dictionary. A data dictionary must be created before the user can use the Interactive Data Definition Utility (IDDU) to describe and create database files. The user can create a data dictionary with IDDU or with the CRTDTADCT command. More information is in the IDDU Use book, SC41-5704.

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### Parameters

Keyword	Description	Choices	Notes
DTADCT	Data dictionary	<i>Name</i>	Required, Positional 1
TEXT	Text 'description'	<i>Character value, *BLANK</i>	Optional
AUT	Authority	<i>Name, *LIBCRTAUT, *CHANGE, *ALL, *USE, *EXCLUDE</i>	Optional

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---

### Data dictionary (DTADCT)

Specifies the name that the data dictionary is assigned when it is created. The dictionary name must be the same as the library name where it is created. The library must already exist.

This is a required parameter.

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### Text 'description' (TEXT)

Specifies the text that briefly describes the object.

The possible values are:

**\*BLANK**

No text is specified.

**'description'**

Specify text no longer than 50 characters enclosed in apostrophes.

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## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

The possible values are:

### \*LIBCRTAUT

The system determines the authority for the object by using the value specified on the **Create authority** prompt (CRTAUT parameter) on the Create Library command (CRTLIB) for the library containing the object to be created. If the value specified on the **Create authority** prompt (CRTAUT parameter) is changed, the new value will not affect any existing objects.

### \*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### \*EXCLUDE

The user cannot access the object.

### *authorization-list-name*

Specify the name of an authorization list. Users included on the authorization list are granted authority to the object as specified by the list. The authorization list must exist when the object is created.

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## Examples

### Example 1: Creating a Data Dictionary and Granting USE Authority

```
CRTDTADCT  DTADCT(DEPT547)  AUT(*USE)
           TEXT('dept547 dictionary')
```

This command creates a data dictionary named DEPT547 in library DEPT547. The authority given for the dictionary to other users is \*USE.

### Example 2: Creating a Restricted Data Dictionary

```
CRTDTADCT  DTADCT(DEPT245)  AUT(MYLIST)
           TEXT('restricted dictionary')
```

This command creates a restricted data dictionary named DEPT245 in library DEPT245. The authority given for the dictionary to the users comes from the authorization list named MYLIST.

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## Error messages

### \*ESCAPE Messages

#### **CPF2DAB**

Authority list &1 not found

#### **CPF2D71**

Dictionary name cannot be &1.

#### **CPF2F04**

Dictionary &1 already exists.

#### **CPF2F07**

Dictionary &1 in error.

#### **CPF2F11**

Dictionary &1 not created.

#### **CPF9820**

Not authorized to use library &1.

#### **CPF9830**

Cannot assign library &1.

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## Create Data Queue (CRTDTAQ)

Where allowed to run: All environments (\*ALL)  
Threadsafe: Yes

Parameters  
Examples  
Error messages

The Create Data Queue (CRTDTAQ) command creates a data queue and stores it in a specified library.

Data queues, which are a type of OS/400 system object, are used to communicate and store data used by several programs either within a job or between jobs. Multiple jobs can send or receive data from a single queue.

For more information about data queues on output queues, see the Printer Device Programming book, SC41-5713.

The Create Data Queue (CRTDTAQ) command optionally creates a distributed data management (DDM) data queue when TYPE(\*DDM) is specified. The DDM data queue is used as a reference data queue by programs to access data queues located on a remote (target) system in the DDM network. Programs on the local (source) system refer to a remote data queue by the DDM data queue's name, not by the remote data queue's name. The DDM data queue name, however, can be the same as the remote data queue name.

The DDM data queue on the source system contains the name of the remote data queue and the name of the remote (target) system on which the remote data queue is located.

**Restrictions:** Users of this command must have add (\*ADD) authority for the library where the data queue is located.

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### Parameters

Keyword	Description	Choices	Notes
DTAQ	Data queue	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Data queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
TYPE	Type	<i>*STD, *DDM</i>	Optional
MAXLEN	Maximum entry length	1-64512	Optional, Positional 2
FORCE	Force to auxiliary storage	<i>*NO, *YES</i>	Optional
SEQ	Sequence	<i>*FIFO, *LIFO, *KEYED</i>	Optional
KEYLEN	Key length	1-256	Optional
SENDERID	Include sender ID	<i>*NO, *YES</i>	Optional
SIZE	Queue size	<i>Element list</i>	Optional
	Element 1: Maximum number of entries	<i>Integer, *MAX16MB, *MAX2GB</i>	
	Element 2: Initial number of entries	<i>Integer, 16</i>	
AUTORCL	Automatic reclaim	<i>*NO, *YES</i>	Optional

Keyword	Description	Choices	Notes
RMTDTAQ	Remote data queue	<i>Qualified object name</i>	Optional
	Qualifier 1: Remote data queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
RMTLOCNAME	Remote location	<i>Communications name, *RDB</i>	Optional
RDB	Relational database	<i>Name</i>	Optional
DEV	APPC device description	<i>Name, *LOC</i>	Optional
LCLLOCNAME	Local location	<i>Communications name, *LOC, *NETATR</i>	Optional
MODE	Mode	<i>Communications name, *NETATR</i>	Optional
RMTNETID	Remote network identifier	<i>Communications name, *LOC, *NETATR, *NONE</i>	Optional
TEXT	Text 'description'	<i>Character value, *BLANK</i>	Optional
AUT	Authority	<i>Name, *LIBCRTAUT, *CHANGE, *ALL, *USE, *EXCLUDE</i>	Optional

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## Data queue (DTAQ)

Specifies the data queue to be created.

This is a required parameter.

### Qualifier 1: Data queue

*name* Specify the name of the data queue.

### Qualifier 2: Library

#### \*CURLIB

The current library for the job is used to locate the data queue. If no current library entry exists in the library list, QGPL is used.

*name* Specify the library where the data queue is located.

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## Type (TYPE)

Specifies the type of data queue to be created. A standard data queue or a distributed data management (DDM) data queue can be created.

\*STD A standard data queue is created. The MAXLEN parameter is required with the use of this value.

#### \*DDM

A DDM data queue is created. This value requires the name of the remote data queue accessed (RMTDTAQ parameter) and the name of the remote (target) system that the data queue is located on (RMTLOCNAME parameter).

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## Maximum entry length (MAXLEN)

Specifies the maximum length of the entry that is sent to the data queue.

### Notes:

1. If the data queue is associated with an output queue, the maximum length value should be at least 128.
2. This parameter is valid only when TYPE(\*STD) is specified.

### 1-64512

Specify the maximum entry length. Valid values range from 1 through 64512.

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## Force to auxiliary storage (FORCE)

Specifies whether the data queue is forced to auxiliary storage when entries are sent or received for this data queue.

**Note:** This parameter is valid only when TYPE(\*STD) is specified.

**\*NO** Send and receive operations are not immediately forced to auxiliary storage.

**\*YES** Send and receive operations are immediately forced to auxiliary storage. This ensures that the changes are not lost if a system failure occurs. This requires additional system overhead.

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## Sequence (SEQ)

Specifies the sequence in which entries are received from the data queue.

### Notes:

1. If the data queue is associated with an output queue, the sequence value should be \*FIFO or \*LIFO."
2. This parameter is valid only when TYPE(\*STD) is specified.

**\*FIFO** Data queue entries are received in a first-in first-out sequence.

**\*LIFO** Data queue entries are received in a last-in first-out sequence.

### \*KEYED

Data queue entries are received by key. A key is a prefix added to an entry by its sender.

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## Key length (KEYLEN)

Specifies the number of characters in the key.

**Note:** This parameter is valid only when SEQ(\*KEYED) and TYPE(\*STD) are specified.

**1-256** Specify the key length. Valid values range from 1 through 256.

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## Include sender ID (SENDERID)

Specifies a sender ID to be attached to each message sent to the Data Queue. The ID contains the job name and the sender's current user profile.

**Note:** This parameter is valid only when TYPE(\*STD) is specified.

**\*NO** Messages sent do not include the sender ID.

**\*YES** Messages sent include the sender ID.

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## Queue size (SIZE)

Specifies the amount of storage allocated for the data queue. Parameter elements consist of the maximum number of entries and the initial number of entries for the data queue.

**Note:** This parameter is valid only when TYPE(\*STD) is specified.

### Element 1: Maximum number of entries

One of the following is used to specify the maximum number of entries that can be added to a data queue.

#### **\*MAX16MB**

The system will calculate the maximum number of entries that can be added to the queue and will be allowed to grow to a maximum size of approximately 16 megabytes(MB). One megabyte equals 1,048,576 bytes. This value with an initial number of entries of 16 provides compatibility with releases of the operating system earlier than Version 4 Release 5 Modification 0 (V4R5M0).

#### **\*MAX2GB**

The system will calculate the maximum number of entries that can be added to the data queue. The data queue will be allowed to grow to a maximum size of approximately 2 gigabytes (GB). One gigabyte equals 1,073,741,824 bytes.

#### *number-of-entries*

The data queue will be allowed to hold at least this number of entries. Based on the extend size used by the machine, the maximum number of data queue entries may be slightly higher than the specified value. The value specified must be greater than 0.

### Element 2: Initial number of entries

Specifies the amount of storage that will initially be allocated to the data queue. The queue will be created to hold the initial number of entries of the maximum entry length.

**16** Initially, storage is allocated to hold 16 entries of the maximum entry length.

#### *initial-number-of-entries*

Specify the value for the initial number of entries that the data queue can hold. The value must be greater than 0.

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## Automatic reclaim (AUTORCL)

Specifies whether the storage allocated for the data queue is automatically reclaimed (released) when the data queue is empty.

**Note:** This parameter is valid only when TYPE(\*STD) is specified.

**\*NO** The storage allocated for the data queue is not released when the data queue is empty.

**\*YES** The storage allocated for the data queue is released when the data queue is empty. Storage for the Initial Number of Entries value will remain allocated.

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## Remote data queue (RMTDTAQ)

Specifies the remote data queue on the target system. The data queue does not need to exist when the DDM data queue is created.

### Qualifier 1: Remote data queue

*name* Specify the name of the data queue that identifies the remote data queue accessed. The name cannot exceed 10 characters.

### Qualifier 2: Library

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

**\*CURLIB**

The current library for the thread is searched. If no library is specified as the current library for the thread, the QGPL library is searched.

*name* Specify the name of the library to be searched.

- If \*LIBL (the default library qualifier) is specified or assumed, the library list in the called job on the target system is searched to locate the data queue.
- If \*CURLIB is specified, the current library in the called job on the target system is searched to locate the data queue.

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## Remote location (RMTLOCNAME)

Specifies the name of the remote location that is used with this object.

**Note:** Multiple DDM data queues can use the same remote location for the target system. The remote locations used must point to iSeries systems that are at a release of OS/400 that supports remote data queues.

**\*RDB** The remote location information from the relational database entry specified for the **Relational database (RDB)** parameter is used to determine the remote system.

*name* Specify the name of the remote location that is associated with the target system. The remote location, which is used in accessing the target system, does not need to exist when the DDM data queue is created but must exist when the DDM data queue is accessed.

More information on remote locations is in the APPC Programming book, SC41-5443.

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## Relational database (RDB)

Specifies the relational database entry that is used to determine the remote location information for the DDM data queue.

### *communications-name*

Specify the name of the relational database entry that identifies the target system or target ASP group. The relational database name can refer to a remote system or an ASP group that is configured and available on a remote system. The relational database entry does not need to exist when the DDM data queue is created but must exist when the DDM data queue is used. This parameter is required when \*RDB is specified for the **Remote location (RMTLOCNAME)** parameter.

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## APPC device description (DEV)

Specifies the name of the APPC device description on the source system that is used with this DDM data queue. The device description does not need to exist when the DDM data queue is created.

**\*LOC** The device associated with the remote location is used. If several devices are associated with the remote location, the system determines which device is used.

*name* Specify the name of a communications device associated with the remote location. If the device name is not valid for the remote location, a message is sent when the program device entry is required. More information on device names is in the APPC Programming book, SC41-5443.

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## Local location (LCLLOCNAME)

Specifies the local location name.

**\*LOC** The device associated with the remote location is used. If several devices are associated with the remote location, the system determines which device is used.

### **\*NETATR**

The LCLLOCNAME value specified in the system network attributes is used.

*name* Specify the name of the local location that is associated with the remote location. The local location name is specified only if the user indicates a specific local location for the remote location. If the local location name is not valid for the remote location, an escape message is sent when the DDM data queue is accessed.

More information on local location names is in the APPC Programming book, SC41-5443.

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## Mode (MODE)

Specifies the mode name that is used with the remote location name to communicate with the target system.

### **\*NETATR**

The mode name specified in the network attributes is used.

*name* Specify the name of the mode that is used to communicate with the remote system. If the mode name is not valid for any combination of remote location and local location, an escape message is sent when the DDM data queue is accessed.

More information on mode names is in the APPC Programming book, SC41-5443.

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## Remote network identifier (RMTNETID)

Specifies the remote network identifier (ID) in which the remote location resides that is used to communicate with the target system.

**\*LOC** The remote network ID associated with the remote location is used. If several remote network IDs are associated with the remote location, the system determines which remote network ID is used.

**\*NETATR**

The RMTNETID value specified in the system network attributes is used.

**\*NONE**

No remote network ID is used.

*remote-network-ID*

Specify the remote network ID that is associated with the remote location. The remote network ID is specified only if the user indicates a specific remote network ID for the remote location. If the remote network ID is not valid for the remote location, an escape message is sent when the DDM data queue is accessed.

More information on remote network IDs is in the APPC Programming book, SC41-5443.

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## Text 'description' (TEXT)

Specifies text that briefly describes the data queue.

**\*BLANK**

No text is specified.

*'description'*

Specify no more than 50 characters, enclosed in apostrophes.

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## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

**\*LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library command (CRTLIB) for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

**\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

- \*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.
- \*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.
- \*EXCLUDE**  
The user cannot access the object.
- name** Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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## Examples

### Example 1: Creating a Standard Data Queue

```
CRTDTAQ  DTAQ(DEPTADTA)  MAXLEN(100)  AUT(*EXCLUDE)
          TEXT('Special data + files for DEPTA')
```

This command creates a data queue named DEPTADTA and puts it in the current library; the maximum length entry is 100. Because AUT(\*EXCLUDE) is specified, the data queue can be used and controlled only by the user who created the queue and by users who have been given specific authority. Users in Department A can be given authority to use this data queue by using the Grant Object Authority (GTROBJAUT) command.

### Example 2: Creating a DDM Data Queue to Access a Data Queue at Another iSeries 400

```
CRTDTAQ  DTAQ(SOURCE/SALES)  TYPE(*DDM)
          RMTDTAQ(REMOTE/SALES)  RMTLOCNAME(NEWYORK)
```

This command creates a DDM data queue named SALES and stores it in the SOURCE library on the source system. This DDM data queue uses the remote location named NEWYORK to access a remote data queue named SALES stored in the REMOTE library on an iSeries 400 in New York.

### Example 3: Creating a Data Queue Specifying Size Attributes and Automatic Reclaim

```
CRTDTAQ  DTAQ(MYLIB/MYDTAQ)  MAXLEN(80)
          SIZE(*MAX2GB 100)  AUTORCL(*YES)
```

This command creates a data queue named MYDTAQ and stores it in the MYLIB library. The maximum entry length is 80 bytes and the queue entries are received in a first-in-first-out (FIFO) sequence. The data queue will initially have storage allocated to hold 100 entries. The data queue can grow to a maximum size of approximately 2 gigabytes. If all queue entries are received, storage for the data queue will be automatically reclaimed.

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## Error messages

### \*ESCAPE Messages

#### CPF2105

Object &1 in &2 type \*&3 not found.

**CPF2108**  
Object &1 type \*&3 not added to library &2.

**CPF2109**  
NEWOBJ must be \*SAME when OBJ parameter is \*ALL or generic name.

**CPF2110**  
Library &1 not found.

**CPF2113**  
Cannot allocate library &1.

**CPF2116**  
DATA(\*YES) specified and \*ALL or \*FILE not in OBJTYPE list.

**CPF2122**  
Storage limit exceeded for user profile &1.

**CPF2123**  
No objects of specified name or type exist in library &2.

**CPF2130**  
&1 objects duplicated. &2 objects not duplicated.

**CPF2151**  
Operation failed for &2 in &1 type \*&3.

**CPF2152**  
Objects of type \*&1 cannot be created into QTEMP.

**CPF2162**  
Duplication of all objects in library &1 not allowed.

**CPF2176**  
Library &1 damaged.

**CPF2182**  
Not authorized to library &1.

**CPF2185**  
TOLIB, TOASPDEV, or NEWOBJ parameter not correct.

**CPF2186**  
Object &1 cannot be created into library &2.

**CPF2283**  
Authorization list &1 does not exist.

**CPF327E**  
Alternative name for file &1 not allowed.

**CPF6565**  
User profile storage limit exceeded.

**CPF9810**  
Library &1 not found.

**CPF9820**  
Not authorized to use library &1.

**CPF9827**  
Object &1 cannot be created or moved into &2.

**CPF9830**  
Cannot assign library &1.

**CPF9870**

Object &2 type \*&5 already exists in library &3.

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## Create Duplicate Object (CRTDUPOBJ)

**Where allowed to run:** All environments (\*ALL)  
**Threadsafe:** Yes

Parameters  
Examples  
Error messages

The Create Duplicate Object (CRTDUPOBJ) command copies a single object or a group of objects. It does not create an exact duplicate of files. The newly created object must be renamed if it is stored in the same library as the original object. If it is stored in a library other than the one that contains the original object, it can retain the name of the original object. You can copy a group of related objects by specifying a generic object name and the library in which the newly created objects are stored. You can also specify whether data in physical files or save files is copied.

**Note:** The value of the **Create authority (CRTAUT)** parameter specified on the Create Library (CRTLIB) command for the to-library is not used for the duplicate object. The public and private authorities for the duplicate object will be the same as the original object. The owner of the duplicate object is either the user profile of the user who issues the command or the group profile if the user profile of the user who issues the command is a member user profile that has specified that the group should be the owner.

When duplicating a file using the CRTDUPOBJ command, the format of the from-file specified for the **From object (OBJ)** parameter is shared with the newly created file specified for the **New object (NEWOBJ)** parameter. When the maximum number (approximately 32K) of file objects that share the same format has been reached, the newly created file will create a new format instead of sharing the FROM file's format.

**Note:** All of the files that share the same format will be considered related and will be grouped together in the same save list when a save operation is performed.

When a logical file is copied into another library, two cases determine the basing for the file:

1. If both the logical file and its based-on physical file are originally in the same library, a duplicate of the physical file must be created in the new library before a duplicate of the logical file is created. After these two duplicates are created, the new logical file is based on the new physical file.
2. If the logical file and its based-on physical file are originally in different libraries, it is not necessary to duplicate the physical file before duplicating the logical file. In this case, the duplicated logical file is based on the same physical file as was the original logical file. Unlike the first case, even if the physical file is copied into the new library before the logical file is copied, the duplicated logical file is based on the original physical file, not on the duplicated physical file.

When the CRTDUPOBJ command creates a file, any constraints associated with the from-file are included. When trigger programs are associated with the from-file, there are additional considerations of which to be aware.

**Note:** See the Database information in the iSeries Information Center at <http://www.ibm.com/eserver/iseres/infocenter> for additional information regarding database files.

### Restrictions:

1. You must have use (\*USE) and object management (\*OBJMGT) authorities for the existing object.
2. You must have use (\*USE) and add (\*ADD) authorities for the library for the new object.
3. You must have authorization list management (\*AUTLMGT) authority if the object is an authorization list.

4. You must have object operational (\*OBJOPR) authority for the Create Save File (CRTSAVF) command to create a duplicate save file. The contents of the save file are duplicated when \*YES is specified for the **Duplicate data (DATA)** parameter.
5. When an object is to be duplicated, it is created in the same auxiliary storage pool (ASP) as the to-library.
6. If \*YES is specified for the **Duplicate data (DATA)** parameter when the CRTDUPOBJ command is used to create a copy of a file, the new duplicate file object is seized (similar to an \*EXCL lock with no timeout) for the duration of the data copy making access impossible. An attempt to use a function that refers to the new duplicate file object while the data copy is in progress results in a lock up for that work station until the data copy is completed. The following are examples of functions that should not be used on the new duplicate file object until the data copy is completed:
  - WRKACTJOB (Option 11-Locks; Option 8-WRKOBJLCK)
  - DSPDBR
  - DSPFD
  - DSPFFD
  - DSPJOB (Option 12-Locks; F10-Job record locks; Option 14-Open files)
  - DSPLIB (The library containing the new duplicate file)
  - DSPOBJD
  - WRKOBJLCK
  - DSPRCDLCK
  - Any other function which refers to the new duplicate file
7. When duplicating a database file or a save file and storage for the from-library is allocated from a primary or secondary auxiliary storage pool (ASP), storage for the to-library must either be allocated from an ASP in the same ASP group as the storage for the from-library or be allocated from the system ASP (ASP 1) or a basic user ASP (ASPs 2-32). Duplicating a database file or a save file from one ASP group to another ASP group is not supported.
8. When creating a duplicate object of type \*GSS, \*FNTRSC, \*FORMDF, \*OVL, \*CSI, \*PAGDFN, or \*PAGSEG, the name of the new object cannot exceed 8 characters in length.
9. The user space (\*USRSPC) and user index (\*USRIDX) user domain objects can be copied only into libraries that are permitted in the system value QALWUSRDMN (allow user domain objects in library). However, if the user object was created as a system domain object, it is not restricted.

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## Parameters

Keyword	Description	Choices	Notes
OBJ	From object	Generic name, name, *ALL	Required, Positional 1
FROMLIB	From library	Name, *LIBL, *CURLIB	Required, Positional 2
OBJTYPE	Object type	Single values: *ALL Other values (up to 57 repetitions): *ALRTBL, *AUTL, *BNDDIR, *CHTFMT, *CLD, *CLS, *CMD, *CRQD, *CSI, *CSPMAP, *CSPTBL, *DTAARA, *FCT, *FILE, *FNTRSC, *FNTTBL, *FORMDF, *FTR, *GSS, *IGCDCT, *IGCSRT, *JOBQ, *JOBQ, *LOCALE, *MEDDFN, *MENU, *MGTCOL, *MODULE, *MSGF, *MSGQ, *M36CFG, *NODGRP, *NODL, *OUTQ, *OVL, *PAGDFN, *PAGSEG, *PDFMAP, *PDG, *PGM, *PNLGRP, *PRDAVL, *PRDDFN, *PRDLOD, *PSFCFG, *QMFORM, *QMORY, *QRYDFN, *SBSD, *SCHIDX, *SRVPGM, *SSND, *TBL, *USRIDX, *USRSPC, *VLDL, *WSCST	Required, Positional 3



Keyword	Description	Choices	Notes
TOLIB	To library	Name, *FROMLIB, *SAME, *CURLIB	Optional, Positional 4
NEWOBJ	New object	Name, *OBJ, *SAME	Optional, Positional 5
ASPDEV	From ASP device	Name, *, *CURASPGRP, *SYSBAS	Optional
TOASPDEV	To ASP device	Name, *ASPDEV, *, *CURASPGRP, *SYSBAS	Optional
DATA	Duplicate data	*NO, *YES	Optional

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---

## From object (OBJ)

Specifies one or more objects to be duplicated.

This is a required parameter.

**\*ALL** All the objects in the specified library for which you have authority and of the object type specified for the **Object type (OBJTYPE)** parameter are duplicated.

### *generic-name*

Specify a group of objects in the specified library to be duplicated. A generic object name is specified as a character string that contains one or more characters followed by an asterisk (\*); for example, ABC\*. A generic name specifies all objects that begin with the same prefix as the generic object name for which you have the proper authority.

**name** Specify the name of the specific object to be duplicated.

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---

## From library (FROMLIB)

Specifies the library that contains the objects to be duplicated.

This is a required parameter.

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

**Note:** \*LIBL can be specified for a specific object and a single, specific object type.

### **\*CURLIB**

The current library for the thread is searched to find the objects to be duplicated. If no library is specified as the current library for the thread, the QGPL library is used.

**name** Specify the name of the library that is searched to find the objects to be duplicated.

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---

## Object type (OBJTYPE)

Specifies the type of the object to be duplicated. This parameter can be specified as a single value or as a list of one or more object types.

To see a complete list of object types when prompting this command, position the cursor on the field for this parameter and press F4 (Prompt). For a description of the object types, see "Object types" in the CL concepts and reference topic in the iSeries Information Center at <http://www.ibm.com/eserver/series/infocenter>.

This is a required parameter.

### Single values

**\*ALL** All object types that have the specified name in the specified library for which you have authority are duplicated. If **\*ALL** is also specified for the **From object (OBJ)** parameter, all the objects in the specified library for which you have authority and that are of the types that can be duplicated are duplicated.

### Other values

#### *object-type*

Specify one or more values for the types of object that are to be duplicated.

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## To library (TOLIB)

Specifies the library in which the duplicate object is to be created.

**Note:** If the library is in an auxiliary storage pool (ASP), the object to be duplicated must be a valid object type that can reside in an ASP. If this object type is not a valid type that can reside in an ASP, an error message is sent.

### \*FROMLIB

The library containing the new object will have the same name as the library containing the original object. Note that this is not necessarily the same library as the library containing the original object. If the **From ASP device (ASPDEV)** parameter and the **To ASP device (TOASPDEV)** parameter describe the same auxiliary storage pool (ASP) device, it is the same library. If it is the same library, a name different from the name of the original object must be assigned to the new object with the **New object (NEWOBJ)** parameter. If the ASPDEV parameter and the TOASPDEV parameter describe different ASP devices, it is a different library (with the same library name) on the different ASP device.

### \*SAME

See \*FROMLIB above. \*SAME and \*FROMLIB have the same meaning.

### \*CURLIB

The current library for the thread will contain the new object. If no library is specified as the current library for the thread, the QGPL library is used. If \*CURLIB is specified for this parameter, either the **To ASP device (TOASPDEV)** parameter must be \*, or the TOASPDEV parameter must be \*ASPDEV and the **From ASP device (ASPDEV)** parameter must be \*.

*name* Specify the name of the library to contain the new object.

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## New object (NEWOBJ)

Specifies name of the new object. A name must be specified here if \*SAME or \*FROMLIB is specified for the **To library (TOLIB)** parameter and the same auxiliary storage pool device is specified for both the **From ASP device (ASPDEV)** parameter and the **To ASP device (TOASPDEV)** parameter. The names of members in a database file to be duplicated remain the same in the new file.

**\*OBJ** The new object has the same name as the original object. If this is specified, the new object and original object must reside in different libraries.

**\*SAME**

See \*OBJ above. \*SAME and \*OBJ have the same meaning.

*name* Specify the name of the new object.

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---

## From ASP device (ASPDEV)

Specifies the auxiliary storage pool (ASP) device name where storage is allocated for the library containing the object to be duplicated (the **From library (FROMLIB)** parameter). If the library is in an ASP that is not part of the thread's library name space, this parameter must be specified to ensure the correct object is duplicated. If this parameter is used when \*LIBL or \*CURLIB is specified for the FROMLIB parameter, \* is the only valid value.

\*  
- The ASPs that are currently part of the thread's library name space will be searched to find the library. This includes the system ASP (ASP 1), all defined basic user ASPs (ASPs 2-32), and, if the thread has an ASP group, the primary and secondary ASPs in the thread's ASP group.

**\*CURASGRP**

If the thread has an ASP group, the primary and secondary ASPs in the thread's ASP group will be searched to find the library. The system ASP (ASP 1) and defined basic user ASPs (ASPs 2-32) will not be searched. If no ASP group is associated with the thread an error will be issued.

**\*SYSBAS**

The system ASP (ASP 1) and all defined basic user ASPs (ASPs 2-32) will be searched to find the library. No primary or secondary ASPs will be searched, even if the thread has an ASP group.

*name* Specify the name of the primary or secondary ASP device to be searched to find the library. The primary or secondary ASP must have been activated (by varying on the ASP device) and have a status of 'Available'. The system ASP (ASP 1) and defined basic user ASPs (ASPs 2-32) will not be searched.

**Note:** To specify a specific auxiliary storage pool (ASP) device name, you must have use (\*USE) authority for each ASP device in the ASP group.

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## To ASP device (TOASPDEV)

Specifies the auxiliary storage pool (ASP) device name where storage is allocated for the library to contain the new object (the **To library (TOLIB)** parameter). If the library is in an ASP that is not part of the thread's library name space, this parameter must be specified to ensure the object is duplicated into the correct library. If this parameter is used when \*CURLIB is specified for the TOLIB parameter, either TOASPDEV(\*) must be specified or TOASPDEV(\*ASPDEV) must be specified and the **From ASP device (ASPDEV)** parameter must be \*.

**\*ASPDEV**

The ASP device specified for the ASPDEV parameter will be searched to find the library.

\* The ASPs that are currently part of the thread's library name space will be searched to find the library. This includes the system ASP (ASP 1), all defined basic user ASPs (ASPs 2-32), and, if the thread has an ASP group, the primary and secondary ASPs in the thread's ASP group.

**\*CURASGRP**

If the thread has an ASP group, the primary and secondary ASPs in the thread's ASP group will

be searched to find the library. The system ASP (ASP 1) and defined basic user ASPs (ASPs 2-32) will not be searched. If no ASP group is associated with the thread an error will be issued.

#### **\*SYSBAS**

The system ASP (ASP 1) and all defined basic user ASPs (ASPs 2-32) will be searched to find the library. No primary or secondary ASPs will be searched, even if the thread has an ASP group.

*name* The name of the primary or secondary ASP device to be searched to find the library. The primary or secondary ASP must have been activated (by varying on the ASP device) and have a status of 'Available'. The system ASP (ASP 1) and defined basic user ASPs (ASPs 2-32) will not be searched.

**Note:** To specify a specific auxiliary storage pool (ASP) device name, you must have use (\*USE) authority for each ASP device in the ASP group.

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## Duplicate data (DATA)

Specifies whether the data records in physical files or save files are copied to the new object. Members of physical files are copied whether or not the data contained in them is copied.

**\*NO** The data records in the members of physical files or save files are not copied to the new object.

**\*YES** The data records in the members of physical files or save files are copied to the new object.

#### **NOTES:**

1. A file cannot be duplicated while it is in use for update by another job.
2. The relative record numbers in the new file are the same as those in the original file.

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## Examples

```
CRTDUPOBJ  OBJ(FILEA)  FROMLIB(LIB1)  OBJTYPE(*FILE)
           TOLIB(LIB2)  DATA(*YES)
```

The file named FILEA in library LIB1 is duplicated and stored in library LIB2. Authorities granted for FILEA are granted to the new FILEA in LIB2, and data associated with FILEA is copied to the newly created FILEA in LIB2.

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## Error messages

### \*ESCAPE Messages

#### **CPFB8ED**

Device description &1 not correct for operation.

#### **CPF2105**

Object &1 in &2 type \*&3 not found.

#### **CPF2109**

NEWOBJ must be \*SAME when OBJ parameter is \*ALL or generic name.

#### **CPF2110**

Library &1 not found.

**CPF2113**  
Cannot allocate library &1.

**CPF2116**  
DATA(\*YES) specified and \*ALL or \*FILE not in OBJTYPE list.

**CPF2122**  
Storage limit exceeded for user profile &1.

**CPF2123**  
No objects of specified name or type exist in library &2.

**CPF2130**  
&1 objects duplicated. &2 objects not duplicated.

**CPF2151**  
Operation failed for &2 in &1 type \*&3.

**CPF2152**  
Objects of type \*&1 cannot be created into QTEMP.

**CPF2155**  
\*LIBL cannot be specified for FROMLIB.

**CPF216C**  
TOASPDEV value not allowed with TOLIB(\*CURLIB).

**CPF216D**  
TOLIB, NEWOBJ, or TOASPDEV parameter not correct.

**CPF2160**  
Object type \*&1 not eligible for requested function.

**CPF2162**  
Duplication of all objects in library &1 not allowed.

**CPF2173**  
Value for ASPDEV not valid with special value for library.

**CPF2176**  
Library &1 damaged.

**CPF218C**  
&1 not a primary or secondary ASP.

**CPF2182**  
Not authorized to library &1.

**CPF2185**  
TOLIB, TOASPDEV, or NEWOBJ parameter not correct.

**CPF2186**  
Object &1 cannot be created into library &2.

**CPF9806**  
Cannot perform function for object &2 in library &3.

**CPF9814**  
Device &1 not found.

**CPF9825**  
Not authorized to device &1.

**CPF9827**  
Object &1 cannot be created or moved into &2.

**CPF9833**

\*CURASPGRP or \*ASPGRPPRI specified and thread has no ASP group.

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## Create Edit Description (CRTEDTD)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Edit Description (CRTEDTD) command defines an edit mask for the specified edit description and stores it in the QSYS library. As many as five edit descriptions can be defined by the user. A version of each of these edit descriptions is supplied in the QSYS library. More information about the IBM-supplied versions is in the Application Display Programming book, SC41-5715. To create a new version, the IBM-supplied version must first be deleted by the Delete Edit Description (DLTEDTD) command.

Edit descriptions can be used in data description specifications and high-level language programs to edit numeric fields.

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### Parameters

Keyword	Description	Choices	Notes
EDTD	Edit description	5, 6, 7, 8, 9	Required, Positional 1
INTMASK	Integer mask	Character value, *NONE	Optional
DECPNT	Decimal point character	Character value, , *NONE	Optional
FRACMASK	Fraction mask	Character value, *NONE	Optional
FILLCHAR	Fill character	Character value, *BLANK	Optional
CURSYM	Currency symbol	Character value, *NONE	Optional
ZEROBAL	Edit zero values	*YES, *NO	Optional
NEGSTS	Negative status characters	Character value, *NONE	Optional
POSSTS	Positive status characters	Character value, *NONE	Optional
LFTCNS	Left constant characters	Character value, *NONE	Optional
RGTCNS	Right constant characters	Character value, *NONE	Optional
TEXT	Text 'description'	Character value, *BLANK	Optional
AUT	Authority	Name, *LIBCRTAUT, *CHANGE, *ALL, *USE, *EXCLUDE	Optional

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### Edit description (EDTD)

Specifies a single-digit code (5, 6, 7, 8, or 9) that identifies the user-defined edit description being created. The actual name of the created object (which is stored in the QSYS library) is **QEDIT $n$** , where  $n$  is the single-digit edit code specified in this parameter.

This is a required parameter.

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## Integer mask (INTMASK)

Specifies a character string (mask) that describes the editing of the integer portion of a decimal field. Characters other than a blank, a zero, or an ampersand (&) are handled as constants in the editing process. Blank, zero, and ampersand have the following meanings:

- Blank: Each blank is replaced with a fill character or with a digit from the number being edited once zero suppression ends.
- Zero (0): The farthest left zero is a digit replacement character and also ends zero suppression. All other zeros in the integer mask are handled as constants.
- Ampersand (&): Blank substitution.

**Note:** You cannot specify both INTMASK(\*NONE) and FRACMASK(\*NONE) on the CRTEDTD command. Instead, specify blanks for INTMASK and FRACMASK, and specify GENLVL(30) on the Create Printer File (CRTPRTF) or Create Display File (CRTDSPF) command, which allows the file to create, but ignores the edit code keyword.

The possible values are:

### \*NONE

No editing mask is used on the integer portion of decimal fields.

### *'integer-mask'*

Specify the character string that is used as the editing mask for the integer portion of a decimal field. A maximum of 31 characters, enclosed in apostrophes, can be used in the integer mask.

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## Decimal point character (DECPNT)

Specifies, for decimal fields, a single character used as a decimal point to separate the integer (INTMASK) and fraction (FRACMASK) portions of the edited result. If the field has no decimal places, this character is not used and is not considered in the width of the edited results.

**Note:** If the separator character specified for DECPNT is also used in the INTMASK parameter, it has no special meaning in the integer mask; it is handled only as a constant or as a digit replacement character in the integer mask.

The possible values are:

### '.' (period)

The period (or decimal point) is the separator character. It must be enclosed in apostrophes.

### \*NONE

No separator character is specified; a decimal point is not needed in the edited result.

### *'separator-character'*

Specify the separator character, such as the comma (,), that is used as a decimal point. Any alphanumeric or special character can be used, but a special character must be enclosed in apostrophes.

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## Fraction mask (FRACMASK)

Specifies a character string (mask) that describes the editing of the fraction portion of a decimal field (to the right of the decimal point). The characters have the same meaning as described for the **Integer mask** prompt (INTMASK parameter) except that all zeros are handled as constants and blanks are not replaced with a fill character.

The possible values are:

**\*NONE**

No editing mask is used on the fraction portion of decimal fields.

*'fraction-mask'*

Specify the character string that is used as the editing mask for the fraction portion of a decimal field. A maximum of 31 characters, enclosed in apostrophes, can be used in the fraction mask.

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## Fill character (FILLCHAR)

Specifies the character that is used in each position of a result that is zero suppressed. The specified character replaces all leading zeros that are to the left of the first significant digit in the integer mask (or a forced zero).

The possible values are:

**\*BLANK**

The fill character is a blank.

*'fill-character'*

Specify the character that is used as the fill character. Any alphanumeric or special character can be used, but a special character must be enclosed in apostrophes.

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## Currency symbol (CURSYM)

Specifies the character string that is used as the floating currency symbol. The character string specified appears immediately to the left of the first significant digit (or constant). If the first significant digit is a zero, occurring in the position that ended zero suppression, the character string ends in the position occupied by that zero.

The possible values are:

**\*NONE**

No floating currency symbol is specified; none is needed in the edited result.

*'floating-currency-symbol'*

Specify the character string that is used as the floating currency symbol for monetary amount fields. A maximum of 15 alphanumeric and special characters, enclosed in apostrophes, can be specified.

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## Edit zero values (ZEROBAL)

Specifies the editing action for zero values.

The possible values are:

- \*YES** The normal editing rules are followed. (For information on Editing rules, refer to the description of the Create Edit Description (CRTEDTD) command in the CL Reference manual.
- \*NO** If the field being edited has a value of zero, the entire field (integer, decimal point, or fraction) is replaced by the fill character, including constants in the edit mask.

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## Negative status characters (NEGSTS)

Specifies the character string that immediately follows the body of the edited result if the field is negative. If the field is positive, blanks are substituted for the length of the string, unless a value is also specified for the **Positive status characters** prompt (POSSTS parameter).

The possible values are:

- \*NONE** No character string is specified; blanks are used to the right of the field in the edited result.

*'negative-status-character-string'*

Specify the character string that immediately follows the edited field when the field is negative in value. A maximum of 31 characters, enclosed in apostrophes, can be specified as the negative status character string.

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## Positive status characters (POSSTS)

Specifies the character string that immediately follows the body of the edited result if the field is positive or zero. If the field is negative, blanks are substituted for the length of the string unless a value is also specified for the **Negative status characters** prompt (NEGSTS parameter).

The possible values are:

- \*NONE** No character string is specified; blanks are used to the right of the field in the edited result.

*'positive-status-character-string'*

Specify the character string that immediately follows the edited field when the field is positive in value. A maximum of 31 characters, enclosed in apostrophes, can be specified as the positive status character string.

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## Left constant characters (LFTCNS)

Specifies the character string constant that always appears as the farthest left portion of the edited result.

The possible values are:

- \*NONE** No constant appears on the left side of edited fields.

### *'left-constant'*

Specify the character string that always appears on the left side of an edited field. A maximum of 31 characters, enclosed in apostrophes, can be specified.

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## Right constant characters (RGTCNS)

Specifies the character string constant that always appears as the farthest right portion of the edited result.

The possible values are:

### \*NONE

No constant appears on the right side of edited fields.

### *'right-constant'*

Specify the character string that always appears on the right side of an edited field. A maximum of 31 characters, enclosed in apostrophes, can be specified.

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## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

The possible values are:

### \*BLANK

No text is specified.

### *'description'*

Specify no more than 50 characters of text, enclosed in apostrophes.

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## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

The possible values are:

### \*LIBCRTAUT

The authority for the object is the same as the create authority for QSYS. The create authority for QSYS can be displayed by using the Display Library Description (DSPLIBD) command. If the create authority is changed with the Change Library (CHGLIB) command, the new authority will not affect existing objects.

### \*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

**\*EXCLUDE**  
The user cannot access the object.

***authorization-list-name***

Specify the name of an authorization list. Users included on the authorization list are granted authority to the object as specified by the list. The authorization list must exist when the object is created.

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## Examples

The examples assume the following:

**FIELDA**

Six digits (four integer and two decimal positions) with a value of 001234

**FIELDB**

Same as FIELDA but with a negative value (-001234)

**FIELD C**

Same as FIELDA but with a zero value (000000)

**DATE** Six digits (0 decimal positions) with a value of 091878

The character **b** is used to represent blank spaces.

**Example 1: Create Edit Description 5**

```
CRTEDTD  EDTD(5) INTMASK(' ', 0') FRACMASK(' ')  
          NEGSTS('DB ') POSSTS('CREDIT')  
          LFTCNS('$') RGTCNS(' **')
```

**FIELDA**

Logical mask is '\$b,bb0.bbDBbbbb b\*\*' for a negative value or '\$b,bb0.bb CREDIT b\*\*' for a positive value

Edited result is \$bbb12.34CREDITb\*\*

**FIELD B**

Same logical mask

Edited result is \$bbb12.34DBbbbbbb\*\*

**FIELD C**

Same logical mask

Edited result is \$bbbbbb.00CREDITb\*\* or, if ZEROBAL(\*NO) had been specified, \$bbbbbbbbbCREDITb\*\*

**Example 2: Create Edit Description 6**

```
CRTEDTD  EDTD(6) INTMASK(' . 0 ') DECPNT(',')
          FRACMASK(' ') CURSYM('DM') NEGSTS('- **')
```

**FIELD A**

Logical mask is 'bbb.b0b,bb-b\*\*' with floating DM

Edited result is bbbDM12,34bbbb

**FIELD B**

Same logical mask

Edited result is bbbDM12,34-b\*\*

**FIELD C**

Same logical mask

Edited result is bbbbDM0,00bbbb or, if ZEROBAL(\*NO) had been specified, bbbbbbbbbbbbbbb

**Example 3: Create Edit Description 7**

```
CRTEDTD  EDTD(7) INTMASK('0 MONTH DAY YEAR')
          LFTCNS('DATE IS ')
```

**DATE** Logical mask is equal to the INTMASK parameter value

Edited result is DATEbISbb9MONTH18DAYb78YEAR

**Example 4: Create Edit Description 9**

```
CRTEDTD  EDTD(9) INTMASK(' , 0') DECPNT('.')
          FRACMASK(' ') FILLCHAR('*') NEGSTS(' ERROR **')
```

**FIELD A**

Logical mask is 'b,bb0.bbbbbbbbbbb' or 'b,bb0.bbbERRORb\*\*' (Both use the \* as the fill character)

Edited result is \*\*\*12.34bbbbbbbbbb

**FIELD B**

Same logical mask

Edited result is \*\*\*12.34bERRORb\*\*

**FIELD C**

Same logical mask

Edited result is \*\*\*\*\*.00bbbbbbbbbb or, if ZEROBAL(\*NO) had been specified, \*\*\*\*\*bbbbbbbbbb

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## Error messages

### \*ESCAPE Messages

**CPF9805**

Object &2 in library &3 destroyed.

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## Create Folder (CRTFLR)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Folder (CRTFLR) command allows you to create a folder. Folders are used to organize documents and other folders. **Restriction:** If a folder is created into an existing folder, \*CHANGE authority to the existing folder is required.

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### Parameters

Keyword	Description	Choices	Notes
FLR	Folder	<i>Character value</i>	Required, Positional 1
INFLR	In folder	<i>Character value, *NONE</i>	Optional, Positional 2
TEXT	Text 'description'	<i>Character value, *FLR</i>	Optional
AUT	Authority	<i>Name, *INFLR, *EXCLUDE, *ALL, *CHANGE, *USE</i>	Optional
ASP	Auxiliary storage pool ID	<i>1-32, *INFLR</i>	Optional
CMDCHRID	Command character identifier	Single values: <i>*SYSVAL, *DEVVD</i> Other values: <i>Element list</i>	Optional
	Element 1: Graphic character set	<i>Integer</i>	
	Element 2: Code page	<i>Integer</i>	

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### Folder (FLR)

Specifies the name of the folder being created.

This is a required parameter.

#### *new-folder-name*

Specify the name (ranging from 1 through 12 characters, including an optional extension) of the folder being created. If no extension is included, a document or folder name can have a maximum of 8 characters. If an extension is included, the extension must start with a period and can have up to 3 additional characters. An extension in the folder name allows you to identify the folder by using specific information that can help you do a selective listing of folders on your system.

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### In folder (INFLR)

Specifies the name of the folder that contains the folder being created.

### **\*NONE**

The folder is not created within another folder; it is considered a first-level folder.

### ***folder-name***

Specify the name of the folder (ranging from 1 through 63 characters) that contains the newly created folder.

Because folders may reside within other folders, and because any given folder name is only unique within its containing folder, you may be required to link several folder names together to identify a folder. This is commonly called the path to an object within a folder. The folder path is:

- One or more folder names. If more than one folder name, each is separated by a forward slash (/). An example of two folder names is FOLDERA/FOLDERB.
- Not to exceed 63 characters in total length.

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## **Text 'description' (TEXT)**

Specifies the text that briefly describes the object.

**\*FLR** The text is the folder name specified on the **Folder (FLR)** parameter.

### ***'description'***

Specify up to 44 characters enclosed in apostrophes.

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## **Authority (AUT)**

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### **\*INFLR**

If the folder is a first-level folder, the authority is \*EXCLUDE. If the folder is not a first-level folder, the authority is copied from the folder specified on the **In folder (INFLR)** parameter.

### **\*EXCLUDE**

The user cannot access the object.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

### **\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file.



The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

***authorization-list-name***

Specify the name of the authorization list. The public authority is set to \*AUTL, and the authorization list is attached to the created folder.

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---

## Auxiliary storage pool ID (ASP)

Specifies the ID of the auxiliary storage pool (ASP) in which to create the folder. This parameter can be specified only when INFLR(\*NONE) is specified (when you are creating a first level folder).

**\*INFLR**

The folder is created in the ASP of its parent folder. When INFLR(\*NONE) is specified, this is the system ASP.

***ASP-ID***

Specify the identifier (ID) of the ASP in which to create the folder. Valid values are the numbers 1 through 32, which must designate an ASP that is configured on the system. For information on configuring an ASP, see the Backup and Recovery book, SC41-5304.

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---

## Command character identifier (CMDCHRID)

Specifies the character identifier (graphic character set and code page) for the data being entered as command parameter values (applies to TEXT parameter). The character identifier is related to the display device that was used to enter the command.

**\*SYSVAL**

The system determines the graphic character set and code page values for the command parameters from the QCHRID system value.

**\*DEV D**

The system determines the graphic character set and code page values for the command parameter from the display device description where this command was entered. This option is valid only when specified from an interactive job. If specified in an interactive CL program or a batch job, an error occurs.

***graphic-character-set code-page***

Specify the graphic character set and code page of the value supplied in the TEXT parameter. Each can be up to three bytes in length and must be separated by at least one blank.

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---

## Examples

### Example 1: Create a Folder in Another Folder

```
CRTFLR  FLR(QTR1)  INFLR('PAYROLL/1987')  AUT(*CHANGE)
        TEXT('first quarter payroll')
```

This command creates the folder QTR1 in folder PAYROLL/1987. The public is granted \*CHANGE authority to the folder, which allows adding a document to the folder, changing the folder description, or showing the contents of the folder. Folder 1987 is in the PAYROLL folder, which is a first-level folder.

### Example 2: Create a Folder in an ASP

```
CRTFLR  FLR(MANFCTNG)  INFLR(*NONE)  ASP(2)  AUT(*USE)
        TEXT('Manufacturing')
```

This command creates the folder MANFCTNG as a first level folder in user auxiliary storage pool (ASP) 2, which has been previously configured on the system. The public is granted \*USE authority to the folder, which allows you to show the description or the contents of the folder.

[Top](#)

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## Error messages

### \*ESCAPE Messages

#### CPF8A18

Folder &1 not created.

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---

## Create Font Resource (CRTFNTRSC)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Font Resources (CRTFNTRSC) command creates a font resource object from a physical file. The physical file contains the font resource information. The font resource information, can, for example, come from an S/370 host system and be in the Systems Application Architecture\* (SAA) format. Depending on the type of information processed by the CRTFNTRSC command, the results are either a font character set, a code page, or a coded font.

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### Parameters

Keyword	Description	Choices	Notes
FNTRSC	Font resource	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Font resource	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
FILE	File	<i>Qualified object name</i>	Required, Positional 2
	Qualifier 1: File	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
MBR	Member	<i>Name, *FNTRSC</i>	Optional, Positional 3
FNTCAPTURE	Font capture	<i>*FILE, *NO, *YES</i>	Optional
TEXT	Text 'description'	<i>Character value, *MBRTXT, *BLANK</i>	Optional
REPLACE	Replace font resource	<i>*YES, *NO</i>	Optional
AUT	Authority	<i>Name, *LIBCRTAUT, *CHANGE, *ALL, *USE, *EXCLUDE</i>	Optional

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---

### Font resource (FNTRSC)

Specifies the name and library of the font resource being created.

This is a required parameter.

The possible library values are:

#### **\*CURLIB**

The current library for the job is used to store the font resource. If no library is specified as the current library for the job, QGPL is used.

#### **library-name**

Specify the library where you want to store the font resource.

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---

## Source file (FILE)

Specifies the name and library of the file containing the font resource sent to this system.

This is a required parameter.

The possible library values are:

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

**\*CURLIB**

The current library for the job is used to locate the file. If no library is specified as the current library for the job, QGPL is used.

*library-name*

Specify the library where the file name is located.

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---

## Source file member (MBR)

Specifies the name of the file member containing the font resource records.

The possible values are:

**\*FNTRSC**

The name of the file member is specified in the **Font resource** prompt (FNTRSC parameter) of this command.

*file-member-name*

Specify the member in the file specified by the **Source file** prompt (FILE parameter).

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---

## Font capture (FNTCAPTURE)

Specifies whether the font character set or code page is to be marked as eligible for font capturing. Fonts and code pages that are marked with FNTCAPTURE(\*YES) are eligible to be captured after downloading on printers that support font capturing. This allows IPDS printers that support font capturing to dynamically capture or cache a host downloaded font which has been marked with font capture \*YES. The captured font then appears to PSF/400 like a printer resident font and remains in the printer even after it has been powered off and then on again. Printing performance is improved by eliminating subsequent font downloads to the printer. Caution must be used when marking security sensitive fonts as FNTCAPTURE(\*YES). There exists a possibility that someone could access the captured font in the printer from another print job on the same system or another print job on a different system if the printer is LAN attached. To use a host font referenced in a print job, you must have authority to the font object and its library on the OS/400 regardless if it has been captured in the printer or not. In addition to marking the font character set and code page, you must also activate font capturing on the printer you are using. To activate font capturing on an IPDS printer, you must specify FNTCAPTURE(\*YES) on the CRTPSFCFG or CHGPSFCFG command.

### Notes:

- Font character set and code page pairs that are marked as eligible to be captured will be downloaded to printers that do not support font capturing.
- Marking coded fonts is not supported. No change will take effect when attempting to mark a coded font.

The possible values are:

- \*FILE** The font capture information stored in the font source is used to mark the font. If no information is found, then \*NO is assumed.
- \*YES** The font character set or code page is eligible to be captured after downloading to the printer. If the printer does not support font capturing, this information is ignored and the font is downloaded.
- \*NO** The font character set or code page is not eligible for font capturing. It will also be downloaded to the printer.

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## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

The possible values are:

- \*MBRTXT**  
The text is taken from the file member being used to create the font resource. You can add or change text for a database source member by using the Source Entry Utility (STRSEU) command, or by using either the Add Physical File Member (ADDPFM) command or the Change Physical File Member (CHGPFM) command. If the file is an inline file or a device file, the text is blank.

- \*BLANK**  
No text is specified.

*'description'*  
Specify no more than 50 characters of text, enclosed in apostrophes.

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## Replace font resource (REPLACE)

Specifies whether an existing font resource with the same name as the one being created is replaced.

The possible values are:

- \*YES** The existing font resource is replaced.
- \*NO** If a font resource with same name exists on the system, the create operation fails. The existing font resource is not replaced.

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---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

The possible values are:

- \*LIBCRTAUT**  
The system determines the authority for the object by using the value specified on the **Create authority** prompt (CRTAUT parameter) on the Create Library command (CRTLIB) for the library

containing the object to be created. If the value specified on the **Create authority** prompt (CRTAUT parameter) is changed, the new value will not affect any existing objects.

**\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

**\*EXCLUDE**

The user cannot access the object.

**authorization-list-name**

Specify the name of an authorization list. Users included on the authorization list are granted authority to the object as specified by the list. The authorization list must exist when the object is created.

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## Examples

```
CRTFNTRSC  FNTRSC(MYLIB/GOTHIC12)  FILE(*LIBL/FONTRSCS)
           MBR(*FNTRSC)  AUT(*USE)
           TEXT('Gothic Font 12 Pitch')
```

This command creates font resource GOTHIC12 in MYLIB. Source file FONTRSCS, in the user's library list, with member GOTHIC12 is used as input. Specifying \*USE for the AUT parameter allows other users to access GOTHIC12, but not to change it. The text describes the font resource.

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## Error messages

**\*ESCAPE Messages**

**CPF2283**

Authorization list &1 does not exist.

**CPF8056**

File &1 in &2 not a physical file.

**CPF88C1**

Printer resource type &1 &2 was not created in library &3.

**CPF9809**

Library &1 cannot be accessed.

**CPF9810**

Library &1 not found.

**CPF9812**

File &1 in library &2 not found.

**CPF9822**

Not authorized to file &1 in library &2.

**CPF9845**

Error occurred while opening file &1.

**CPF9846**

Error while processing file &1 in library &2.

**CPF9847**

Error occurred while closing file &1 in library &2.

**CPF9870**

Object &2 type \*&5 already exists in library &3.

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## Create Font Table (CRTFNTTBL)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Font Table (CRTFNTTBL) command allows the user to create a font mapping table to be used by Print Services Facility (PSF). These tables allow the user to change, add, and remove entries in a font table that controls:

1. Host-resident to printer-resident font character set mapping
2. Printer-resident to host-resident font character set mapping
3. Host-resident to printer-resident code page mapping
4. Printer-resident to host-resident code page mapping
5. Printer-resident to printer-resident font substitution mapping

In performing the printer to host and host to printer font mapping (first four tables above), the user tables are searched first for a match. If no match is found, then the system font or code page tables are searched.

For the printer-resident to printer-resident font substitution table, the following processing is done by the system:

- If the printer-resident font specified in the print job is supported by the printer, then it is used. The printer-resident to printer-resident font substitution table is not searched.
- If the printer-resident font specified in the print job is not supported by the printer, then the printer-resident to printer-resident font substitution table is searched.
  - If a matching entry is found in the printer-resident font substitution table and the entry is supported by the printer, then the specified substitute font in the printer-resident font substitution table is used.
  - If a matching entry is not found in the printer-resident font substitution table or if the specified substitute font is not supported by the printer, then the system will use its internal font substitution tables to perform the font substitution.

Refer to Printer Device Programming, SC41-5713 for more information on font mapping tables.

### Restrictions:

- The PSF feature is required to use this command.

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## Parameters

Keyword	Description	Choices	Notes
FNTTBL	Font table	Single values: *PHFCS, *HPFCS, *PHCP, *HPCP Other values: <i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Font table	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *CURLIB	
TEXT	Text 'description'	<i>Character value</i> , *BLANK	Optional
AUT	Authority	<i>Name</i> , *LIBCRTAUT, *CHANGE, *ALL, *USE, *EXCLUDE	Optional

---

## Font table (FNTTBL)

Specifies the name of the font table to be created. Only one font mapping table can be created on the system for each of the single values allowed for this parameter. When one of these values is specified, a font mapping table is created in library QUSRSYS with one of the following names:

Single value	Font table
-----	-----
*PHFCS	QPHFCS
*PHCP	QPHCP
*HPFCS	QHPFCS
*HPCP	QHPCP

You can also create a printer-resident to printer-resident font substitution table. Multiple printer-resident to printer-resident font substitution tables can be created on the system.

### Single values

#### \*PHFCS

The printer-resident to host-resident font character set mapping table is created. When this table is created, it will be named QPHFCS and will be created in library QUSRSYS. This table would be used when your application references printer-resident fonts and the printer, such as the 3827, 3825, 3820, 3900 Model 1, does not support resident fonts. Print Services Facility (PSF) must map the references from printer-resident fonts to host-resident fonts and download them.

#### \*PHCP

The printer-resident to host-resident code page mapping table is created. When this table is created, it will be named QPHCP and will be created in library QUSRSYS. This table is like the QPHFCS table, in that it is used when the application references printer-resident code pages and the printer being used does not support printer-resident code pages. The printer-resident code page must be mapped to a host-resident code page and downloaded to the printer by PSF.

#### \*HPFCS

The host-resident to printer-resident font character set mapping table is created. When this table is created, it will be named QHPFCS and will be created in library QUSRSYS. This table is used when your application references host-resident fonts (font character sets and code pages) and the printer, such as the 4224, 4234, 4230, 64XX, does not support downloading of host-resident fonts. PSF must map the references from host-resident fonts to printer-resident fonts.

#### \*HPCP

The host-resident to printer-resident code page mapping table is created. When this table is created, it will be named QHPCP and will be created in library QUSRSYS. This table is like the QHPFCS table, in that it is used when the application references host-resident code pages and the printer being used does not support host-resident code pages. The host-resident code page must be mapped to a printer-resident code page and downloaded to the printer by PSF.

### Qualifier 1: Font table

*name* Specify the name of the printer-resident to printer-resident font substitution table to be created.

The name of the font table must be specified when a printer-resident to printer-resident font substitution table is created. This printer-resident font substitution table should be used when all three of the following conditions exist:

- You are printing to a PSF attached printer.
- Your application specifies a printer-resident font which is not supported by the printer you are using.

- You want to specify a different substitute printer-resident font than the one selected by the system.

To use a printer-resident to printer-resident font substitution table with a particular PSF printer, you need to specify the name of the font table on the FNTTBL parameter of the Create PSF Configuration (CRTPSF CFG) or Change PSF Configuration (CHGPSF CFG) command.

## Qualifier 2: Library

### \*CURLIB

The current library is used to store the font table. If no library is specified as the current library for the job, the QGPL library is used.

*name* Specify the name of the library where you want to store the font table.

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## Text 'description' (TEXT)

Specifies the text that briefly describes the font table.

### \*BLANK

No text is specified.

### *'character-value'*

Specify no more than 50 characters of text, enclosed in apostrophes.

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## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority to the object, who are not on an authorization list, and whose group profile has no specific authority to the object.

### \*LIBCRTAUT

The system determines the authority for the object by using the value specified for the CRTAUT parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified on the CRTAUT parameter is changed, the new value will not affect any existing objects.

### \*CHANGE

Change authority allows the user to change and perform basic functions on the object. Change authority provides object operational authority and all data authorities.

\*ALL The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, perform basic functions on the object, and change ownership of the object.

\*USE Use authority provides object operational authority, read authority, and execute authority.

### \*EXCLUDE

The user cannot access the object.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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## Examples

```
CRTFNTTBL  FNTTBL(*PHFCS)
           TEXT('Printer to Host Font Mapping Table')
```

This command creates a Printer to Host Font Mapping Table. The table will be named QPHFCS and created into library QUSRSYS. The table is created with no entries. Entries can be added or changed by running the Add Font Table Entry (ADDFNTTBLE) and Change Font Table Entry (CHGFNTTBLE) commands.

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## Error messages

### \*ESCAPE Messages

#### **CPF2283**

Authorization list &1 does not exist.

#### **PQT0121**

Font table &1 not created in library &2.

#### **CPF9810**

Library &1 not found.

#### **CPF9820**

Not authorized to use library &1.

#### **CPF9845**

Error occurred while opening file &1.

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## Create Form Definition (CRTFORMDF)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Form Definition (CRTFORMDF) command creates a form definition from a physical file. The physical file contains the form definition information. The form definition information, can, for example, come from a S/370\* host system and be in the Systems Application Architecture (SAA) format.

**Restriction:** If networking spooled files to a System/370\* system, the first two characters of the form definition name must be 'F1'.

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### Parameters

Keyword	Description	Choices	Notes
FORMDF	Form definition	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Form definition	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
FILE	File	<i>Qualified object name</i>	Required, Positional 2
	Qualifier 1: File	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
MBR	Member	<i>Name, *FORMDF</i>	Optional, Positional 3
TEXT	Text 'description'	<i>Character value, *MBRTXT, *BLANK</i>	Optional
REPLACE	Replace form definition	<i>*YES, *NO</i>	Optional
AUT	Authority	<i>Name, *LIBCRTAUT, *CHANGE, *ALL, *USE, *EXCLUDE</i>	Optional

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---

### Form definition (FORMDF)

Specifies the qualified name of the form definition being created.

This is a required parameter.

The possible library values are:

#### \*CURLIB

The current library for the job is used to store the form definition name. If no library is specified as the current library for the job, QGPL is used.

#### *library-name*

Specify the library where you want to store form definition.

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---

## Source file (FILE)

Specifies the qualified name of the file containing the form definition records sent to this system.

This is a required parameter.

The possible library values are:

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

**\*CURLIB**

The current library for the job is used to locate the file. If no library is specified as the current library for the job, QGPL is used.

*library-name*

Specify the library where the file name is located.

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---

## Source file member (MBR)

Specifies the name of the file member containing the form definition records.

The possible values are:

**\*FORMDF**

The name of the file member is specified in the **Form definition** prompt (FORMDF parameter) of this command.

*file-member-name*

Specify the member in the file specified by the **Source file** prompt (FILE parameter).

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---

## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

The possible values are:

**\*MBRTXT**

The text is taken from the file member being used to create the form definition. You can add or change text for a database source member by using the Source Entry Utility (STRSEU) command, or by using either the Add Physical File Member (ADDPFM) command or the Change Physical File Member (CHGPFM) command. If the file is an inline file or a device file, the text is blank.

**\*BLANK**

No text is specified.

*'description'*

Specify no more than 50 characters of text, enclosed in apostrophes.

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---

## Replace form definition (REPLACE)

Specifies whether an existing form definition with the same name as the one being created is replaced.

The possible values are:

- \*YES** The existing form definition is replaced.
- \*NO** If a form definition with same name exists on the system, the create operation fails. The existing form definition is not replaced.

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---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

The possible values are:

### **\*LIBCRTAUT**

The system determines the authority for the object by using the value specified on the **Create authority** prompt (CRTAUT parameter) on the Create Library command (CRTLIB) for the library containing the object to be created. If the value specified on the **Create authority** prompt (CRTAUT parameter) is changed, the new value will not affect any existing objects.

### **\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

- \*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

- \*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### **\*EXCLUDE**

The user cannot access the object.

### ***authorization-list-name***

Specify the name of an authorization list. Users included on the authorization list are granted authority to the object as specified by the list. The authorization list must exist when the object is created.

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---

## Examples

```
CRTFORMDF  FORMDF(*CURLIB/FORMDF1)
           FILE(*CURLIB/FORMDF)  MBR(F1A01238)
           AUT(*EXCLUDE)
           TEXT('Default form definition for AFP printers')
```

This command creates form definition FORMDF1 in the current library, or in the QGPL library if there is no current library. Input is taken from source file FORMDF with member F1A01238, in the current library. Specifying \*EXCLUDE for authority restricts the usage of the object to the owner. The text describes what the form definition represents.

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## Error messages

### \*ESCAPE Messages

#### CPF2283

Authorization list &1 does not exist.

#### CPF8056

File &1 in &2 not a physical file.

#### CPF88C1

Printer resource type &1 &2 was not created in library &3.

#### CPF9809

Library &1 cannot be accessed.

#### CPF9810

Library &1 not found.

#### CPF9812

File &1 in library &2 not found.

#### CPF9822

Not authorized to file &1 in library &2.

#### CPF9845

Error occurred while opening file &1.

#### CPF9846

Error while processing file &1 in library &2.

#### CPF9847

Error occurred while closing file &1 in library &2.

#### CPF9870

Object &2 type \*&5 already exists in library &3.

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## Create Filter (CRTFTR)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Filter (CRTFTR) command creates a filter object of the specified type. Filters contain selection entries and action entries. A filter allows the user to categorize data into groups and specify special actions to be applied to each group. The typical user is a system programmer or operator responsible for system management.

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### Parameters

Keyword	Description	Choices	Notes
FILTER	Filter	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Filter	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
TYPE	Type	*ALR, *PRB	Required, Positional 2
TEXT	Text 'description'	<i>Character value, *BLANK</i>	Optional
AUT	Authority	<i>Name, *LIBCRTAUT, *CHANGE, *ALL, *USE, *EXCLUDE</i>	Optional

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---

### Filter (FILTER)

Specifies the qualified name of the filter that is created.

The possible library values are:

**\*CURLIB**

The current library is used to locate the filter. If no library is specified as the current library for the job, the QGPL library is used.

*library-name*

Specify the name of the library where the filter is located.

*filter-name*

Specify the name of the filter that is to be created.

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### Type (TYPE)

Specifies the type of filter being created. The type of filter determines which applications can use the filter and the type of entries that can be placed in the filter.

**\*ALR** The filter is an alert filter. The OS/400 Alert Manager can use the filter on alerts that it receives or generates.

**\*PRB** The filter is a problem filter. The OS/400 Problem Manager uses the filter on problem entries that are created, changed, or deleted.

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## Text 'description' (TEXT)

Specifies text that briefly describes the object.

### \*BLANK

Text is not specified.

### *character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

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## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### \*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library command (CRTLIB) for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

### **\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### **\*EXCLUDE**

The user cannot access the object.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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---

## Examples

```
CRTFTR  FILTER(MYLIB/MYFILTER)  TYPE(*ALR)  AUT(*CHANGE)
        TEXT('My filter')
```

This command creates an alert filter called MYFILTER in the library MYLIB. The type is \*ALR and the public has \*CHANGE authority to the filter, described as 'My filter'.

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---

## Error messages

### \*ESCAPE Messages

#### CPF2108

Object &1 type \*&3 not added to library &2.

#### CPF2112

Object &1 in &2 type \*&3 already exists.

#### CPF2113

Cannot allocate library &1.

#### CPF2151

Operation failed for &2 in &1 type \*&3.

#### CPF2182

Not authorized to library &1.

#### CPF2283

Authorization list &1 does not exist.

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---

## Create Graphics Symbol Set (CRTGSS)

**Where allowed to run:** All environments (\*ALL)  
**Threadsafe:** No

Parameters  
Examples  
Error messages

The Create Graphics Symbol Set (CRTGSS) command creates a graphics symbol set object from a physical file that contains symbol set data. Depending upon the contents of the file, the CRTGSS command creates either a vector symbol set (mode 3 graphics characters) or an image symbol set (mode 2 graphics characters).

The symbol set object can be used in a graphical data display manager (GDDM\*) or presentation graphics routines (PGR) graphics application program or in a Business Graphics Utility chart as an alternative to an IBM-supplied graphics symbol set. More information on the Business Graphics Utility is in the BGU User's Guide and Reference, SC09-1408 book.

**Restriction:** A physical file used with this command must contain records with no less than 80 bytes and no more than 400 bytes, and a source file must contain no less than 92 bytes and no more than 412 bytes. The contents of the file must be in symbol set format.

Top

---

### Parameters

Keyword	Description	Choices	Notes
GSS	Graphics symbol set	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Graphics symbol set	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , <b>*CURLIB</b>	
FILE	File	<i>Qualified object name</i>	Required, Positional 2
	Qualifier 1: File	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , <b>*LIBL</b> , <b>*CURLIB</b>	
MBR	Member	<i>Name</i> , <b>*GSS</b>	Optional, Positional 3
TEXT	Text 'description'	<i>Character value</i> , <b>*MBRTXT</b> , <b>*BLANK</b>	Optional
AUT	Authority	<i>Name</i> , <b>*LIBCRTAUT</b> , <b>*CHANGE</b> , <b>*ALL</b> , <b>*USE</b> , <b>*EXCLUDE</b>	Optional

Top

---

### Graphics symbol set (GSS)

Specifies the name and library of the graphics symbol set being created. If no library name is given, the symbol set is stored in library **\*CURLIB**. Graphics symbol set names can be up to 8 characters in length.

This is a required parameter.

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---

## File (FILE)

Specifies the name and library of the source data file being used to create the symbol set.

This is a required parameter.

The possible library values are:

### \*CURLIB

The current library for the job is used to store the graphics symbol set. If no library specified as the current library for the job, QGPL is used.

### *library-name*

Specify the library where the graphics symbol set is to be stored.

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---

## Member (MBR)

Specifies the name of the file member being used to create the symbol set.

The possible values are:

\*GSS The name of the file member that contains the input data is the same as the symbol set being created.

### *member-name*

Specify the file member that contains the symbol set input data.

Top

---

## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

The possible values are:

### \*MBRTXT

The text is taken from the file member being used to create the symbol set.

### \*BLANK

No text is specified.

### *'description'*

Specify no more than 50 characters of text, enclosed in apostrophes.

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---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

The possible values are:

### \*LIBCRTAUT

The system determines the authority for the object by using the value specified on the **Create**

**authority** prompt (CRTAUT parameter) on the Create Library command (CRTLIB) for the library containing the object to be created. If the value specified on the **Create authority** prompt (CRTAUT parameter) is changed, the new value will not affect any existing objects.

**\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

**\*EXCLUDE**

The user cannot access the object.

***authorization-list-name***

Specify the name of an authorization list. Users included on the authorization list are granted authority to the object as specified by the list. The authorization list must exist when the object is created.

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## Examples

### Example 1: Creating Set With Same Name as Source File

```
CRTGSS GSS(GSSLIB/ADMVARP) FILE(GSSLIB/ADMVARP)
```

This command creates a symbol set of the same name and in the same library as the source file.

### Example 2: Creating Set From Different Library

```
CRTGSS GSS(*CURLIB/VECTOR1) FILE(GSSLIB/QDATASRC)
      MBR(SCHEM) AUT(*ALL) TEXT('Schematic vector symbols')
```

This command creates a symbol set named VECTOR1 in the QGPL library from member SCHEM in file QDATASRC in library GSSLIB. The public has complete authority over the symbol set. Despite the fact that the symbol set data is stored in source physical file QDATASRC, it cannot be edited or shown by the source entry utility (SEU) because some of the contents of the symbol set data cannot be shown.

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---

## Error messages

### \*ESCAPE Messages

**CPF8660**

Symbol set &1 not created in library &2.

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## Create ICF File (CRTICFF)

Where allowed to run: All environments (\*ALL)  
 Threadsafte: No

Parameters  
 Examples  
 Error messages

The Create Intersystem Communications Function File (CRTICFF) command creates an intersystem communications function (ICF) file from the information specified on this command and from the data description specifications (DDS) contained in a source file.

An ICF file is used to perform input and output operations with communication devices.

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### Parameters

Keyword	Description	Choices	Notes
FILE	File	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: File	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
SRCFILE	Source file	<i>Qualified object name</i>	Optional, Positional 2
	Qualifier 1: Source file	<i>Name, QDDSSRC</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
SRCMBR	Source member	<i>Name, *FILE</i>	Optional, Positional 3
GENLVL	Generation severity level	0-30, <u>20</u>	Optional
FLAG	Flagging severity level	0-30, <u>0</u>	Optional
ACQPGMDEV	Program device to acquire	<i>Character value, *NONE</i>	Optional
TEXT	Text 'description'	<i>Character value, *SRCMBRTXT, *BLANK</i>	Optional
OPTION	Source listing options	Values (up to 3 repetitions): *SRC, *NOSRC, *SOURCE, *NOSOURCE, *LIST, *NOLIST, *SECLVL, *NOSECLVL	Optional, Positional 4
MAXPGMDEV	Maximum program devices	1-256, <u>1</u>	Optional
MAXRCLEN	Maximum record length	1-32767, * <u>CALC</u>	Optional
WAITFILE	Maximum file wait time	1-32767, * <u>IMMED</u> , *CLS	Optional
WAITRCD	Maximum record wait time	1-32767, * <u>NOMAX</u> , *IMMED	Optional
DTAQ	Data queue	Single values: * <u>NONE</u> Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Data queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
SHARE	Share open data path	* <u>NO</u> , *YES	Optional
LVLCHK	Record format level check	* <u>YES</u> , *NO	Optional
AUT	Authority	<i>Name, *LIBCRTAUT, *ALL, *CHANGE, *EXCLUDE, *USE</i>	Optional
REPLACE	Replace file	* <u>YES</u> , *NO	Optional

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---

## File (FILE)

Specifies the intersystem communications function (ICF) file to be created.

If the file is used in a high-level language program, the file name should be consistent with the naming rules of that language. Otherwise, the file must be renamed in the program.

This is a required parameter.

### Qualifier 1: ICF communication file

*name* Specify the name of the ICF file.

### Qualifier 2: Library

#### \*CURLIB

The current library for the job is used to locate the ICF file. If no library is specified as the current library for the job, QGPL is used.

*name* Specify the name of the library where the ICF file is located.

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---

## Source file (SRCFILE)

Specifies the source file containing the data description specifications (DDS) source used to create the ICF file.

### Qualifier 1: Source file

#### QDDSSRC

The source file named QDDSSRC contains the DDS source used to create the ICF file.

*name* Specify the name of the source file.

### Qualifier 2: Library

\*LIBL All libraries in the library list for the current thread are searched until the first match is found.

#### \*CURLIB

The current library for the job is used to locate the source file. If no library is specified as the current library for the job, QGPL is used.

*name* Specify the name of the library where the source file is located.

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---

## Source member (SRCMBR)

Specifies the source file member that contains the data description specifications (DDS) source for the ICF file being created.

\*FILE The source file member name is the same as the ICF file name specified in the **ICF communication file (FILE)** parameter.

*name* Specify the name of the member in the source file.

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---

## Generation severity level (GENLVL)

Specifies the severity level of data description specifications (DDS) messages that cause file creation to fail. This parameter applies only to messages created while processing DDS source files.

- 20 If errors occur in the DDS source file processing with a severity level greater than or equal to 20, the file is not created.
- 0-30** Specify the desired severity level value. If 0 is specified, the file is not created. The value specified must be greater than or equal to the value specified for the **Flagging severity level (FLAG)** parameter.

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## Flagging severity level (FLAG)

Specifies the minimum severity level of messages to be listed.

- 0 All messages are listed.
- 0-30** Specify a number indicating the minimum severity of messages to be listed. The value specified must be greater than or equal to the value specified for the **Generation severity level (GENLVL)** parameter.

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---

## Program device to acquire (ACQPGMDEV)

Specifies which program device is acquired to use with the file when the file is opened.

\*NONE

The file is opened without an acquired program device. All program devices used with this file must be explicitly acquired before input/output can be started with them.

*character-value*

Specify the name of the first program device that is acquired when the file is opened. The program device must be added to the file before the file is opened.

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---

## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

\*SRCMBRTXT

The text is taken from the source file member used to create the file if the source file is a database file. The text is blank if the source file is an inline file or a device file.

**\*BLANK**

No text is specified.

*character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

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---

## Source listing options (OPTION)

Specifies the type of printout produced when the file is created. A maximum of three of the following values can be specified in any order on this parameter. If neither or both of the values on an option are specified, the first value listed for the option is used.

**Note:** The first values on each option are similar to, but are not actually default values, and therefore, cannot be changed with the CHGCMDDFT (Change Command Default) command.

### Program Creation Option

#### \*SRC or \*SOURCE

A printout is created of the source statements used to create the file and any errors that occur.

#### \*NOSRC or \*NOSOURCE

No printout of the source statements is created unless errors are detected. If errors are detected, they are listed along with the record format containing the error.

### Source Listing Option

\*LIST An expanded source printout is created, showing a detailed list of the file specifications that result from the source statements and references to other file descriptions.

#### \*NOLIST

An expanded source printout is not created.

### Second-Level Message Text Option

#### \*NOSECLVL

The messages section of the DDS printout does not contain the second-level message text for errors found during DDS processing.

#### \*SECLVL

Second-level message text is included in the source listing.

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---

## Maximum program devices (MAXPGMDEV)

Specifies the maximum number of program device entries that can be added to the ICF file. The program device entries are added by using the Add Intersystem Communications Function Device Entry (ADDICFDEVE) command.

1 Only one program device entry or \*REQUESTER can be added to this ICF file.

1-256 Specify the maximum number of program device entries that are defined for, or that can be added to, this ICF file.

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---

## Maximum record length (MAXRCLEN)

Specifies the maximum number of bytes in the record length used when the file is opened.

#### \*CALC

The length calculated for the largest record in the file is used when the file is opened.

#### 1-32767

Specify the maximum record length. If the record length is less than the length calculated for the largest record in the file, then the calculated value is used.

---

## Maximum file wait time (WAITFILE)

Specifies the number of seconds that the program waits for the file resources to be allocated when the file is opened, or the device or session resources to be allocated when an acquire operation is performed to the file. If the file resources cannot be allocated in the specified wait time, an error message is sent to the program.

### \*IMMED

The program does not wait. Immediate allocation of file resources is required.

**\*CLS** The job default wait time is used as the wait time for the file resources to be allocated.

### *1-32767*

Specify the number of seconds to wait for file resources to be allocated.

---

## Maximum record wait time (WAITRCD)

Specifies the number of seconds the program waits for the completion of a read-from-invited-devices operation to a multiple device file in a high-level language program. Refer to the high-level language reference manual to determine when a file is treated as a multiple device file. The program performing the read operation waits for the input from all invited devices currently accessing the file. If a record is not returned from any of the invited program devices in the specified amount of time, a notify message is sent to the program. This parameter has no effect on an input operation directed to a single device.

### \*NOMAX

There is no limit on the time the system waits for the completion of the operation.

### \*IMMED

The program does not wait. If a record is not available when the read-from-invited-devices operation is done, a notify message is sent to the program.

### *integer*

Specify the maximum number of seconds that the program waits. Valid values range from 1 through 32767 seconds.

---

## Data queue (DTAQ)

Specifies the data queue on which entries are placed. The specified data queue must have a minimum length of 80 characters. The data queue need not exist when the display file is created since the name specified for this parameter is not evaluated until the file is used.

**Note:** Keyed data queues are not supported for this parameter. If a keyed data queue is specified, a run-time error will occur; but because it is not required that a data queue exist at the time the command is issued, the error will not be flagged.

### Single values

#### \*NONE

No data queue is specified.

### Qualifier 1: Data queue

*name* Specify the name of the data queue on which entries are placed.

### Qualifier 2: Library

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

#### **\*CURLIB**

The current library is used to locate the data queue. If no library is specified as the current library for the job, QGPL is used.

*name* Specify the library where the data queue is located.

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---

## Share open data path (SHARE)

Specifies whether the open data path (ODP) is shared with other programs in the same routing step. When an ODP is shared, the programs accessing the file share facilities such as the file status and the buffer.

**\*NO** The ODP is not shared with other programs in the routing step. A new ODP for the file is created and used every time a program opens the file.

**\*YES** The same ODP is shared with each program in the job that also specifies \*YES when it opens the file.

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## Record format level check (LVLCHK)

Specifies whether the level identifiers of the record formats in the ICF device file are checked when the file is opened by a program.

**\*YES** The level identifiers of the record formats are checked. If the level identifiers do not all match, an open error message is sent to the program that tried to open the file.

**\*NO** The level identifiers are not checked when the file is opened.

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---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

#### **\*LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library command (CRTLIB) for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

#### **\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can

change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

**\*EXCLUDE**

The user cannot access the object.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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---

## Replace file (REPLACE)

Specifies whether an existing file, other than a save or database file, is replaced.

**\*YES** An existing file with the same name and library is replaced if the creation of the new ICF file is successful.

**\*NO** The creation of a new ICF file is not allowed if there is an existing file with the same name and library.

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---

## Examples

```
CRTICFF FILE(QGPL/ICFTEST) SRCFILE(QGPL/QDDSSRC)
        MAXPGMDEV(5) ACQPGMDEV(DENVER)
```

This command creates the file ICFTEST in the QGPL library. The DDS source used to create the file is in member ICFTEST from file QDDSSRC in the QGPL library. Up to five program devices can be used with the file. The program device DENVER is acquired when the file is opened.

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## Error messages

### \*ESCAPE Messages

#### CPF7302

File &1 not created in library &2.

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## Create DBCS Conversion Dict (CRTIGCDCT)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create DBCS Conversion Dictionary (CRTIGCDCT) command creates the specified double-byte character set (DBCS) conversion dictionary and stores that dictionary in the specified library. The dictionary contains alphanumeric entries and their related DBCS words. The system refers to DBCS conversion dictionaries when doing DBCS conversion.

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### Parameters

Keyword	Description	Choices	Notes
IGCDCT	DBCS conversion dictionary	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: DBCS conversion dictionary	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
TEXT	Text 'description'	<i>Character value, *BLANK</i>	Optional
AUT	Authority	<i>Element list</i>	Optional
	Element 1:	<i>Character value, *LIBCRTAUT, *CHANGE, *ALL, *USE, *EXCLUDE</i>	

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---

### DBCS conversion dictionary (IGCDCT)

Specifies the name of the double-byte character set (DBCS) conversion dictionary created and the library in which it is stored. If you do not specify a library name, the dictionary is stored in the current library for the job. If no library is specified as the current library for the job, QGPL is used.

This is a required parameter.

**Note:** A user-created DBCS conversion dictionary can have any name, but is used for performing DBCS conversion only if it is named QUSRIGCDCT.

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---

### Text 'description' (TEXT)

Specifies the text that briefly describes the object.

#### \*BLANK

No text is specified.

#### *'description'*

Specify no more than 50 characters of text, enclosed in apostrophes.

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---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### \*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library command (CRTLIB) for the library containing the object to be created. If the value specified for the **Create authority (CRTAUT)** parameter is changed, the new value will not affect any existing objects.

### **\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### **\*EXCLUDE**

The user cannot access the object.

### *authorization-list-name*

Specify the name of an authorization list. Users included on the authorization list are granted authority to the object as specified by the list. The authorization list must exist when the object is created.

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---

## Examples

```
CRTIGCDCT  IGCDCT(DBCSLIB/QUSRIGCDCT)
```

This command creates a DBCS conversion dictionary named QUSRIGCDCT, which is stored in the library DBCSLIB.

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---

## Error messages

### \*ESCAPE Messages

**CPF8431**

DBCS conversion dictionary &2 not created in library &3.

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## Create Image Catalog (CRTIMGCLG)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Image Catalog (CRTIMGCLG) command is used to create an image catalog object (\*IMGCLG) in library QUSRSYS and associate the image catalog with a target directory.

An image catalog contains information about images that have been added to the image catalog using the Add Image Catalog Entry (ADDIMGCLGE) command. The image catalog contains the following information:

### Directory name

The directory where the image files reside

### Image file name

The name of the image file

### Index number

The order of this image within the image catalog

**Status** The status of the image within the virtual optical device

**Text** A short description of the image

### Restrictions:

- You must have security administrator (\*SECADM) and all object (\*ALLOBJ) special authorities to use this command.
- A directory can only be associated with a single image catalog.

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## Parameters

Keyword	Description	Choices	Notes
IMGCLG	Image catalog	<i>Name</i>	Required, Positional 1
DIR	Directory	<i>Path name</i>	Required, Positional 2
CRTDIR	Create directory	*NO, *YES	Optional
TEXT	Text 'description'	<i>Character value, *BLANK</i>	Optional
AUT	Authority	<i>Name, *EXCLUDE, *LIBCRTAUT, *CHANGE, *ALL, *USE</i>	Optional

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---

## Image catalog (IMGCLG)

Specifies the image catalog to be created.

This is a required parameter.

**name** Specify the name of the image catalog.

---

## Directory (DIR)

Specifies the directory to be associated with this image catalog.

This is a required parameter.

### *path-name*

Specify the path name of the directory for the image catalog.

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---

## Create directory (CRTDIR)

Specifies whether the directory (DIR parameter) should be created if it doesn't exist.

**\*NO** The directory will not be created.

**\*YES** The directory will be created.

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---

## Text 'description' (TEXT)

Specifies the text that briefly describes the image catalog being created.

### **\*BLANK**

The text description will be blank.

### *character-value*

Specify up to 50 characters of text for this image catalog.

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---

## Authority (AUT)

Specifies the authority given to users who do not have specific authority to the library, who are not on an authorization list, and whose user group has no specific authority to the image catalog.

### **\*EXCLUDE**

The user cannot access the image catalog.

### **\*LIBCRTAUT**

The authority for the object is the same as the create authority for QUSRSYS. The create authority for QUSRSYS can be displayed by using the Display Library Description (DSPLIBD) command. If the create authority is changed with the Change Library (CHGLIB) command, the new authority does not affect existing objects.

**\*USE** The user can perform basic operations on the image catalog, such as displaying. The user cannot change the image catalog. **\*USE** authority provides object operational authority, read authority, and execute authority.

### **\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove user ids.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the image catalog.

*name* Specify the name of the authorization list to be used.

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---

## Examples

### Example 1: Creating an Image Catalog

```
CRTIMGCLG  IMGCLG(MYCLG)  DIR('/MyDir')
```

This command creates image catalog **MYCLG** in library QUSRSYS and associates directory **/Mydir** with it.

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---

## Error messages

### \*ESCAPE Messages

#### CPFBC02

Image catalog &1 was not created in library &2.

#### CPFBC45

Image catalog &1 not found.

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# Create Job Description (CRTJOBDB)

Where allowed to run: All environments (\*ALL)  
 Threadsafte: No

Parameters  
 Examples  
 Error messages

The Create Job Description (CRTJOBDB) command creates a job description object that contains a specific set of job-related attributes that can be used by one or more jobs. The attributes determine how each job is run on the system. The same job description can be used by multiple jobs. The values in the job description are usually used as the default values of the corresponding parameters in the Batch Job (BCHJOB) and Submit Job (SBMJOB) commands when their parameters are not specified.

The values in the job description can be overridden by the values specified on the BCHJOB and SBMJOB commands.

## Restrictions:

- To use this command, you must have:
  - read (\*READ) and add (\*ADD) authority to the library where the job description is to be created.
  - use (\*USE) authority to the user profile specified on the User (USER) parameter.
- To create a job description with an accounting code other than \*USRPRF, you must have \*USE authority to the Change Accounting Code (CHGACGCDE) command.

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## Parameters

Keyword	Description	Choices	Notes
JOBDB	Job description	Qualified object name	Required, Positional 1
	Qualifier 1: Job description	Name	
	Qualifier 2: Library	Name, *CURLIB	
JOBQ	Job queue	Qualified object name	Optional, Positional 3
	Qualifier 1: Job queue	Name, QBATCH	
	Qualifier 2: Library	Name, *LIBL, *CURLIB	
JOBPTY	Job priority (on JOBQ)	1-9, 5	Optional
OUTPTY	Output priority (on OUTQ)	1-9, 5	Optional
PRTDEV	Print device	Name, *USRPRF, *SYSVAL, *WRKSTN	Optional
OUTQ	Output queue	Single values: *USRPRF, *DEV, *WRKSTN Other values: Qualified object name	Optional
	Qualifier 1: Output queue	Name	
	Qualifier 2: Library	Name, *LIBL, *CURLIB	
TEXT	Text 'description'	Character value, *BLANK	Optional
USER	User	Name, *RQD	Optional, Positional 2
PRTTXT	Print text	Character value, *BLANK, *SYSVAL	Optional
ACGCDE	Accounting code	Character value, *USRPRF, *BLANK	Optional
RTGDTA	Routing data	Character value, QCMDI, *RQSDTA	Optional
RQSDTA	Request data or command	Character value, *NONE, *RTGDTA	Optional
SYNTAX	CL syntax check	0-99, *NOCHK	Optional

Keyword	Description	Choices	Notes
INLLIBL	Initial library list	Single values: *SYSVAL, *NONE Other values (up to 250 repetitions): <i>Name</i>	Optional
ENDSEV	End severity	0-99, <u>30</u>	Optional
LOG	Message logging	<i>Element list</i>	Optional
	Element 1: Level	0-4, <u>4</u>	
	Element 2: Severity	0-99, <u>0</u>	
	Element 3: Text	*NOLIST, *MSG, *SECLVL	
LOGCLPGM	Log CL program commands	*NO, *YES	Optional
INQMSGRPY	Inquiry message reply	*RQD, *DFT, *SYSRPLY	Optional
HOLD	Hold on job queue	*NO, *YES	Optional
DATE	Job date	<i>Date</i> , *SYSVAL	Optional
SWS	Job switches	<i>Character value</i> , 00000000	Optional
DEVRCYACN	Device recovery action	*SYSVAL, *MSG, *DSCMSG, *DSCENDRQS, *ENDJOB, *ENDJOBNO LIST	Optional
TSEPOOL	Time slice end pool	*SYSVAL, *NONE, *BASE	Optional
AUT	Authority	<i>Name</i> , *LIBCRTAUT, *CHANGE, *ALL, *USE, *EXCLUDE	Optional
JOBMSGQMX	Job message queue maximum size	2-64, *SYSVAL	Optional
JOBMSGQFL	Job message queue full action	*SYSVAL, *NOWRAP, *WRAP, *PRTWRAP	Optional
ALWMLTHD	Allow multiple threads	*NO, *YES	Optional
INLSPGRP	Initial ASP group	<i>Name</i> , *NONE	Optional
SPLFACN	Spooled file action	*SYSVAL, *KEEP, *DETACH	Optional
DDMCNV	DDM conversation	*KEEP, *DROP	Optional

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## Job description (JOB D)

Specifies the name and library of the job description being created.

This is a required parameter.

### Qualifier 1: Job description

*name* Specify the name of the job description.

### Qualifier 2: Library

#### \*CURLIB

The current library for the thread is used to locate the object. If no current library entry exists in the thread's library list, the library QGPL is used.

*name* Specify the library where the object is located.

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## Job queue (JOBQ)

Specifies the name and library of the default job queue where jobs submitted using this job description are placed.

### Qualifier 1: Job queue

#### QBATCH

The QBATCH job queue is the queue where the jobs are placed.

*name* Specify the name of the job queue.

### Qualifier 2: Library

**\*LIBL** All libraries in the thread's library list are searched until a match is found.

#### **\*CURLIB**

The current library for the thread is used to locate the object. If no library is specified as the current library for the thread, the QGPL library is used.

*name* Specify the library where the job queue is located.

**Note:** If the job queue does not exist when the job description is created, a library qualifier must be specified because the name of the qualified job queue is kept in the job description.

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## Job priority (on JOBQ) (JOBPTY)

Specifies the job queue scheduling priority used for jobs that use this job description. The highest priority is 1 and the lowest priority is 9.

5 The scheduling priority for any job using this job description is 5.

*1-9* Specify the scheduling priority of jobs that use this job description.

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## Output priority (on OUTQ) (OUTPTY)

Specifies the output priority of spooled output files produced by jobs that use this job description. The highest priority is 1 and the lowest priority is 9.

5 The output priority for spooled files produced using this job description is 5.

*1-9* Specify a value ranging from 1 through 9 for the output priority of the spooled output files that are produced by jobs that use this job description. The highest priority is 1 and the lowest priority is 9.

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## Print device (PRTDEV)

Specifies the qualified name of the default printer device for this job. If the printer file being used to create the output specifies to spool the file, the spooled file is placed on the device's output queue, which is named the same as the device.

**Note:** This assumes the defaults are specified on the **Output queue (OUTQ)** parameter for the printer file, job description, user profile and workstation.

### **\*USRPRF**

The printer device name for jobs that use this job description is taken from the user profile associated with the job at the time the job is started.

### **\*SYSVAL**

The value in the system value QPRTDEV at the time the job is started is used as the printer device.

### **\*WRKSTN**

The printer device used with this job description is the printer device assigned to the workstation that is associated with the job at the time the job is started.

*name* Specify the printer device to be used by jobs that use this job description.

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## **Output queue (OUTQ)**

Specifies the name and library of the output queue used as the default output queue for jobs that use this job description. This parameter applies only to spooled printer files that specify \*JOB for the output queue.

### **Single values**

#### **\*USRPRF**

The output queue for jobs using this job description is obtained from the user profile associated with the job at the time the job is started.

**\*DEV** The output queue associated with the printer specified on the **Device (DEV)** parameter of the printer file is used. The output queue has the same name as the printer. The printer file DEV parameter is determined by the Create Printer File (CRTPRTF), Change Printer File (CHGPRTF), or the Override with Printer File (OVRPRTF) commands.

**Note:** This assumes the defaults were specified on the OUTQ parameter for the printer file, job description, user profile, and workstation.

#### **\*WRKSTN**

The output queue to be used with this job description is the output queue assigned to the workstation that is associated with the job at the time the job is started.

### **Qualifier 1: Output queue**

*name* Specify the name of the output queue to be used with this job description

### **Qualifier 2: Library**

**\*LIBL** All libraries in the thread's library list are searched until a match is found.

#### **\*CURLIB**

The current library for the thread is used to locate the object. If no library is specified as the current library for the thread, the QGPL library is used.

*name* Specify the library where the output queue is located.

**Note:** If the output queue does not exist when the job description is created, a library qualifier must be specified because the qualified output queue name is kept in the job description.

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## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

### \*BLANK

No text is specified.

### *character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

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## User (USER)

Specifies the name of the user profile associated with this job description. The names QSECOFR, QSPL, QDOC, QDBSHR, QRJE, QSYS, QLPAUTO, QLPINSTALL, QTSTRQS, and QDFTOWN are not valid entries for this parameter.

### \*RQD

A user name is required to use the job description. For work station entries, you must enter a user name when signing on at the work station; the associated user name becomes the name used for the job. \*RQD is not valid for job descriptions specified for autostart job entries or for those used by the Batch Job (BCHJOB) command. It is valid on the Submit Job (SBMJOB) command only if \*CURRENT is specified on the **User (USER)** parameter.

### *name*

Specify the user name that identifies the user profile associated with batch jobs using this job description. For interactive jobs, this is the default user name used to sign on the system without typing a user name.

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## Print text (PRTTXT)

Specifies the printing of a line of text at the bottom of each page.

### \*SYSVAL

The value in the system value QPRTTXT is used.

### \*BLANK

No text is printed.

### *character-value*

Specify the character string that is printed at the bottom of each page. A maximum of 30 characters can be entered enclosed in apostrophes.

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## Accounting code (ACGCDE)

Specifies the accounting code that is used when logging system resource use for jobs that use this description. If the job is submitted by the Submit Job (SBMJOB) command, the submitter's accounting code is used. To specify an accounting code other than \*USRPRF, you must be authorized to the Change Accounting Code (CHGACGCDE) command.

### \*USRPRF

The accounting code for jobs using this job description is obtained from the user profile associated with the job.

### \*BLANK

An accounting code of 15 blanks is assigned to jobs that use this job description.

### *character-value*

Specify the accounting code for jobs that use this job description and have accounting statistics logged in the system accounting journal QACGJRN. If less than 15 characters are entered, the string is padded with blanks on the right.

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## Routing data (RTGDTA)

Specifies the routing data used with this job description to start jobs.

### QCMDI

The default routing data QCMDI is used by the IBM-supplied interactive subsystem to route the job to the IBM-supplied control language processor QCMD in the QSYS library.

### \*RQSDTA

Up to the first 80 characters of the request data specified on the **Request data or command (RQSDTA)** parameter are used as the routing data for the job.

### *character-value*

Specify the routing data for jobs that use this job description. A maximum of 80 characters can be typed (enclosed in apostrophes if necessary).

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## Request data or command (RQSDTA)

Specifies the request data that is placed as the last entry in the job's message queue for jobs using this job description.

### \*NONE

No request data is placed in the job's message queue.

### \*RTGDTA

The routing data specified on the **Routing data (RTGDTA)** parameter is placed as the last entry in the job's message queue.

### *character-value*

Specify the character string that is placed as the last entry in the job's message queue as a single request. A maximum of 256 characters can be entered (enclosed in apostrophes if necessary). When a CL command is entered, it must be enclosed in single apostrophes, and where apostrophes would normally be used **inside** the command, double apostrophes must be used instead.

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## CL syntax check (SYNTAX)

Specifies whether requests placed on the job message queue (for jobs using this job description) are checked for syntax as CL commands. When syntax checking is specified, the commands are checked for syntax as they are submitted instead of when the job is run, thus providing an earlier diagnosis of syntax errors. If checking is specified, the message severity that causes a syntax error to end processing of a job is also specified.

### \*NOCHK

The request data is not checked for syntax as CL commands.

**0-99** Specify the lowest message severity that can cause running of a job to end. The request data is

checked for syntax as CL commands. If a syntax error occurs that is equal to or greater than the error message severity specified here, the running of the job containing the erroneous command is suppressed.

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## Initial library list (INLLIBL)

Specifies the initial user part of the library list to be used for jobs using this job description.

**Note:** Duplication of library names in the library list is not allowed.

### Single values

#### \*SYSVAL

The system default library list is used for jobs that use this job description. The default library list contains the library names that were specified in the system value QUSRLIBL at the time a job using this job description is started.

#### \*NONE

The user part of the library list is empty; only the system portion is used.

### Other values (up to 250 repetitions)

*name* Specify the library in the user part of the library list to be used for jobs using this job description.

**Note:** Libraries are searched in the same order as they are listed here.

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## End severity (ENDSEV)

Specifies the message severity level of escape messages that can cause a batch job to be ended. The batch job is ended when a request in the batch input stream results in an escape message whose severity code is equal to or greater than that specified here being sent to the request processing program QCMD or QCL. This parameter value is compared with the severity of any escape message not monitored that occurs as a result of running a noncompiled CL command in a batch job.

30 A batch input stream request that results in an escape message whose severity is equal to or greater than 30 causes the job to end.

0-99 Specify the message severity of an escape message that results from a request in the batch input stream and that causes the jobs that use this job description to be ended. Because escape messages typically have a maximum severity level of 50, a value of 50 or lower must be specified in order for a job to be ended as a result of an escape message. An unhandled escape message whose severity is equal to or greater than the value specified causes the job to be ended.

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## Message logging (LOG)

Specifies the message logging values used to determine the amount and type of information sent to the job log by this job. This parameter has three elements: the message (or logging) level, the message severity, and the level of message text.

### Element 1: Level

- 4 A message logging level of 4 is used for jobs that use this job description.
- 0-4** Specify the message logging level to be used for the job's messages.
- 0** No messages are logged.
- 1** All messages sent to the job's external message queue with a severity greater than or equal to the message logging severity are logged. This includes the indications of job start, job end, and job completion status.
- 2** The following information is logged:
- Logging level 1 information
  - Request messages which result in a high-level message with a severity code greater than or equal to the message logging severity. Both the request message and all associated messages are logged.
- Note:** A high-level message is one that is sent to the program message queue of the program that receives the request message. For example, QCMD is an IBM-supplied request processing program that receives request messages.
- 3** The following information is logged:
- Logging level 1 and 2 information
  - All request messages
  - Commands run by a CL program are logged if it is allowed by the logging of CL programs job attribute and the log attribute of the CL program.
- 4** The following information is logged:
- All request messages and all messages with a severity greater than or equal to the message logging severity, including trace messages.
  - Commands run by a CL program are logged if it is allowed by the logging of CL programs job attribute and the log attribute of the CL program.

### Element 2: Severity

- 0 A message severity level of 0 is used for jobs that use this job description.
- 0-99** Specify the message severity level to be used in conjunction with the logging level to determine which error messages are logged in the job log.

### Element 3: Text

#### \*NOLIST

If the job ends normally, no job log is produced. If the job ends abnormally (if the job end code is 20 or higher), a job log is produced. The messages that appear in the job log contain both the message text and the message help.

**\*MSG** Only the message text is written to the job log.

#### **\*SECLVL**

Both the message text and the message help (cause and recovery) of the error message are written to the job log.

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## Log CL program commands (LOGCLPGM)

Specifies whether the commands that can be logged and were run in a control language program are logged to the job log by way of the CL program's message queue. This parameter sets the status of the job's logging flag. If \*NO is specified, the logging flag status is **off** and CL commands are not logged. If \*YES is specified here and \*JOB is specified on the **Message logging (LOG)** parameter of the Create CL Program (CRTCLPGM) command, all commands in the CL program that can be logged are logged to the job log.

**\*NO** The commands in a CL program are not logged to the job log.

**\*YES** The commands in a CL program are logged to the job log.

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## Inquiry message reply (INQMSGRPY)

Specifies the way that inquiry messages are answered for jobs that use this job description. You can specify that inquiry messages are to be answered in the usual manner, that a default reply be issued, or that if certain conditions are met, an answer is issued to the inquiry based on those conditions. The conditions met are listed in the system reply list entries of the Add Reply List Entry (ADDRPYLE) command.

**\*RQD** A reply is required for any predefined inquiry message that is issued by a job that uses this job description.

**\*DFT** The default message reply is used to answer any predefined inquiry messages issued during running of a job that uses this job description. The default reply is either defined in the message description or is the default system reply.

**\*SYSRPYL**

The system reply list is checked to determine whether an entry matches the message identifier and optional compare value for any inquiry message issued by a job that uses this job description. If a match occurs, the reply value in that reply list entry is used. If no entry exists for that message, a reply is required.

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## Hold on job queue (HOLD)

Specifies whether jobs using this job description are put on the job queue in the hold condition. A job placed on the job queue in the hold condition is held until it is released by the Release Job (RLSJOB) command, or it is ended, either by the End Job (ENDJOB) command or by the Clear Job Queue (CLRJOBQ) command.

**\*NO** Jobs that use this job description are not held when they are put on the job queue.

**\*YES** Jobs that use this job description are held when they are put on the job queue.

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## Job date (DATE)

Specifies the date that is assigned to the job that uses this job description when the job is started.

**\*SYSVAL**

The value in the QDATE system value at the time the job is started is used as the job date.

*date* Specify the job date for the job being started. The format currently specified for the DATFMT job attribute must be used.

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## Job switches (SWS)

Specifies the initial switch settings for a group of eight job switches used for jobs that use this job description. These switches can be set or tested in a CL program and used to control the flow of the program. The only values that are valid for each single-digit switch are 0 (off) or 1 (on).

### 00000000

The first setting for the job switches is all zeros for jobs that use this job description.

### *character-value*

Specify any combination (enclosed in apostrophes if necessary) of eight 0's or 1's to change the job switch settings.

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## Device recovery action (DEVRCYACN)

Specifies the recovery action to take for the job when an I/O error is encountered on the \*REQUESTOR device for interactive jobs that use this job description. This attribute is ignored for non-interactive jobs.

### \*SYSVAL

The value in the system value QDEVRCYACN at the time the job is started is to be used as the device recovery action for this job description.

**\*MSG** The application program requesting the I/O operation receives an error message indicating the operation has failed.

### **\*DSCMSG**

The job is automatically disconnected. Once the job has reconnected, it receives an error message indicating an I/O error has occurred and the device has been recovered. Even though the device has been recovered, the contents of the screen prior to the error must be displayed again.

### **\*DSCENDRQS**

The job is automatically disconnected. Once the job has reconnected, the End Request (ENDRQS) command will be issued specifying the processor that made the previous request. If there is no request processor, an error message will be issued.

### **\*ENDJOB**

The job is ended with the \*IMMED option. A job log is produced for the job.

### **\*ENDJOBNOLOG**

The job is ended with the \*IMMED option. No job log is produced for the job.

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## Time slice end pool (TSEPOOL)

Specifies whether interactive jobs are moved to another main storage pool when they reach the end of the time slice. The job is moved back to the pool in which it was originally running when a long wait occurs. This may help minimize the effect on interactive response time of other interactive jobs.

### \*SYSVAL

The value of the system value QTSEPOOL at the time the job is started is to be used as the time slice end pool action for this job description.

**\*NONE**

The job is not moved when the end of the time slice is reached.

**\*BASE**

The job is moved to the base pool when the end of the time slice is reached.

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## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

**\*LIBCRTAUT**

The authority to the object is the same as the value specified on the **Create authority (CRTAUT)** parameter of the library in which the object is being created. If the value specified on the CRTAUT parameter is changed, the new value will not affect any existing objects.

**\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as displaying its contents. The user cannot change the object. \*USE authority provides object operational authority, read authority, and execute authority.

**\*EXCLUDE**

The user cannot access the object.

**name** Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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## Job message queue maximum size (JOBMSGQMX)

Specifies the maximum size of the job message queue.

**\*SYSVAL**

The value in QJOBMSGQMX (system value) at the time the job is started is used as the maximum size of the job message queue.

**2-64** Specify the maximum size, in megabytes, of the job message queue.

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## Job message queue full action (JOBMSGQFL)

Specifies the action that should be taken when the job message queue is full.

### **\*SYSVAL**

The value specified for the QJOBMSGQFL system value is used.

### **\*NOWRAP**

The message queue does not wrap when it is full. This action ends the job.

### **\*WRAP**

The message queue wraps to the start of the message queue when it is full and starts filling the message queue again.

### **\*PRTWRAP**

The message queue wraps the job message queue when it is full and prints the messages that are being overlaid because of wrapping.

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## Allow multiple threads (ALWMLTTHD)

Specifies whether or not the job can run with multiple user threads. This attribute does not prevent the operating system from creating system threads in the job. This job attribute is not allowed to be changed once a job starts. This attribute applies to autostart jobs, prestart jobs, batch jobs submitted from job schedule entries and jobs started using the Submit Job (SBMJOB) and Batch Job (BCHJOB) commands. This attribute is ignored when starting all other types of jobs. This attribute should be set to \*YES only in job descriptions used exclusively with functions that create multiple user threads.

**\*NO** The job cannot run with multiple user threads.

**\*YES** The job can run with multiple user threads.

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## Initial ASP group (INLASPGRP)

Specifies the initial setting for the auxiliary storage pool (ASP) group name for the initial thread of jobs using this job description. A thread can use the Set ASP Group (SETASPGRP) command to change its library name space. When an ASP group is associated with a thread, all libraries in the independent ASPs in the ASP group are accessible and objects in those libraries can be referenced using regular library-qualified object name syntax. The libraries in the independent ASPs in the specified ASP group plus the libraries in the system ASP (ASP number 1) and basic user ASPs (ASP numbers 2 - 32) form the library name space for the thread.

### **\*NONE**

Specifies the initial thread of jobs using this job description will be started with no ASP group. The library name space will not include libraries from any ASP group. Only the libraries in the system ASP and any basic user ASPs will be in the library name space.

*name* Specifies the name of the ASP group to be set for the initial thread of jobs using this job description. The ASP group name is the name of the primary ASP device within the ASP group. All libraries from all ASPs in this ASP group will be included in the library name space.

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## Spooled file action (SPLFACN)

Specifies whether or not spooled files are accessed through job interfaces after the job ends. Keeping spooled files with jobs allows job commands such as the Work with Submitted Jobs (WRKSBMJOB) command to work with the spooled files even after the job has ended. Detaching spooled files from jobs reduces the use of system resources by allowing job structures to be recycled when the jobs end.

### \*SYSVAL

The value specified in the system value QSPLFACN is used.

### **\*KEEP**

When the job ends, as long as at least one spooled file for the job exists in the system auxiliary storage pool (ASP 1) or in a basic user ASP (ASPs 2-32), the spooled files are kept with the job and the status of the job is updated to indicate that the job has completed. When all remaining spooled files for the job are in independent ASPs (ASPs 33-255), the spooled files will be detached from the job and the job will be removed from the system.

### **\*DETACH**

When the job ends, the spooled files are detached from the job and the job is removed from the system.

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## DDM conversation (DDMCNV)

Specifies whether the connections using distributed data management (DDM) protocols remain active when they are not being used. The connections include APPC conversations, active TCP/IP conversations or OptiConnect connections. The DDM protocols are used in Distributed Relational Database Architecture (DRDA) applications, DDM applications, or DB2 Multisystem applications. For more information on distributed data management, see the iSeries Information Center at <http://www.ibm.com/eserver/iseres/infocenter>.

### \*KEEP

The system keeps DDM conversation connections active when they are no longer being used, except when:

- The routing step ends on the source system.
- There is an explicit request that conversations be disconnected, using the Reclaim DDM Conversations (RCLDDMCNV) command or the Reclaim Resources (RCLRSC) command.
- There is a communications failure or internal failure.
- A DRDA connection to an application server not running on the iSeries ends.

### **\*DROP**

The system ends a DDM-allocated conversation when it is no longer being used. Examples include when an application closes a DDM file, or when a DRDA application runs an SQL DISCONNECT statement.

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## Examples

### Example 1: Creating a Job Description for Interactive Jobs

```
CRTJOB  JOB(INT4)  USER(*RQD)  RTGDTA(QCMDI)
        INQMSGRPY(*SYSRPLY)
        TEXT('Interactive #4 JOB for Department 127')
```

This command creates a job description named INT4 in the user's current library. This job description is for interactive jobs and is used by Department 127. When you sign on, you must type your password.

The characters QCMDI are used as routing data that is compared with the routing table of the subsystem where the job is run. All inquiry messages are compared to the entries in the system reply list to determine whether a reply is issued automatically.

### Example 2: Creating a Job Description for Jobs on a Specified Queue

```
CRTJOBDB  JOBDB(BATCH3)  USER(*RQD)  JOBQ(NIGHTQ)  JOBPTY(4)
          OUTPTY(4)  ACGCDE(NIGHTQ012345)  RTGDTA(QCMDB)
          TEXT('Batch #3 JOBDB for high priority night work')
```

This command creates a job description named BATCH3 in the user's current library. The jobs using this description are placed on the job queue NIGHTQ. The priority for jobs using this description and their spooled output is 4. QCMDB is the routing data that is compared with entries in the routing table of the subsystem where the job runs. The accounting code of NIGHTQ012345 is used when recording accounting statistics for jobs that use this job description.

### Example 3: Specifying Request Data

```
CRTJOBDB  JOBDB(PAYWK)  USER(QPGMR)  RTGDTA(QCMDB)
          RQSDTA('CALL PAY025 PARM(WEEKLY UNION)')
```

This command creates a job description named PAYWK in the user's current library. Jobs using this job description run under the IBM-supplied user profile for the programmer, QPGMR, and use the accounting code found in that user profile. If the job is started via the SBMJOB command, the accounting code of the person submitting the command is automatically used. The routing data QCMDB is compared with entries in the routing table of the subsystem where the job is run. The request data passed to the command processing program is a CALL command that names the application program that is run and passes a parameter to it.

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## Error messages

### \*ESCAPE Messages

#### CPF1621

Job description &1 not created in library &2.

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---

## Create Job Queue (CRTJOBQ)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Job Queue (CRTJOBQ) command creates a new job queue. A job queue contains entries for jobs that are waiting to be processed by the system. Jobs can be placed on a job queue by using any of the following commands:

- Start Database Reader (STRDBRDR)
- Start Diskette Reader (STRDKTRDR)
- Start Printer Writer (STRPRTWTR)
- Start Diskette Writer (STRDKTWTR)
- Submit Job (SBMJOB)
- Submit Database Jobs (SBMDBJOB)
- Submit Diskette Jobs (SBMDKTJOB)
- Transfer Job (TFRJOB)

After you create a new job queue, you must add an entry for it in the appropriate subsystem description. To do this use the Add Job Queue Entry (ADDJOBQE) command.

Top

---

### Parameters

Keyword	Description	Choices	Notes
JOBQ	Job queue	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Job queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
TEXT	Text 'description'	<i>Character value, *BLANK</i>	Optional
OPRCTL	Operator controlled	<i>*YES, *NO</i>	Optional, Positional 2
AUTCHK	Authority to check	<i>*OWNER, *DTAAUT</i>	Optional
AUT	Authority	<i>Name, *USE, *ALL, *CHANGE, *EXCLUDE, *LIBCRTAUT</i>	Optional

Top

---

### Job queue (JOBQ)

This is a required parameter.

Specifies the name of the job queue being created.

The possible library values are:

#### \*CURLIB

The current library for the job is used to locate the job queue. If no current library entry exists in the library list, QGPL is used.

### *library-name*

Specify the library where the job queue is located.

**Note:** The temporary library QTEMP is not a valid library name. Job queues must be in permanent libraries.

### *'job-queue-name'*

Specify the name you want for the job queue being created.

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---

## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

The possible values are:

### \*BLANK

No text is specified.

### *'description'*

Specify no more than 50 characters, enclosed in apostrophes.

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---

## Operator controlled (OPRCTL)

Specifies whether a user who has job control authority is allowed to control this job queue.

The possible values are:

\*YES A user with job control authority can control the queue.

\*NO This queue cannot be controlled by users with job control authority unless they also have some other special authority.

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---

## Authority to check (AUTCHK)

Specifies what type of authorities to the job queue allow the user to control the job queue by holding or releasing the queue. Users with some special authority may also be able to control the job queue.

The possible values are:

### \*OWNER

The requester must have ownership authority to the job queue to pass the job queue authorization test. The requester can have ownership authority by being the owner of the job queue, sharing a group profile with the job queue owner, or running a program that adopts the job queue owner's authority.

### \*DTAAUT

Any user with add, read, and delete authority to the job queue can control the queue.

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---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

The possible values are:

- \*USE** Use authority allows the user to perform basic operations on the job queue, such as submit jobs to this queue.
- \*CHANGE**  
Change authority allows the user to control jobs submitted by other users if \*DTAAUT was specified on the **Authority to check** prompt (AUTCHK parameter).
- \*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.
- \*EXCLUDE**  
The user cannot access the object.
- \*LIBCRTAUT**  
The authority for the object is the same as the value specified on the **Create authority** prompt (CRTAUT parameter) of the library in which the object is being created. If the value specified on the **Create authority** prompt (CRTAUT parameter) is changed, the new value will not affect any existing objects.

### *authorization-list-name*

Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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---

## Examples

```
CRTJOBQ JOBQ(DEPTA) AUT(*EXCLUDE)
        TEXT('Special queue for Dept A jobs')
```

This command creates a job queue named DEPTA and puts it in the current library. Because AUT(\*EXCLUDE) is specified and OPRCTL(\*YES) is assumed, the job queue is used and controlled only by the user who created the queue and by users with job control authority (\*JOBCTL). Also, users with spool control authority (\*SPLCTL) can control the queue.

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---

## Error messages

### \*ESCAPE Messages

#### CPF2182

Not authorized to library &1.

#### CPF2192

Object &1 cannot be created into library &3.

#### CPF2207

Not authorized to use object &1 in library &3 type \*&2.

**CPF3323**

Job queue &1 in &2 already exists.

**CPF3351**

Temporary library &1 invalid for job queue &2.

**CPF3354**

Library &1 not found.

**CPF3356**

Cannot allocate library &1.

**CPF3371**

Spool user profile QSPL damaged or not found.

**CPF9818**

Object &2 in library &3 not created.

[Top](#)

# Create Journal (CRTJRN)

Where allowed to run: All environments (\*ALL)  
 Threadsafte: Yes

Parameters  
 Examples  
 Error messages

The Create Journal (CRTJRN) command creates a journal as a local journal with the specified attributes, and attaches the specified journal receiver to the journal. Once a journal is created, object changes can be journaled to it or user entries can be sent to it. The journal state of the created journal is \*ACTIVE.

## Restrictions:

- A journal cannot be created in the library QTEMP.
- The receiver specified must be created before issuing this command and it must be empty (that is, the receiver must not have been previously attached to a journal or have been in the process of being attached to a journal).
- This command cannot be used to create a remote journal. See the ADDRMTJRN (Add Remote Journal) command description or the Add Remote Journal (QjoAddRemoteJournal) API in the System API Reference information in the iSeries Information Center at <http://www.ibm.com/eserver/series/infocenter>.
- If RCVSIZOPT(\*MAXOPT1 or \*MAXOPT2 or \*MAXOPT3) is not to be in effect for the journal, the maximum threshold value that can be specified for any journal receiver being attached is 1,919,999 kilobytes.
- If the library to contain the journal is on an independent ASP then the journal receiver specified must be located on an independent ASP that is in the same ASP group as the journal's library. Likewise, if the library to contain the journal is not on an independent ASP, then the journal receiver specified cannot be located on an independent ASP.
- If the library to contain the journal is on an independent ASP then ASP(\*LIBASP) must be specified.
- RCVSIZOPT(\*MINFIXLEN) and FIXLENDTA cannot be used for the system security audit journal QSYS/QAUDJRN. Journal entries in the security audit journal are required to contain all possible data that could be used for auditing purposes.

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## Parameters

Keyword	Description	Choices	Notes
JRN	Journal	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Journal	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
JRNRCV	Journal receiver	Values (up to 2 repetitions): <i>Qualified object name</i>	Required, Positional 2
	Qualifier 1: Journal receiver	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
ASP	ASP number	1-32, <b>*LIBASP</b>	Optional
MSGQ	Journal message queue	<i>Qualified object name</i>	Optional
	Qualifier 1: Journal message queue	<i>Name, QSYSOPR</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
MNGRCV	Manage receivers	<b>*USER, *SYSTEM</b>	Optional

Keyword	Description	Choices	Notes
DLTRCV	Delete receivers	*NO, *YES	Optional
RCVSIZEOPT	Receiver size options	Single values: *NONE Other values (up to 3 repetitions): *RMVINTENT, *MINFIXLEN, *MAXOPT1, *MAXOPT2, *MAXOPT3	Optional
MINENTDTA	Minimize entry specific data	Single values: *NONE Other values (up to 2 repetitions): *FILE, *DTAARA	Optional
JRNCACHE	Journal caching	*NO, *YES	Optional
MNGRCVDLY	Manage receiver delay time	1-1440, 10	Optional
DLTRCVDLY	Delete receiver delay time	1-1440, 10	Optional
FIXLENTDTA	Fixed length data	Single values: *JOBUSRPGM Other values (up to 9 repetitions): *JOB, *USR, *PGM, *PGMLIB, *SYSSEQ, *RMTADR, *THD, *LUW, *XID	Optional
TEXT	Text 'description'	Character value, *BLANK	Optional
AUT	Authority	Name, *LIBCRTAUT, *CHANGE, *ALL, *USE, *EXCLUDE	Optional

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---

## Journal (JRN)

Specifies the qualified name of the journal to be created.

This is a required parameter.

### Qualifier 1: Journal

*journal-name*

Specify the name of the journal that is being created.

### Qualifier 2: Library

\*CURLIB

The journal is created in the current library for the job. If no library is specified as the current library for the job, QGPL is used.

*library-name*

Specify the library where the journal is to be created.

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---

## Journal receiver (JRNRCV)

Specifies the journal receiver to be attached to the specified journal.

Up to 2 journal receivers can be specified, but the second journal receiver is ignored.

This is a required parameter.

### Qualifier 1: Journal receiver

*receiver-name*

Specify the name of the journal receiver.

The journal receiver must not have been previously attached to a journal or have been in the process of being attached to a journal.

## Qualifier 2: Library

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

### **\*CURLIB**

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

### *library-name*

Specify the name of the library to be searched.

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---

## ASP number (ASP)

Specifies the auxiliary storage pool (ASP) from which the system allocates storage for the journal.

### **\*LIBASP**

The storage space for the journal is allocated from the same auxiliary storage pool as the storage space of the journal's library. Use this value if you want the journal in an independent user ASP.

### *ASP-identifier*

Specify a value ranging from 1 through 32 to specify the identifier of the ASP from which to have the storage space of the journal allocated. Valid values depend on how ASPs are defined on the system. Specify an ASP number only if you want to place the journal in a basic non-library user ASP.

**Note:** The value of 1 is the system ASP, any other value indicates a user ASP.

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## Journal message queue (MSGQ)

Specifies the qualified name of the message queue associated with this journal. A message is sent to this queue when one of the following occurs:

- When an attached journal receiver's threshold is surpassed, the message CPF7099 is sent if the journal has the MNGRCV(\*USER) attribute.
- When an attached journal receiver's threshold is surpassed, the system attempts to create and attach a new receiver if the journal has the MNGRCV(\*SYSTEM) attribute. When the old receiver is detached, the message CPF7020 is sent. If the attempt fails due to lock conflicts, the system sends the message CPI70E5 and then tries again every ten minutes (or as often as requested via the MNGRCVDLY parameter) until the change journal operation is successful. If the change journal fails for any other reason, message CPI70E3 is sent.
- When a journal receiver's sequence number exceeds 2,147,000,000, the message CPI70E7 is sent. If the journal receiver was attached while RCVSIZOPT(\*MAXOPT1 or \*MAXOPT2) was in effect for the journal, message CPI70E7 is sent when the sequence number exceeds 9,900,000,000. If the journal receiver was attached while RCVSIZOPT(\*MAXOPT3) was in effect for the journal, message CPI70E7 is sent when the sequence number exceeds 18,446,644,000,000,000,000.
- When the system cannot determine if the journal has the MNGRCV(\*SYSTEM) attribute, or if the attempt to create and attach a new journal receiver fails because of something other than a lock conflict, the message CPI70E3 is sent.
- When remote journal operations occur, see the Journal Management information in the iSeries Information Center at <http://www.ibm.com/eserver/series/infocenter>.
- When the system cannot delete a receiver due to a lock conflict, an exit program indicating that the receiver cannot be deleted, or the receiver is not yet fully replicated to all remote journals, CPI70E6 is sent.

sent and the operation will be retried every 10 minutes (or as often as requested via the DLTRCVDLY parameter). If a delete fails for any other reason, CPI70E1 is sent.

To set the threshold value, refer to the Create Journal Receiver (CRTJRNRVCV) command description.

**Note:** A message queue that is in the library QTEMP cannot be specified on this parameter.

### **QSYSOPR**

The message is sent to the QSYSOPR message queue.

#### *journal-message-queue*

Specify the name of the message queue to which the journal messages are sent. If this message queue is not available when a message is to be sent, the message is sent to the QSYSOPR message queue.

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

#### **\*CURLIB**

The current library for the job is used to locate the journal message queue. If no library is specified as the current library for the job, QGPL is used.

#### *library-name*

Specify the library where the journal message queue is located.

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---

## **Manage receivers (MNGRCV)**

Specifies how the changing of journal receivers (detaching the currently attached journal receiver and attaching a new journal receiver) is managed.

### **\*SYSTEM**

The system manages the changing of journal receivers (this function is called system change-journal management). When an attached journal receiver reaches its size threshold, the system detaches the attached journal receiver and creates and attaches a new journal receiver. Message CPF7020 is sent to the journal message queue when the journal receiver is detached. Additionally, during an initial program load (IPL), the system performs a CHGJRN command to create and attach a new journal receiver and to reset the journal sequence number of journals that are not needed for commitment control recovery for that IPL. The sequence number will not be reset during IPL, if the RCVSIZOPT is \*MAXOPT3 unless the sequence number exceeds the sequence number threshold which is 18,446,600,000,000,000. Also, if the journal receiver was attached while RCVSIZOPT(\*MAXOPT1 or \*MAXOPT2) was in effect for the journal, the system attempts to perform a CHGJRN command to reset the sequence number when the journal receiver's sequence number exceeds 9,900,000,000. If the journal receiver was attached while RCVSIZOPT(\*MAXOPT3) was in effect for the journal, the system attempts to perform a CHGJRN command to reset the sequence number when the journal receiver's sequence number exceeds 18,446,644,000,000,000. For all other journal receivers, the system attempts this CHGJRN when the sequence number exceeds 2,147,000,000.

#### **Notes:**

1. The journal receiver threshold value must be specified on the Create Journal Receiver (CRTJRNRVCV) command before this value is specified. If a journal receiver threshold is specified but is less than 100,000 KB, then the threshold will be adjusted to 100,000 KB at the time the journal receiver is created.
2. Specifying MNGRCV(\*SYSTEM) does not prevent you from using the CHGJRN command to manage journal receivers.

## \*USER

The user manages the changing of journal receivers by issuing the Change Journal (CHGJRN) command to attach a new receiver and detach the old receiver.

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## Delete receivers (DLTRCV)

Specifies whether the system deletes journal receivers when they are no longer needed or leaves them on the system for the user to delete after they have been detached by system change-journal management or by a user-issued CHGJRN command.

**Note:** This parameter can be specified only if MNGRCV(\*SYSTEM) is specified.

**\*NO** The journal receivers are not deleted by the system.

**\*YES** The journal receivers are deleted by the system.

When the journal has the DLTRCV(\*YES) attribute, the following conditions can prevent the system from deleting the receiver. When one of these conditions occurs, the system sends message CPI70E6 to the journal message queue, and then retries the delete operation every 10 minutes (or as often as requested via the DLTRCVDLY parameter) until the operation is successful.

- A lock conflict occurs for either the journal receiver or its journal.
- An exit program that was registered by way of the QIBM\_QJO\_DLT\_JRNRCV exit point indicates that a receiver is not eligible for deletion.
- A journal has remote journals associated with it and one or more of the associated remote journals do not yet have full copies of this receiver.

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## Receiver size options (RCVSIZOPT)

Specifies the options that affect the size of the receiver attached to the journal.

### \*MAXOPT1

If this is specified for the journal, the journal receiver attached to that journal can have a maximum receiver size of approximately one terabyte (1,099,511,627,776 bytes) and a maximum sequence number of 9,999,999,999. Additionally, the maximum size of the journal entry which can be deposited is 15,761,440 bytes. These journal receivers cannot be saved and restored to any releases prior to V4R5M0 nor can they be replicated to any remote journals on any systems at releases prior to V4R5M0. This value cannot be specified if \*MAXOPT2 or \*MAXOPT3 is specified.

### \*NONE

No options affect the size of the journal entries attached to the receiver. All journal entries placed on the receiver are permanent. The fixed length data as defined by FIXLENDTA will be included in every journal entry deposited into the attached journal receiver.

### \*RMVINTENT

The size of the receiver attached to the journal is reduced by automatic removal of the internal entries required only for initial program load (IPL) recovery when these entries are no longer required.

### \*MINFIXLEN

The size of the journal entries that are deposited into the attached journal receiver is reduced by the automatic removal of fixed-length data that is deemed not to be required for recovery purposes. This option is not valid when FIXLENDTA is also specified.

### **\*MAXOPT2**

If this is specified for the journal, the journal receiver attached to that journal can have a maximum receiver size of approximately one terabyte (1,099,511,627,776 bytes) and a maximum sequence number of 9,999,999,999. Additionally, the maximum size of the journal entry which can be deposited is 4,000,000,000 bytes. These journal receivers cannot be saved and restored to any releases prior to V5R1M0 nor can they be replicated to any remote journals on any systems at releases prior to V5R1M0. This value cannot be specified if \*MAXOPT1 or \*MAXOPT3 is specified.

### **\*MAXOPT3**

If this is specified for the journal, the journal receiver attached to that journal can have a maximum receiver size of approximately one terabyte (1,099,511,627,776 bytes) and a maximum sequence number of 18,446,744,073,709,551,600. Additionally, the maximum size of the journal entry which can be deposited is 4,000,000,000 bytes. These journal receivers cannot be saved and restored to any releases prior to V5R3M0 nor can they be replicated to any remote journals on any systems at releases prior to V5R3M0. This value cannot be specified if \*MAXOPT1 or \*MAXOPT2 is specified.

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## **Minimize entry specific data (MINENTDTA)**

Specifies which object types allow journal entries to have minimized entry specific data.

Journal receivers with object types allowing minimized entry specific data cannot be saved and restored to any release prior to V5R1M0 nor can they be replicated to any remote journal on a system at a release prior to V5R1M0. See the Journal Management information in the iSeries Information Center at <http://www.ibm.com/eserver/iseries/infocenter> for restrictions and usage of journal entries with minimized entry specific data.

### **\*NONE**

No object type allows a journal entry with minimized entry specific data. Journal entries for all journaled objects will be deposited in the journal with complete entry specific data.

**\*FILE** Journaled files may have journal entries deposited with minimized entry specific data.

### **\*DTAARA**

Journaled data areas may have journal entries deposited with minimized entry specific data.

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## **Journal caching (JRNCACHE)**

Specifies whether journal entries will be cached before being written out to disk.

**\*NO** Journal entries are written to disk immediately if needed to assure single-system recovery.

**\*YES** Journal entries are written to main memory. When there are several journal entries in main memory, then the journal entries are written from main memory to disk. If the application performs large numbers of changes, this may result in fewer synchronous disk writes resulting in improved performance. However, it is **not** recommended to use this option if it is unacceptable to lose even one recent change in the event of a system failure where the contents of main memory are not preserved. This type of journaling is directed primarily toward batch jobs and may not be suitable for interactive applications where single system recovery is the primary reason for journaling.

**Note:** Applications using commitment control will likely see less performance improvement because commitment control already performs some journal caching.



**Note:** Entries that are in the cache are not displayable using the Display Journal (DSPJRN) command, Receive Journal Entries (RCVJRNE) command, Retrieve Journal Entries (RTVJRNE) command, or the QjoRetrieveJournalEntries API. However, they are included in the last journal sequence number for the journal receiver returned via the Display Journal Receiver Attributes (DSPJRNRCVA) command or QjoRtvJrneReceiverInformation API.

**Note:** This value cannot be specified if the journal-name starts with a Q and the journal-library starts with a Q, unless the library is QGPL.

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## Manage receiver delay time (MNGRCVDLY)

Specifies the time (in minutes) to be used to delay the next attempt to attach a new journal receiver to this journal if the journal is system managed (MNGRCV(\*SYSTEM)).

**10** When the system cannot allocate an object needed to attach a new journal receiver to this journal, it will wait 10 minutes before trying again.

*manage-receiver-delay-time:*

When the system cannot allocate an object needed to attach a new journal receiver to this journal, it will wait the specified number of minutes before trying again. Valid values range from 1 to 1440.

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## Delete receiver delay time (DLTRCVDLY)

If the system cannot allocate an object needed to delete a journal receiver associated with this journal and the journal has DLTRCV(\*YES) specified, this parameter specifies the time (in minutes) to be used to delay the next attempt to delete the journal receiver.

**10** System waits 10 minutes before trying again.

*delete-receiver-delay-time:*

System waits the specified number of minutes before trying again. Valid values range from 1 to 1440.

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## Fixed length data (FIXLENDTA)

Specifies the data that is included in the fixed-length portion of the journal entries that are deposited into the attached journal receiver. This parameter is not valid when RCVSIZOPT(\*MINFIXLEN) is also specified.

**\*JOBUSRPGM**

The job name, user name and program name will be included in the journal entries deposited into the attached journal receiver.

**\*JOB** The job name will be included in the journal entries deposited into the attached journal receiver.

**\*USR** The effective user profile name will be included in the journal entries deposited into the attached journal receiver.

**\*PGM** The program name will be included in the journal entries deposited into the attached journal receiver.

#### **\*PGMLIB**

The program library name and the auxiliary storage pool device name that contains the program library will be included in the journal entries deposited into the attached journal receiver.

#### **\*SYSSEQ**

The system sequence number will be included in the journal entries deposited into the attached journal receiver. The system sequence number gives a relative sequence to all journal entries in all journal receivers on the system.

#### **\*RMTADR**

If appropriate, the remote address, the address family and the remote port will be included in the journal entries deposited into the attached journal receiver.

**\*THD** The thread identifier will be included in the journal entries deposited into the attached journal receiver. The thread identifier helps distinguish between multiple threads running in the same job.

**\*LUW** If appropriate, the logical unit of work identifier will be included in the journal entries deposited into the attached journal receiver. The logical unit of work identifies work related to specific commit cycles.

**\*XID** If appropriate, the transaction identifier will be included in the journal entries deposited into the attached journal receiver. The transaction identifier identifies transactions related to specific commit cycles.

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## **Text 'description' (TEXT)**

Specifies the text that briefly describes the object.

#### **\*BLANK**

No text is specified.

#### **'description'**

Specify no more than 50 characters of text, enclosed in apostrophes.

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## **Authority (AUT)**

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

#### **\*LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library command (CRTLIB) for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

#### **\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence,

specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

**\*EXCLUDE**  
The user cannot access the object.

**name** Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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## Examples

```
CRTJRN JRN(MYLIB/JRNLA) JRNRCV(MYLIB/RCV01) ASP(3)
```

This command creates a journal named JRNLA in library MYLIB. Storage space for the journal is allocated from user auxiliary storage pool (ASP) 3. Journal receiver RCV01 in library MYLIB is attached to journal JRNLA. The public authority for the journal is taken from the CRTAUT parameter for library MYLIB.

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## Error messages

### \*ESCAPE Messages

#### CPF70A0

FIXLENDTA parameter not allowed.

#### CPF70A1

FIXLENDTA parameter not allowed with RCVSIZOPT(\*MINFIXLEN).

#### CPF70E0

Operation on &1 not allowed.

#### CPF70E2

DLTRCV(\*YES) not allowed.

#### CPF70E5

RCVSIZOPT values specified not allowed.

#### CPF70F1

Journal receiver threshold too big for journal.

#### CPF70F5

Receiver threshold value is not valid.

#### CPF7003

Entry not journaled to journal &1. Reason code &3.

#### CPF701A

Journal receiver not eligible for operation.

#### CPF7010

Object &1 in &2 type \*&3 already exists.

**CPF7011**  
Not enough storage or resources.

**CPF7012**  
Auxiliary storage pool &4 not found for object &1.

**CPF7015**  
Error on JRNRCV specifications.

**CPF7017**  
Library QTEMP not valid for message queue parameter.

**CPF704E**  
RCVSIZOPT(\*MINFIXLEN) not allowed.

**CPF708A**  
Journal QAUDJRN in QSYS not created or restored.

**CPF708D**  
Journal receiver found logically damaged.

**CPF708E**  
Journal receiver not allowed with \*MAXOPT1 or \*MAXOPT2 or \*MAXOPT3.

**CPF709F**  
Start of journal caching not allowed. Reason code &3.

**CPF9801**  
Object &2 in library &3 not found.

**CPF9802**  
Not authorized to object &2 in &3.

**CPF9803**  
Cannot allocate object &2 in library &3.

**CPF9806**  
Cannot perform function for object &2 in library &3.

**CPF9810**  
Library &1 not found.

**CPF9820**  
Not authorized to use library &1.

**CPF9825**  
Not authorized to device &1.

**CPF9830**  
Cannot assign library &1.

**CPF9839**  
Object &1 not created.

**CPF9840**  
Object &1 not created.

**CPF9873**  
ASP status is preventing access to object.

**CPF9875**  
Resources exceeded on ASP &1.

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## Create Journal Receiver (CRTJRNRCV)

Where allowed to run: All environments (\*ALL)  
Threadsafe: Yes

Parameters  
Examples  
Error messages

The Create Journal Receiver (CRTJRNRCV) command creates a journal receiver. Once a journal receiver is attached to a journal (with the Create Journal (CRTJRN) or Change Journal (CHGJRN) command), journal entries can be placed in it. A preferred auxiliary storage pool(ASP), and a storage space threshold value can be specified for the journal receiver.

### Restrictions:

- A journal receiver cannot be created in library QTEMP.
- This command cannot be used to create a journal receiver for a remote journal.
- If the library to contain the journal receiver is on an independent ASP then ASP(\*LIBASP) must be specified.

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## Parameters

Keyword	Description	Choices	Notes
JRNRCV	Journal receiver	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Journal receiver	<i>Simple name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
ASP	ASP number	1-32, *LIBASP	Optional
THRESHOLD	Journal receiver threshold	1-1000000000, <u>1500000</u> , *NONE	Optional
TEXT	Text 'description'	<i>Character value, *BLANK</i>	Optional
UNIT	Preferred storage unit	1-255, *ANY	Optional
AUT	Authority	<i>Name, *LIBCRTAUT, *CHANGE, *ALL, *USE, *EXCLUDE</i>	Optional

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## Journal receiver (JRNRCV)

Specifies the name and library of the journal receiver that is being created.

This is a required parameter.

### Qualifier 1: Journal receiver

*receiver-name*

Specify the name of the journal receiver being created.

### Qualifier 2: Library

#### \*CURLIB

The journal receiver is created in the current library. If no library is specified as the current library for the job, QGPL is used.

### *library-name*

Specify the library where the journal receiver is to be created.

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## ASP number (ASP)

Specifies the auxiliary storage pool (ASP) from which the system allocates storage for the journal receiver.

### \*LIBASP

The storage space for the journal receiver is allocated from the same auxiliary storage pool as the storage space of the journal receiver's library.

### *ASP-identifier*

Specify a value ranging from 1 through 32 to specify the identifier of the ASP from which to have the storage space of the journal receiver allocated. Valid values depend on how ASPs are defined on the system.

**Note:** The value of 1 is the system ASP, any other value indicates a user ASP.

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## Journal receiver threshold (THRESHOLD)

Specifies a storage space threshold value (in KB) for the journal receiver. If the threshold value is exceeded during journaling, one of the following occurs:

- The message CPF7099 is sent to the journal message queue if the journal has the MNGRCV(\*USER) attribute.
- The system attempts to create and attach a new receiver if the journal has the MNGRCV(\*SYSTEM) attribute. When the old receiver is detached, the message CPF7020 is sent to the journal message queue. If the attempt fails due to lock conflicts, the system sends the message CPI70E5 and then tries again every ten minutes (or as often as requested via the MNGRCVDLY parm) until the change journal operation is successful.
- When the system cannot determine if the journal has the MNGRCV(\*SYSTEM) attribute, or if the attempt to create and attach a new journal receiver fails because of something other than a lock conflict, the message CPI70E3 is sent.

The journal message queue is specified on the CRTJRN (Create Journal) or CHGJRN (Change Journal) command.

**Note:** The value for the MNGRCV parameter is specified for the journal on the CRTJRN or CHGJRN command. If you have not specified system change-journal management (\*SYSTEM), and the threshold value is exceeded, you may want to take some action, such as issuing a CHGJRN command.

### 1,500,000

This is the default threshold value. Each 1000KB specifies 1,024,000 bytes of storage space.

### \*NONE

No threshold value is specified. The message CPF7099 is not sent and MNGRCV(\*SYSTEM) cannot be specified when attaching this receiver to a journal.

### *threshold-value*

Specify a value ranging from 1 through 1,000,000,000 in kilobytes (KB) of storage. Each 1000 KB specifies 1,024,000 bytes of storage space. A value less than 100,000 will automatically be reset to 100,000. When the size of the space for the journal receiver is larger than the size specified by this value, a message is sent to the identified message queue if appropriate, and journaling continues.

**Notes:**

1. If you plan to attach this journal receiver to a journal that does not have RCVSIZOPT(\*MAXOPT1 or \*MAXOPT2 or \*MAXOPT3) specified, the maximum threshold you should specify is 1,919,999 in kilobytes.
2. If you specify a value less than 100,000, the value will automatically be reset to 100,000. Otherwise, you may see the threshold exceeded message too frequently. Also, if the threshold value is too small, the threshold exceeded message may occur when the journal receiver is attached to a journal either with the Create Journal (CRTJRN) command or the Change Journal (CHGJRN) command.

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## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

### \*BLANK

No text is specified.

### *'description'*

Specify no more than 50 characters of text, enclosed in apostrophes.

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## Preferred storage unit (UNIT)

This parameter is no longer supported. It has been kept strictly for syntactic compatibility with releases prior to Version 1 Release 3 Modification 0 of the AS/400 system.

To isolate the journal receiver to a disk arm, use the ASP parameter. For more information on using user ASPs, see the iSeries Information Center at <http://www.ibm.com/eserver/iseries/infocenter>.

You can specify either \*ANY or a value from 1 through 32 for this parameter.

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## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### \*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library command (CRTLIB) for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

### \*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence,

specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

**\*EXCLUDE**  
The user cannot access the object.

**name** Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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## Examples

```
CRTJRNRCV  JRNRCV(MYLIB/JRNRCCLA)  ASP(3)
           THRESHOLD(100000)  AUT(*ALL)
           TEXT('RECEIVER FOR WEEK 37')
```

This command creates a journal receiver named JRNRCCLA in library MYLIB. Storage space for the journal receiver is allocated from user auxiliary storage pool (ASP) 3. When the size of JRNRCCLA is larger than 100000 kilobytes (102,400,000 bytes), the message CPF7099 is sent to the journal message queue, if the journal to which this receiver is attached has the MNGRCV(\*USER) attribute. The public authority to the journal receiver is \*ALL.

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## Error messages

### \*ESCAPE Messages

#### CPF2283

Authorization list &1 does not exist.

#### CPF70FD

Internal system journal status object recreated.

#### CPF7010

Object &1 in &2 type \*&3 already exists.

#### CPF7011

Not enough storage or resources.

#### CPF7012

Auxiliary storage pool &4 not found for object &1.

#### CPF70FD

Internal system journal status object recreated.

#### CPF9801

Object &2 in library &3 not found.

#### CPF9802

Not authorized to object &2 in &3.

#### CPF9810

Library &1 not found.



**CPF9820**

Not authorized to use library &1.

**CPF9830**

Cannot assign library &1.

**CPF9839**

Object &1 not created.

**CPF9840**

Object &1 not created.

**CPF9873**

ASP status is preventing access to object.

**CPF9875**

Resources exceeded on ASP &1.

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## Create Java Program (CRTJVAPGM)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Java Program (CRTJVAPGM) command creates a Java program from a Java class file, JAR file, or ZIP file. The resulting Java program object becomes part of the class file, JAR file or ZIP file object. The Java program runs when started by the JAVA (Run Java Program) command. The size and performance of the Java program can be controlled through use of the OPTIMIZE and LICOPT parameters.

If a JAR file or ZIP file is specified, only one Java program is created and associated with this file. The Java program contains an optimized internal form for all of the classes in the JAR file or ZIP file.

**Restrictions:** The file must be in one of the following file systems: QOpenSys,"root", or a user-defined file system.

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### Parameters

Keyword	Description	Choices	Notes
CLSF	Class file or JAR file	<i>Path name</i>	Required, Positional 1
CLASSPATH	Classpath	<i>Path name</i> , *NONE, *ENVVAR	Optional
JDKVER	Java developer kit version	<i>Character value</i> , *NONE	Optional
OPTIMIZE	Optimization	<u>10</u> , *INTERPRET, 20, 30, 40	Optional
USRPRF	User profile	* <u>USER</u> , *OWNER	Optional
USEADPAUT	Use adopted authority	* <u>NO</u> , *YES	Optional
REPLACE	Replace program	* <u>YES</u> , *NO	Optional
ENBPFCOL	Enable performance collection	* <u>NONE</u> , *ENTRYEXIT, *FULL	Optional
PRFDTA	Profiling data	* <u>NOCOL</u> , *COL	Optional
SUBTREE	Directory subtree	* <u>NONE</u> , *ALL	Optional
TGTRLS	Target release	<i>Character value</i> , * <u>CURRENT</u>	Optional
LICOPT	Licensed Internal Code options	<i>Character value</i> , * <u>OPTIMIZE</u>	Optional
LICOPTFILE	LIC options file	<i>Path name</i> , * <u>NONE</u>	Optional

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### Class file or JAR file (CLSF)

Specifies the class file , JAR file, or ZIP file name from which to create the Java program. The file name may be qualified by one or more directory names.

#### *class-file-name*

Specify the name of the class file or a pattern for identifying the class file or files to be used. A pattern can be specified in the last part of the name. An asterisk matches any number of characters and a question mark matches a single character. If the name is qualified or contains a

pattern it must be enclosed in apostrophes. An example of a qualified class file name is `'/directory1/directory2/myclassname.class'`. An example of a pattern is `'/directory1/directory2/myclass*.class'`.

#### ***JAR-file-name***

Specify the name of the Java archive (JAR) file or pattern for identifying the JAR or ZIP file or files to be used. A file is assumed to be a JAR file if the file name ends with `'jar'` or `'zip'`. A pattern can be specified in the last part of the name. An asterisk matches any number of characters and a question mark matches a single character. If the name is qualified or contains a pattern it must be enclosed in apostrophes. An example of a qualified JAR file name is `'/directory1/directory2/myappname.jar'`. An example of a pattern is `'/directory1/directory2/myapp*.zip'`.

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## **Classpath (CLASSPATH)**

Specifies the path used to locate classes for inter-JAR binding. Directories are separated by colons.

#### **\*NONE**

No additional directories or JAR files are added to the class path for locating classes.

#### **\*ENVVAR**

The class path is determined by the environment variable CLASSPATH.

#### ***class-path***

Path used to locate classes. An example class path is `'/directory1/directory2:/QIBM/ProdData/Java400'`.

Either CLASSPATH or JDKVER must be specified for inter-JAR binding to occur. CLASSPATH must be \*NONE when CLSF is a class file.

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## **Java developer kit version (JDKVER)**

Specifies the Java Development Kit (JDK) version to add to the class path for locating classes for inter-JAR binding.

#### **\*NONE**

No additional directories for this JDK version are added to the class path for locating classes.

#### ***Java-Development-Kit version***

The jar files and directories for this JDK version are added to the class path for locating classes. An example JDK version is `'1.2.2'`.

Either CLASSPATH or JDKVER must be specified for inter-JAR binding to occur. JDKVER must be \*NONE when CLSF is a class file.

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## Optimization (OPTIMIZE)

Specifies the optimization level of the Java program. For OPTIMIZE(\*INTERPRET), the resulting Java program will be pre-verified and converted to an internal form. Then, it will be interpreted when it runs. For other optimization levels, the Java program contains server machine instruction sequences that are run when the Java program is invoked. These server machine instructions have been optimized based on the specified optimization level. The server directly runs the machine instructions when the program runs.

OPTIMIZE(\*INTERPRET) Java programs are smaller but run slower than Java programs created with higher optimization levels. As the optimization level is increased beyond 10, the Java program performance generally improves, but the time required to create the Java program increases and debugging is more difficult.

**10** The Java program contains a compiled version of the class byte codes but has only minimal additional compiler optimization. Variables can be displayed and modified while debugging.

### **\*INTERPRET**

The Java program created does not contain machine specific instructions. The Java program is interpreted from the byte codes when it is started.. Variables can be displayed and modified while debugging.

**20** The Java program contains a compiled version of the class byte codes and has some additional compiler optimization. Variables can be displayed but not modified while debugging.

**30** The Java program contains a compiled version of the class byte codes and has more compiler optimization than optimization level 20. During a debug session, user variables cannot be changed, but can be displayed. The presented values may not be the current values of the variables.

**40** The Java program contains a compiled version of the class byte codes and has more compiler optimization than optimization level 30. All call and instruction tracing is disabled.

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## User profile (USRPRF)

Specifies whether the authority checking done while this program is running should include only the user who is running the program (\*USER) or both the user who is running the program and the program owner (\*OWNER). The profiles of the program user or both the program user and the program owner are used to control which objects can be used by the program, including the authority the program has for each object. Only the program owner or a user with QSECOFR authority can change the user profile attribute.

### **\*SAME**

The user profile attribute does not change.

### **\*USER**

The program runs under the user profile of the program's user.

### **\*OWNER**

The user profiles of both the program's owner and the program's user are used when the program is processed. The collective sets of object authority in both user profiles are used to find and access objects during program processing. Authority from the owning user profile's group profile is not included in the authority for the running program.

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## Use adopted authority (USEADPAUT)

Specifies whether program adopted authority from previous programs in the call stack will be used as a source of authority when this program is running.

- \*NO** Program adopted authority from previous call levels is not used when this program is running.
- \*YES** Program adopted authority from previous call levels is used when this program is running. If an authorization list is specified for the QUSEADPAUT system value and the user is not authorized to that authorization list, \*NO is used.

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## Replace program (REPLACE)

Specifies whether an existing Java program associated with this file is replaced with the new Java program being created.

- \*YES** The existing Java program associated with this file is replaced by the new Java program created.
- \*NO** An existing Java program associated with this file is replaced only if the class file was changed since the existing program was created; otherwise, creation of the new Java program is stopped and a message is displayed. If a pattern was used to indicate multiple creations, processing continues with the next file.

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## Enable performance collection (ENBPFCOL)

Specifies whether collection of performance data is enabled.

- \*NONE**  
The collection of performance data is not enabled. No performance data is to be collected.
- \*ENTRYEXIT**  
Performance data is collected for procedure entry and exit.
- \*FULL** Performance data is collected for procedure entry and exit. Performance data is also collected before and after calls to external procedures.

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## Profiling data (PRFDTA)

Specifies the program profiling data attribute for the module. Program profiling is an advanced optimization technique to reorder procedures and code within the procedures based on statistical data (profiling data)

- \*NOCOL**  
The Java program is not enabled to collect profiling data.
- \*COL** This Java program is enabled to collect profiling data.  
**Note:** \*COL can be specified only when the optimization level of the Java program is 30 or greater and is not being changed.

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## Directory subtree (SUBTREE)

Specifies whether directory subtrees are processed when looking for files that match the CLSF keyword.

### \*NONE

Only the files that match the object name pattern will be processed. No subtrees are processed. If the directory has subdirectories, neither the subdirectories nor the objects in the subdirectories are processed.

**\*ALL** The entire subtree of the path specified in CLSF is processed to create java programs for files matching the name specified on CLSF parameter.

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## Target release (TGTRLS)

Specifies the release of the operating system on which you intend to use the object being created. When specifying the target-release value, the format VxRxMx is used to specify the release, where Vx is the version, Rx is the release, and Mx is the modification level. For example, V4R2M0 is version 4, release 2, modification level 0.

Valid values depend on the current version, release, and modification level, and they change with each new release.

### \*CURRENT

The object is to be used on the release of the operating system currently running on your system. The object can also be used on a system with any subsequent release of the operating system installed.

### *target-release*

Specify the release in the format VxRxMx. The object can be used on a system with the specified release or with any subsequent release of the operating system installed.

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## Licensed Internal Code options (LICOPT)

Specifies one or more Licensed Internal Code compile-time options. This parameter allows individual compile-time options to be selected, and is intended for the advanced programmer who understands the potential benefits and drawbacks of each selected type of compiler option.

### \*OPTIMIZE

Use the set of compile-time options which are implicitly associated with the optimization level specified on the OPTIMIZE parameter. If OPTIMIZE(\*INTERPRET) is specified, no compile-time optimizations will be performed.

### *'Licensed-Internal-Code-options-string'*

The selected Licensed Internal Code compile-time options are used when creating the Java program object. Certain options may reduce your ability to debug the created Java program.

**Note:** Additional information about the LICOPT options can be found in the IBM Developer Kit for Java reference at <http://AS400BKS.rochester.ibm.com/>.

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## LIC options file (LICOPTFILE)

Specifies a file name which lists one or more Licensed Internal Code compile-time options.

## \*NONE

There is no file specified.

## *'Licensed-Internal-Code-options-filename'*

The file is used for specifying which Licensed Internal Code compile-time options are used when creating the Java program object. Certain options may reduce your ability to debug the created Java program.

**Note:** Additional information about the LICOPT options can be found in the IBM Developer Kit for Java reference at <http://AS400BKS.rochester.ibm.com/>.

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## Examples

### Example 1: Create an Optimized Java Program

```
CRTJVAPGM  CLSF('/projectA/myJavaclassname.class')
           OPTIMIZE(10)
```

This command will create a Java program and associate it with the class file myJavaclassname. The Java program will contain compiled machine instruction sequences which will be run when the Java program is invoked via the RUNJVA (Run Java) or the JAVA CL command.

### Example 2: Create a Java Program Specifying a LICOPT File

```
CRTJVAPGM  CLSF('/projectA/myJavaclassname.class')
           LICOPTFILE('/projectA/mylicoptfile.txt')
```

This command will create a Java program and associate it with the class file myJavaclassname. The command will read the Licensed Internal Code options contained in the text file mylicoptfile.txt and prepend them to the default Licensed Internal Code Options used when generating compiled machine instruction sequences.

### Example 3: Create Numerous Java Programs

```
CRTJVAPGM  CLSF('/projectA/*.class') SUBTREE(*ALL)
```

This command will create a Java program and associate it with any class file in the projectA directory and any class file in directories below projectA.

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## Error messages

### \*ESCAPE Messages

#### JVAB524

&1 Java programs created, &4 with errors. &2 Java programs were current. &3 Java programs not created

#### JVAB532

Unable to create Java program for "&1".

#### JVAB535

Unmonitored exception received.

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## Create Logical File (CRTLF)

**Where allowed to run:** All environments (\*ALL)  
**Threadsafe:** Conditional

Parameters  
Examples  
Error messages

The Create Logical File (CRTLF) command creates a logical file from the information specified on this command and from the data description specifications (DDS) contained in a source file.

A logical file is a database file that describes how data records contained in one or more physical files are presented to a program. The logical file does not contain data records. The data records are contained in the physical files associated with the logical file.

The data records contained in the physical files are grouped into physical file members. The logical file accesses the data records through one or more logical file members. Each logical file member describes the data contained in one or more physical file members, and each logical file member has its own access path to the data. Normally, database files have only one member which, by default, is added to the file when the file is created.

### Restrictions:

- To create a keyed logical file over one or more physical files, you must have object operational (\*OBJOPR) authority and either object management (\*OBJMGT) authority or object alter (\*OBJALTER) authority for each of the files specified for the PFILE or JFILE keywords in DDS.  
To create a non-keyed logical file, only \*OBJOPR authority is required.
- This command is conditionally threadsafe. In multithreaded jobs, this command is not threadsafe for distributed files and fails for distributed files that use relational databases of type \*SNA.

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## Parameters

Keyword	Description	Choices	Notes
FILE	File	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: File	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
SRCFILE	Source file	<i>Qualified object name</i>	Optional, Positional 2
	Qualifier 1: Source file	<i>Name, QDDSSRC</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
SRCMBR	Source member	<i>Name, *FILE</i>	Optional, Positional 3
GENLVL	Generation severity level	0-30, <u>20</u>	Optional
FLAG	Flagging severity level	0-30, <u>0</u>	Optional
FILETYPE	File type	<i>*DATA, *SRC</i>	Optional
MBR	Member, if desired	<i>Name, *FILE, *NONE</i>	Optional

Keyword	Description	Choices	Notes
DTAMBR5	Physical file data members	Single values: *ALL Other values (up to 32 repetitions): <i>Element list</i>	Optional
	Element 1: Physical file	<i>Qualified object name</i>	
	Qualifier 1: Physical file	<i>Name</i> , <u>QDDSSRC</u>	
	Qualifier 2: Library	<i>Name</i> , *CURRENT	
	Element 2: Members	Single values: *NONE Other values (up to 32 repetitions): <i>Name</i>	
TEXT	Text 'description'	<i>Character value</i> , *SRCMBRTXT, *BLANK	Optional
OPTION	Source listing options	Values (up to 4 repetitions): *SRC, *NOSRC, *SOURCE, *NOSOURCE, *LIST, *NOLIST, *SECLVL, *NOSECLVL, *EVENTF, *NOEVENTF	Optional, Positional 4
SYSTEM	System	*LCL, *RMT, *FILETYPE	Optional
MAXMBRS	Maximum members	<i>Integer</i> , <u>1</u> , *NOMAX	Optional
ACCPH5IZ	Access path size	*MAXITB, *MAX4GB	Optional
MAINT	Access path maintenance	*IMMED, *DLY, *REBLD	Optional
RECOVER	Access path recovery	*NO, *AFTIPL, *IPL	Optional
FRACCPH5	Force keyed access path	*NO, *YES	Optional
UNIT	Preferred storage unit	1-255, *ANY	Optional
FMTSLR	Rcd format selector program	Single values: *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Rcd format selector program	<i>Name</i> , <u>QDDSSRC</u>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
FRCRATIO	Records to force a write	<i>Integer</i> , *NONE	Optional
WAITFILE	Maximum file wait time	<i>Integer</i> , <u>30</u> , *IMMED, *CLS	Optional
WAITRCD	Maximum record wait time	<i>Integer</i> , <u>60</u> , *IMMED, *NOMAX	Optional
SHARE	Share open data path	*NO, *YES	Optional
SRTSEQ	Sort sequence	Single values: *SRC, *JOB, *LANGIDSHR, *LANGIDUNQ, *HEX Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Sort sequence	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
LANGID	Language ID	<i>Character value</i> , *JOB	Optional
LVLCHK	Record format level check	*YES, *NO	Optional
AUT	Authority	<i>Name</i> , *LIBCRTAUT, *ALL, *CHANGE, *EXCLUDE, *USE	Optional

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## File (FILE)

Specifies the logical file to be created.

If the file is used in a high-level language program, the file name should be consistent with the naming rules of that language; otherwise, the file must be renamed in the program.

This is a required parameter.

### Qualifier 1: File

*name* Specify the name of the logical file.

## Qualifier 2: Library

### \*CURLIB

The file is located in the current library for the job. If no library is specified as the current library for the job, QGPL is used.

*name* Specify the library where the file is located.

**Note:** If a logical file and the physical file on which it is based are in different libraries, and the logical or physical file does not exist when it is to be restored (such as during disaster recovery or when the files are deleted), the access path is not restored. It is rebuilt. To make it possible for access paths to be restored and not rebuilt, the logical files and the based-on physical files must be in the same library. More information on the restoring of saved access paths is in the Backup and Recovery book, SC41-5304.

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## Source file (SRCFILE)

Specifies the source file that contains the data description specifications (DDS) source used to create the logical file.

### Qualifier 1: Source file

#### QDDSSRC

The DDS source file QDDSSRC contains the source descriptions used to create the logical file.

*name* Specify the name of the source file that contains the DDS used to create the logical file.

### Qualifier 2: Library

\*LIBL All libraries in the library list for the current thread are searched until the first match is found.

#### \*CURLIB

The current library for the job is used to locate the source file. If no library is specified as the current library for the job, QGPL is used.

*name* Specify the library where the source file is located.

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## Source member (SRCMBR)

Specifies the name of the source file member that contains the DDS source for the logical file being created.

\*FILE The source file member name is the same as the name specified for the **File (FILE)** parameter.

*name* Specify the name of the member in the source file.

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## Generation severity level (GENLVL)

Specifies the severity level of data description specifications (DDS) messages that cause file creation to fail. This parameter applies only to messages created while processing DDS source files.

20 If errors occur in the DDS source file processing with a severity level greater than or equal to 20, the file is not created.

**0-30** Specify the desired severity level value. If 0 is specified, the file is not created. The value specified must be greater than or equal to the value specified for the **Flagging severity level (FLAG)** parameter.

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## Flagging severity level (FLAG)

Specifies the minimum severity level of messages to be listed.

**0** All messages are listed.

**0-30** Specify a number indicating the minimum severity of messages to be listed. The value specified must be greater than or equal to the value specified for the **Generation severity level (GENLVL)** parameter.

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## File type (FILETYPE)

Specifies whether each member of the logical file being created contains data records, or contains source records for a program or another file.

### \*DATA

The logical file contains data records.

**\*SRC** The logical file contains source records. This value cannot be specified for join logical files.

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## Logical file member (MBR)

Specifies the logical file member to be added when the logical file is created.

**\*FILE** The name of the member to be added is the same as the name specified for the **File (FILE)** parameter.

### **\*NONE**

No member is added when the file is created.

**name** Specify the name of the logical file member to be added.

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## Physical file data members (DTAMBRS)

Specifies the physical files and members that contain the data associated with the logical file member being added by this command. A logical file member can be based on all (\*ALL) of the physical files and members on which the logical file itself is based, or the member can be based on a subset of the total files and members.

**Note:** When adding a member to a logical file that is a DDM file, the physical file, if specified, must also be a DDM file with its library and member(s) specified explicitly. \*CURRENT is not supported when the logical file is a DDM file.

When a logical file is created, the physical files specified for the PFILE or JFILE DDS keyword are used to create the logical file. If no library name is specified for the physical files on the PFILE or JFILE keyword,

the library list (\*LIBL) at file creation time is used to find the physical files; the physical files from the library list are used to create the logical file. The qualified physical files from the PFILE or JFILE keyword (regardless of whether a library name was specified or if the library list was used to find the files) are the physical files associated with the logical file. The names of the physical files associated with the logical file are saved in the description of the logical file. When a member is added to the logical file, the DTAMBRS parameter is used to specify the physical file members associated with the logical file member. Each physical file name specified on the DTAMBRS parameter must be the name of a physical file that is associated with the logical file (saved in the description of the logical file).

### Single values

**\*ALL** The logical file member being added is based on all the physical files and members (that exist at the time this CRTLF command is entered) used by the logical file. At least one member must exist in at least one of the physical files. The physical file names are specified for the PFILE or JFILE parameter in the DDS.

### Element 1: Physical file

#### Qualifier 1: Physical file

*name* Specify the names of the physical files that contain the data being accessed by the logical file member being added.

The physical file names must match a name on the PFILE or JFILE keywords in the DDS and cannot be specified more often on the DTAMBRS parameter than on the PFILE or JFILE keywords in the DDS. For join logical files, all physical files specified for the JFILE keyword must be specified for the DTAMBRS parameter and each physical file must contain only one member. If a physical file name is not specified for a physical file that is on a PFILE or JFILE keyword in the DDS, the logical file member is not based on any member of that physical file.

#### Qualifier 2: Library

##### **\*CURRENT**

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

If a library name is not specified, the current library name (\*CURRENT) from the logical file description is used. If the library name is specified, the physical file must be a physical file associated with the logical file. If the logical file is associated with more than one physical file of the same name, the library name must be specified.

*name* Specify the name of the library to be searched.

### Element 2: Member

#### Single values

##### **\*NONE**

A member name is not specified.

#### Other values (up to 32 repetitions)

*name* Specify the names of the physical file members that contain the data being accessed by the logical file member being added.

When the FILE parameter specifies a join logical file or an arrival sequence logical file, only one data member must be specified for the DTAMBRS parameter for each physical file that was specified for the PFILE or JFILE keyword in the DDS. \*ALL is valid only if each based-on physical file has only one member. If any of the physical files has more than one member, the specific physical file member must be specified for the DTAMBRS parameter.

The same physical file name can be specified more than once on the JFILE keyword. In this case, each occurrence of the file name is treated as a different based-on physical file, and must be specified for the DTAMBRS parameter.

Up to 32 qualified physical file names and physical file member names can be specified. Also, the total number of member names cannot exceed 32. For example, one file can specify 32 members, two files can each have 16 members, or 32 files can each have one member specified.

For DDM file:

- The file names specified in the DTAMBRS parameter must be the names of the DDM files that represent the remote based-on physical files. If a member name was specified as part of the remote file name in the DDM file, only that member name can be specified for the DTAMBRS parameter. The member names must be the actual remote file member names.
- The based-on physical files must be at the same system location as the logical file to which the member is being added.
- When no member name is specified for the remote file name in the DDM file, all members are accessible. When only one member name is specified, only that member is accessible through that DDM file.

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## Text 'description' (TEXT)

Specifies the text that briefly describes the object.

### \*SRCMBRTXT

If the source file is a database file, the text is taken from the source file member used to create the file. If the source file is an inline file or a device file, the text is blank.

### \*BLANK

No text is specified.

### *character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

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## Source listing options (OPTION)

Specifies the type of output produced when the file is created. A maximum of four of the following values can be specified in any order on this parameter. If neither or both of the values on an option are specified, the first value listed for the option is used.

**Note:** The first values on each option are similar to, but are not actually default values, and therefore, cannot be changed with the CHGCMDDFT (Change Command Default) command.

### Source Listing Option

#### \*SRC or \*SOURCE

A printout of the source statements, including a list of errors, is created.

**\*NOSRC or \*NOSOURCE**

No printout of the source statements is created unless errors are detected. If errors are detected, they are listed along with the keyword or record format that caused the error.

**Program Listing Option**

**\*LIST** An expanded source printout is created, showing a detailed list of the file specifications and the references to other file descriptions.

**\*NOLIST**

The expanded source printout is not created.

**Second-Level Message Text Option**

**\*NOSECLVL**

The messages section of the data description specifications (DDS) printout does not contain the online help information for messages issued during DDS processing.

**\*SECLVL**

The online help information appears in the DDS printout.

**Event File Creation Option**

**\*NOEVENTF**

The compiler does not produce an event file for the CoOperative Development Environment/400 (CODE for OS/400) product.

**\*EVENTF**

The compiler produces an event file that can be used by the CODE for OS/400 product. The event file is created as a member in the file EVFEVENT in your object library. The CODE for OS/400 product uses this file to offer error feedback integrated with the CODE for OS/400 editor. This value is normally specified by the CODE for OS/400 product on your behalf.

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## System (SYSTEM)

Specifies whether the logical file is created on the local system or the remote system.

**\*LCL** The logical file is created on the local system.

**\*RMT** The logical file is created on a remote system. The file specified for the **File (FILE)** parameter must be the name of a DDM file that identifies the remote system and the name of the logical file being created.

**\*FILETYPE**

If the file specified for the FILE parameter does not exist on the system, the logical file is created on the local system. Otherwise, the file on the FILE parameter must be a DDM file, and the logical file is created on a remote system. The DDM file identifies the remote system and the name of the logical file being created.

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## Maximum members (MAXMBRS)

Specifies the maximum number of members that the logical file can contain.

**1** Only one member can be contained in the file.

#### **\*NOMAX**

The number of members that can be contained in the file is the system maximum of 32,767 members.

#### ***integer***

Specify the maximum number of members that can be contained in the file. Valid values range from 1 through 32767.

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## **Access path size (ACCPHSIZ)**

Specifies the maximum size of auxiliary storage that can be occupied by access paths that are associated with join logical files or with files that have keyed sequence access paths.

**Note:** For a join logical file, this parameter applies to all join secondary access paths even if the join logical file is not a keyed file.

#### **\*MAX1TB**

The access paths associated with this file can occupy a maximum of one terabyte (1,099,511,627,776 bytes) of auxiliary storage.

#### **\*MAX4GB**

The access paths associated with this file can occupy a maximum of four gigabytes (4,294,966,272 bytes) of auxiliary storage.

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## **Access path maintenance (MAINT)**

Specifies, for files with key fields or join logical files, the type of access path maintenance used for all members of the logical file.

#### **\*IMMED**

The access path is updated each time a record is changed, added, or deleted from a member. \*IMMED must be specified for files that require unique keys.

#### **\*REBLD**

The access path is completely rebuilt each time a file member is opened. The access path is maintained until the member is closed, then the access path is deleted. \*REBLD cannot be specified for files that require unique keys.

**\*DLY** The maintenance of the access path is delayed until the logical file member is opened. Then the access path is changed only for records that have been added, deleted, or changed since the file was last opened. While the file is open, all changes made to based-on file members are immediately reflected in the access paths of the opened file's own members, no matter what is specified for this parameter. To prevent a long rebuilding time when the file is opened, \*DLY should be specified only when the number of changes to the access path between successive open operations are small; that is, when the file is opened frequently or when the key fields in records for this access path change infrequently. \*DLY is not valid for access paths that require unique key values.

If the number of changes between a close operation and the next open operation reaches approximately 10 percent of the access path size, the system stops saving changes and the access path is completely rebuilt the next time the file is opened. The access path is updated when the member is opened with records that have been added, deleted, or changed from the member since the last time the member was opened.



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## Access path recovery (RECOVER)

Specifies, for files having immediate or delayed maintenance on their access paths, when recovery processing of the file is performed after a system failure occurs while the access path is being changed. This parameter is valid only for join logical files or files with a keyed access path.

If \*IMMED or \*DLY is specified for the **Access path maintenance (MAINT)** parameter, the access path can be rebuilt during initial program load (IPL) (before any user can run a job), after IPL has ended (during concurrent job running), or when the file is next opened. While the access path is being rebuilt, the file cannot be used by any job.

During the IPL, an Override Access Path Recovery display lists those paths that must be recovered and what the RECOVER parameter value is for each path. The user can override the RECOVER parameter value on this display. More information is in the Backup and Recovery book, SC41-5304.

If \*REBLD is specified for the MAINT parameter, the access path is rebuilt the next time its file is opened.

**\*NO** The access path of the file is rebuilt when the file is opened. \*NO is the default for all files that do not require unique keys.

### \*AFTIPL

The access path of the file is rebuilt after the initial program load (IPL) operation is completed. This option allows other jobs not using this file to start processing immediately after the completion of IPL. If a job tries to allocate the file while its access path is being rebuilt, a file open exception occurs. \*AFTIPL is the default for files that require unique keys.

**\*IPL** The access path of the file is rebuilt during the IPL operation. This ensures that the file's access path is rebuilt before the first user program tries to use it; however, no jobs can start running until after all files that specify RECOVER(\*IPL) have their access paths rebuilt.

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## Force keyed access path (FRCACCPH)

Specifies, for files with key fields or a join logical file, whether access path changes are forced to auxiliary storage along with the associated records in the file. FRCACCPH(\*YES) minimizes (but does not remove) the possibility that an abnormal job end could cause damage to the access path that would require it to be rebuilt.

**Note:** For a join logical file, this parameter value applies to all join secondary files even if the join file is not a keyed file.

**\*NO** The access path and associated records are not written to auxiliary storage whenever the access path is changed.

**\*YES** The access path and associated records are written to auxiliary storage whenever the access path is changed. \*YES cannot be specified if \*REBLD is specified for the **Access path maintenance (MAINT)** parameter.

FRCACCPH(\*YES) slows the response time of the system if the access path is changed in an interactive job. If the access path is changed frequently, the overall performance of the system is affected somewhat.

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## Preferred storage unit (UNIT)

This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 3 Release 6 Modification 0 of the OS/400 operating system. For information on using auxiliary storage pools (ASPs), refer to the Backup and Recovery book, SC41-5304.

You can specify the value \*ANY or a value ranging from 1 through 255 on this parameter.

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## Rcd format selector program (FMTSLR)

Specifies the record format selector program that is called when the logical file member contains more than one logical record format.

The user-written selector program is called when a record is written to the database file and a record format name is not included in the high-level language program. The selector program receives the record as input, determines the record format used, and returns it to the database.

This parameter is not valid if the logical file has only one record format.

### Single values

#### \*NONE

There is no selector program for this logical file.

### Qualifier 1: Rcd format selector program

#### QDDSSRC

The format selector program name is QDDSSRC.

*name* Specify the name of the format selector program to be called. A program specified as the format selector program cannot be created with \*OWNER specified for the **User profile (USRPRF)** parameter.

### Qualifier 2: Library

\*LIBL All libraries in the library list for the current thread are searched until the first match is found.

#### \*CURLIB

The current library is used to locate the program name. If no library is specified as the current library for the job, QGPL is used.

*name* Specify the library where the program is located.

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## Records to force a write (FRCRATIO)

Specifies the number of inserted or updated records that are processed before the records are forced into auxiliary storage.

The force write ratio specified for a logical file cannot be less than or equal to the smallest force write ratio of its based-on files. If a larger force write ratio is specified, it is ignored and a message is sent informing the user of the action.

For example, if the force ratios of three physical files are 2, 6, and 8, the logical file force ratio that is based on these three physical files must be as restrictive as the least of them; that is 2 in this case. Two

would be used even if the FRCRATIO parameter is not specified. Thus, each time a program inserts, updates, or deletes two records in the logical file (regardless of which based-on physical files are affected), those records are forced to permanent storage.

If a physical file associated with this logical file is being journaled, a large force write ratio or \*NONE is specified. More information on journal management is in the Backup and Recovery book, SC41-5304.

**\*NONE**

There is no specified force ratio. The system determines when the records are written to auxiliary storage.

*integer*

Specify the number of inserted or updated records that are processed before the records are written to auxiliary storage.

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## Maximum file wait time (WAITFILE)

Specifies the number of seconds that the program waits for the file resources to be allocated when the file is opened, or the device or session resources to be allocated when an acquire operation is performed to the file. If the file resources cannot be allocated in the specified wait time, an error message is sent to the program.

**\*IMMED**

The program does not wait. Immediate allocation of file resources is required.

**\*CLS** The job default wait time is used as the wait time for the file resources to be allocated.

**1-32767**

Specify the number of seconds to wait for file resources to be allocated.

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## Maximum record wait time (WAITRCD)

Specifies the number of seconds that the program waits for a record being changed or deleted. If the record cannot be allocated within the specified wait time, an error message is sent to the program.

**60** The program waits for 60 seconds for a record being changed or deleted.

**\*IMMED**

The program does not wait. Immediate allocation of file resources is required.

**\*NOMAX**

The wait time is the maximum allowed by the system, which is 32767 seconds.

*integer*

Specify the number of seconds that the program waits for a record being changed or deleted. Valid values range from 1 through 32767 seconds.

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## Share open data path (SHARE)

Specifies whether the open data path (ODP) is shared with other programs in the same routing step. When an ODP is shared, the programs accessing the file share facilities such as the file status and the buffer.

**Note:** This parameter is not valid when \*NONE is specified for the **Logical file member (MBR)** parameter.

- \*NO** The ODP is not shared with other programs in the routing step. A new ODP for the file is created and used every time a program opens the file.
- \*YES** The same ODP is shared with each program in the job that also specifies \*YES when it opens the file.

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## Sort sequence (SRTSEQ)

Specifies the sort sequence used for this file. The sort sequence is used with the LANGID parameter to determine which sort sequence table is used.

### Single values

- \*SRC** The table specified in the data description specifications (DDS) on the ALTSEQ keyword is used. If ALTSEQ is not used in the DDS, use the value specified for \*JOB on this parameter.
- \*JOB** The sort sequence value used is the value for the job issuing this command to create the logical file.
- \*LANGIDSHR**  
The sort sequence table can contain the same weight for multiple characters, and is the shared weighted table associated with the language specified in the LANGID parameter.
- \*LANGIDUNQ**  
The sort sequence table must contain a unique weight for each character in the code page.
- \*HEX** A sort sequence table is not used, and the hexadecimal values of the characters are used to determine the sort sequence.

### Qualifier 1: Sort sequence

*name* Specify the name of the sort sequence table.

### Qualifier 2: Library

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

### **\*CURLIB**

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

*name* Specify the name of the library to be searched.

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## Language ID (LANGID)

Specifies the language identifier used when \*LANGIDSHR or \*LANGIDUNQ is specified for the **Sort sequence (SRTSEQ)** parameter. The language identifier is used with the SRTSEQ parameter to determine which sort sequence table the file uses.

**\*JOB** The language identifier specified for the job is used.

### *character-value*

Specify a language identifier. To see a complete list of identifiers when prompting this command, position the cursor on the field for this parameter and press F4 (Prompt).

---

## Record format level check (LVLCHK)

Specifies whether the level identifiers of the record formats in the logical file are checked when the file is opened by a program.

- \*YES** The level identifiers of the record formats are checked. If the level identifiers do not all match, an open error message is sent to the program requesting the open operation.
- \*NO** The level identifiers are not checked when the file is opened.

---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### \*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library command (CRTLIB) for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

### **\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

- \*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

- \*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### **\*EXCLUDE**

The user cannot access the object.

- name** Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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## Examples

### Example 1: Creating a Logical File Without Members

```
CRTLFL FILE(INVEN/STOCKCTL) SRCFILE(SRCLIB/STKLFSRC)
      MBR(*NONE)
```

This command creates a logical file named STOCKCTL, in the INVEN library. The source descriptions in the source file STKLFSRC in the SRCLIB library are used to create the logical file. The file is created without any members (\*NONE was specified), and only one member can be added later (because one member is the default for the MAXMBRS parameters). The logical file accesses the data contained in the physical files specified in the DDS source file used to create this logical file. For successful completion of the CRTLF command, the user must have object operational authority for all the physical files specified in the DDS. If the logical file is keyed, object management authority is also required.

### Example 2: Creating a Logical File With Members

```
CRTLF FILE(PAYLIB/PAYCODESEQ) SRCFILE(PAYLIB/PAYTXSRC)
      DTAMBR5(PAYTRANS FIRSTQTR) AUT(*EXCLUDE)
      TEXT('Pay taxes in code sequence')
```

This command creates a logical file and logical file member, both named PAYCODESEQ in the PAYLIB library. The file and its member are created from the PAYTXSRC source file that is in the same library. The logical file member accesses the data contained in the FIRSTQTR member of the physical file PAYTRANS. The logical file is secured for the private use of the owner. The owner must have object operational authority for the PAYTRANS file to create the member. If the logical file is keyed, object management authority is also required.

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## Error messages

### \*ESCAPE Messages

#### CPF3204

Cannot find object needed for file &1 in &2.

#### CPF323C

QRECOVERY library could not be allocated.

#### CPF5702

File either not DDM file or not found.

#### CPF7302

File &1 not created in library &2.

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## Create Library (CRTLIB)

Where allowed to run: All environments (\*ALL)  
Threadsafe: Yes

Parameters  
Examples  
Error messages

The Create Library (CRTLIB) command adds a new library to the system. Before any objects are placed into a library, the library must have been created. When the library is created, it appears as though it exists in the QSYS (system) library.

### Restrictions:

1. A library with the name QRCL or QRPLOBJ can only be created in the system ASP (ASP 1).
2. A library with the name QRCLxxxxx or QRPLxxxxx can only be created in the ASP for which the ASP number corresponds to 'xxxxx' (where 'xxxxx' is the number of a primary ASP right adjusted and padded on the left with zeros); for example, library QRPL00033 can only be created in the ASP device corresponding to ASP number 33.
3. When library QSPLnnnn is created in a primary or secondary ASP, it must be created in the ASP for which the ASP number corresponds to 'nnnn' (where 'nnnn' is the number of a primary or secondary ASP right adjusted and padded on the left with zeros).
4. You cannot create a library with the name QSYSxxxxx, QSYS2xxxxx, or SYSIBxxxxx (where 'xxxxx' is a number).

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## Parameters

Keyword	Description	Choices	Notes
LIB	Library	<i>Name</i>	Required, Positional 1
TYPE	Library type	<b>*PROD</b> , <b>*TEST</b>	Optional, Positional 2
ASP	ASP number	1-32, <b>1</b> , *ASPDEV	Optional
ASPDEV	ASP device	<i>Name</i> , <b>*ASP</b> , *ASPGRPPRI, *SYSTEM	Optional
TEXT	Text 'description'	<i>Character value</i> , <b>*BLANK</b>	Optional
AUT	Authority	<i>Name</i> , <b>*LIBCRTAUT</b> , *CHANGE, *ALL, *USE, *EXCLUDE	Optional
CRTAUT	Create authority	<i>Name</i> , <b>*SYSVAL</b> , *CHANGE, *ALL, *USE, *EXCLUDE	Optional
CRTOBJAUD	Create object auditing	<b>*SYSVAL</b> , *NONE, *USRPRF, *CHANGE, *ALL	Optional

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## Library (LIB)

Specifies the library to be created.

**Note:** You should not use a name that begins with the character Q. The system assumes that libraries with those names are system libraries.

This is a required parameter.

*name* Specify the name of the library to be created.

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## Library type (TYPE)

Specifies the type of library to be created.

### \*PROD

This is a production library. Database files in production libraries cannot be opened for updating if a user is in debug mode and he requested that production libraries be protected. A user can protect all database files in production libraries from updates by specifying \*NO for the **Update production files (UPDPROD)** parameter on the Start Debug (STRDBG) command to begin testing. However, this protection does not prevent the program from deleting database files or from changing other objects (such as data areas) in the library.

**\*TEST** This is a test library. All objects in a test library can be updated during testing, even if special protection is requested for production libraries.

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## ASP number (ASP)

Specifies the number of the system or basic user auxiliary storage pool (ASP) where storage for the library is allocated. For libraries created in an ASP, all objects in the library must be in the same ASP as the library. When a value other than \*ASP is specified for the **ASP device (ASPDEV)** parameter, \*ASPDEV is the only valid value that can be specified for the **ASP number (ASP)** parameter, if specified. Also when a value other than \*ASP is specified for the ASPDEV parameter, the ASP parameter can be omitted and its defaulted value will be ignored.

1 The storage space for the library is allocated from the system auxiliary storage pool ASP 1.

### **\*ASPDEV**

The storage for the library is allocated from the primary or secondary ASP specified for the ASPDEV parameter.

### *number*

Specify a value ranging from 1 through 32 that is the number of the system or basic user ASP.

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## ASP device (ASPDEV)

Specifies the auxiliary storage pool (ASP) device name where storage is allocated for the library. When a value other than \*ASPDEV is specified for the **ASP number (ASP)** parameter, ASPDEV(\*ASP) is the only valid value for the **ASP device (ASPDEV)** parameter, if specified. Other values for the ASPDEV parameter are valid if the ASP parameter is omitted. In this case, the defaulted value for the ASP parameter is ignored.

\*ASP The storage for the library is allocated from the system or basic user ASP specified for the ASP parameter.

### **\*ASPGRPRI**

The storage for the library is allocated from the primary ASP of the thread's ASP group. If no ASP group is associated with the thread an error message is sent.

### **\*SYSTEM**

The storage for the library is allocated from the system ASP (ASP 1).



*name* Specify the name of a primary or secondary ASP device. The storage for the library is allocated from the primary or secondary ASP. The primary or secondary ASP must have been activated (by varying on the ASP device) and have a status of 'Available'.

**Note:** To specify a specific auxiliary storage pool (ASP) device name, you must have use (\*USE) authority for each ASP device in the ASP group.

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## Text 'description' (TEXT)

Specifies the text that briefly describes the library.

### \*BLANK

The text is set to blanks.

### *'description'*

Specify no more than 50 characters of text, enclosed in apostrophes.

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## Authority (AUT)

Specifies the default public authority for this library. This is the authority you are giving to a user who does not have specific authority for the library, who is not on an authorization list specified for the library, and whose group profiles have no specific authority for the library.

### \*LIBCRTAUT

The authority for the library is the same as the create authority for the QSYS library. The create authority for the QSYS library can be displayed by using the Display Library Description (DSPLIBD) command. If the create authority for QSYS is changed with the Change Library (CHGLIB) command, the new authority will not affect existing libraries.

### \*CHANGE

Change (\*CHANGE) authority provides the authority needed to perform all operations on the library except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the library. Change (\*CHANGE) authority provides object operational (\*OBJOPR) authority and all data authority.

**\*ALL** All (\*ALL) authority provides the authority needed to perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the library's existence, specify the security for the library, change the library, and perform basic functions on the library. The user also can change ownership of the library.

**\*USE** Use (\*USE) authority provides the authority needed to perform basic operations on the library, such as running a program or reading a file. The user cannot change the library. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### \*EXCLUDE

The user cannot access the library.

*name* Specify the name of an authorization list. Users included on the authorization list are granted authority for the library as specified by the list. The authorization list must exist when the library is created.

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## Create authority (CRTAUT)

Specifies the default public authority for an object created into this library. This is the authority given to a user who does not have specific authority for the object, who is not on an authorization list specified for the object, and whose user groups have no specific authority for the object.

When the user creates an object into this library, the **Authority (AUT)** parameter on the create command for the object determines the public authority for the object. If the AUT value on the create command for the object is \*LIBCRTAUT, the public authority for the object is set to the CRTAUT value for the library.

### \*SYSVAL

The default public authority will be determined by the value of the QCRTAUT system value when an object is created into this library.

### \*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### \*EXCLUDE

The user cannot access the object.

*name* Specify the name of the authorization list whose authority is used for the object.

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---

## Create object auditing (CRTOBJAUD)

Specifies the auditing value for objects created in this library.

**Note:** To specify a value other than \*SYSVAL for this parameter, you must have audit (\*AUDIT) special authority.

### \*SYSVAL

The auditing value will be determined by the value of the QCRTOBJAUD system value when an object is created into this library.

### \*NONE

Using or changing this object will not cause an audit entry to be sent to the security journal.

### \*USRPRF

The user profile of the user accessing this object is used to determine if an audit entry will be sent to the security journal for the access. The **Object auditing value (OBJAUD)** parameter on the Change User Auditing (CHGUSRAUD) command is used to turn auditing on for a specific user.

### \*CHANGE

All change access to this object by all users will cause an audit entry to be sent to the security journal.

**\*ALL** All change or read access to this object by all users will cause an audit entry to be sent to the security journal.

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---

## Examples

### Example 1: Creating a Production Library

```
CRTLIB LIB(MYLIB) TEXT('My Production Library')
```

The library MYLIB is added to the system. The library is a production library; only the owner has object existence (\*OBJEXIST) and object (\*OBJMGT) management authorities for it. The authority for other users for library MYLIB is determined by the create authority of library QSYS, since \*LIBCRTAUT was assumed for the AUT parameter. The text, 'My Production Library', is displayed whenever the library description for MYLIB is displayed.

### Example 2: Creating a Test Library

```
CRTLIB LIB(Z) TYPE(*TEST) AUT(*EXCLUDE)
      TEXT('This is a test library')
```

Test library Z is added to the system. Only the owner of Z can use it because no other users have been granted any authority. The specified text ('This is a test library') is displayed whenever the library description for Z is displayed.

### Example 3: Creating a Library in an Independent Auxiliary Storage Pool (ASP)

```
CRTLIB LIB(INVENTORY) ASPDEV(SALES)
      TEXT('Inventory Library on SALES ASP')
```

The library INVENTORY is added to the system in an independent auxiliary storage pool (ASP) named SALES. The SALES ASP must have been activated (by varying on the ASP device) and have a status of 'Available'. The library is a production library; only the owner has object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities for it. The authority for other users to library INVENTORY is determined by the create authority of library QSYS, since \*LIBCRTAUT was assumed for the AUT parameter. The text, 'Inventory Library on SALES ASP', is displayed whenever the library description for INVENTORY is displayed.

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## Error messages

### \*ESCAPE Messages

#### CPF8ED

Device description &1 not correct for operation.

#### CPF21A0

\*AUDIT required to create or change libraries.

#### CPF210E

Library &1 not available.

#### CPF2111

Library &1 already exists.

#### CPF2122

Storage limit exceeded for user profile &1.

- CPF2138**  
Creation of library &3 not allowed.
- CPF2166**  
Library name &1 not valid.
- CPF2172**  
ASPDEV value not valid with value specified for ASP.
- CPF218A**  
Library &1 cannot be created into ASP &2.
- CPF218B**  
Library &1 cannot be created into ASPDEV &2.
- CPF2197**  
Library &1 cannot be created into user ASP &2.
- CPF2283**  
Authorization list &1 does not exist.
- CPF7012**  
Auxiliary storage pool &4 not found for object &1.
- CPF9814**  
Device &1 not found.
- CPF9825**  
Not authorized to device &1.
- CPF9833**  
\*CURASPGRP or \*ASPGRPPRI specified and thread has no ASP group.

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## Create Line Desc (Async) (CRTLINASC)

Where allowed to run: All environments (\*ALL)  
 Threadsafte: No

Parameters  
 Examples  
 Error messages

The Create Line Description Asynchronous (Async) (CRTLINASC) command creates a line description for an asynchronous line.

Top

### Parameters

Keyword	Description	Choices	Notes
LIND	Line description	<i>Name</i>	Required, Positional 1
RSRCNAME	Resource name	<i>Name</i>	Required, Positional 2
ONLINE	Online at IPL	<u>*YES</u> , *NO	Optional
INTERFACE	Physical interface	<u>*RS232V24</u> , *RS530V36, *INTMODEM	Optional
CNN	Connection type	<u>*NONSWTTP</u> , *SWTTP, *NONSWTCAL, *NONSWTANS	Optional
SNBU	Switched network backup	<u>*NO</u> , *YES	Optional
VRYWAIT	Vary on wait	15-180, <u>*NOWAIT</u>	Optional
AUTOCALL	Autocall unit	<u>*NO</u> , *YES	Optional
BITSCHAR	Data bits per character	<u>8</u> , 7	Optional
PARITY	Type of parity	<u>*NONE</u> , *ODD, *EVEN	Optional
STOPBITS	Stop bits	<u>1</u> , 2	Optional
DUPLEX	Duplex	<u>*FULL</u> , *HALF	Optional
ECHO	Echo support	<u>*NONE</u> , *ALL, *CNTL	Optional
LINESPEED	Line speed	50, 75, 110, 150, 300, 600, <b>1200</b> , 2400, 4800, 7200, 9600, 14400, 19200, 28800, 38400, 57600, 76800, 115200	Optional
MODEM	Modem type supported	<u>*NORMAL</u> , *V54, *IBMWRAP	Optional
SWTCNN	Switched connection type	<u>*BOTH</u> , *ANS, *DIAL	Optional
AUTOANS	Autoanswer	<u>*YES</u> , *NO	Optional
AUTODIAL	Autodial	<u>*NO</u> , *YES	Optional
DIALCMD	Dial command type	<u>*NONE</u> , *V25BIS, *OTHER	Optional
SETMDMASC	Set modem to ASYNC command	<i>Character value</i> , <u>*NONE</u> , END	Optional
MDMINZCMD	Modem init command string	<i>Character value</i> , <u>*NONE</u>	Optional
ACRSRCNAME	Autocall resource name	<i>Name</i>	Optional
CALLNBR	Calling number	<i>Character value</i> , <u>*NONE</u>	Optional
INACTTMR	Inactivity timer	150-4200, <u>300</u> , *NOMAX	Optional
MAXBUFFER	Maximum buffer size	128-4096, <u>896</u>	Optional
FLOWCNTL	Flow control	<u>*NO</u> , *YES, *HARDWARE	Optional
XONCHAR	XON character	X'01'-X'FF', <u>11</u>	Optional
XOFFCHAR	XOFF character	X'01'-X'FF', <u>13</u>	Optional

Keyword	Description	Choices	Notes
EORTBL	End-of-Record table	Values (up to 8 repetitions): <i>Element list</i>	Optional
	Element 1: End-of-Record character	X'00'-X'FF', <u>00</u>	
	Element 2: Trailing characters	0-4, <u>0</u>	
DSRDRPTMR	Data Set Ready drop timer	3-60, <u>6</u>	Optional
AUTOANSTYP	Autoanswer type	<u>*DTR</u> , *CDSTL	Optional
RMTANSTMR	Remote answer timer	30, 35, 40, 45, 50, 55, <u>60</u> , 65, 70, 75, 80, 85, 90, 95, 100, 105, 110, 115, 120	Optional
TEXT	Text 'description'	<i>Character value</i> , <u>*BLANK</u>	Optional
CTL	Attached nonswitch controller	<i>Name</i>	Optional
SWTCTLLST	Switched controller list	Values (up to 64 repetitions): <i>Name</i>	Optional
MODEMRATE	Modem data rate select	<u>*FULL</u> , *HALF	Optional
THRESHOLD	Error threshold level	<u>*OFF</u> , *MIN, *MED, *MAX	Optional
IDLTMTR	Idle timer	0-254, <u>1</u>	Optional
CTSTMR	Clear To Send timer	10-120, <u>25</u> , *NOMAX	Optional
CMNRCYLMT	Recovery limits	Single values: *SYSVAL Other values: <i>Element list</i>	Optional
	Element 1: Count limit	0-99, <u>2</u>	
	Element 2: Time interval	0-120, <u>5</u>	
AUT	Authority	<i>Name</i> , <u>*CHANGE</u> , *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

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---

## Line description (LIND)

Specifies the name of the line description

This is a required parameter.

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## Resource names (RSRCNAME)

Specifies the resource name that identifies the hardware this description represents. Use the WRKHDWRSC command to determine the resource name.

This is a required parameter.

You can enter multiple values for this parameter.

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## Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

**\*YES** The line is automatically varied on at initial program load (IPL).

**\*NO** This line is not automatically varied on at IPL.

---

## Physical interface (INTERFACE)

Specifies the type of physical interface on the input/output adapter (IOA) port.

**\*RS232V24 (Async, BSC, X.25 and SDLC only)**

RS-232/V.24 physical interface.

**\*V35 (BSC and SDLC only)**

V.35 physical interface.

**\*X21 (X.25 and SDLC only)**

X.21 physical interface.

**\*X21BISV24 (X.25, BSC and SDLC only)**

X.21 bis/V.24 physical interface.

**\*X21BISV35 (X.25, BSC and SDLC only)**

X.21 bis/V.35 physical interface.

**\*RS449V36 (Async, BSC, X.25 and SDLC only)**

RS-449/V.36 physical interface.

**\*INTMODEM**

The integrated modem interface is used.

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## Connection type (CNN)

Specifies the type of line connection.

**\*NONSWTPP**

A nonswitched point-to-point line is used.

**\*SWTPP**

A switched point-to-point line is used.

**\*NONSWTCAL**

A nonswitched point-to-point line is used for call mode.

**\*NONSWTANS**

A nonswitched point-to-point line is used for answer mode.

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---

## Switched network backup (SNBU)

Specifies, for nonswitched modems only, if the local modem supports the switched network backup utility (SNBU) feature. The backup feature is used to bypass a broken nonswitched (nonswitched line) connection by establishing a switched connection.

To activate SNBU, you must change the mode of the modem from nonswitched to switched. If the modem model is IBM 386x, 586x, or 786x, no change is required. Otherwise, specify **\*YES** for the **Activate swt network backup (ACTSNBU)** parameter for the line description you are using.

**\*NO** The local modem does not have the SNBU feature.

**\*YES** The local modem has the SNBU feature.

---

## Vary on wait (VRYWAIT)

Specifies whether the line is varied on asynchronously or synchronously. For synchronous vary on, this parameter specifies how long the system waits for the vary on to complete.

### \*NOWAIT

The system does not wait for vary on completion. The line is varied on asynchronously.

### *vary-on-wait*

Specify the time (in seconds) to wait. Valid values range from 15 through 180. The system waits until the line is varied on, or until the specified time passes, before completing the Vary Configuration (VRYCFG) command.

### Notes:

1. When ONLINE(\*YES) is used, specifying a wait time in the line description affects system IPL time. In such cases, system IPL time is influenced by the amount of time required to synchronously vary on the line or reach the wait-time value.
2. The time required to vary on a line is the time it takes to:
  - Put tasks in place to manage the line
  - Activate the communications I/O processor (IOP), including downloading the IOP model-unique Licensed Internal Code
  - Establish the communications tasks and processes

Normal vary-on time ranges from 5 through 45 seconds, but can be longer, depending on the system, line protocol, and other factors.

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## Autocall unit (AUTOCALL)

Specifies, for switched or switched network backup lines (Async, BSC, SDLC, or X.25 line), whether the line has an associated automatic call unit that can automatically call the remote system.

\*NO No automatic call unit is associated with this line.

\*YES An automatic call unit is associated with this line.

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---

## Data bits per character (BITSCHAR)

Specifies the number of data bits per character (excluding the parity bit if any).

8 8 data bits per character are used.

**Note:** 8 bits with parity cannot be used with some Input/Output processors.

7 7 data bits per character are used.

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---

## Type of parity (PARITY)

Specifies the type of parity used for error checking (a parity bit is a binary digit inserted in each byte of data to make the arithmetic sum of all the digits, including the parity bit, always odd or always even).

**Note:** The remote system must use the same parity.

**\*NONE**

No parity bit is inserted in the data byte.

**\*ODD** The arithmetic sum of all the digits, including the parity bit, is odd.

**\*EVEN**

The arithmetic sum of all the digits, including the parity bit, is even.

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---

## Stop bits (STOPBITS)

Specifies the number of bits added to the end of each character. These bits are used to keep the local and remote ends of the line synchronized.

**Note:** The remote system must use the same number of stop bits as the local system.

**1** 1 stop bit is added to each character.

**2** 2 stop bits are added to each character.

**Note:** At line speeds of 300 bps or lower, 2 stop bits are recommended.

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## Duplex (DUPLEX)

Specifies whether request-to-send (RTS) is permanently turned on (for duplex modems) or turned on only when transmission is required (for half duplex modems).

**\*HALF**

Request-to-send (RTS) is turned on only when transmission is required (for half duplex modems). You can choose to run half duplex even if the modem can support duplex communication.

**\*FULL** Request-to-send (RTS) is permanently set on (for duplex modems).

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---

## Echo support (ECHO)

Specifies whether the system sends back (echo) all characters it receives to the remote system, send back all characters except end-of-record characters, or if echo is inhibited.

**Note:** Specify **\*ALL** or **\*CNTL** if this line supports communication with a remote system that requires echo. If you specify **\*ALL** or **\*CNTL**, you must also specify **\*FULL** for the **Duplex (DUPLEX)** parameter.

**\*NONE**

No characters received are echoed to the remote system.

**\*ALL** All characters received are echoed to the remote system.

**\*CNTL**

All characters received prior to end-of-record characters are echoed to the remote system.

---

## Line speed (LINESPEED)

Specifies the line speed in bits per second (bps).

**1200** 1200 bps is used.

### *line-speed*

Specify the line speeds. Valid lines speeds are: 50, 75, 110, 150, 300 600, 1200, 2400 4800, 7200, 9600, 14400, 19200, 28800, 38400, 57600, 76800, or 115200 bits per second.

---

## Modem type supported (MODEM)

Specifies the type of modem supported on the communications line. Refer to the modem manual to determine the appropriate value to select.

### **\*NORMAL**

No attempt is made to run diagnostic tests to your modem.

**\*V54** Certain types of diagnostic tests (as defined by the CCITT recommendations) are run to your modem. This system supports CCITT V.54 loop 3, (a local loop back,) and loop 2, (which is a remote loop back).

### **\*IBMWRAP**

An IBM modem with wrap test capabilities is used on the communications line.

### **\*IBMLPDA1**

An IBM modem with Link Problem Determination Aid-1 (LPDA-1) is used on the line.

### **\*IBMLPDA2**

An IBM modem with Link Problem Determination Aid-2 (LPDA-2) is used on the line.

---

## Switched connection type (SWTCNN)

Specifies whether the switched (Async, BSC, SDLC, or IDLC) line or switched network backup (Async, BSC, or SDLC) line is used for incoming calls, outgoing calls, or both.

### **\*BOTH**

The line is used for both incoming and outgoing calls.

**\*ANS** The line is used for incoming calls only.

### **\*DIAL**

The line is used for outgoing calls only.

---

## Autoanswer (AUTOANS)

Specifies, for switched or switched network backup lines (Async, BSC, SDLC, or X.25 line), whether the system automatically answers a call from a remote system to establish the connection, or whether the system operator manually answers the call and places the modem in data mode.

**Note:** \*YES is a valid option only if the modem has the automatic answer feature.

**\*YES** The incoming call is automatically answered by the automatic answer feature.

**\*NO** The incoming call must be manually answered.

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---

## Autodial (AUTODIAL)

Specifies, for switched lines, whether the system automatically calls a remote system to establish a connection or if the system operator must manually place the call.

**\*NO** The line connection is made by manually dialing the X.25 network.

**\*YES** The line connection is made by the system automatically dialing the X.25 network.

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---

## Dial command type (DIALCMD)

Specifies the type of dial command used to establish a switched connection with a remote system.

**\*NONE**

No dial command is used. (An automatic call unit is used to establish the connection.)

**\*V25BIS**

V.25 bis is a recommendation which allows the use of one physical interface for call establishment and data transmission. It is referred to as a serial automatic call interface because the digits are presented serially on the link from the system to the modem.

**\*OTHER**

The IBM command set is one example of another command type that is used by asynchronous protocols. The dial digits and all other call-related data must be placed directly into the data stream by the application program.

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## Set modem to ASYNC command (SETMDMASC)

Specifies the V25BIS command string to send to the modem to set the modem to ASYNC mode.

**\*NONE**

No V25BIS command string is sent to the modem.

**END** The END command string is generally used as the command to set most modems to ASYNC mode. For cases that do not use the END command string, you should enter the command string appropriate for that modem to set it to ASYNC mode.

*command-string*

Specify up to 40 characters that represent the command issued. Valid characters are upper case characters A through Z, lower case characters a through z, numbers 0 through 9, and the following special characters:

.	Period
<	Less than sign
(	Left parenthesis
+	Plus sign
&	Ampersand
*	Asterisk
)	Right parenthesis
;	Semicolon
-	Minus sign
/	Slash
,	Comma
_	Underline
>	Greater than sign
?	Question mark
:	Colon
=	Equal sign

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---

## Modem init command string (MDMINZCMD)

Specifies the modem initialization command string sent to set the modem.

**Note:** Valid only when INTERFACE(\*INTMODEM) or INFTRFTYPE(\*SYNCMODEM) is specified.

### \*NONE

No command string is sent to the modem.

### *command-string*

Specifies up to 60 characters that represent the command string sent to the modem. Valid characters are upper case A thru Z, lower case a thru z, numbers 0 thru 9, and special characters:

Period  
Less than sign  
Left parenthesis  
Plus sign  
Ampersand  
Asterisk  
Right parenthesis  
Semicolon  
Minus sign  
Slash  
Comma  
Underline  
Greater than sign  
Question mark  
Colon  
Equal sign  
Spaces  
Number sign  
Double quote  
Exclamation point  
At sign

Hat symbol  
Percent  
Left square bracket  
Right square bracket  
Back slash

**Note:** The modem initialization string must begin with the two characters 'AT'.

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---

## Autocall resource name (ACRSRCNAME)

Specifies the automatic call resource name that describes the automatic call unit port that is used to establish a connection with a remote system. Use the Work with Hardware Resources (WRKHDWRSC) command to determine the resource name.

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## Calling number (CALLNBR)

Specifies the local telephone number of the line that is used for the V.25 bis Call Request with Identification (CRI) dial command. When V.25 bis CRI dialing is used, the system takes the called (connection) number (CANNBR parameter), adds a separator character (;), and puts the calling number at the end. The default, \*NONE, indicates that Call Request Normal (CRN) is used.

Specify the calling number only when the modem and network support the CRI dial command.

### \*NONE

Call Request Normal (CRN) is used. CRN dialing sends only the connection number to the V.25 bis modem.

### *calling-number*

Specify the local telephone number if V.25 bis CRI dialing is required. The number can be up to 32 characters in length. See your modem documentation to determine the values allowed by the modem.

**Note:** Specify the calling number only if both the modem and network support the V.25 bis CRI dial command.

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## Inactivity timer (INACTTMR)

Specifies the time (in tenths of a second) the system waits for activity on a switched line before disconnecting the line.

### \*NOMAX

The system waits indefinitely for activity.

### *inactivity-timer*

Specify a value from 150 to 4200 units. Each unit represents 0.1 second, which provides a time range of 0.3 to 9.9 seconds.

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## Maximum buffer size (MAXBUFFER)

Specifies the maximum size of inbound and outbound data buffers.

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## Flow control (FLOWCTL)

Specifies whether the hardware controls the data flow.

**\*NO** Prevents the hardware from generating or recognizing flow control characters, and prevents the use of Request to Send (RTS) and Clear to Send (CTS) flow control signals.

**\*YES** The system uses the flow control capabilities of the asynchronous protocol. If **\*YES** is specified, the hardware recognizes flow control characters. This means that upon receipt of an XOFF character, the hardware stops transmission until an XON character is received. It also means that the hardware sends an XOFF character to the remote location when it is incapable of receiving characters. When the hardware is again able to receive characters, it sends an XON character to the remote system.

**\*HARDWARE**

If this option is specified, the hardware signals the modem to stop sending data by dropping RTS signals when it is not capable of receiving characters. When the hardware is able to receive characters again, it raises the RTS signal to the modem. Also, the hardware monitors the CTS and RTS signal from the modem and stops sending data when it is turned off.

**NOTES:**

1. If **\*YES** or **\*HARDWARE** is specified, **DUPLEX(\*FULL)** must be specified.
2. Hardware flow control is performed using the Request To Send (RTS) and Clear To Send (CTS) flow control signals.

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## XON character (XONCHAR)

Specifies the hexadecimal value of the flow control character XON. If the system received an XOFF character while sending data, it automatically stops sending, and it starts sending data again only after receiving an XON character.

*XON-character*

The XON-character can be any value from hexadecimal 01 through FF; however, you must specify a different character than the XOFF character and one that does not appear in your normal data stream, such as hexadecimal 20 (ASCII blank).

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## XOFF character (XOFFCHAR)

Specifies the hexadecimal value of the flow control character XOFF. If the system receives an XOFF character while sending data, it automatically stops sending, and starts sending data again only after receiving an XON character.

*XOFF-character*

Specify the hexadecimal XOFF character. The XOFF-character can be any value between hexadecimal 01 and FF; however, you must specify a different character than the XON character and one that does not appear in your normal data stream, such as hexadecimal 20 (ASCII blank).

---

## End-of-Record table (EORTBL)

Specifies the table which allows the hardware to recognize logical records when receiving data. You can define a line feed (LF) as an end-of-record (EOR) character in the data stream, and have the hardware return the data when the LF character is detected in the data stream.

The EOR table is specified as a set of paired elements, in which the first element of a pair is the EOR character and the second element specifies the number of characters that follow the EOR character. Up to 8 entries can be specified. A value of 00 indicates that no end-of-record character is defined.

You can enter multiple values for this parameter.

### *EOR-character*

Specify the end-of-record character(s). Valid end-of-record characters are in the range hexadecimal 01 through 7F (if 7 bits-per-character) or 01 through FF (if 8 bits-per-character). End-of-record characters are specified as they appear on the line after any translation by the Asynchronous communications support.

### *trailing-characters*

Specify the number of additional characters received after the end-of-record character is detected. The number of trailing characters is 0 through 4.

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## Data Set Ready drop timer (DSRDRPTMR)

Specifies the amount of time that the system waits for the modem to exit the Data Set Ready (DSR) state before signaling an error.

### *drop-timer*

Specify a value ranging from 3 through 60 seconds.

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## Autoanswer type (AUTOANSTYP)

Specifies the method that the system uses to answer incoming calls.

**\*DTR** The system enters the Data Terminal Ready state, signals the modem to answer calls, and waits for the modem to enter the Data Set Ready (DSR) state.

### **\*CDSTL**

The system enters the Connect Data Set to Line (CDSTL) state after monitoring the Ring Indicator to signal the modem to answer the call.

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## Remote answer timer (RMTANSTMR)

Specifies the amount of time that system waits for the modem to enter the Data Set Ready (DSR) state after dialing before signaling an error.

### *answer-timer*

Specify a value ranging from 30 through 120 seconds in 5-second intervals.

---

## Text 'description' (TEXT)

Specifies text that briefly describes the line description.

**\*BLANK**

Text is not specified.

*character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

---

## Attached nonswitched ctls (CTL)

Specifies, for nonswitched lines, the names of one or more controllers to which this line is attached. The controller descriptions must already exist.

---

## Switched controller list (SWTCTLLST)

Specifies the names of up to 64 switched controllers that can establish a connection with this switched line. The controller descriptions must already exist. This parameter is valid only if the line is switched or the nonswitched line has the switched network backup (SNBU) feature.

You can enter multiple values for this parameter.

*switched-controller-list*

Specify the switched controller names. Up to 64 switched controllers can be specified.

---

## Modem data rate select (MODEMRATE)

Specifies the speed at which the line operates if the modem has the data rate select feature.

**\*FULL** The line operates at the full rate of the modem.

**\*HALF**

The line operates at half the full rate of the modem.

---

## Error threshold level (THRESHOLD)

Specifies the temporary error threshold level being monitored by the system. A permanent error is reported only if the errors occurred consecutively and exceeded the retry limit.

**Note:** Specifying the THRESHOLD parameter affects all threshold errors. They cannot be specified individually.

**\*OFF** No threshold errors are reported.

**\*MIN** The threshold for errors is set to a minimum monitoring level.



\***MED** The threshold for errors is set to a medium monitoring level.

\***MAX** The threshold for errors is set to a maximum monitoring level.

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---

## Idle timer (IDLTMR)

Specifies the time (in 0.5 second intervals) that the system waits between characters before the adapter forwards the receive buffer to the system.

### *idle-timer*

Specify a value from 1 to 254 in 0.5 second intervals, or specify 0 which represents no timer.

**Note:** Idle timer is also referred to as inter-character timer.

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## Clear To Send timer (CTSTMR)

Specifies the amount of time the system waits for the modem to enter or exit the Clear to Send (CTS) state before signaling an error.

### \***NOMAX**

The system waits indefinitely.

### *cts-timer*

Specify a value ranging from 10 through 120 seconds.

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## Recovery limits (CMNRCYLMT)

Specifies the second-level communications recovery limits to be used for this line description.

The possible **count-limit** values are:

**2** Two recovery attempts are made within the specified time interval.

### \***SYSVAL**

The value in the QCMNRCYLMT system value is used.

### *count-limit*

Specify the number of recovery attempts to be performed by the system. Valid values range from 0 through 99.

The possible **time-interval** values are:

**5** The specified number of recovery attempts are made within a 5-minute interval.

### *time-interval*

Specify the number of minutes within which recovery attempts are made. Valid values range from 0 through 120 in 1-minute intervals.

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---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### \*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### **\*EXCLUDE**

The user cannot access the object.

### **\*LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

---

## Examples

```
CRTLINASC LIND(ITF) RSCRNAME(LIN031)
```

This command creates an asynchronous line description named ITF with a resource name of LIN031.

Top

---

## Error messages

### \*ESCAPE Messages

#### CPF2718

Line description &1 not created due to errors.

Top

## Create Line Desc (BSC) (CRTLINBSC)

Where allowed to run: All environments (\*ALL)  
 Threadsafte: No

Parameters  
 Examples  
 Error messages

The Create Line Description (BSC) (CRTLINBSC) command creates a line description for a BSC line.

Top

### Parameters

Keyword	Description	Choices	Notes
LIND	Line description	<i>Name</i>	Required, Positional 1
RSRCNAME	Resource name	<i>Name</i>	Required, Positional 2
ONLINE	Online at IPL	<u>*YES</u> , *NO	Optional
APPTYPE	Application type	<u>*PGM</u> , *RJE, *EML	Optional
INTERFACE	Physical interface	<u>*RS232V24</u> , *RS449V36, *RS530V36, *V35, *X21BISV24, *X21BISV35	Optional
CNN	Connection type	<u>*NONSWTPP</u> , *SWTPP, *MPTRIB	Optional
SNBU	Switched network backup	<u>*NO</u> , *YES	Optional
VRYWAIT	Vary on wait	15-180, <u>*NOWAIT</u>	Optional
AUTOCALL	Autocall unit	<u>*NO</u> , *YES	Optional
STNADR	Station address	X'04'-X'FE'	Optional
CLOCK	Clocking	<u>*MODEM</u> , *SYSTEM	Optional
DUPLEX	Duplex	<u>*HALF</u> , *FULL	Optional
LINESPEED	Line speed	600, 1200, 2400, 4800, 7200, <u>9600</u> , 14400, 19200, 48000, 56000, 57600	Optional
MODEM	Modem type supported	<u>*NORMAL</u> , *V54, *IBMWRAP	Optional
SWTCNN	Switched connection type	<u>*BOTH</u> , *ANS, *DIAL	Optional
AUTOANS	Autoanswer	<u>*YES</u> , *NO	Optional
AUTODIAL	Autodial	<u>*NO</u> , *YES	Optional
DIALCMD	Dial command type	<u>*NONE</u> , *V25BIS	Optional
ACRSRCNAME	Autocall resource name	<i>Name</i>	Optional
CALLNBR	Calling number	<i>Character value</i> , <u>*NONE</u>	Optional
INACTTMR	Inactivity timer	150-4200, <u>300</u> , *NOMAX	Optional
MAXBUFFER	Maximum buffer size	8-8192, <u>1024</u>	Optional
CODE	Character code	<u>*EBCDIC</u> , *ASCII	Optional
RCVTMR	Receive timer	30-254, <u>30</u>	Optional
CONTTMR	Continue timer	16-24, <u>20</u>	Optional
CTNRTY	Contention state retry	0-21, <u>7</u>	Optional
DTASTRTY	Data state retry	0-255, <u>7</u>	Optional
TMTRTY	Transmit TTD or WACK retry	0-65534, <u>60</u> , *NOMAX	Optional
RCVRTY	Receive TTD or WACK retry	0-65534, <u>45</u> , *NOMAX	Optional

Keyword	Description	Choices	Notes
DSRDRPTMR	Data Set Ready drop timer	3-60, <u>6</u>	Optional
AUTOANSTYP	Autoanswer type	* <u>DTR</u> , *CDSTL	Optional
RMTANSTMR	Remote answer timer	30, 35, 40, 45, 50, 55, <u>60</u> , 65, 70, 75, 80, 85, 90, 95, 100, 105, 110, 115, 120	Optional
TEXT	Text 'description'	<i>Character value</i> , * <u>BLANK</u>	Optional
CTL	Attached nonswitched ctls	<i>Name</i>	Optional
SWTCTLLST	Switched controller list	Values (up to 64 repetitions): <i>Name</i>	Optional
MODEMRATE	Modem data rate select	* <u>FULL</u> , *HALF	Optional
SYNCCHARS	SYN characters	<u>2</u> , 4	Optional
THRESHOLD	Error threshold level	* <u>OFF</u> , *MIN, *MED, *MAX	Optional
STXLRC	Include STX character in LRC	* <u>NO</u> , *YES	Optional
CTSTMR	Clear To Send timer	10-60, <u>25</u>	Optional
CMNRCYLMT	Recovery limits	Single values: *SYSVAL Other values: <i>Element list</i>	Optional
	Element 1: Count limit	0-99, <u>2</u>	
	Element 2: Time interval	0-120, <u>5</u>	
AUT	Authority	<i>Name</i> , * <u>CHANGE</u> , *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

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---

## Line description (LIND)

Specifies the name of the line description

This is a required parameter.

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---

## Resource name (RSRCNAME)

Specifies the resource name that describes the automatic call unit port.

**Note:** Use the Work with Hardware Resources (WRKHDWRSC) command with \*CMN specified for the TYPE parameter to help determine the resource name. The resource name is on the port. For example, the resource name may be CMN01 on an Ethernet port.

This is a required parameter.

Top

---

## Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

\*YES The line is automatically varied on at initial program load (IPL).

\*NO This line is not automatically varied on at IPL.

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---

## Application type (APPTYPE)

Specifies the application type used by this device.

- \***PGM** This BSC line is used by a user-written program (not RJE or EML).
- \***RJE** This BSC line is used by the Remote Job Entry Facility.
- \***EML** This BSC line is used by 3270 device emulation.

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---

## Physical interface (INTERFACE)

Specifies the type of physical interface on the input/output adapter (IOA) port.

- \***RS232V24 (Async, BSC, X.25 and SDLC only)**  
RS-232/V.24 physical interface.
- \***V35 (BSC and SDLC only)**  
V.35 physical interface.
- \***X21 (X.25 and SDLC only)**  
X.21 physical interface.
- \***X21BISV24 (X.25, BSC and SDLC only)**  
X.21 bis/V.24 physical interface.
- \***X21BISV35 (X.25, BSC and SDLC only)**  
X.21 bis/V.35 physical interface.
- \***RS449V36 (Async, BSC, X.25 and SDLC only)**  
RS-449/V.36 physical interface.
- \***INTMODEM**  
The integrated modem interface is used.

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---

## Connection type (CNN)

Specifies the type of line connection.

- \***NONSWTPP**  
A nonswitched point-to-point line is used.

**Note:** This value cannot be selected if you choose \*EML for the **Application type (APPTYPE)** parameter.

- \***SWTPP**  
A switched point-to-point line is used.

**Note:** This value cannot be selected if you choose \*EML for the **Application type (APPTYPE)** parameter.

- \***MPTRIB**  
A multipoint tributary line.

**Note:** This value cannot be selected if you choose \*RJE for the **Application type (APPTYPE)** parameter.

Top

---

## Switched network backup (SNBU)

Specifies, for nonswitched modems only, if the local modem supports the switched network backup utility (SNBU) feature. The backup feature is used to bypass a broken nonswitched (nonswitched line) connection by establishing a switched connection.

To activate SNBU, you must change the mode of the modem from nonswitched to switched. If the modem model is IBM 386x, 586x, or 786x, no change is required. Otherwise, specify \*YES for the **Activate swt network backup (ACTSNBU)** parameter for the line description you are using.

\*NO The local modem does not have the SNBU feature.

\*YES The local modem has the SNBU feature.

Top

---

## Vary on wait (VRYWAIT)

Specifies whether the line is varied on asynchronously or synchronously. For synchronous vary on, this parameter specifies how long the system waits for the vary on to complete.

### \*NOWAIT

The system does not wait for vary on completion. The line is varied on asynchronously.

### *vary-on-wait*

Specify the time (in seconds) to wait. Valid values range from 15 through 180. The system waits until the line is varied on, or until the specified time passes, before completing the Vary Configuration (VRYCFG) command.

### Notes:

1. When ONLINE(\*YES) is used, specifying a wait time in the line description affects system IPL time. In such cases, system IPL time is influenced by the amount of time required to synchronously vary on the line or reach the wait-time value.
2. The time required to vary on a line is the time it takes to:
  - Put tasks in place to manage the line
  - Activate the communications I/O processor (IOP), including downloading the IOP model-unique Licensed Internal Code
  - Establish the communications tasks and processes

Normal vary-on time ranges from 5 through 45 seconds, but can be longer, depending on the system, line protocol, and other factors.

Top

---

## Autocall unit (AUTOCALL)

Specifies, for switched or switched network backup lines (Async, BSC, SDLC, or X.25 line), whether the line has an associated automatic call unit that can automatically call the remote system.

\*NO No automatic call unit is associated with this line.

\*YES An automatic call unit is associated with this line.

Top

---

## Station address (STNADR)

Specifies, for multipoint tributary lines, the hexadecimal address by which the local system is known to the remote system. The hexadecimal address is the polling address assigned to this system.

If a character code of \*ASCII is specified, any address with the 6-bit set on cannot be used. If a character code of \*EBCDIC is specified, any address with the 2-bit set on cannot be used.

### *station-address*

Specify a hexadecimal value from 04 to FE. BSC control characters can not be specified.

Top

---

## Clocking (CLOCK)

Specifies how the clocking function for the line is provided.

### \*MODEM

The clocking function for the line is provided by the modem.

Top

---

## Duplex (DUPLEX)

Specifies whether request-to-send (RTS) is permanently turned on (for duplex modems) or turned on only when transmission is required (for half duplex modems).

### \*HALF

Request-to-send (RTS) is turned on only when transmission is required (for half duplex modems). You can choose to run half duplex even if the modem can support duplex communication.

\*FULL Request-to-send (RTS) is permanently set on (for duplex modems).

Top

---

## Line speed (LINESPEED)

Specifies the line speed in bits per second (bps).

1200 1200 bps is used.

### *line-speed*

Specify the line speeds. Valid lines speeds are: 50, 75, 110, 150, 300 600, 1200, 2400 4800, 7200, 9600, 14400, 19200, 28800, 38400, 57600, 76800, or 115200 bits per second.

Top

---

## Modem type supported (MODEM)

Specifies the type of modem supported on the communications line. Refer to the modem manual to determine the appropriate value to select.

### \*NORMAL

No attempt is made to run a diagnostic test to your modem.

\*V54 A certain type of diagnostic test (as defined by the CCITT recommendations) is run to your modem. This system supports CCITT V.54 loop 3, local loop back, and loop 2, which is a remote loop back.

#### **\*IBMWRAP**

An IBM modem with wrap test capabilities is used on the communications line.

Top

---

### **Switched connection type (SWTCNN)**

Specifies whether the switched (Async, BSC, SDLC, or IDLC) line or switched network backup (Async, BSC, or SDLC) line is used for incoming calls, outgoing calls, or both.

#### **\*BOTH**

The line is used for both incoming and outgoing calls.

**\*ANS** The line is used for incoming calls only.

#### **\*DIAL**

The line is used for outgoing calls only.

Top

---

### **Autoanswer (AUTOANS)**

Specifies, for switched or switched network backup lines (Async, BSC, SDLC, or X.25 line), whether the system automatically answers a call from a remote system to establish the connection, or whether the system operator manually answers the call and places the modem in data mode.

**Note:** \*YES is a valid option only if the modem has the automatic answer feature.

**\*YES** The incoming call is automatically answered by the automatic answer feature.

**\*NO** The incoming call must be manually answered.

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---

### **Autodial (AUTODIAL)**

Specifies, for switched lines, whether the system automatically calls a remote system to establish a connection or if the system operator must manually place the call.

**\*NO** The line connection is made by manually dialing the X.25 network.

**\*YES** The line connection is made by the system automatically dialing the X.25 network.

Top

---

### **Dial command type (DIALCMD)**

Specifies the type of dial command used to establish a switched connection with a remote system.

#### **\*NONE**

No dial command is used. (An automatic call unit is used to establish the connection.)

#### **\*V25BIS**

V.25 bis is a recommendation which allows the use of one physical interface for call establishment



and data transmission. It is referred to as a serial automatic call interface because the digits are presented serially on the link from the system to the modem.

Top

---

## Autocall resource name (ACRSRCNAME)

Specifies the automatic call resource name that describes the automatic call unit port that is used to establish a connection with a remote system. Use the Work with Hardware Resources (WRKHDWRSC) command to determine the resource name.

Top

---

## Calling number (CALLNBR)

Specifies the local telephone number of the line that is used for the V.25 bis Call Request with Identification (CRI) dial command. When V.25 bis CRI dialing is used, the system takes the called (connection) number (CANNBR parameter ), adds a separator character (;), and puts the calling number at the end. The default, \*NONE, indicates that Call Request Normal (CRN) is used.

Specify the calling number only when the modem and network support the CRI dial command.

### \*NONE

Call Request Normal (CRN) is used. CRN dialing sends only the connection number to the V.25 bis modem.

### *calling-number*

Specify the local telephone number if V.25 bis CRI dialing is required. The number can be up to 32 characters in length. See your modem documentation to determine the values allowed by the modem.

**Note:** Specify the calling number only if both the modem and network support the V.25 bis CRI dial command.

Top

---

## Inactivity timer (INACTTMR)

Specifies the time (in tenths of a second) the system waits for activity on a switched line before disconnecting the line.

### \*NOMAX

The system waits indefinitely for activity.

### *inactivity-timer*

Specify a value from 150 to 4200 units. Each unit represents 0.1 second, which provides a time range of 0.3 to 9.9 seconds.

Top

---

## Maximum buffer size (MAXBUFFER)

Specifies the maximum size of inbound and outbound data buffers.

Top

---

## Character code (CODE)

Specifies whether the extended binary-coded decimal interchange code (\*EBCDIC) or the American National Standard Code for Information Interchange (\*ASCII) character code is used on the line.

### \*EBCDIC

The EBCDIC character set code is used.

### \*ASCII

The ASCII character code is used.

Top

---

## Receive timer (RCVTMR)

Specifies the duration of time the system waits for data from the remote system before a receive timeout occurs.

### *receive-timer*

Specify a value from 30 to 254 in 0.1-second intervals.

Top

---

## Continue timer (CONTTMR)

Specifies, when the system is not ready to transmit or receive data, the duration of time the system waits before sending a control character which prevents the line from becoming inoperative. This parameter is not valid for an application type of RJE.

### *continue-timer*

Specify a value from 16 to 24 in 0.1-second intervals.

Top

---

## Contention state retry (CTNRTY)

Specifies the number of contention state retries to attempt before indicating the error and making the line inoperative.

For BSC, contention is the state that exists after the end of transmission (EOT) character is received or sent and before a starting sequence (ENQ) has been positively acknowledged (ACK0).

In data communications, a type of half-duplex line or link control in which either user may transmit any time the line/link is available. In the event that both users attempt to transmit a request simultaneously, the protocols or the hardware determines who wins the contention.

### *contention-state-retry*

Specify a value from 0 to 21 for the number of contention state retries.

Top

---

## Data state retry (DTASTRTY)

Specifies the number of data state retries to attempt before indicating the error and ending the session.

For BSC, a data state is a time during which BSC is sending or receiving characters on the communications line.

*data-state-retry*

Specify a value from 0 to 255 for the number of data state retries.

Top

---

## Transmit TTD or WACK retry (TMTRTY)

Specifies the number of retries for transmitting temporary text delay (TTD) or wait before transmitting (WACK) before indicating a session failure. This parameter is not valid for an application type of RJE.

**\*NOMAX**

Retries are attempted indefinitely.

*transmit-TTD-or-WACK-retry*

Specify a value from 0 to 65534 for the number of retries.

Top

---

## Receive TTD or WACK retry (RCVRTY)

Specifies the number of retries for receiving temporary text delay (TTD) or wait before transmitting (WACK) before indicating a session failure. This parameter can only be specified if the application type is program-to-program.

**\*NOMAX**

Retries are attempted indefinitely.

*receive-TTD-or-WACK-retry*

Specify a value from 0 to 65534 for the number of retries.

Top

---

## Data Set Ready drop timer (DSRDRPTMR)

Specifies the amount of time that the system waits for the modem to exit the Data Set Ready (DSR) state before signaling an error.

*drop-timer*

Specify a value ranging from 3 through 60 seconds.

Top

---

## Autoanswer type (AUTOANSTYP)

Specifies the method that the system uses to answer incoming calls.

**\*DTR** The system enters the Data Terminal Ready state, signals the modem to answer calls, and waits for the modem to enter the Data Set Ready (DSR) state.

**\*CDSTL**

The system enters the Connect Data Set to Line (CDSTL) state after monitoring the Ring Indicator to signal the modem to answer the call.

Top

---

## Remote answer timer (RMTANSTMR)

Specifies the amount of time that system waits for the modem to enter the Data Set Ready (DSR) state after dialing before signaling an error.

### *answer-timer*

Specify a value ranging from 30 through 120 seconds in 5-second intervals.

Top

---

## Text 'description' (TEXT)

Specifies text that briefly describes the line description.

### **\*BLANK**

Text is not specified.

### *character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

---

## Attached nonswitched ctls (CTL)

Specifies, for nonswitched lines, the names of one or more controllers to which this line is attached. The controller descriptions must already exist.

Top

---

## Switched controller list (SWTCTLLST)

Specifies the names of up to 64 switched controllers that can establish a connection with this switched line. The controller descriptions must already exist. This parameter is valid only if the line is switched or the nonswitched line has the switched network backup (SNBU) feature.

You can enter multiple values for this parameter.

### *switched-controller-list*

Specify the switched controller names. Up to 64 switched controllers can be specified.

Top

---

## Modem data rate select (MODEMRATE)

Specifies the speed at which the line operates if the modem has the data rate select feature.

**\*FULL** The line operates at the full rate of the modem.

### **\*HALF**

The line operates at half the full rate of the modem.

Top

---

## SYN characters (SYNCCHARS)

Specifies the number of BSC SYN (synchronous) control characters to send when transmitting. The SYN control character is used to establish and maintain synchronization and as a time fill in the absence of any data or other control character.

- 2 The synchronization pattern consists of two consecutive SYN characters.
- 4 The synchronization pattern consists of four consecutive SYN characters.

Top

---

## Error threshold level (THRESHOLD)

Specifies the temporary error threshold level being monitored by the system. A permanent error is reported only if the errors occurred consecutively and exceeded the retry limit.

**Note:** Specifying the THRESHOLD parameter affects all threshold errors. They cannot be specified individually.

- \*OFF No threshold errors are reported.
- \*MIN The threshold for errors is set to a minimum monitoring level.
- \*MED The threshold for errors is set to a medium monitoring level.
- \*MAX The threshold for errors is set to a maximum monitoring level.

Top

---

## Include STX character in LRC (STXLRC)

Specifies whether the start of text (STX) control character is included in the longitudinal redundancy check (LRC) calculation. This applies only to lines using the ASCII character code.

- \*NO The STX control character is not included in the LRC calculation.
- \*YES The STX control character is included in the LRC calculation.

Top

---

## Clear To Send timer (CTSTMR)

Specifies the amount of time the system waits for the modem to enter or exit the Clear to Send (CTS) state before signaling an error.

*cts-timer*

Specify a value ranging from 10 through 60 seconds.

Top

---

## Recovery limits (CMNRCYLMT)

Specifies the second-level communications recovery limits to be used for this line description.

The possible **count-limit** values are:

- 2 Two recovery attempts are made within the specified time interval.

### **\*SYSVAL**

The value in the QCMNRCYLMT system value is used.

### **count-limit**

Specify the number of recovery attempts to be performed by the system. Valid values range from 0 through 99.

The possible **time-interval** values are:

5 The specified number of recovery attempts are made within a 5-minute interval.

### **time-interval**

Specify the number of minutes within which recovery attempts are made. Valid values range from 0 through 120 in 1-minute intervals.

Top

---

## **Authority (AUT)**

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### **\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### **\*EXCLUDE**

The user cannot access the object.

### **\*LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

**name** Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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---

## **Examples**

```
CRTLINBSC  LIND(BRANCHES)  RSRNAME(LIN021)
           ONLINE(*NO)   CNN(*SWTPP)
           AUTOCALL(*YES) ACRSRNAME(LIN032)
           SWTCTLLST(BRANCH1 BRANCH2)
```

This command creates a BSC line description for the first port on the second IOA. It is set up to autodial on the second port of the third IOA, or to automatic answer. The controller descriptions in the SWCTLLST already exist.

[Top](#)

---

## Error messages

### \*ESCAPE Messages

#### CPF2718

Line description &1 not created due to errors.

[Top](#)





## Create Line Desc (DDI) (CTRLINDDI)

Where allowed to run: All environments (\*ALL)  
 Threadsafes: No

Parameters  
 Examples  
 Error messages

The Create Line Description (Distributed Data Interface) (CTRLINDDI) command creates a line description for a data-description interface line such as an FDDI (Fiber Distributed Data Interface) local area network. More information about using this command is in the Communications Configuration book, SC41-5401.

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### Parameters

Keyword	Description	Choices	Notes
LIND	Line description	<i>Name</i>	Required, Key, Positional 1
RSRCNAME	Resource name	<i>Name</i> , *NWID	Required, Key, Positional 2
ONLINE	Online at IPL	*YES, *NO	Optional
VRYWAIT	Vary on wait	15-180, *NOWAIT	Optional
MAXCTL	Maximum controllers	1-256, <u>40</u>	Optional
MAXFRAME	Maximum frame size	265-4444	Optional
LOGLVL	Logging level	*OFF, *ERRORS, *ALL	Optional
LCLMGRMODE	Local manager mode	*OBSERVING, *NONE	Optional
NWI	Attached NWI	<i>Name</i> , *NONE	Optional
NWIDLCI	DLC identifier	1-1018, *NONE	Optional
ADPTADR	Local adapter address	X'400000000000'-X'7FFFFFFFFF', *ADPT	Optional
EXCHID	Exchange identifier	X'05600000'-X'056FFFFF', *SYSGEN	Optional
SSAP	SSAP list	Single values: *SYSGEN Other values (up to 24 repetitions): <i>Element list</i>	Optional
	Element 1: Source service access point	X'02'-X'FE'	
	Element 2: SSAP maximum frame	265-4444, *MAXFRAME	
	Element 3: SSAP type	*CALC, *NONSNA, *SNA	
TEXT	Text 'description'	<i>Character value</i> , *BLANK	Optional
NETCTL	Network controller	<i>Name</i>	Optional
GRPADR	Group address	Values (up to 12 repetitions): X'800000000000'-X'FFFFFFFFFE', *NONE	Optional
TKNRTTIME	Token rotation time	4-167, *CALC	Optional
LINKSPEED	Link speed	*MIN, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, *MAX	Optional
COSTCNN	Cost/connect time	0-255, <u>0</u>	Optional
COSTBYTE	Cost/byte	0-255, <u>0</u>	Optional

Keyword	Description	Choices	Notes
SECURITY	Security for line	*NONSECURE, *PKTSWTNET, *UNDGRDCBL, *SECURECND, *GUARDCND, *ENCRYPTED, *MAX	Optional
PRPDLY	Propagation delay	*PKTSWTNET, *LAN, *MIN, *TELEPHONE, *SATELLITE, *MAX	Optional
USRDFN1	User-defined 1	0-255, <u>128</u>	Optional
USRDFN2	User-defined 2	0-255, <u>128</u>	Optional
USRDFN3	User-defined 3	0-255, <u>128</u>	Optional
AUTOCRTCTL	Autocreate controller	*YES, *NO	Optional
AUTODLTCTL	Autodelete controller	1-10000, <u>1440</u> , *NONE	Optional
CMNRCYLMT	Recovery limits	Single values: *SYSVAL Other values: <i>Element list</i>	Optional
	Element 1: Count limit	0-99, <u>2</u>	
	Element 2: Time interval	0-120, <u>5</u>	
MSGQ	Message queue	Single values: *SYSVAL, *SYSOPR Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Message queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i>	
AUT	Authority	<i>Name</i> , *CHANGE, *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

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---

## Line description (LIND)

Specifies the name of the line description

This is a required parameter.

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---

## Resource name (RSRCNAME)

Specifies the resource name that identifies the hardware that the description represents.

**Note:** Use the Work with Hardware Resources (WRKHDWRSC) command with \*CMN specified for the TYPE parameter to help determine the resource name. The resource name is on the port. For example, the resource name may be CMN01 on an Ethernet port.

**Note:** The value specified on the RSRCTYPE parameter cannot be changed from \*NWID to another value or from another value to \*NWID.

This is a required parameter.

\*NWID

The resource name specified on the attached frame relay network interface description is used.

*name* Specify a resource name.

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---

## Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

**\*YES** The line is automatically varied on at initial program load (IPL).

**\*NO** This line is not automatically varied on at IPL.

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## Vary on wait (VRYWAIT)

Specifies whether the line is varied on asynchronously or synchronously. For synchronous vary on, this parameter specifies how long the system waits for the vary on to complete.

### **\*NOWAIT**

The system does not wait for vary on completion. The line is varied on asynchronously.

### *vary-on-wait*

Specify the time (in seconds) to wait. Valid values range from 15 through 180. The system waits until the line is varied on, or until the specified time passes, before completing the Vary Configuration (VRYCFG) command.

### **Notes:**

1. When ONLINE(\*YES) is used, specifying a wait time in the line description affects system IPL time. In such cases, system IPL time is influenced by the amount of time required to synchronously vary on the line or reach the wait-time value.
2. The time required to vary on a line is the time it takes to:
  - Put tasks in place to manage the line
  - Activate the communications I/O processor (IOP), including downloading the IOP model-unique Licensed Internal Code
  - Establish the communications tasks and processes

Normal vary-on time ranges from 5 through 45 seconds, but can be longer, depending on the system, line protocol, and other factors.

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---

## Maximum controllers (MAXCTL)

Specifies the maximum number of controllers that the line supports.

**40** The line supports 40 controllers.

### *maximum-controllers*

Specify a number large enough to account for all controllers currently active to this network, and the controllers that will be attached in the near future. Valid values range from 1 through 256.

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---

## Maximum frame size (MAXFRAME)

Specifies the maximum frame (path information unit (PIU)) size that the controller can send or receive. This value is used to calculate request unit (RU) sizes. Since the maximum PIU size that the controller can send or receive is negotiated when system identifiers are exchanged, the maximum PIU size used at run time may be different. This value matches the corresponding value on the host system.

**Note:** The MAXFRAME value is provided by your telephone carrier from which you should subtract 44 bytes for the size of the header.

4105 The maximum frame size is 4105 bytes.

**Note:** This value changes to 1556 when RSRCTYPE(\*NWID) is specified.

*maximum-frame-size*

Specify the maximum frame size. Valid values range from 265 through 4444 bytes.

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---

## Logging level (LOGLVL)

Specifies the error logging level used by the DDI local area network (LAN) manager. This parameter is used to determine whether unsolicited LAN errors are logged. These messages are logged in either the QHST message queue or the QSYSOPR message queue.

**Note:** The LOGLVL parameter is not used when RSRCTYPE(\*NWID) is specified.

**\*OFF** Errors are not monitored.

**\*ERRORS**

Logs LAN manager error messages only.

**\*ALL** Logs LAN manager error messages and informational messages.

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---

## Local manager mode (LCLMGRMODE)

Specifies whether this station is an observing network manager. An observing network manager logs network error messages and informational messages for this and other stations on the ring. These messages are logged in either the QHST message queue or the QSYSOPR message queue.

Examples of information available in observing mode only include errors on remote stations that do not affect general ring operation, or information about stations that are joining or leaving the ring.

**Note:** The LCLMGRMODE parameter is not used when RSRCTYPE(\*NWID) or LOGLVL(\*OFF) is specified.

**\*OBSERVING**

The LAN manager function of this station retrieves information generated by all adapters.

**\*NONE**

The LAN manager function of this station only retrieves information generated by the local adapter.

**Note:** A local area network manager logs only those messages that pertain to this station and its ability to access the ring when \*NONE is specified.

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## Attached NWI (NWI)

Specifies an attached nonswitched frame relay NWI.

**Note:** NWI(\*NONE) must be specified when RSRCTYPE(\*NWID) is not specified. Otherwise, NWI(\*NONE) can be specified only when NWIDLICI(\*NONE) is also specified.

**\*NONE**

No network interface is specified.

*name* Specify the name of an attached nonswitched frame relay NWI.

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## DLC identifier (NWIDLCI)

Specifies the data link connection identifier (DLCI) for the network interface.

**Note:** NWIDLCI(\*NONE) must be specified when RSRCTYPE(\*NWID) is not specified. Otherwise, NWIDLCI(\*NONE) can be specified only when NWI(\*NONE) is also specified.

### \*NONE

A DLCI is not specified for the network interface.

### *data-link-connection-ID*

Specify the DLCI for the network interface to which this line permanently attaches. Valid values range from 1 through 1018.

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## Local adapter address (ADPTADR)

Specifies the 12-character hexadecimal adapter address.

**Note:** ADPTADR(\*ADPT) cannot be specified when RSRCTYPE(\*NWID) is specified.

### \*ADPT

This value gives the user the preset DDI default address for this DDI adapter card. The user may display this by doing a DSPLIND on this line description after it has successfully varied on.

### *local-adapter-address*

Specify an address for this system in the DDI network. Valid values range from hexadecimal 400000000000 through 7FFFFFFFFFFFFF.

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## Exchange identifier (EXCHID)

Specifies the hexadecimal exchange identifier that is used to identify the local system to the remote system. The 8-digit hexadecimal exchange identifier contains three digits for the block number and five digits for the identifier of this system.

### \*SYSGEN

The operating system generates the exchange identifier.

### *exchange-identifier*

Specify an exchange identifier composed of eight hexadecimal digits starting with 056.

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## SSAP list (SSAP)

Specifies source service access points (SSAPs). This is the hexadecimal logical address used to route incoming data from the bus to the proper user. A maximum frame size can be specified for each SSAP. Valid SSAP values are AA (for TCP/IP), and 04 through 9C divisible by 4 (for SNA).

The destination service access point (DSAP), specified by the remote controller, must match one of the SSAPs specified in order for communication to occur. All SSAP values must be unique.

**\*SYSGEN**

The system automatically creates three SSAPs, hex 04 for SNA, and hex 06 for TCP/IP applications.

The possible **SSAP** values are:

*source-service-access-point*

Specify a maximum of 24 SSAPs using valid SSAP values.

You can enter multiple values for this parameter.

The possible **Frame Size for SSAP** values are:

**\*MAXFRAME**

The frame size specified on the MAXFRAME parameter is used.

*SSAP-maximum-frame*

Specify the maximum SSAP frame size (the maximum size of the data field that may be transmitted or received). Valid values for this parameter range from 265 through 4444 bytes, but must not exceed the value of the MAXFRAME parameter.

The possible **SSAP Type** values are:

**\*CALC**

The system determines the SSAP type based on the following values:

- 04 through 9C, divisible by 4 (for SNA)
- 02 through FE, divisible by 2 (for non-SNA)

**\*SNA** The SSAP is used for SNA communications. Valid values range from 04 through 9C and must be divisible by 4.

**\*NONSNA**

The SSAP is used for non-SNA communications. Valid values range from 02 through FE and must be divisible by 2.

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---

## Text 'description' (TEXT)

Specifies text that briefly describes the line description.

**\*BLANK**

Text is not specified.

*character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

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## Network controller (NETCTL)

Specifies the name of an existing network controller.

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---

## Group address (GRPADR)

Specifies the distributed data interface group addresses used. Group addresses must each be specified as a 12-digit hexadecimal number. Valid values range from 800000000000 through FFFFFFFF0000.

You can enter multiple values for this parameter.

### \*NONE

No group addresses are specified.

### *group-address*

Specify the group addresses to be used.

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## Token rotation time (TKNRTTIME)

Specifies the token rotation time requested. This value is used when the station bids on the network. The lowest value of all attached stations on a ring determines the value the ring uses.

**Note:** TKNRTTIME(\*CALC) must be specified when RSRNAME(\*NWID) is specified.

### \*CALC

The system calculates the value based on the type of line that is linked to the controller.

### *token-rotation-time*

Specify a value ranging from 4 through 167 milliseconds.

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---

## Link speed (LINKSPEED)

Specifies the link speed in bits per second (bps). This parameter is valid only if APPN is used on the system.

\*MAX A link speed greater than 16M bps is used.

4M The link speed is 4M bps.

\*MIN A link speed of less than 1200 bps is used.

### *link-speed*

Specify the link speed. Valid values are: 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, and 16M.

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## Cost/connect time (COSTCNN)

Specifies the relative cost of being connected on the line. This parameter is required only if APPN is used on the system.

0 The cost per connect time is 0.

### *cost-per-connect-time*

Specify a value ranging from 0 through 255.

---

## Cost/byte (COSTBYTE)

Specifies the relative cost per byte for sending and receiving data on the line. This parameter is required only if APPN is used on the system.

0 The cost per byte is 0.

### *cost-per-byte*

Specify a value ranging from 0 through 255.

---

## Security for line (SECURITY)

Specifies the security level of the physical line.

### \*NONSECURE

Normal priority is used.

### \*PKTSWTNET

A packet switched network is used. Data does not always follow the same path through the network.

### \*UNDGRDCBL

An underground cable is used.

### \*SECURECND

A secure, unguarded conduit (for example, a pressurized pipe) is used.

### \*GUARDCND

A guarded conduit, which is protected against physical tapping, is used.

### \*ENCRYPTED

Data flowing on the line is encrypted.

\*MAX A guarded conduit, protected against physical and radiation tapping, is used.

---

## Propagation delay (PRPDLY)

Specifies the level of propagation delay on the line. This parameter is valid only if APPN is used on the system. The order of the values from shortest to longest delay is \*MIN, \*LAN, \*TELEPHONE, \*PKTSWTNET, and \*SATELLITE.

\*LAN The local area network propagation delay is used.

### \*PKTSWTNET

The packet switched network propagation delay is used.

\*MIN The minimum propagation delay is used.

### \*TELEPHONE

The telephone propagation delay is used.

### \*SATELLITE

The satellite propagation delay is used.

\*MAX The maximum propagation delay is used.



---

## User-defined 1 (USRDFN1)

Specifies the first of the three user-defined fields. This field is used to describe unique characteristics of the line that is controlled. This parameter is valid only if APPN is used on the system.

128 A value 128 is used.

### *user-defined-1*

Specify a value ranging from 0 through 255.

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## User-defined 2 (USRDFN2)

Specifies the second of the three user-defined fields. This field is used to describe unique characteristics of the line that is controlled. This parameter is valid only if APPN is used on the system.

128 A value 128 is used.

### *user-defined-2*

Specify a value ranging from 0 through 255.

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## User-defined 3 (USRDFN3)

Specifies the third of the three user-defined fields. This field is used to describe unique characteristics of the line that is controlled. This parameter is valid only if APPN is used on the system.

128 A value 128 is used.

### *user-defined-3*

Specify a value ranging from 0 through 255.

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## Autocreate controller (AUTOCRTCTL)

Specifies whether the system automatically creates controller descriptions when calls are received from adjacent systems on the local area network (LAN).

**\*NO** The system does not automatically create a controller description when incoming calls are received.

**\*YES** The system automatically creates a controller description when incoming calls are received.

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## Autodelete controller (AUTODLTCTL)

Specifies the number of minutes an automatically created controller can remain in an idle state (switched from varied on to varied on pending) before the controller description and attached device descriptions are varied off and deleted.

1440 The controller description can be idle for 1440 minutes (24 hours).

**\*NONE**

The system does not automatically delete or vary off the automatically configured, idle controller descriptions.

***wait-time***

Specify the number of minutes to wait before deleting the automatically configured, idle controller descriptions for this line. Valid values range from 1 to 10,000 minutes.

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## Recovery limits (CMNRCYLMT)

Specifies the number of recovery attempts made by the system before an inquiry message is sent to the system operator. Also specifies the time (in minutes) that must elapse before the system sends an inquiry message to the system operator indicating that the recovery attempt count limit is reached.

The possible **Maximum Recovery Limit** values are:

**2** Two recovery attempts are made within the interval specified.

***count-limit***

Specify the number of recovery attempts to be made. Valid values range from 0 through 99.

The possible **Recovery Time Interval** values are:

**5** A 15-second timeout period is used.

***time-interval***

Specify the time interval (in minutes) at which the specified number of second-level recoveries are attempted. Valid values range from 0 through 120. If the value specified for *count-limit* is not 0, the value 0 specifies infinite recovery.

**\*SYSVAL**

The recovery limits specified in the QCMNRCYLMT system value are used.

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## Message queue (MSGQ)

Specifies the message queue to which operational messages are sent.

**\*SYSVAL**

The value in the system value QCFGMSGQ is used.

**\*SYSOPR**

Messages are sent to the system operator message queue (QSYS/QSYSOPR).

**Qualifier 1: Message queue**

***name*** Specify the name of the message queue to which operational messages are sent.

**Qualifier 2: Library**

***name*** Specify the name of the library where the message queue is located.

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## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### \*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### **\*EXCLUDE**

The user cannot access the object.

### **\*LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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## Examples

```
CRTLINDDI LIND(DDILAN1) RSRNAME(LIN011)
          TEXT('Fiber Distributed Data Interface (FDDI) Line')
```

This command creates a DDI line description named DDILAN1 for an FDDI line installed on adapter LIN011 on the system.

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## Error messages

### \*ESCAPE Messages

#### CPF2718

Line description &1 not created due to errors.

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## Create Line Desc (Ethernet) (CRTLINETH)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Line Description (Ethernet) (CRTLINETH) command creates a line description for an Ethernet line.

---

### Common Errors for CRTLINETH

In order to avoid common configuration errors, determine the port configuration of your switch or hub prior to configuring your line description. The line description parameters and the port configuration must match in order for OS/400 to communicate properly with the network.

Use the following guidelines when configuring your line description:

- If the switch or hub auto-negotiates either the line speed or duplex, specify \*AUTO for both the LINESPEED and DUPLEX parameters. Do not specify LINESPEED(100M) or LINESPEED(10M) and DUPLEX(\*FULL).
- If the switch or hub does not auto-negotiate either the line speed or duplex, specify the corresponding values on the iSeries. For example, if the switch specifies a line speed of 100M and full duplex, specify LINESPEED(100M) and DUPLEX(\*FULL) on the OS/400 command.

One frequent cause of problems is a mismatch between the duplex setting of an auto-negotiation capable adapter like the 2838 and the switch or hub. In the case of auto-negotiation, duplex is not detectable by either the switch, hub, or the auto-negotiation capable adapter. So, there is no way to notify the user of a mismatch. Symptoms of a duplex mismatch include:

- A6E3, A6F4 reference codes
- Poor performance
- Large numbers of TCP/IP retransmits

The following are common reference codes for 2809 and 2810 IOPs:

**A6E3** Duplex mismatch, cable problems, or an auto-negotiation timeout

**A6F4** Unable to establish link, line speed mismatch, duplex mismatch, or no cable.

**A42B** The switch or hub did not participate in auto-negotiation. A good link may not be established. The line description should be reconfigured to match the switch or hub.

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### Parameters

Keyword	Description	Choices	Notes
LIND	Line description	Name	Required, Positional 1
RSRCNAME	Resource name	Name, *NWID, *NWSID	Required, Positional 2
ONLINE	Online at IPL	*YES, *NO	Optional
VRYWAIT	Vary on wait	15-180, *NOWAIT	Optional

Keyword	Description	Choices	Notes
NWI	Attached NWI	Name, <u>*NONE</u>	Optional
NWITYPE	NWI type	<u>*FR</u>	Optional
NWIDLCI	DLC identifier	1-1018, <u>*NONE</u>	Optional
NWS	Network server description	Single values: <u>*NONE</u> Other values: <i>Element list</i>	Optional
	Element 1:	Name	
	Element 2: Port number	1-2, *VRTETHPTP, *VRTETH0, *VRTETH1, *VRTETH2, *VRTETH3, *VRTETH4, *VRTETH5, *VRTETH6, *VRTETH7, *VRTETH8, *VRTETH9	
ASSOCPORT	Associated port resource name	Name, <u>*NONE</u>	Optional
ADPTADR	Local adapter address	Character value, <u>*ADPT</u>	Optional
EXCHID	Exchange identifier	X'05600000'-X'056FFFFF', <u>*SYSGEN</u>	Optional
ETHSTD	Ethernet standard	*ETHV2, *IEEE8023, <u>*ALL</u>	Optional
LINESPEED	Line speed	Character value, <u>10M</u> , 100M, 1G, *AUTO	Optional
DUPLEX	Duplex	Character value, <u>*HALF</u> , *FULL, *AUTO	Optional
MAXFRAME	Maximum frame size	1496-8996, <u>1496</u> , 8996	Optional
SSAP	SSAP list	Single values: <u>*SYSGEN</u> Other values (up to 24 repetitions): <i>Element list</i>	Optional
	Element 1: Source service access point	X'02'-X'FE'	
	Element 2: SSAP maximum frame	265-8996, <u>*MAXFRAME</u> , 265, 521, 1033, 1466, 1493, 1496, 8996	
	Element 3: SSAP type	<u>*CALC</u> , *NONSNA, *SNA, *HPR	
ACCTYPE	ATM access type	<u>*SVC</u> , *PVC	Optional
PVCID	PVC identifiers	<i>Element list</i>	Optional
	Element 1: Virtual path identifier	0-7	
	Element 2: Virtual circuit identifier	32-4095	
USELECSADR	Use LECS address	<u>*YES</u> , *NO	Optional
LESATMADR	LES ATM address	Single values: <u>*NONE</u> Other values: <i>Element list</i>	Optional
	Element 1: Network prefix	Hexadecimal value	
	Element 2: End system identifier	Hexadecimal value	
	Element 3: Selector byte	Hexadecimal value	
EMLLANNAME	Emulated LAN name	Character value, <u>*NONE</u>	Optional
LECDSTIMO	LEC disconnect time out	1-30, <u>10</u> , *NOMAX	Optional
TEXT	Text 'description'	Character value, <u>*BLANK</u>	Optional
NETCTL	Network controller	Name	Optional
GRPADR	Group address	Single values: <u>*NONE</u> Other values (up to 12 repetitions): X'010000000000'-X'FDFFFFFFF'	Optional
MAXCTL	Maximum controllers	1-256, <u>40</u>	Optional
THRESHOLD	Error threshold level	<u>*OFF</u> , *MIN, *MED, *MAX	Optional
GENTSTFRM	Generate test frame	<u>*YES</u> , *NO	Optional
LINKSPEED	Link speed	1200-603979776000, *MIN, 4M, <u>10M</u> , 16M, 100M, *MAX	Optional
COSTCNN	Cost/connect time	0-255, <u>0</u>	Optional
COSTBYTE	Cost/byte	0-255, <u>0</u>	Optional

Keyword	Description	Choices	Notes
SECURITY	Security for line	*NONSECURE, *PKTSWTNET, *UNDGRDCBL, *SECURECND, *GUARDCND, *ENCRYPTED, *MAX	Optional
PRPDLY	Propagation delay	*LAN, *MIN, *TELEPHONE, *PKTSWTNET, *SATELLITE, *MAX	Optional
USRDFN1	User-defined 1	0-255, <u>128</u>	Optional
USRDFN2	User-defined 2	0-255, <u>128</u>	Optional
USRDFN3	User-defined 3	0-255, <u>128</u>	Optional
AUTOCRTCTL	Autocreate controller	*YES, *NO	Optional
AUTODLTCTL	Autodelete controller	1-10000, <u>1440</u> , *NONE	Optional
CMNRCYLMT	Recovery limits	Single values: *SYSVAL Other values: <i>Element list</i>	Optional
	Element 1: Count limit	0-99, <u>2</u>	
	Element 2: Time interval	0-120, <u>5</u>	
MSGQ	Message queue	Single values: *SYSVAL, *SYSOPR Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Message queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i>	
AUT	Authority	<i>Name</i> , *CHANGE, *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

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## Line description (LIND)

Specifies the name of the line description

This is a required parameter.

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---

## Resource name (RSRCNAME)

Specifies the resource name that identifies the communications port.

**Note:** Use the Work with Hardware Resources (WRKHDWRSC) command with \*CMN specified for the TYPE parameter to help determine the resource name. The resource name is on the port. For example, the resource name may be CMN01 on an Ethernet port.

**Note:** The value specified on the RSRCTYPE parameter cannot be changed from \*NWSD to another value or from another value to \*NWSD.

### \*NWID

The resource name specified on the attached frame relay network interface description is used.

### \*NWSD

The resource name is determined by the network server used.

*name* Specify the resource name of the communications port.

This is a required parameter.

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## Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

**\*YES** The line is automatically varied on at initial program load (IPL).

**\*NO** This line is not automatically varied on at IPL.

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## Vary on wait (VRYWAIT)

Specifies whether the line is varied on asynchronously or synchronously. For synchronous vary on, this parameter specifies how long the system waits for the vary on to complete.

### **\*NOWAIT**

The system does not wait for vary on completion. The line is varied on asynchronously.

### *vary-on-wait*

Specify the time (in seconds) to wait. Valid values range from 15 through 180. The system waits until the line is varied on, or until the specified time passes, before completing the Vary Configuration (VRYCFG) command.

### **Notes:**

1. When ONLINE(\*YES) is used, specifying a wait time in the line description affects system IPL time. In such cases, system IPL time is influenced by the amount of time required to synchronously vary on the line or reach the wait-time value.
2. The time required to vary on a line is the time it takes to:
  - Put tasks in place to manage the line
  - Activate the communications I/O processor (IOP), including downloading the IOP model-unique Licensed Internal Code
  - Establish the communications tasks and processes

Normal vary-on time ranges from 5 through 45 seconds, but can be longer, depending on the system, line protocol, and other factors.

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## Attached NWI (NWI)

Specifies the network interface description to use.

**Note:** NWI(\*NONE) must be specified when RSRNAME(\*NWID) is not specified. Otherwise, NWI(\*NONE) can be specified only when NWIDLICI(\*NONE) is also specified.

### **\*NONE**

No network interface is specified.

*name* Specify the name of the network interface description to be used.

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## NWI type (NWITYPE)

Specifies the network interface type.

**Note:** This parameter is ignored when RSRCTYPE is not \*NWID.

\*FR The network interface type is frame relay.

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Specifies the frame relay network interface data link connection identifier to be used.

**Note:** NWIDLCI(\*NONE) must be specified when RSRCTYPE(\*NWID) is not specified. Otherwise, NWIDLCI(\*NONE) can be specified only when NWI(\*NONE) is also specified.

\*NONE

A DLCI is not specified for the network interface.

*data-link-connection-ID*

Specify the DLCI for the network interface to which this line permanently attaches. Valid values range from 1 through 1018.

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---

## Network server description (NWS)

Specifies the network server name to which this line is attached.

**Note:** NWS must be specified when RSRCTYPE(\*NWS) is specified. NWS(\*NONE) must be specified if RSRCTYPE(\*NWS) is not specified.

The possible Network server description values are:

\*NONE

No server description is specified.

*name* Specify the name of an existing network server description to be used.

The possible Network server port value is:

*network-server-port*

Specify the network server port to which the line is attached. Valid values are 1,2 or virtual ports \*VRTETHPTP or \*VRTETHn where n is 0-9.

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---

## Associated port resource name (ASSOCPORT)

Specifies the resource name that describes the port that is used to establish a connection between a Windows network server and the network.

**Note:** Use the Work with Hardware Resources (WRKHDWRSC) command with \*CMN specified for the TYPE parameter to help determine the resource name. The resource name is on the port. For example, the resource name may be CMN01 on an Ethernet port.

**Note:** ASSOCPORT parameter is only valid when RSRCTYPE(\*NWS) is specified.

**\*NONE**

An associated port resource name is not associated with the line.

*name* Specify the resource name.

Top

---

## Local adapter address (ADPTADR)

Specifies the 12-character hexadecimal adapter address.

**\*ADPT**

The preset default address for this Ethernet adapter card is used.

**Note:** This value is not valid when RSRCTYPE(\*NWID) and NWITYPE(\*FR) is specified.

**Note:** \*ADPT must be specified when the NWS parameter specifies a virtual ethernet port number, \*VRTETHPTP or \*VRTETHn where n is 0-9.

### *local-adapter-address*

Specify an adapter address of your choice to describe this system in the Ethernet network. The value specified must be an individual address that is locally administered. Valid values are \*ADPT or hexadecimal 020000000000 through FFFFFFFF. The second digit must be 2, 6, A, or E.

Top

---

## Exchange identifier (EXCHID)

Specifies the hexadecimal exchange identifier that is used to identify the local system to the remote system. The 8-digit hexadecimal exchange identifier contains three digits for the block number and five digits for the identifier of this system.

**\*SYSGEN**

This value allows the operating system to create the exchange identifier. Use the Display Line Description (DSPLIND) command to see the resulting exchange identifier.

### *exchange-ID*

Specify an 8-character (four hexadecimal bytes) exchange identifier ranging from 05600000 through 056FFFFFF.

Top

---

## Ethernet standard (ETHSTD)

Identifies the Ethernet standard used on the network.

**\*ALL** All Ethernet standards will be used on the network.

**\*ETHV2**

Ethernet Version 2.

**\*IEEE8023**

IEEE 802.3 standard.

Top

---

## Line speed (LINESPEED)

Specifies the line speed in bits per second (bps).

**10M** The line speed is 10 million bits per second.

**100M** The line speed is 100 million bits per second.

**1G** The line speed is 1 gigabit per second(1000 million bits per second).

**Note:** The value 1G specifies gigabit ethernet. Gigabit ethernet is only available when running strictly TCP/IP protocol. 1G must be specified when the NWS parameter specifies a virtual ethernet port number, \*VRTETHPTP or \*VRTETHn where n is 0-9.

**\*AUTO**

The line speed value will be determined by the hardware using auto-negotiation.

Top

---

## Duplex (DUPLEX)

Specifies whether the hardware can send and receive data simultaneously. In half duplex mode, the hardware must alternate between sending data and receiving data. In full duplex mode, one cable is dedicated to send data and another cable is dedicated to receive data. Therefore, data can be sent and received simultaneously. A hub is required for full duplex.

**Note:** For optimum performance, this setting should match the setting on the switch or hub this line is connected to. Refer to iSeries Information Center at <http://www.ibm.com/eserver/series/infocenter> for more information.

**\*HALF**

The line communicates using half duplex mode.

**\*FULL** The line communicates using full duplex mode.

**Note:** \*FULL must be specified when the NWS parameter specifies a virtual ethernet port number, \*VRTETHPTP or \*VRTETHn where n is 0-9.

**\*AUTO**

The duplex value will be determined by the hardware using auto-negotiation.

Top

---

## Maximum frame size (MAXFRAME)

Specifies the maximum frame size that can be transmitted and received on this line description.

**1496** The maximum frame size is 1496 bytes.

*maximum-frame-size*

Specify the maximum frame size value to be used. The valid frame sizes (in bytes) range from 1496 through 8996.

**Note:** When RSRCNAME(\*NWID) specified, the only valid value for this parameter is 1496 bytes. If the maximum frame size is greater than 1496 bytes, LINESPEED(1G) or LINESPEED(\*AUTO) and DUPLEX(\*FULL) or DUPLEX(\*AUTO) must be specified. 8996 is recommended when the NWS parameter specifies a virtual ethernet port number, \*VRTETHPTP or \*VRTETHn where n is 0-9.

Top

---

## SSAP list (SSAP)

Specifies the source service access point (SSAP) information, including an SSAP value, a maximum frame size, and an SSAP type.

You can enter multiple values for this parameter.

The possible **source service access point** values are:

### \*SYSGEN

The system determines the source service access points.

- If ETHSTD(\*ALL) or ETHSTD(\*IEEE8023) is specified, the system generates the SSAPs 04, 12, AA, and C8.
- If ETHSTD(\*ETHV2) is specified, the system generates the SSAPs 04 and 08

### *source-service-access-point*

Specify a service access point for receiving and transmitting data. The SSAP must be hexadecimal 06 or AA for TCP/IP applications if ETHSTD is \*ALL or \*IEEE8023 (06 and AA are not allowed when ETHSTD is \*ETHV2; however, TCP/IP can still be run). For SNA applications, specify a value ranging from 04 through 9C in multiples of four. For example, 7C is a valid choice. For non-SNA applications, specify a value ranging from 02 through FE in multiples of 2.

The possible SSAPs value is:

### *source-service-access-point*

Specify a source service access point for receiving and transmitting data. A maximum of 24 SSAP values can be specified.

- For Transmission Control Protocol/Internet Protocol (TCP/IP) applications, the SSAP must be AA.

**Note:** If ETHSTD(\*ETHV2) is specified, AA cannot be specified. However, TCP/IP can be run.

For Systems Network Architecture (SNA) applications, the SSAP must be a hex value ranging from 04 through 9C in multiples of four (04, 08, 0C, and so on).

- For high-performance routing (HPR) applications, the SSAP must be hex C8.
- For non-SNA applications, the SSAP must be a hex value ranging from 02 through FE in multiples of two (02, 04, 06, and so on).
- For LAN printing applications, specify a SSAP value of 12 with SSAP type of \*NONSNA.
- 

The possible **SSAP maximum frame size** values are:

### \*MAXFRAME

The system determines the maximum frame size (data field size) that can be transmitted or received. If ETHSTD(\*ALL or \*IEEE8023) was specified, \*CALC produces a frame size of 1496 for TCP/IP and SNA SSAPs. If ETHSTD(\*ETHV2) was specified, \*CALC produces a frame size of 1493 for SNA SSAPs.

### *SSAP-maximum-frame*

Specify a maximum frame size for this SSAP. Valid values range from 265 through 8996 (265 through 1493 for SNA SSAPs when \*ETHV2 is specified on the **Ethernet standard (ETHSTD)** parameter).

**Note:** When \*NWID is specified on the **Resource name (RSRCNAME)** parameter and \*ETHV2 is specified on the ETHSTD parameter, the valid values for this parameter range from 265 through 1486 bytes. When \*NWID is specified on the RSRCNAME parameter, and \*ALL or \*IEEE8023 is specified on the ETHSTD parameter, the valid values for this parameter range from 265 through 1489 bytes. Maximum frame size larger than 1486 or 1489 is valid only when AA SSAP for TCP/IP is specified.

The possible **SSAP type** values are:

**\*CALC**

The system determines the SSAP type based on the SSAP value specified.

**\*SNA** The system uses IBM's Systems Network Architecture for communication. Only SSAP values of 04 through 9C in multiples of 4 are supported.

**\*NONSNA**

The system does not use SNA communications. Only SSAP values of 02 through FE in multiples of 2 are supported.

**\*HPR** The SSAP is used for HPR communications. It also can be used for SNA applications. The valid value is hex C8.

Top

**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## ATM access type (ACCTYPE)

Specifies the type of access to the ATM network.

**\*SVC** This line represents a LAN emulation client using switched virtual circuits.

**\*PVC** This line represents a LAN emulation client using a permanent virtual circuit.

Top

**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## PVC identifiers (PVCID)

Specifies the virtual path identifier and virtual circuit identifier pairs associated with this permanent virtual circuit.

**Note:** PVCID is required if ACCTYPE(\*PVC) is specified.

The possible **Virtual Path Identifier** value is:

*virtual-path-id*

Specify a number that represents the virtual path identifier. This number must be in the range of 0 to 7.

The possible **Virtual Circuit Identifier** value is:

*virtual-circuit-id*

Specify a number that represents the virtual circuit identifier. This number must be in the range of 32 to 4095.

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**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## Use LECS address (USELECSADR)

Specifies whether the LAN emulation configuration server (LECS) should be connected to request the remote LAN emulation server (LES) address.

**\*YES** The LECS address is used.

**\*NO** The LECS address is not used.

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**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## LES ATM address (LESATMADR)

Specifies the ATM network address of the remote LAN emulation server.

**Note:** This parameter cannot be **\*NONE** if USELECSADR(**\*NO**) is specified.

The possible **Single Value** is:

**\*NONE**

The ATM network address is not used.

The possible **Network prefix** value is:

*network-prefix*

Specify the network prefix of the ATM address of the remote server. This is a 26 digit hexadecimal value.

The possible **End system identifier** value is:

*end-system-identifier*

Specify the end system identifier of the remote server. This is a 12 digit hexadecimal value.

The possible **Selector byte** value is:

*selector byte*

Specify the selector byte of the remote server. This is a two digit hexadecimal value.

Top

**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## Emulated LAN name (EMLLANNAME)

Specifies the emulated LAN name.

**\*NONE**

The emulated LAN name not used.

*emulated-LAN-name*

Specify the emulated LAN name. A maximum of 32 characters can be specified.

Top

**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## LEC disconnect time out (LECDSTIMO)

Specifies the amount of time in minutes a LAN emulation (LE) client waits before disconnecting an idle virtual circuit connection to another client.

**10** The LE client waits 10 minutes.

**\*NOMAX**

The LE client waits indefinitely.

*LEC-disconnect-timeout*

Specify the number of minutes the LE client waits before disconnecting an idle virtual circuit connection to another client. The value must be in the range of 1 to 30 minutes.

Top

---

## Text 'description' (TEXT)

Specifies text that briefly describes the line description.

**\*BLANK**

Text is not specified.

*character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

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## Network controller (NETCTL)

Specifies the name of an existing network controller.

Top

---

## Group address (GRPADR)

A group address is an address to which a subset of nodes on the Ethernet line will respond in addition to their local adapter addresses.

**\*NONE**

No group addresses are defined.

*group-address*

Specify a group address of your choice to describe this system in the Ethernet network. Valid values are hexadecimal 010000000000 through FDFFFFFFFF. The second digit of the value specified must be 1, 3, 5, 7, 9, B, D, or F. Up to 12 addresses may be specified.

Top

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## Maximum controllers (MAXCTL)

Specifies the maximum number of controllers that the line supports.

**40** The number of controllers is 40.

### *maximum-controllers*

Specify value ranging from 1 to 256. The number must be large enough to account for all of the SNA controllers that are currently active to this line, and for those controllers you know will be attached in the near future.

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---

## **Error threshold level (THRESHOLD)**

This parameter, and its values \*OFF, \*MIN, \*MED, and \*MAX, can be specified but it is not used by the system starting in release V2R3M0. The parameter may be removed in a later release.

Top

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## **Generate test frame (GENTSTFRM)**

Specifies whether the system will automatically generate test frames to determine network availability.

\*YES The system will generate test frames.

\*NO The system will not generate test frames.

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---

## **Link speed (LINKSPEED)**

Specifies the link speed in bits per second (bps). This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

**10M** The link speed is 10 million bits per second.

**4M** The link speed is 4 million bits per second.

**16M** The link speed is 16 million bits per second.

**100M** The link speed is 100 million bits per second.

\*MIN A link speed of less than 1200 bps is used.

\*MAX A link speed greater than 100M bps is used.

### *link-speed*

Specify the link speed. Valid values range from 1200 to 603979776000 bps.

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---

## **Cost/connect time (COSTCNN)**

Specifies the relative cost of being connected on the line. This parameter is required only if APPN is used on the system.

**0** The cost per connect time is 0.

### *cost-per-connect-time*

Specify a value ranging from 0 through 255.

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---

## Cost/byte (COSTBYTE)

Specifies the relative cost per byte for sending and receiving data on the line. Zero implies a low cost while 255 indicates a high cost. This parameter is valid only if APPN is used on the system.

0 The cost per byte is 0.

### *cost-per-byte*

Specify a value ranging from 0 through 255.

Top

---

## Security for line (SECURITY)

Specifies the security level of the physical line. This parameter is valid only if APPN is used on the system.

### \*NONSECURE

There is no security on the line.

### \*PKTSWTNET

A packet switched network is used. Data does not always follow the same path through the network.

### \*UNDRGRDCBL

An underground cable is used.

### \*SECURECND

A secure, but unguarded, conduit is used.

### \*GUARDCND

A guarded conduit, protected against physical tapping, is used.

### \*ENCRYPTED

Data flowing on the line is encrypted.

\*MAX A guarded conduit, protected against physical and radiation tapping is used.

Top

---

## Propagation delay (PRPDLY)

Specifies the level of propagation delay on the line. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system. The order of the values from shortest to longest delay is \*MIN, \*LAN, \*TELEPHONE, \*PKTSWTNET, and \*SATELLITE.

\*LAN Propagation delay using a local area network.

\*MIN The minimum propagation delay is used.

### \*TELEPHONE

Propagation delay using telephone lines.

### \*PKTSWTNET

Propagation delay using a packet switched network.

### \*SATELLITE

Propagation delay using satellite communications.

\*MAX The maximum propagation delay is used.

---

## User-defined 1 (USRDFN1)

This field is used to describe unique characteristics of the line that you want to control. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

128 The default value is 128.

### *user-defined-1*

Specify a value ranging from 0 through 255.

---

## User-defined 2 (USRDFN2)

This field is used to describe unique characteristics of the line that you want to control. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

128 The default value is 128.

### *user-defined-2*

Specify a value ranging from 0 through 255.

---

## User-defined 3 (USRDFN3)

This field is used to describe unique characteristics of the line that you want to control. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

128 The default value is 128.

### *user-defined-3*

Specify a value ranging from 0 through 255.

---

## Autocreate controller (AUTOCRTCTL)

Specifies whether the system automatically creates an advanced program-to-program communications (APPC) controller description when an incoming advanced peer-to-peer networking (advanced peer-to-peer networking (APPN)) call is received from an adjacent system on the Local Area Network (LAN).

\*NO A controller description is not automatically created for this line.

\*YES A controller description is automatically created for this line.

---

## Autodelete controller (AUTODLTCTL)

Specifies how many minutes the system waits before automatically varying off and deleting automatically created advanced program-to-program communications (APPC) controller descriptions (associated with this line) which have gone to an idle state.

1440 The controller description can be idle for 1440 minutes (24 hours).

**\*NONE**

The controller descriptions for this line are not automatically deleted.

***auto-delete-controller***

Specify a value ranging from 1 through 10000 minutes. The value 1440 is 24 hours.

Top

---

## Recovery limits (CMNRCYLMT)

Specifies the second-level communications recovery limits to be used for this line description.

The possible **count-limit** values are:

2 Two recovery attempts are made within the specified time interval.

**\*SYSVAL**

The value in the QCMNRCYLMT system value is used.

***count-limit***

Specify the number of recovery attempts to be performed by the system. Valid values range from 0 through 99.

The possible **time-interval** values are:

5 The specified number of recovery attempts are made within a 5-minute interval.

***time-interval***

Specify the number of minutes within which recovery attempts are made. Valid values range from 0 through 120 in 1-minute intervals.

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---

## Message queue (MSGQ)

Specifies the message queue to which operational messages are sent.

**\*SYSVAL**

The value in the system value QCFGMSGQ is used.

**\*SYSOPR**

Messages are sent to the system operator message queue (QSYS/QSYSOPR).

**Qualifier 1: Message queue**

***name*** Specify the name of the message queue to which operational messages are sent.

**Qualifier 2: Library**

***name*** Specify the name of the library where the message queue is located.

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---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### **\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### **\*EXCLUDE**

The user cannot access the object.

### **\*LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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## **Examples**

### **Example 1: Creating an Ethernet Line Description**

```
CRTLINETH LIND(BOSTON) RSRNAME(LIN041)
```

This command creates an Ethernet line description named BOSTON with a resource name of LIN041.

### **Example 2: Creating an Ethernet Line Description Attached to a Network Server**

```
CRTLINETH LIND(ETHLIN) RSRNAME(*NWS) NWS(REMODEL 1)
```

This command creates an Ethernet line description named ETHLIN that is attached to port 1 of the network server REMODEL.

### **Example 3: Creating a Gigabit Ethernet Line Description**

```
CRTLINETH LIND(GIGETH) RSRNAME(LIN041) LINESPEED(1G)
          DUPLEX(*FULL) MAXFRAME(8996)
```

This command creates an Ethernet line description using the maximum gigabit ethernet connectivity configuration.

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## **Error messages**

### **\*ESCAPE Messages**

**CPF2718**

Line description &1 not created due to errors.

[Top](#)



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## Create Line Desc (Fax) (CRTLINFAX)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Line Description (Fax) (CRTLINFAX) command creates a line description for a facsimile (fax) line.

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---

### Parameters

Keyword	Description	Choices	Notes
LIND	Line description	<i>Name</i>	Required, Positional 1
RSRCNAME	Resource names	Values (up to 2 repetitions): <i>Name</i>	Required, Positional 2
ONLINE	Online at IPL	<u>*YES</u> , *NO	Optional
VRYWAIT	Vary on wait	15-180, <u>*NOWAIT</u>	Optional
TEXT	Text 'description'	<i>Character value</i> , <u>*BLANK</u>	Optional
CTL	Attached nonswitched ctls	<i>Name</i>	Optional
AUT	Authority	<i>Name</i> , <u>*CHANGE</u> , *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

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### Line description (LIND)

Specifies the name of the line description

This is a required parameter.

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---

### Resource names (RSRCNAME)

Specifies the resource names that describe the fax ports.

**Note:** Use the Work with Hardware Resources (WRKHDWRSC) command with \*CMN specified for the TYPE parameter to help determine the resource name.

The resource name consists of the input/output adapter (IOA) resource name and the port number on the IOA. For example, if the resource name of the IOA is LIN01, the resource names for ports 1 and 2 are LIN011 and LIN012.

The resource name for both ports of the fax IOA must be specified. All lines specified must be attached to the same input/output processor.

#### *rsrcname-1*

Specify the first resource name to be used to describe the fax ports.

*rsrcname-2*

Specify the second resource name to be used to describe the fax ports.

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---

## Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

**\*YES** The line is automatically varied on at initial program load (IPL).

**\*NO** This line is not automatically varied on at IPL.

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---

## Vary on wait (VRYWAIT)

Specifies whether the line is varied on asynchronously or synchronously. For synchronous vary on, this parameter specifies how long the system waits for the vary on to complete.

**\*NOWAIT**

The system does not wait for vary on completion. The line is varied on asynchronously.

*vary-on-wait*

Specify the time (in seconds) to wait. Valid values range from 15 through 180. The system waits until the line is varied on, or until the specified time passes, before completing the Vary Configuration (VRYCFG) command.

### Notes:

1. When ONLINE(\*YES) is used, specifying a wait time in the line description affects system IPL time. In such cases, system IPL time is influenced by the amount of time required to synchronously vary on the line or reach the wait-time value.
2. The time required to vary on a line is the time it takes to:
  - Put tasks in place to manage the line
  - Activate the communications I/O processor (IOP), including downloading the IOP model-unique Licensed Internal Code
  - Establish the communications tasks and processes

Normal vary-on time ranges from 5 through 45 seconds, but can be longer, depending on the system, line protocol, and other factors.

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## Text 'description' (TEXT)

Specifies text that briefly describes the line description.

**\*BLANK**

Text is not specified.

*character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

Top



---

## Attached nonswitched ctls (CTL)

Specifies the name of the controller description to which this object is attached.

**Note:** This parameter is valid only when the associated controller description has been created before this line description.

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---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### \*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### \*EXCLUDE

The user cannot access the object.

### \*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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## Examples

```
CRTLINFAX LIND(FAXLINE) RSRNAME(LIN041 LIN042)
```

This command creates fax line description named FAXLINE with resource names of LIN041 and LIN042.

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## Error messages

### \*ESCAPE Messages

**CPF2718**

Line description &1 not created due to errors.

[Top](#)

## Create Line Desc (Frame Relay) (CRTLINFR)

Where allowed to run: All environments (\*ALL)  
 Threadsafes: No

Parameters  
 Examples  
 Error messages

The Create Line Description (Frame-Relay Network) (CRTLINFR) command creates a line description for a frame-relay network (FR) line. More information about using this command is in the Communications Configuration book, SC41-5401.

Top

### Parameters

Keyword	Description	Choices	Notes
LIND	Line description	<i>Name</i>	Required, Positional 1
NWI	Attached NWI	<i>Name</i> , <u>*NONE</u>	Optional, Positional 2
NWIDLCI	DLC identifier	1-1018, <u>*NONE</u>	Optional, Positional 3
ONLINE	Online at IPL	<u>*YES</u> , *NO	Optional
VRYWAIT	Vary on wait	15-180, <u>*NOWAIT</u>	Optional
MAXCTL	Maximum controllers	1-256, <u>40</u>	Optional
MAXFRAME	Maximum frame size	265-8182, <u>1590</u>	Optional
EXCHID	Exchange identifier	X'0560000'-X'056FFFFF', <u>*SYSGEN</u>	Optional
SSAP	SSAP list	Single values: <u>*SYSGEN</u> Other values (up to 24 repetitions): <i>Element list</i>	Optional
	Element 1: Source service access point	X'02'-X'FE'	
	Element 2: SSAP maximum frame	265-8182, <u>*MAXFRAME</u> , 265, 502, 1014, 2038, 4086, 8182	
	Element 3: SSAP type	<u>*CALC</u> , *NONSNA, *SNA, *HPR	
TEXT	Text 'description'	<i>Character value</i> , <u>*BLANK</u>	Optional
LINKSPEED	Link speed	1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, <u>64000</u> , 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000	Optional
NETCTL	Network controller	<i>Name</i>	Optional
COSTCNN	Cost/connect time	0-255, <u>0</u>	Optional
COSTBYTE	Cost/byte	0-255, <u>0</u>	Optional
SECURITY	Security for line	<u>*PKTSWTNET</u> , *NONSECURE, *UNDGRDCBL, *SECURECND, *GUARDCND, *ENCRYPTED, *MAX	Optional
PRPDLY	Propagation delay	<u>*PKTSWTNET</u> , *LAN, *MIN, *TELEPHONE, *SATELLITE, *MAX	Optional
USRDFN1	User-defined 1	0-255, <u>128</u>	Optional
USRDFN2	User-defined 2	0-255, <u>128</u>	Optional
USRDFN3	User-defined 3	0-255, <u>128</u>	Optional

Keyword	Description	Choices	Notes
CMNRCYLMT	Recovery limits	Single values: *SYSVAL Other values: <i>Element list</i>	Optional
	Element 1: Count limit	0-99, <u>2</u>	
	Element 2: Time interval	0-120, <u>5</u>	
MSGQ	Message queue	Single values: * <u>SYSVAL</u> , *SYSOPR Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Message queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i>	
AUT	Authority	<i>Name</i> , * <b>CHANGE</b> , *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

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---

## Line description (LIND)

Specifies the name of the line description

This is a required parameter.

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---

## Attached NWI (NWI)

Specifies, for a nonswitched connection, the frame relay network interface description containing the DLCI to which this line permanently attaches. If a DLCI is not specified for the network interface, a description cannot be specified. If a DLCI is specified for the network interface, a description must be specified.

### \*NONE

No network interface is specified.

*name* Specify the name of the network interface to which this line permanently attaches.

Top

---

## DLC identifier (NWIDLCI)

Specifies the data link connection identifier (DLCI) for the network interface.

**Note:** NWIDLCI(\*NONE) must be specified when RSRNAME(\*NWID) is not specified. Otherwise, NWIDLCI(\*NONE) can be specified only when NWI(\*NONE) is also specified.

### \*NONE

A DLCI is not specified for the network interface.

### *data-link-connection-ID*

Specify the DLCI for the network interface to which this line permanently attaches. Valid values range from 1 through 1018.

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---

## Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

**\*YES** The line is automatically varied on at initial program load (IPL).

**\*NO** This line is not automatically varied on at IPL.

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---

## Vary on wait (VRYWAIT)

Specifies whether the line is varied on asynchronously or synchronously. For synchronous vary on, this parameter specifies how long the system waits for the vary on to complete.

### **\*NOWAIT**

The system does not wait for vary on completion. The line is varied on asynchronously.

### *vary-on-wait*

Specify the time (in seconds) to wait. Valid values range from 15 through 180. The system waits until the line is varied on, or until the specified time passes, before completing the Vary Configuration (VRYCFG) command.

### **Notes:**

1. When ONLINE(\*YES) is used, specifying a wait time in the line description affects system IPL time. In such cases, system IPL time is influenced by the amount of time required to synchronously vary on the line or reach the wait-time value.
2. The time required to vary on a line is the time it takes to:
  - Put tasks in place to manage the line
  - Activate the communications I/O processor (IOP), including downloading the IOP model-unique Licensed Internal Code
  - Establish the communications tasks and processes

Normal vary-on time ranges from 5 through 45 seconds, but can be longer, depending on the system, line protocol, and other factors.

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---

## Maximum controllers (MAXCTL)

Specifies the maximum number of controllers supported by a line.

**40** The line supports 40 controllers.

### *maximum-controllers*

Specify a number large enough to account for all controllers currently active to this network, and the controllers that will be attached in the near future. Valid values range from 1 through 256.

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---

## Maximum frame size (MAXFRAME)

Specifies the maximum frame (path information unit (PIU)) size that the controller can send or receive. This value is used to calculate request unit (RU) sizes. Since the maximum PIU size that the controller can send or receive is negotiated at exchange identifier time, the maximum PIU size used at run time may be different. This value matches the corresponding value on the host system. The recommended MAXFRAME values are: 502, 1014, 1590, 2038, 4086, and 8182 bytes.

**1590** The maximum frame size is 1590 bytes.

### *maximum-frame-size*

Specify the maximum frame size value to be used. Valid values range from 265 through 8182.

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---

## Exchange identifier (EXCHID)

Specifies the hexadecimal exchange identifier that is used to identify the local system to the remote system. The 8-digit hexadecimal exchange identifier contains three digits for the block number and five digits for the identifier of this system.

### **\*SYSGEN**

The operating system generates the exchange identifier.

### *exchange-identifier*

Specify (if the \*SYSGEN value is not specified) an exchange identifier composed of eight hexadecimal digits starting with 056.

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---

## SSAP list (SSAP)

Specifies the source service access point (SSAP). The most commonly used SNA SSAP is hex 04. All SSAP values must be unique.

### **\*SYSGEN**

The system automatically creates three SSAPs: hex 04 for Systems Network Architecture (SNA) applications, hex C8 for high-performance routing (HPR) applications, and hex AA for Transmission Control Protocol/Internet Protocol (TCP/IP) applications.

The possible SSAPs value is:

### *source-service-access-point*

Specify a source service access point for receiving and transmitting data. A maximum of 24 SSAP values can be specified.

- For TCP/IP applications, the SSAP must be AA.
- For SNA applications, the SSAP must be a hex value ranging from 04 through 9C in multiples of four (04, 08, 0C, and so on).
- For HPR applications, the SSAP must be hex C8.
- For non-SNA applications, the SSAP must be a hex value ranging from 02 through FE in multiples of two (02, 04, 06, and so on).

The possible Frame Size for SSAPs values are:

### **\*MAXFRAME**

The frame size specified on the MAXFRAME parameter is used.

### *SSAP-maximum-frame*

Specify the maximum SSAP frame size (the maximum size of the data field that can be transmitted or received). Valid values for this parameter range from 265 through 8182 bytes.

**Note:** This value cannot be larger than the value specified on the MAXFRAME parameter.

The possible SSAP Type values are:

### **\*CALC**

The system determines the SSAP type based on the following hex values:

- 04 through 9C, divisible by 4 (for SNA)

- C8 (for HPR)
- 02 through FE, divisible by 2 (for non-SNA)

**\*SNA** The SSAP is used for SNA communications. Valid values range from hex 04 through hex 9C in multiples of four (04, 08, 0C, and so on).

**\*NONSNA**

The SSAP is used for non-SNA communications. Valid values range from hex 02 through hex FE in multiples of two (02, 04, 06, and so on).

**\*HPR** The SSAP is used for HPR communications. It also can be used for SNA applications. The valid value is hex C8.

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## Text 'description' (TEXT)

Specifies text that briefly describes the line description.

**\*BLANK**

Text is not specified.

*character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

## Link speed (LINKSPEED)

Specifies the link speed in bits per second (bps). This parameter is valid only if APPN is used on the system.

**64000** The link speed is 64000 bps.

*link-speed*

Specify the link speed. Valid values are: 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000.

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## Network controller (NETCTL)

Specifies the name of an existing network controller.

Top

## Cost/connect time (COSTCNN)

Specifies the relative cost of being connected on the line. This parameter is required only if APPN is used on the system.

**0** The cost per connect time is 0.

*cost-per-connect-time*

Specify a value ranging from 0 through 255.

---

## Cost/byte (COSTBYTE)

Specifies the relative cost per byte for sending and receiving data on the line. This parameter is required only if APPN is used on the system.

0 The cost per byte is 0.

### *cost-per-byte*

Specify a value ranging from 0 through 255.

---

## Security for line (SECURITY)

Specifies the security level of the physical line. This parameter is valid only if APPN is used on the system.

### \*PKTSWTNET

A packet switched network is used. Data does not always follow the same path through the network.

### \*NONSECURE

Normal priority is used.

### \*UNDGRDCBL

An underground cable is used.

### \*SECURECND

A secure, unguarded conduit (for example, a pressurized pipe) is used.

### \*GUARDCND

A guarded conduit, which is protected against physical tapping, is used.

### \*ENCRYPTED

Data flowing on the line is encrypted.

\*MAX A guarded conduit, protected against physical and radiation tapping, is used.

---

## Propagation delay (PRPDLY)

Specifies the level of propagation delay on the line. This parameter is valid only if APPN is used on the system. The order of the values from shortest to longest delay is \*MIN, \*LAN, \*TELEPHONE, \*PKTSWTNET, and \*SATELLITE.

### \*PKTSWTNET

The packet switched network propagation delay is used.

\*LAN The local area network propagation delay is used.

\*MIN The minimum propagation delay is used.

### \*TELEPHONE

The telephone propagation delay is used.

### \*SATELLITE

The satellite propagation delay is used.



\*MAX The maximum propagation delay is used.

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## User-defined 1 (USRDFN1)

Specifies the first of the three user-defined fields. This field is used to describe unique characteristics of the line that is controlled. This parameter is valid only if APPN is used on the system.

128 A value 128 is used.

### *user-defined-1*

Specify a value ranging from 0 through 255.

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## User-defined 2 (USRDFN2)

Specifies the second of the three user-defined fields. This field is used to describe unique characteristics of the line that is controlled. This parameter is valid only if APPN is used on the system.

128 A value 128 is used.

### *user-defined-2*

Specify a value ranging from 0 through 255.

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## User-defined 3 (USRDFN3)

Specifies the third of the three user-defined fields. This field is used to describe unique characteristics of the line that is controlled. This parameter is valid only if APPN is used on the system.

128 A value 128 is used.

### *user-defined-3*

Specify a value ranging from 0 through 255.

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---

## Recovery limits (CMNRCYLMT)

Specifies the number of recovery attempts made by the system before an inquiry message is sent to the system operator. Also specifies the time (in minutes) that must elapse before the system sends an inquiry message to the system operator indicating that the recovery attempt count limit is reached.

2 Two recovery attempts are made within the interval specified.

### *count-limit*

Specify the number of recovery attempts to be made. Valid values range from 0 through 99.

5 A 15-second time-out period is used.

### *time-interval*

Specify the time interval (in minutes) at which the specified number of second-level recoveries are attempted. Valid values range from 0 through 120. If the value specified for *count-limit* is not 0, the value 0 specifies infinite recovery.

### \*SYSVAL

The recovery limits specified in the QCMNRCYLMT system value are used.

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---

## Message queue (MSGQ)

Specifies the message queue to which operational messages are sent.

### \*SYSVAL

The value in the system value QCFGMSGQ is used.

### \*SYSOPR

Messages are sent to the system operator message queue (QSYS/QSYSOPR).

#### Qualifier 1: Message queue

*name* Specify the name of the message queue to which operational messages are sent.

#### Qualifier 2: Library

*name* Specify the name of the library where the message queue is located.

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## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### \*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### \*EXCLUDE

The user cannot access the object.

### \*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

---

## Examples

```
CRTLINFR  LIND(FRLIN)  NWI(NEWONE)  NWIDLCI(1001)
           ONLINE(*YES)
           VRYWAIT(*NOWAIT)  MAXFRAME(1600)  LINKSPEED(2400)
```

This command creates frame relay line FRLIN. FRLIN is attached to a frame relay NWI named NEWONE using DLCI number 1001. FRLIN is automatically varied on at initial program load (IPL). The system does not wait for the vary on to complete; therefore, the line is varied on asynchronously. The maximum frame size for this line is 1600 and the link speed is 2400 bits per second (bps).

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## Error messages

### \*ESCAPE Messages

#### CPF2718

Line description &1 not created due to errors.

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## Create Line Desc (PPP) (CRTLINPPP)

Where allowed to run: All environments (\*ALL)  
 Threadsafte: No

Parameters  
 Examples  
 Error messages

The Create Line Description (Point-to-Point Protocol (PPP)) (CRTLINPPP) command creates a line description for a PPP line. More information about using this command is in the Communications Configuration book, SC41-5401.

**Restriction:** You must have \*IOSYSCFG special authority to use this command.

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### Parameters

Keyword	Description	Choices	Notes
LIND	Line description	<i>Name</i>	Required, Key, Positional 1
RSRCNAME	Resource name	<i>Name</i>	Required, Key, Positional 2
CNN	Connection type	* <b>SWTTP</b> , *NONSWTTP, *NONSWTCAL, *NONSWTANS	Optional, Key
FRAMING	Framing type	* <b>ASYNC</b> , *SYNC	Optional
INTERFACE	Physical interface	<i>Character value</i> , * <b>RS232V24</b> , *RS449V36, *V35, *X21, *INTMODEM	Optional
NWI	Attached nonswitched NWI	<i>Name</i>	Optional
NWICHLNBR	NWI channel number	<i>Character value</i>	Optional
SWTNWILST	Switched NWI list	Single values: * <b>NONE</b> Other values (up to 64 repetitions): <i>Element list</i>	Optional
	Element 1: NWI description	<i>Name</i>	
	Element 2: NWI channel type	* <b>B</b>	
	Element 3: NWI channel number	* <b>CALC</b> , 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30	
ONLINE	Online at IPL	* <b>NO</b> , *YES	Optional
VRYWAIT	Vary on wait	15-180, * <b>NOWAIT</b>	Optional
LINESPEED	Line speed	<i>Character value</i> , <b>115200</b>	Optional
INFTRFTYPE	Information transfer type	<i>Character value</i> , * <b>UNRESTRICTED</b> , *V110, *DOV, *ASYNCMODEM, *SYNCMODEM	Optional
MDMINZCMD	Modem init command string	<i>Character value</i> , * <b>NONE</b>	Optional
MAXFRAME	Maximum frame size	<i>Character value</i> , <b>2048</b>	Optional
SWTCNN	Switched connection type	<i>Character value</i> , * <b>BOTH</b> , *ANS, *DIAL	Optional
SWTNWISLCT	Switched NWI selection	<i>Character value</i> , * <b>FIRST</b> , *CALC	Optional
CNNLSTOUT	Outgoing connection list	<i>Name</i>	Optional
CNNLSTOUTE	Connection list entry	<i>Name</i>	Optional
CNNLSTIN	Incoming connection list	<i>Name</i> , * <b>NETATR</b>	Optional
CLOCK	Clocking	* <b>MODEM</b> , *INVERT, *LOOP	Optional
DIALCMD	Dial command type	<i>Character value</i> , * <b>ATCMD</b> , *V25BIS	Optional

Keyword	Description	Choices	Notes
SETMDMASC	Set modem to ASYNC command	Character value, <u>*NONE</u> , END	Optional
CALLNBR	Calling number	Character value, <u>*NONE</u>	Optional
FLOWCNTL	Flow control	Character value, <u>*HARDWARE</u> , *NO	Optional
NETCTL	Network controller	Name	Optional
CTSTMR	Clear To Send timer	10-60, <u>25</u>	Optional
INACTTMR	Inactivity timer	Character value, <u>*NOMAX</u>	Optional
RMTANSTMR	Remote answer timer	Character value, <u>60</u>	Optional
NRZI	NRZI data encoding	*YES, <u>*NO</u>	Optional
TEXT	Text 'description'	Character value, <u>*BLANK</u>	Optional
ACCM	Async control character map	Hexadecimal value, <u>00000000</u>	Optional
LCPAUT	LCP authentication values	Element list	Optional
	Element 1: Remote peer challenge timer	Integer, <u>*NONE</u>	
	Element 2: Max authentication attempts	1-255, <u>5</u>	
LCPCFG	LCP configuration values	Element list	Optional
	Element 1: Configuration retry timer	0.1-60.0, <u>3.0</u>	
	Element 2: Max configuration failures	1-255, <u>5</u>	
	Element 3: Max configuration requests	1-255, <u>10</u>	
	Element 4: Max termination requests	1-255, <u>2</u>	
COMPRESS	Compression	Character value, <u>*STACLZS</u> , *NONE	Optional
CMNRCYLMT	Recovery limits	Single values: *SYSVAL Other values: Element list	Optional
	Element 1: Count limit	0-99, <u>2</u>	
	Element 2: Time interval	0-120, <u>5</u>	
MSGQ	Message queue	Single values: *SYSVAL, *SYSOPR Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Message queue	Name	
	Qualifier 2: Library	Name	
AUT	Authority	Name, <u>*CHANGE</u> , *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

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## Line description (LIND)

Specifies the name of the line description

This is a required parameter.

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## Resource name (RSRCNAME)

Specifies the resource name that identifies the hardware that the description represents.

**Note:** Use the Work With Hardware Resources (WRKHDWRSC) command with \*CMN specified for the TYPE parameter to help determine the resource name.

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## Connection type (CNN)

Specifies the type of line connection used.

**Note:** \*NONSWTCAL and \*NONSWTANS valid only when INTERFACE(\*INTMODEM), or INFTRFTYPE \*ASYNCMODEM or \*SYNCMODEM.

**\*SWTPP**

A switched point-to-point line is used.

**\*NONSWTPP**

A nonswitched point-to-point line is used.

**\*NONSWTCAL**

A nonswitched point-to-point line is used for call mode.

**\*NONSWTANS**

A nonswitched point-to-point line is used for answer mode.

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---

## Framing type (FRAMING)

Specifies whether the line uses asynchronous or synchronous framing.

**Note:** Not valid when RSRCTYPE(\*NWID).

**\*ASYNC**

Asynchronous frames are used.

**\*SYNC**

Synchronous frames are used.

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## Physical interface (INTERFACE)

Specifies the type of physical interface on the input/output adapter (IOA) port.

**Note:** Not valid when RSRCTYPE(\*NWID).

**\*RS232V24**

The RS232/V.24 interface is used.

**\*RS449V36**

The RS449/V.36 interface is used.

**\*X35** The X.35 interface is used.

**\*X21** The X.21 interface is used.

**\*INTMODEM**

The integrated modem interface is used.

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**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## Attached nonswitched NWI (NWI)

Specifies, for a nonswitched connection, the network interface description containing the channel to which this line permanently attaches.

**Note:** Valid only when RSRCTYPE(\*NWI) and CNN not \*SWTPP.

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**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## NWI channel number (NWIHLNBR)

Specifies, for a nonswitched connection, the channel number (1 through 30) of the network interface description that is used by this line description. 2, 23 or 30 channels are available for each network interface description, depending on whether the network interface is basic or primary rate and what the network type is, but only one line description can be permanently attached to a channel. The Display Network Interface Description (DSPNWI) command is used to display information about the channel numbers for a given NWI.

**Note:** Valid only when RSRCTYPE(\*NWI) and CNN not \*SWTPP.

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**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## Switched NWI list (SWTNWILST)

Specifies, for ISDN/T1 switched connections, a list of network interface descriptions to which this line can be attached. A network interface description is chosen from the list based on the value specified by the switched NWI selection parameter (SWTNWISLCT) at the time an incoming or outgoing call is processed.

**Note:** Valid only when RSRCTYPE(\*NWI) and CNN(\*SWTPP).

The possible **Network Interface Description Name** values are:

**\*NONE**

No network interface description is specified.

**name** Specify, for switched connections, the name of the network interface description to which this line attaches.

The possible **Network Interface Channel Type** values are:

**\*B** The B channel is used.

The possible **Network Interface Channel-Number** values are:



### \*CALC

The system selects one of the 30 channel numbers (based on availability) defined for the network interface description when an incoming or outgoing call is processed.

### *NWI-channel-number*

Specify a channel number (1 to 30) to which the line description is restricted.

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## Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

\*YES The line is automatically varied on at initial program load (IPL).

\*NO This line is not automatically varied on at IPL.

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---

## Vary on wait (VRYWAIT)

Specifies whether the line is varied on asynchronously or synchronously. For synchronous vary on, this parameter specifies how long the system waits for the vary on to complete.

### \*NOWAIT

The system does not wait for vary on completion. The line is varied on asynchronously.

### *vary-on-wait*

Specify the time (in seconds) to wait. Valid values range from 15 through 180. The system waits until the line is varied on, or until the specified time passes, before completing the Vary Configuration (VRYCFG) command.

### Notes:

1. When ONLINE(\*YES) is used, specifying a wait time in the line description affects system IPL time. In such cases, system IPL time is influenced by the amount of time required to synchronously vary on the line or reach the wait-time value.
2. The time required to vary on a line is the time it takes to:
  - Put tasks in place to manage the line
  - Activate the communications I/O processor (IOP), including downloading the IOP model-unique Licensed Internal Code
  - Establish the communications tasks and processes

Normal vary-on time ranges from 5 through 45 seconds, but can be longer, depending on the system, line protocol, and other factors.

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## Line speed (LINESPEED)

Specifies the line speed in bits per second (bps).

9600 9600 bps is used.

### *line-speed*

Specify the line speeds. Valid line speeds are: 600, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 57600, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 392000, 448000, 504000, 512000, 560000, 576000, 616000, 640000, 672000, 704000, 728000,

768000, 784000, 832000, 840000, 896000, 952000, 960000, 1008000, 1024000, 1064000, 1088000, 1120000, 1152000, 1176000, 1216000, 1232000, 1280000, 1288000, 1344000, 1400000, 1408000, 1456000, 1472000, 1512000, 1536000, 1568000, 1600000, 1624000, 1664000, 1680000, 1728000, 1736000, 1792000, 1856000, 1920000, 1984000, or 2048000 bits per second.

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**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## Information transfer type (INFTRFTYPE)

Specifies the information transfer type. The information transfer type determines the layer 1 protocol.

**Note:** Valid only when RSRCTYPE(\*NWID) and CNN not \*SWTPP.

### \*UNRESTRICTED

The data-channel traffic appears as digital information; no physical transformation is required and each B-channel operates at capacity (64k bps).

**\*V110** The transfer type is V-series Recommendation 110. Each B-channel operates at 56k bps.

**\*DOV** Allows Data Over Voice (DOV) digital data to be transferred over an ISDN voice call. Also, this is referred to as Data Over Voice Bearer Service (DOVBS), Data Over Speech Bearer Service (DOSBS), TollSaver, or TollMizer. This option should only be used if an ISDN voice call is less expensive than an ISDN data call or if a bearer service for data is not available. The remote location must also support this feature. Data is transferred at 56Kbps in each direction.

### \*ASYNCMODEM

Allows data from the integrated asynchronous modem to be transferred over an ISDN voice call. This option should be used to connect to a remote location that is using an asynchronous modem on an analog telephone line. Data is transferred at modem speeds up to 33.6Kbps from the remote analog device to this digital connection and up to 56Kbps from this digital connection to the remote analog device.

### \*SYNCMODEM

Allows data from the integrated synchronous modem to be transferred over an ISDN voice call. This option should be used to connect to a remote location that is using a synchronous modem on an analog telephone line. Data is transferred at modem speeds up to 33.6Kbps from the remote analog device to this digital connection and up to 56Kbps from this digital connection to the remote analog device.

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## Modem init command string (MDMINZCMD)

Specifies the modem initialization command string sent to set the modem

**Note:** Valid only when INTERFACE(\*INTMODEM) or INFTRFTYPE(\*ASYNCMODEM) or INFTRFTYPE(\*SYNCMODEM) is specified.

### \*NONE

No command string is sent to the modem.

### *command-string*

Specifies up to 60 characters that represent the command string sent to the modem. Valid characters are upper case A thru Z, lower case a thru z, numbers 0 thru 9, and special characters:

Period  
Less than sign  
Left parenthesis  
Plus sign  
Ampersand  
Asterisk  
Right parenthesis  
Semicolon  
Minus sign  
Slash  
Comma  
Underline  
Greater than sign  
Question mark  
Colon  
Equal sign  
Spaces  
Number sign  
Double quote  
Exclamation point  
At sign  
Hat symbol  
Percent  
Left square bracket  
Right square bracket  
Back slash

**Note:** The modem initialization string must begin with the two characters 'AT'.

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---

## Maximum frame size (MAXFRAME)

Specifies the maximum length for the information field in a PPP frame, including padding, but not including the protocol field. It is also known as the Maximum Receive Unit (MRU). By negotiation, consenting PPP implementations may use other values for the MRU.

**2048** The maximum frame size is 2048 bytes.

### *maximum-frame-size*

Specify the maximum frame size (in bytes). Valid maximum frame sizes range from 1500 to 4096 bytes.

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---

## Switched connection type (SWTCNN)

Specifies, for the switched line, whether the line is used for incoming calls, outgoing calls, or both incoming and outgoing calls.

### **\*BOTH**

The line is used for both incoming and outgoing calls.

**\*ANS** The line is used for incoming calls only.

### **\*DIAL**

The line is used for outgoing calls only.

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**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## Switched NWI selection (SWTNWISLCT)

Specifies the method used to select network interfaces from the switched network interface list.

**Note:** Valid only when RSRCTYPE(\*NWID) and CNN(\*SWTPP).

### \*FIRST

Selection begins with the first network interface specified in the switched network interface list.

### \*CALC

The system calculates which network interface is selected.

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**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## Outgoing connection list (CNLSTOUT)

Specifies, for ISDN/T1 switched connections, the name of a connection list object that contains the ISDN/T1 assigned numbers for a dial-out operation to the ISDN/T1.

**Note:** Valid only when RSRCTYPE(\*NWID) and CNN(\*SWTPP).

*name* Specify the name of the connection list for dial out operations.

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**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## Connection list entry (CNLSTOUTE)

Specifies, for ISDN/T1 switched connections, the entry name from the connection list used to make a call to the ISDN/T1. The connection list must be specified on the CNLSTOUT parameter.

**Note:** Valid only when RSRCTYPE(\*NWID) and CNN(\*SWTPP).

*name* Specify the entry name from the connection list.

Top

**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## Incoming connection list (CNLSTIN)

Specifies for ISDN/T1 switched connections the name of the connection list that is used to retrieve call information (or connection) for identifying authorized incoming calls.

**Note:** Valid only when RSRCTYPE(\*NWID) and CNN(\*SWTPP).

### \*NETATR

The connection list used by this line description is taken from the list of system default network

attributes that were identified at IPL (Initial Program Load). The Display Network Attributes (DSPNETA) command can be used to see the name of the connection list.

*name* Specify the name of the connection list used for this line description.

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---

## Clocking (CLOCK)

Specifies how the clocking function for the line is provided.

**Note:** Not valid when RSRCTYPE(\*NWID).

### \*MODEM

The modem supplies the clocking function.

### \*LOOP

The receiving clock provided by the modem data circuit-terminating equipment (DCE) is looped back to the (DTE) transmitting clock. This option can be used to improve high speed data transmission when the modem (DCE) supports such an option. The valid interfaces for \*LOOP are \*V35, \*X21BISV35, and \*RS449V36.

### \*INVERT

The transmit clock provided by the modem data circuit-terminating equipment (DCE) is inverted before use. This option can be used when having problems with high speed data transmission and the modem (DCE) does not support looped clocking. The valid interfaces for \*INVERT are \*V35, \*X21, \*X21BISV35, and \*RS449V36.

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---

## Dial command type (DIALCMD)

Specifies the type of dial command used to establish a switched connection with a remote system.

**Note:** Not valid when RSRCTYPE(\*NWID).

### \*ATCMD

The Attention (AT) command set (sometimes referred to as the Hayes command set) is a group of modem commands that allow an application program to control the modem while it is operating asynchronously. The application program must place all AT commands directly into the data stream. The AT commands supported are dependent on the specific modem being used.

### \*V25BIS

Uses the International Telecommunication Union - Telecommunication (ITU-T) (formerly known as CCITT) V.25 bis standard for serial automatic calling

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---

## Set modem to ASYNC command (SETMDMASC)

Specifies the ASCII V.25 bis command string to send to the modem to set the modem to ASYNC mode.

**Note:** Not valid when RSRCTYPE(\*NWID).

### \*NONE

No V.25 bis command string is sent to the modem.

**\*END** The END command string is generally used as the command to set most modems to ASYNC

mode. For cases that do not use the END command string, you should enter the command string appropriate for that modem to set it to ASYNC mode.

***command-string***

Specifies up to 40 characters that represent the command string sent to the modem. Valid characters are upper case A thru Z, lower case a thru z, numbers 0 thru 9, and special characters:

.	Period
<	Less than sign
(	Left parenthesis
+	Plus sign
&	Ampersand
*	Asterisk
)	Right parenthesis
;	Semicolon
-	Minus sign
/	Slash
,	Comma
_	Underline
>	Greater than sign
?	Question mark
:	Colon
=	Equal sign

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---

## Calling number (CALLNBR)

Specifies the local telephone number of the line used for the V.25 bis call request with identification (CRI) dial command. This parameter is used when the CRI function is needed for V.25 bis. When V.25 bis CRI dialing is used, the system takes the called (connection) number from the C>NNNBR parameter of the controller description, adds a separator character (;), and concatenates the calling number at the end. Specify the calling number only if the modem and the network both support the CRI dial command.

**Note:** Not valid when RSRNAME(\*NWID).

**\*NONE**

The Call Request Normal (CRN) dial command is used by the V.25 bis line.

***calling-number***

Specify up to 32 characters that represent the local telephone number for V.25 bis CRI auto-dialing.

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---

## Flow control (FLOWCNTL)

Specifies whether the system controls the data flow.

**Note:** Not valid when RSRCNAME(\*NWID).

**\*NO** Prevents the hardware from generating or recognizing flow control characters, and prevents the use of Request To Send (RTS) and Clear To Send (CTS) flow control signals.

**\*HARDWARE**

Hardware flow control is performed using the Request to Send (RTS) and Clear To Send (CTS) flow control signals.

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## Network controller (NETCTL)

Specifies the name of an existing network controller.

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---

## Clear To Send timer (CTSTMR)

Specifies the amount of time the system waits for the modem to enter or exit the Clear to Send (CTS) state before signaling an error.

**Note:** Not valid when RSRCNAME(\*NWID).

**25** The system waits up to 25 seconds for the CTS state to begin or end.

*timer-value*

Specify a value ranging from 10 through 60 seconds.

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---

## Inactivity timer (INACTTMR)

Specifies the time (in seconds) that the system waits for activity on a switched line before disconnecting.

**\*NOMAX**

The inactivity timer is disabled.

*timer-value*

Specify a value ranging from 15 through 65535 seconds.

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---

## Remote answer timer (RMTANSTMR)

Specifies the amount of time the system waits for the modem to enter the DSR state after dialing before signaling an error.

**Note:** Not valid when RSRCNAME(\*NWID).

**60** The system waits 60 seconds before signaling an error.

*timer-value*

Specify a value ranging from 30 through 120 seconds.

---

## NRZI data encoding (NRZI)

Specifies whether non-return-to-zero-inverted (NRZI) data encoding is used for modems that are sensitive to certain bit patterns in the data stream. This ensures that the signal does not remain the same for an extended period of time. For digital phone lines, \*NO is suggested.

**Note:** Not valid when RSRNAME(\*NWID).

### NOTES:

1. All data communications equipment on the line must use the same data transmission coding method.
2. Framing (FRAMING parameter) must be \*SYNC to use NRZI data encoding.

\*YES NRZI data encoding is used.

\*NO NRZI data encoding is not used.

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## Text 'description' (TEXT)

Specifies text that briefly describes the line description.

### \*BLANK

Text is not specified.

### *character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

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## Async control character map (ACCM)

Specifies a mapping for control characters in the transmitted data that may be either removed or introduced by data communications equipment on the line.

**Note:** ACCM(00000000) must be specified unless FRAMING(\*ASYNC) is specified.

OS/400 sends all characters specified by this map to the remote peer as a 2-byte escape sequence. Additionally, all characters specified by this map must be sent by the remote peer to OS/400 as a 2-byte escape sequence. Any characters specified in this map that are not escaped are discarded by OS/400.

### Attention

The default value for this parameter does not normally need to be changed. Do not specify a different value for this parameter unless you are fully aware of the effect of the change.

### 00000000

No ASCII control characters between '00'X and '1F'X are escaped.

### *control-character-map*

Specifies a 32-bit value as a 8-digit hexadecimal number. Each bit in this 32-bit value indicates whether a character is escaped or not. If the bit value is set to 1, the corresponding character is escaped. If the bit is set to 0, the control character is not escaped.



The ordinal number of a bit in the 32-bit value determines the character affected. The leftmost bit (number 0) corresponds to the character '00'X. The rightmost bit (number 31) corresponds to the character '1F'X. For example,

- Specifying ACCM(80000000) requires character '00'X be sent and received as the 2-byte escape sequence '7D20'X. Characters '01'X to '1F'X are not mapped.
- Specifying ACCM(00000001) requires character '1F'X be sent and received as the 2-byte escape sequence '7D3F'X. Characters '00'X to '1E'X are not mapped.
- Specifying ACCM(0000A000) requires characters '11'X and '13'X be sent and received as the 2-byte escape sequence '7D31'X and '7D33'X, respectively.

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## LCP authentication values (LCPAUT)

Specifies values controlling how the Link Control Protocol layer of OS/400 PPP authenticates a remote peer.

The **Remote peer challenge timer** value specifies the interval, in minutes, to periodically issue an authentication challenge to the remote peer.

### \*NONE

The remote peer is authenticated only once when the PPP link is initially opened. No additional authentication challenges are issued.

### *challenge-interval*

Specify the interval, in minutes, to re-validate the remote peer's authentication.

The **Maximum authentication attempts** value specifies the maximum number of unacknowledged authentication challenges sent to a remote peer before assuming that the peer is unable to respond.

### NOTES:

1. A challenge is considered unacknowledged when OS/400 does not receive a response within the interval specified by the configuration retry timer (element 1 of parameter LCPCFG).
2. This value does not affect how OS/400 responds when a peer fails authentication. OS/400 always terminates communication without any retry if a response from the remote peer fails authentication.
5. If the remote peer does not respond after AS/00 has sent five authentication challenges, OS/400 terminates communication.

### *maximum-number-of-attempts*

Specifies the maximum number of unacknowledged challenges sent to a remote peer before communication is terminated.

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## LCP configuration values (LCPCFG)

Specifies values controlling how the Link Control Protocol layer of OS/400 PPP negotiates mutually acceptable link configuration values with a remote peer.

### Attention:

The default values for this parameter do not normally need to be changed. Do not specify different values for this parameter unless you are fully aware of the effect of the change.

The **Configuration retry timer** value specifies the interval, in seconds, that OS/400 waits before resending an unacknowledged configuration, termination, or authentication challenge request to a remote peer.

**3.0** Unacknowledged configuration requests are resent every 3 seconds.

*retry-interval*

Specify the time interval after which unacknowledged requests are resent.

The **Maximum configuration failures** value specifies the maximum number of attempts that are made to negotiate a mutually acceptable configuration with a remote peer before assuming that configuration is not converging.

**5** If the configuration does not converge after 5 attempts, OS/400 terminates communication.

*maximum-number-of-attempts*

Specifies the maximum number of attempts made to negotiate a mutually acceptable configuration.

The **Maximum configuration requests** value specifies the maximum number of unacknowledged configuration requests sent to a remote peer before assuming that the peer is unable to respond.

**10** If OS/400 transmits ten configuration requests to the remote peer but does not receive a response, OS/400 terminates communication.

*maximum-number-of-attempts*

Specifies the maximum number configuration attempts made before OS/400 terminates communication.

The **Maximum termination requests** value specifies the maximum number of unacknowledged termination request packets sent to a remote peer before assuming that the peer is unable to respond.

**2** If no response is received after sending two termination requests, OS/400 terminates communication immediately.

*maximum-number-of-attempts*

Specifies the maximum number of attempts made to notify the remote peer that communication will be terminated.

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## Compression (COMPRESS)

Specifies the compression function is provided.

**Note:** This parameter allows you to enable a compression protocol, but does not guarantee that compression will be used. Data compression will not be activated unless both the local system and the remote peer system connects to agree to use the specified compression protocol.

**\*STACLZS**

OS/400 is allowed to negotiate the use of STAC LZS data compression.

**\*NONE**

OS/400 is not allowed to negotiate or use any Point-to-Point Compression protocol.

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## Recovery limits (CMNRCYLMT)

Specifies the number of recovery attempts made by the system before an inquiry message is sent to the system operator. Also specifies the time (in minutes) that must elapse before the system sends an inquiry message to the system operator indicating that the recovery attempt count limit is reached.

The possible **Maximum Recovery Limit** values are:

**2** Two recovery attempts are made within the specified time interval.

### *count-limit*

Specify the number of recovery attempts to be made. Valid values range from 0 through 99.

The possible **Recovery Time Interval** values are:

**5** The specified number of recovery attempts is made within a 5-minute interval.

### *time-interval*

Specify the time interval (in minutes) at which the specified number of second-level recoveries are attempted. Valid values range from 0 through 120. If the value specified for *count-limit* is not 0, then the value 0 specifies infinite recovery.

The possible **Other Single Value** is:

### **\*SYSVAL**

The recovery limits specified in the system value QCMNRCYLMT are used.

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## Message queue (MSGQ)

Specifies the message queue to which operational messages are sent.

### **\*SYSVAL**

The value in the system value QCFGMSGQ is used.

### **\*SYSOPR**

Messages are sent to the system operator message queue (QSYS/QSYSOPR).

### **Qualifier 1: Message queue**

*name* Specify the name of the message queue to which operational messages are sent.

### **Qualifier 2: Library**

*name* Specify the name of the library where the message queue is located.

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## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### **\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can

change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

**\*EXCLUDE**  
The user cannot access the object.

**\*LIBCRTAUT**  
The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

**name** Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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## Examples

```
CRTLINPPP LIND(PPP01) RSCRNAME(LIN031)
```

This command creates a PPP line description named PPP01 with a resource name of LIN031.

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---

## Error messages

None

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## Create Line Desc (SDLC) (CRTLINS DLC)

Where allowed to run: All environments (\*ALL)  
 Threadsaf e: No

Parameters  
 Examples  
 Error messages

The Create Line Description (SDLC) (CRTLINS DLC) command creates a line description for a synchronous data link control (SDLC) line. More information about using this command is in the Communications Configuration book, SC41-5401.

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### Parameters

Keyword	Description	Choices	Notes
LIND	Line description	<i>Name</i>	Required, Positional 1
RSRCNAME	Resource names	Values (up to 6 repetitions): <i>Name</i>	Required, Positional 2
ONLINE	Online at IPL	<u>*YES</u> , *NO	Optional
ROLE	Data link role	<u>*NEG</u> , *PRI, *SEC	Optional
INTERFACE	Physical interface	<u>*RS232V24</u> , *RS530V36, *V35, *X21, *X21BISV24, *X21BISV35, *RS449V36, *INTMODEM	Optional
CNN	Connection type	<u>*NONSWTTP</u> , *SWTTP, *MP, *SHM, *NONSWTCAL, *NONSWTANS	Optional
SNBU	Switched network backup	<u>*NO</u> , *YES	Optional
SHMNODE	SHM node type	<u>*T21</u> , *T20	Optional
VRYWAIT	Vary on wait	15-180, <u>*NOWAIT</u>	Optional
AUTOCALL	Autocall unit	<u>*NO</u> , *YES	Optional
EXCHID	Exchange identifier	X'05600000'-X'056FFFFF', <u>*SYSGEN</u>	Optional
NRZI	NRZI data encoding	<u>*YES</u> , *NO	Optional
MAXCTL	Maximum controllers	1-254, <u>1</u>	Optional
CLOCK	Clocking	<u>*MODEM</u> , *SYSTEM, *LOOP, *INVERT	Optional
LINESPEED	Line speed	600, 1200, 2400, 4800, 7200, <b>9600</b> , 14400, 19200, 48000, 56000, 57600, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 392000, 448000, 504000, 512000, 560000, 576000, 616000, 640000, 672000, 704000, 728000, 768000, 784000, 832000, 840000, 896000, 952000, 960000, 1008000, 1024000, 1064000, 1088000, 1120000, 1152000, 1176000, 1216000, 1232000, 1280000, 1288000, 1344000, 1400000, 1408000, 1456000, 1472000, 1512000, 1536000, 1568000, 1600000, 1624000, 1664000, 1680000, 1728000, 1736000, 1792000, 1856000, 1920000, 1984000, 2048000	Optional
MODEM	Modem type supported	<u>*NORMAL</u> , *V54, *IBMWRAP, *IBMLPDA1, *IBMLPDA2	Optional
SWTCNN	Switched connection type	<u>*BOTH</u> , *ANS, *DIAL	Optional
AUTOANS	Autoanswer	<u>*YES</u> , *NO	Optional
AUTODIAL	Autodial	<u>*NO</u> , *YES	Optional
MDMINZCMD	Modem init command string	<i>Character value</i> , *NONE	Optional
DIALCMD	Dial command type	<u>*NONE</u> , *V25BIS	Optional

Keyword	Description	Choices	Notes
ACRSRCNAME	Autocall resource name	<i>Name</i>	Optional
SHMCALLTMR	SHM call timer	1-60, * <u>NONE</u>	Optional
SHMMAXCNN	SHM maximum connect timer	1-254, <u>8</u> , *NOMAX	Optional
SHMANSDLY	SHM answer delay timer	1-254, <u>11</u> , *NOMAX	Optional
SHMCALLFMT	SHM call format	0-15, * <u>DNIC</u> , *DCC	Optional
SHMACC	SHM access code	<i>Character value, X''</i>	Optional
CALLNBR	Calling number	<i>Character value, *NONE</i>	Optional
STNADR	Station address	X'01'-X'FE'	Optional
CNNPOLLRTY	Connect poll retry	0-64, <u>7</u>	Optional
CNNTMR	Connect timer	1-32767, * <u>NOMAX</u>	Optional
SHORTTMR	Short timer	10-600, <u>50</u>	Optional
LONGTMR	Long timer	100-6000, <u>600</u>	Optional
SHORTRTY	Short retry	0-254, <u>7</u>	Optional
LONGRTY	Long retry	0-254, <u>1</u>	Optional
CPSRTY	Call progress signal retry	Values (up to 11 repetitions): *CPS41, *CPS42, *CPS43, *CPS44, *CPS45, *CPS46, *CPS47, *CPS48, *CPS49, *CPS71, *CPS72	Optional
MAXFRAME	Maximum frame size	265, <u>521</u> , 1033, 2057	Optional
DUPLEX	Duplex	* <u>HALF</u> , *FULL	Optional
INACTTMR	Inactivity timer	150-4200, <u>300</u> , *NOMAX	Optional
POLLRSPDLY	Poll response delay	0-2048, <u>0</u>	Optional
NPRDRCVTMR	Nonproductive receive timer	160-4200, <u>320</u>	Optional
IDLTMR	Idle timer	5-300, <u>30</u>	Optional
CNNPOLLTMR	Connect poll timer	2-300, <u>30</u>	Optional
POLLPAUSE	Poll cycle pause	0-2048, <u>0</u>	Optional
FRAMERTY	Frame retry	0-64, <u>7</u>	Optional
FAIRPLLTMR	Fair polling timer	5-60, <u>15</u>	Optional
DSRDRPTMR	Data Set Ready drop timer	3-60, <u>6</u>	Optional
AUTOANSTYP	Autoanswer type	* <u>DTR</u> , *CDSTL	Optional
RMTANSTMR	Remote answer timer	30, 35, 40, 45, 50, 55, <u>60</u> , 65, 70, 75, 80, 85, 90, 95, 100, 105, 110, 115, 120	Optional
TEXT	Text 'description'	<i>Character value, *BLANK</i>	Optional
CTL	Attached nonswitched ctls	Values (up to 254 repetitions): <i>Name</i>	Optional
MODEMRATE	Modem data rate select	* <u>FULL</u> , *HALF	Optional
THRESHOLD	Error threshold level	* <u>OFF</u> , *MIN, *MED, *MAX	Optional
MODULUS	Modulus	<u>8</u> , 128	Optional
MAXOUT	Maximum outstanding frames	1-28, <u>7</u>	Optional
CTSTMR	Clear To Send timer	10-60, <u>25</u>	Optional
LINKSPEED	Link speed	* <u>INTERFACE</u> , *MIN, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, *MAX	Optional
COSTCNN	Cost/connect time	0-255, * <u>CNN</u>	Optional
COSTBYTE	Cost/byte	0-255, * <u>CNN</u>	Optional

Keyword	Description	Choices	Notes
SECURITY	Security for line	*NONSECURE, *PKTSWTNET, *UNDGRDCBL, *SECURECND, *GUARDCND, *ENCRYPTED, *MAX	Optional
PRPDLY	Propagation delay	*MIN, *LAN, *TELEPHONE, *PKTSWTNET, *SATELLITE, *MAX	Optional
USRDFN1	User-defined 1	0-255, <u>128</u>	Optional
USRDFN2	User-defined 2	0-255, <u>128</u>	Optional
USRDFN3	User-defined 3	0-255, <u>128</u>	Optional
CMNRCYLMT	Recovery limits	Single values: *SYSVAL Other values: <i>Element list</i>	Optional
	Element 1: Count limit	0-99, <u>2</u>	
	Element 2: Time interval	0-120, <u>5</u>	
AUT	Authority	Name, *CHANGE, *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

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## Line description (LIND)

Specifies the name of the line description

This is a required parameter.

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## Resource names (RSRCNAME)

Specifies the resource name that identifies the hardware this description represents. Use the WRKHDWRSC command to determine the resource name.

This is a required parameter.

You can enter multiple values for this parameter.

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## Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

\*YES The line is automatically varied on at initial program load (IPL).

\*NO This line is not automatically varied on at IPL.

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## Data link role (ROLE)

Specifies whether the system is the primary station, or the secondary station, or whether the system dynamically negotiates the primary and secondary roles.

The primary station is the controlling station and the secondary station is the responding station. The primary station controls the data link by sending commands to the secondary station, and the secondary station responds to the commands.

- \*NEG This value allows this system and the remote system to negotiate which station is primary.
- \*PRI This system is the primary station on this communications line.
- \*SEC This system is a secondary station on this communications line.

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## Physical interface (INTERFACE)

Specifies the type of physical interface on the input/output adapter (IOA) port.

\*RS232V24 (Async, BSC, X.25 and SDLC only)  
RS-232/V.24 physical interface.

\*V35 (BSC and SDLC only)  
V.35 physical interface.

\*X21 (X.25 and SDLC only)  
X.21 physical interface.

\*X21BISV24 (X.25, BSC and SDLC only)  
X.21 bis/V.24 physical interface.

\*X21BISV35 (X.25, BSC and SDLC only)  
X.21 bis/V.35 physical interface.

\*RS449V36 (Async, BSC, X.25 and SDLC only)  
RS-449/V.36 physical interface.

\*INTMODEM  
The integrated modem interface is used.

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## Connection type (CNN)

Specifies the type of line connection.

\*NONSWTPP  
A nonswitched point-to-point line is used.

\*SWTPP  
A switched point-to-point line is used.

\*MP A nonswitched multipoint line.

\*SHM An X.21 short hold mode line.

\*NONSWTCAL  
A nonswitched point-to-point line is used for call mode.

\*NONSWTANS  
A nonswitched point-to-point line is used for answer mode.

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## Switched network backup (SNBU)

Specifies, for nonswitched modems only, if the local modem supports the switched network backup utility (SNBU) feature. The backup feature is used to bypass a broken nonswitched (nonswitched line) connection by establishing a switched connection.



To activate SNBU, you must change the mode of the modem from nonswitched to switched. If the modem model is IBM 386x, 586x, or 786x, no change is required. Otherwise, specify \*YES for the **Activate swt network backup (ACTSNBU)** parameter for the line description you are using.

\*NO The local modem does not have the SNBU feature.

\*YES The local modem has the SNBU feature.

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## SHM node type (SHMNODE)

Specifies, for X.21 short hold mode lines only, the physical unit type of the controllers using the X.21 short hold mode line. This parameter is valid only if CNN(\*SHM) is specified.

\*T21 Specifies physical unit type 2.1 controllers. \*NEG must also be specified for the **Data link role (ROLE)** parameter.

This value should be specified when using the following controllers:

- APPC controllers

\*T20 Specifies physical unit type 2.0 controllers. \*PRI or \*SEC must be specified for the **Data link role (ROLE)** parameter.

This value should be specified when using the following controllers:

- host controllers
- remote work station controllers
- finance controllers

Top

---

## Vary on wait (VRYWAIT)

Specifies whether the line is varied on asynchronously or synchronously. For synchronous vary on, this parameter specifies how long the system waits for the vary on to complete.

\*NOWAIT

The system does not wait for vary on completion. The line is varied on asynchronously.

*vary-on-wait*

Specify the time (in seconds) to wait. Valid values range from 15 through 180. The system waits until the line is varied on, or until the specified time passes, before completing the Vary Configuration (VRYCFG) command.

### Notes:

1. When ONLINE(\*YES) is used, specifying a wait time in the line description affects system IPL time. In such cases, system IPL time is influenced by the amount of time required to synchronously vary on the line or reach the wait-time value.
2. The time required to vary on a line is the time it takes to:
  - Put tasks in place to manage the line
  - Activate the communications I/O processor (IOP), including downloading the IOP model-unique Licensed Internal Code
  - Establish the communications tasks and processes

Normal vary-on time ranges from 5 through 45 seconds, but can be longer, depending on the system, line protocol, and other factors.

---

## Autocall unit (AUTOCALL)

Specifies, for switched or switched network backup lines (Async, BSC, SDLC, or X.25 line), whether the line has an associated automatic call unit that can automatically call the remote system.

**\*NO** No automatic call unit is associated with this line.

**\*YES** An automatic call unit is associated with this line.

Top

---

## Exchange identifier (EXCHID)

Specifies the hexadecimal exchange identifier that is used to identify the local system to the remote system. The 8-digit hexadecimal exchange identifier contains three digits for the block number and five digits for the identifier of this system.

### **\*SYSGEN**

This value allows the operating system to create the exchange identifier. Use the Display Line Description (DSPLIND) command to see the resulting exchange identifier.

### *exchange-ID*

Specify an 8-character (four hexadecimal bytes) exchange identifier ranging from 05600000 through 056FFFFF.

Top

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## NRZI data encoding (NRZI)

Specifies whether non-return-to-zero-inverted (NRZI) data coding is to be used for modems that are sensitive to certain bit patterns in the data stream. This ensures that the signal does not remain the same for an extended period of time.

**Note:** All data communications equipment on the line must use the same transmission method.

**\*YES** NRZI data coding is used.

**\*NO** NRZI data coding is not used.

Top

---

## Maximum controllers (MAXCTL)

Specifies the maximum number of controllers that the line supports.

**1** One controller is supported. Use the default (1) for:

- Nonswitched point-to-point and switched point-to-point connection types
- Nonswitched point-to-point and multipoint connection types communicating with a host system using duplex, two-way simultaneous data transfer. (The host system specifies duplex data transfer in its NCP generation by specifying LINE ADDRESS=(nnn,FULL) on the LINE macroinstruction.)
- Short-hold mode lines specified with ROLE(\*SEC) and SHMNODE(\*T20)

Short-hold mode lines specified with ROLE(\*PRI) or ROLE(\*NEG) can support up to 64 controllers.

*maximum-controllers*

Specify value ranging from 1 to 254. The number must be large enough to account for all of the controllers that are currently active to this line, and for those controllers you know will be attached in the near future.

Top

---

## Clocking (CLOCK)

Specifies how the clocking function for the line is provided.

**\*MODEM**

The clocking function for the line is provided by the modem.

**\*LOOP**

The receiving clock provided by the modem data circuit-terminating equipment (DCE) is looped back to the modem DCE on the system data terminal equipment (DTE) transmitting clock. This option can be used to provide high speed data transmission when the modem DCE supports such an option. The valid interfaces for \*LOOP are \*V35, \*X21BISV35, and \*RS449V36.

**\*INVERT**

The transmit clock provided by the modem data circuit-terminating equipment (DCE) is inverted before use. This option can be used when having problems with high speed data transmission and the modem (DCE) does not support looped clocking. The valid interfaces for \*INVERT are \*V35, \*X21, \*X21BISV35, and \*RS449V36.

Top

---

## Line speed (LINESPEED)

Specifies the line speed in bits per second (bps).

**9600** 9600 bps is used.

*line-speed*

Specify the line speeds. Valid lines speeds are: 600, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 57600, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 392000, 448000, 504000, 512000, 560000, 576000, 616000, 640000, 672000, 704000, 728000, 768000, 784000, 832000, 840000, 896000, 952000, 960000, 1008000, 1024000, 1064000, 1088000, 1120000, 1152000, 1176000, 1216000, 1232000, 1280000, 1288000, 1344000, 1400000, 1408000, 1456000, 1472000, 1512000, 1536000, 1568000, 1600000, 1624000, 1664000, 1680000, 1728000, 1736000, 1792000, 1856000, 1920000, 1984000, or 2048000 bits per second.

Top

---

## Modem type supported (MODEM)

Specifies the type of modem supported on the communications line. Refer to the modem manual to determine the appropriate value to select.

**\*NORMAL**

No attempt is made to run diagnostic tests to your modem.

**\*V54** Certain types of diagnostic tests (as defined by the CCITT recommendations) are run to your modem. This system supports CCITT V.54 loop 3, (a local loop back,) and loop 2, (which is a remote loop back).

**\*IBMWRAP**

An IBM modem with wrap test capabilities is used on the communications line.

**\*IBMLPDA1**

An IBM modem with Link Problem Determination Aid-1 (LPDA-1) is used on the line.

**\*IBMLPDA2**

An IBM modem with Link Problem Determination Aid-2 (LPDA-2) is used on the line.

Top

---

## Switched connection type (SWTCNN)

Specifies whether the switched (Async, BSC, SDLC, or IDLC) line or switched network backup (Async, BSC, or SDLC) line is used for incoming calls, outgoing calls, or both.

**\*BOTH**

The line is used for both incoming and outgoing calls.

**\*ANS** The line is used for incoming calls only.

**\*DIAL**

The line is used for outgoing calls only.

Top

---

## Autoanswer (AUTOANS)

Specifies, for switched or switched network backup lines (Async, BSC, SDLC, or X.25 line), whether the system automatically answers a call from a remote system to establish the connection, or whether the system operator manually answers the call and places the modem in data mode.

**Note:** \*YES is a valid option only if the modem has the automatic answer feature.

**\*YES** The incoming call is automatically answered by the automatic answer feature.

**\*NO** The incoming call must be manually answered.

Top

---

## Autodial (AUTODIAL)

Specifies, for switched lines, whether the system automatically calls a remote system to establish a connection or if the system operator must manually place the call.

**\*NO** The line connection is made by manually dialing the X.25 network.

**\*YES** The line connection is made by the system automatically dialing the X.25 network.

Top

---

## Modem init command string (MDMINZCMD)

Specifies the modem initialization command string sent to set the modem.

**Note:** Valid only when INTERFACE(\*INTMODEM) or INFTRFTYPE(\*SYNCMODEM) is specified.

### \*NONE

No command string is sent to the modem.

### *command-string*

Specifies up to 60 characters that represent the command string sent to the modem. Valid characters are upper case A thru Z, lower case a thru z, numbers 0 thru 9, and special characters:

- Period
- Less than sign
- Left parenthesis
- Plus sign
- Ampersand
- Asterisk
- Right parenthesis
- Semicolon
- Minus sign
- Slash
- Comma
- Underline
- Greater than sign
- Question mark
- Colon
- Equal sign
- Spaces
- Number sign
- Double quote
- Exclamation point
- At sign
- Hat symbol
- Percent
- Left square bracket
- Right square bracket
- Back slash

**Note:** The modem initialization string must begin with the two characters 'AT'.

Top

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## Dial command type (DIALCMD)

Specifies the type of dial command used to establish a switched connection with a remote system.

### \*NONE

No dial command is used. (An automatic call unit is used to establish the connection.)

### \*V25BIS

V.25 bis is a recommendation which allows the use of one physical interface for call establishment and data transmission. It is referred to as a serial automatic call interface because the digits are presented serially on the link from the system to the modem.

Top

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## Autocall resource name (ACRSRCNAME)

Specifies the automatic call resource name that describes the automatic call unit port that is used to establish a connection with a remote system. Use the Work with Hardware Resources (WRKHDWRSC) command to determine the resource name.

Top

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## SHM call timer (SHMCALLTMR)

Specifies the interval at which a connection is re-established on an X.21 short hold mode (SHM) line to verify the state of the remote system if no SHM reconnection has occurred in the specified interval. This parameter is valid only if \*SHM is specified on the **Connection type (CNN)** parameter.

### \*NONE

No call is made to verify the connection.

### *short-hold-mode-call-timer*

Specify an interval, from 1 to 60 minutes, at which a call is made to verify the connection.

Top

---

## SHM maximum connect timer (SHMMAXCNN)

Specifies the amount of time the system allows a connection to continue if there are more controllers than there are available ports. The system clears the connection after the specified amount of time, delays further calls for the amount of time specified on the **SHM answer delay timer (SHMANSDLY)** parameter, and then makes any calls that had been waiting before re-calling the controller that was interrupted.

**Note:** This parameter is valid only if \*PRI or \*NEG is specified on the **Data link role (ROLE)** parameter and if \*SHM is specified on the **Connection type (CNN)** parameter.

8 The system waits eight seconds before checking for other controllers.

### \*NOMAX

The timer is disabled.

### *maximum-connect-timeout*

Specify a value ranging from 1 through 254 seconds.

Top

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## SHM answer delay timer (SHMANSDLY)

Specifies the amount of time the system waits for controllers to call in before making outgoing calls. The SHM answer delay timer is started when one of the following is true:

- The time specified by the SHM maximum connect timer (SHMMAXCNN parameter) has expired.
- A period of time equal to twice the value of the SHMMAXCNN parameter has elapsed with no opportunities for incoming calls to be received.

**Note:** This parameter is valid only if \*PRI or \*NEG is specified on the **Data link role (ROLE)** parameter and if \*SHM is specified on the **Connection type (CNN)** parameter.

11 The system waits 1.1 seconds before making outgoing calls.

**\*NOMAX**

The timer is disabled.

***ans-delay-timeout***

Specify a value ranging from 1 through 254 tenths of seconds. For example, 10 seconds equal 100 tenths of seconds.

Top

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## **SHM call format (SHMALLFMT)**

Specifies the format for the X.21 short hold mode line call number. This parameter is valid only if \*SHM is specified on the **Connection type (CNN)** parameter.

**\*DNIC**

The Data Network Identification Code (DNIC) is used.

**\*DCC** The Data Country Code (DCC) is used.

***call-format***

The length of the area code or country or region code portion of the SHM calling number. Specify a number from 0 to 15.

Top

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## **SHM access code (SHMACC)**

Specifies the access code for the X.21 short hold mode line. This parameter is valid only if \*SHM is specified on the **Connection type (CNN)** parameter.

Top

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## **Calling number (CALLNBR)**

Specifies the local telephone number of the line that is used for the V.25 bis Call Request with Identification (CRI) dial command. When V.25 bis CRI dialing is used, the system takes the called (connection) number (CANNBR parameter), adds a separator character (;), and puts the calling number at the end. The default, \*NONE, indicates that Call Request Normal (CRN) is used.

Specify the calling number only when the modem and network support the CRI dial command.

**\*NONE**

Call Request Normal (CRN) is used. CRN dialing sends only the connection number to the V.25 bis modem.

***calling-number***

Specify the local telephone number if V.25 bis CRI dialing is required. The number can be up to 32 characters in length. See your modem documentation to determine the values allowed by the modem.

**Note:** Specify the calling number only if both the modem and network support the V.25 bis CRI dial command.

Top

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## Station address (STNADR)

Specifies, for a switched secondary or negotiable line, the hexadecimal station address to which the local system responds when polled by the remote system if it answers a call.

### *station-address*

Specify a hexadecimal value from 01 to FE.

Top

---

## Connect poll retry (CNNPOLLRTY)

Specifies, for a switched primary line or a negotiable line, the number of connection polling retries to make before indicating the error and making the station inoperative.

### *connect-poll-retry*

Specify a value from 0 through 64 for the number of retries.

Top

---

## Connect timer (CNNTMR)

Specifies, for an X.21 circuit switched interface, the amount of time an automatic answer connect request waits for an incoming call to be accepted.

### **\*NOMAX**

The system waits indefinitely.

### *connect-timer*

Specify a value from 1 to 32767 in 0.1 second intervals.

Top

---

## Short timer (SHORTTMR)

Specifies, for X.21 circuit switched interface or short hold mode, the short timer used during bursts of retry operations. The system waits between connection attempts for this timeout period.

1. The SHORTTMR parameter is used only for X.21 circuit-switched or short-hold mode lines.
2. The default meets most countries' or regions' requirements relative to call retries and call delays. In the event that the default does not meet your country's or region's requirements, the value must be configured in accordance with the country or region requirement. Before changing this value, ensure that the new value is in accordance with your country's or region's requirements.

If you are not aware of your country's or region's requirement, your IBM representative or IBM-approved remarketer can provide this information.

This parameter is used to control retries when you are attempting to make a call over an X.21 circuit-switched or short-hold mode network. Call attempts are characterized by bursts of retries. A single burst of retries is controlled by the short timer and short retry value. If all short retries are completed, the system delays for a longer time (the long timer) before attempting another burst of retries. The total number of these bursts of retries is based on the long retry value.

**50** The system waits five seconds.

### *short-timer*

Specify a value from 10 to 600 in 0.1 second intervals.

Top



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## Long timer (LONGTMR)

Specifies for an X.21 circuit switched interface or short hold mode, the long timer used between bursts of retry operations. After a burst of retry attempts, the system waits for this timeout period before the next attempt.

This parameter is used to control retries when you are attempting to make a call over an X.21 circuit-switched or short-hold mode network. Call attempts are characterized by &odq.bursts&cdq. of retries. A single burst of retries is controlled by the short timer and short retry value. If all short retries are completed, the system delays for a longer time (the long timer) before attempting another burst of retries. The total number of these bursts of retries is based on the long retry value.

**600** The system waits 60 seconds.

### *long-timer*

Specify a value from 100 to 6000 in 0.1 second intervals.

Top

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## Short retry (SHORTRTY)

Specifies for an X.21 circuit switched interface or short hold mode, the number of retry attempts that are made during a burst of retries.

### *short-retry*

Specify a value from 0 to 254 for the number of retries.

Top

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## Long retry (LONGRTY)

Specifies, for an X.21 circuit switched interface or short hold mode, the number of burst retry attempts when processing a connect request.

This parameter is used to control retries when you are attempting to make a call over an X.21 circuit-switched or short-hold mode network. Call attempts are characterized by &odq.bursts&cdq. of retries. A single burst of retries is controlled by the short timer and short retry value. If all short retries are completed, the system delays for a longer time (the long timer) before attempting another burst of retries. The total number of these bursts of retries is based on the long retry value.

**1** One retry is attempted.

### *long-retry*

Specify a value from 0 to 254 for the number of retries.

Top

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## Call progress signal retry (CPSRTY)

Specifies which call progress signals are retried for X.21 circuit switched interface or X.21 short hold mode lines. Up to 11 values can be specified; duplicate values are ignored.

Valid values are: \*CPS41, \*CPS42, \*CPS43, \*CPS44, \*CPS45, \*CPS46, \*CPS47, \*CPS48, \*CPS49, \*CPS71, and \*CPS72.

This parameter can be specified only if \*SHM or \*SWTPP is specified for the **Connection type (CNN)** parameter and \*X21 is specified on the **Physical interface (INTERFACE)** parameter.

Top

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## Maximum frame size (MAXFRAME)

Specifies the maximum frame size that can be transmitted and received on this line description.

### *frame-size*

The standard frame sizes are:

- 265 (All line types)
- 521 (All line types)
- 1033 (All line types)
- 1994 (Token-ring only)
- 2057 (SDLC or Token-ring)
- 4105 (TDLC or Token-ring)
- 4060 (Token-ring only)
- 8156 (Token-ring only)
- 16393 (Token-ring only)

Top

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## Duplex (DUPLEX)

Specifies whether request-to-send (RTS) is permanently turned on (for duplex modems) or turned on only when transmission is required (for half duplex modems).

### **\*HALF**

Request-to-send (RTS) is turned on only when transmission is required (for half duplex modems). You can choose to run half duplex even if the modem can support duplex communication.

**\*FULL** Request-to-send (RTS) is permanently set on (for duplex modems).

Top

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## Inactivity timer (INACTTMR)

Specifies, for a secondary or negotiable line, the time (in tenths of a second) the system waits for a valid frame to flow before reporting the error and disconnecting the line. This timer is started at connection time and restarted when any frame is sent, and then reset when a frame with a valid frame check sequence is received.

**300** The system waits 30 seconds (300 tenths of a second) for a valid frame.

### *inactivity-timer*

Specify a value from 150 to 4200 in 0.1 second intervals.

Top

---

## Poll response delay (POLLRSPDLY)

Specifies, for a secondary or negotiable line, the minimum time the system must wait before it responds to a data poll if there is no frame to transmit.

### *poll-response-delay*

Specify a value from 1 to 2048 in 0.0001 second intervals, or 0 to indicate no delay.

Top

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## **Nonproductive receive timer (NPRDRCVTMR)**

Specifies, for a primary or negotiable line, the time the system waits for either a final frame or an idle signal while the secondary station is continuously sending. If this timer expires, the nonproductive receive condition is reported.

### *nonproductive-receive-timer*

Specify a value from 160 to 4200 in 0.1 second intervals.

Top

---

## **Idle timer (IDLTMR)**

Specifies, for a primary or negotiable line, the time (in 0.1 second intervals) that the system waits before sampling the line for an idle signal. If an idle signal is detected, error recovery procedures are started.

### *idle-timer*

Specify a value from 5 to 300 in 0.1 second intervals.

Top

---

## **Connect poll timer (CNNPOLLTMR)**

Specifies, for a primary or negotiable line, the time the system waits for the response to a connect poll before resending the poll.

### *connect-poll-timer*

Specify a value from 2 to 300 in 0.1 second intervals.

Top

---

## **Poll cycle pause (POLLPAUSE)**

Specifies, for a primary or negotiable line, the time the system pauses after the last remote system in the poll list is polled.

### *poll-cycle-pause*

Specify a value from 1 to 2048 in 0.0001 second intervals, or 0 to indicate no pause.

Top

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## **Frame retry (FRAMERTY)**

Specifies, for a primary, negotiable, or X.25 line, the number of retries for an unanswered command frame or unacknowledged information frame before indicating the error.

### *frame-retry*

Specify a value from 0 to 64 for the number of retries.

Top

---

## Fair polling timer (FAIRPLLTMR)

Specifies, for a multipoint line, the number of seconds the system waits before resuming polling of stations without pending data transfer requests.

### *fair-poll-timer*

Specify a value from 5 to 60 in one second intervals.

Top

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## Data Set Ready drop timer (DSRDRPTMR)

Specifies the amount of time that the system waits for the modem to exit the Data Set Ready (DSR) state before signaling an error.

### *drop-timer*

Specify a value ranging from 3 through 60 seconds.

Top

---

## Autoanswer type (AUTOANSTYP)

Specifies the method that the system uses to answer incoming calls.

**\*DTR** The system enters the Data Terminal Ready state, signals the modem to answer calls, and waits for the modem to enter the Data Set Ready (DSR) state.

### **\*CDSTL**

The system enters the Connect Data Set to Line (CDSTL) state after monitoring the Ring Indicator to signal the modem to answer the call.

Top

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## Remote answer timer (RMTANSTMR)

Specifies the amount of time that system waits for the modem to enter the Data Set Ready (DSR) state after dialing before signaling an error.

### *answer-timer*

Specify a value ranging from 30 through 120 seconds in 5-second intervals.

Top

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## Text 'description' (TEXT)

Specifies text that briefly describes the line description.

### **\*BLANK**

Text is not specified.

### *character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

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## Attached nonswitched ctls (CTL)

Specifies, for nonswitched lines, the names of one or more controllers to which this line is attached. The controller descriptions must already exist.

You can enter multiple values for this parameter.

*name* Specify the names of one or more attached nonswitched controllers. Up to 254 controller names can be specified.

Top

---

## Modem data rate select (MODEMRATE)

Specifies the speed at which the line operates if the modem has the data rate select feature.

**\*FULL** The line operates at the full rate of the modem.

**\*HALF**  
The line operates at half the full rate of the modem.

Top

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## Error threshold level (THRESHOLD)

Specifies the temporary error threshold level being monitored by the system. A permanent error is reported only if the errors occurred consecutively and exceeded the retry limit.

**Note:** Specifying the THRESHOLD parameter affects all threshold errors. They cannot be specified individually.

**\*OFF** No threshold errors are reported.

**\*MIN** The threshold for errors is set to a minimum monitoring level.

**\*MED** The threshold for errors is set to a medium monitoring level.

**\*MAX** The threshold for errors is set to a maximum monitoring level.

Top

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## Modulus (MODULUS)

Specifies whether the extended sequence numbers are used.

**8** Extended sequence numbers are not used (Modulus 8).

**128** Extended sequence numbers are used (Modulus 128).

Top

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## Maximum outstanding frames (MAXOUT)

Specifies the maximum number of frames that can be sent to a remote system before the remote system must respond back. For modulus 8, the maximum number of frames must be 1 to 7. For modulus 128, the maximum number of frames must be 8 to 28.

*maximum-outstanding-frames*

Specify a value from 1 to 28 for the number of outstanding frames.

---

## Clear To Send timer (CTSTMR)

Specifies the amount of time the system waits for the modem to enter or exit the Clear to Send (CTS) state before signaling an error.

### *cts-timer*

Specify a value ranging from 10 through 60 seconds.

Top

---

## Link speed (LINKSPEED)

Specifies the link speed in bits per second (bps). This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

### **\*INTERFACE (SDLC and X.25 only)**

The link speed is based on the physical interface type: 9600 bps for RS-232/V.24 and X.21 bis/V.24, 48000 bps for V.35 and X.21 bis/V.35, and 64000 bps for X.21 and RS-449V.36.

**\*MIN** A link speed of less than 1200 bps is used.

**\*MAX** A link speed greater than 100M bps is used.

### *link-speed*

Specify a link speed. The valid link speeds are 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M and 16M bps.

Top

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## Cost/connect time (COSTCNN)

Specifies the relative cost of being connected on the line. Zero implies a low cost while 255 indicates a high cost. This parameter is valid only if APPN is used on the system.

### **\*CNN (SDLC and IDLC only)**

The cost per connection time is based on the connection type: Zero for nonswitched connections and 128 for switched connections.

### *cost-per-connect-time*

Specify a value ranging from 0 through 255.

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## Cost/byte (COSTBYTE)

Specifies the relative cost per byte for sending and receiving data on the line. Zero implies a low cost while 255 indicates a high cost. This parameter is valid only if APPN is used on the system.

### **\*CNN (SDLC and IDLC only)**

The cost per byte is based on the connection type: Zero for nonswitched connections and 128 for switched connections.

*cost-per-byte*

Specify a value ranging from 0 through 255.

Top

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## Security for line (SECURITY)

Specifies the security level of the physical line. This parameter is valid only if APPN is used on the system.

**\*NONSECURE**

There is no security on the line.

**\*PKTSWTNET**

A packet switched network is used. Data does not always follow the same path through the network.

**\*UNDRGRDCBL**

An underground cable is used.

**\*SECURECND**

A secure, but unguarded, conduit is used.

**\*GUARDCND**

A guarded conduit, protected against physical tapping, is used.

**\*ENCRYPTED**

Data flowing on the line is encrypted.

**\*MAX** A guarded conduit, protected against physical and radiation tapping is used.

Top

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## Propagation delay (PRPDLY)

Specifies the level of propagation delay on the line. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system. The order of the values from shortest to longest delay is \*MIN, \*LAN, \*TELEPHONE, \*PKTSWTNET, and \*SATELLITE.

**\*MIN** The minimum propagation delay is used.

**\*LAN** Propagation delay using a local area network.

**\*TELEPHONE**

Propagation delay using telephone lines.

**\*PKTSWTNET**

Propagation delay using a packet switched network.

**\*SATELLITE**

Propagation delay using satellite communications.

**\*MAX** The maximum propagation delay is used.

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## User-defined 1 (USRDFN1)

This field is used to describe unique characteristics of the line that you want to control. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

**128** The default value is 128.

### *user-defined-1*

Specify a value ranging from 0 through 255.

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## User-defined 2 (USRDFN2)

This field is used to describe unique characteristics of the line that you want to control. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

**128** The default value is 128.

### *user-defined-2*

Specify a value ranging from 0 through 255.

Top

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## User-defined 3 (USRDFN3)

This field is used to describe unique characteristics of the line that you want to control. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

**128** The default value is 128.

### *user-defined-3*

Specify a value ranging from 0 through 255.

Top

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## Recovery limits (CMNRCYLMT)

Specifies the second-level communications recovery limits to be used for this line description.

The possible **count-limit** values are:

**2** Two recovery attempts are made within the specified time interval.

### **\*SYSVAL**

The value in the QCMNRCYLMT system value is used.

### *count-limit*

Specify the number of recovery attempts to be performed by the system. Valid values range from 0 through 99.

The possible **time-interval** values are:

**5** The specified number of recovery attempts are made within a 5-minute interval.

### *time-interval*

Specify the number of minutes within which recovery attempts are made. Valid values range from 0 through 120 in 1-minute intervals.

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## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### \*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### **\*EXCLUDE**

The user cannot access the object.

### **\*LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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---

## Examples

```
CRTLINSDLC  LIND(BOSTON)  RSRNAME(LIN041)
```

This command creates an SDLC line description named BOSTON with a resource name of LIN041.

Top

---

## Error messages

### \*ESCAPE Messages

#### CPF2718

Line description &1 not created due to errors.

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---

## Create Line Desc (TDLC) (CRTLINTDLC)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Line Description (TDLC) (CRTLINTDLC) command creates a line description for a twinaxial data link control line.

Top

---

### Parameters

Keyword	Description	Choices	Notes
LIND	Line description	<i>Name</i>	Required, Positional 1
WSC	Attached work station ctl	<i>Name</i>	Required, Positional 2
ONLINE	Online at IPL	<b>*YES</b> , <b>*NO</b>	Optional
TEXT	Text 'description'	<i>Character value</i> , <b>*BLANK</b>	Optional
NETCTL	Network controller	<i>Name</i>	Optional
CTL	Attached nonswitched ctls	Values (up to 64 repetitions): <i>Name</i>	Optional
AUT	Authority	<i>Name</i> , <b>*CHANGE</b> , <b>*ALL</b> , <b>*USE</b> , <b>*EXCLUDE</b> , <b>*LIBCRTAUT</b>	Optional

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---

### Line description (LIND)

Specifies the name of the line description

This is a required parameter.

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---

### Attached work station ctl (WSC)

Specifies the name of the work station controller to which the 5150 devices and other displays are attached.

*name* Specify the work station controller name.

Top

---

### Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

**\*YES** The line is automatically varied on at initial program load (IPL).

**\*NO** This line is not automatically varied on at IPL.

---

## Text 'description' (TEXT)

Specifies text that briefly describes the line description.

### \*BLANK

Text is not specified.

### *character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

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---

## Network controller (NETCTL)

Specifies the name of an existing network controller. This network controller is used to run TCP/IP over the connection.

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---

## Attached nonswitched ctls (CTL)

Specifies, for nonswitched lines, the names of one or more controllers to which this line is attached. The controller descriptions must already exist.

You can enter multiple values for this parameter.

*names* Specify up to 56 APPC controller names.

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---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### \*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### \*EXCLUDE

The user cannot access the object.

### \*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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## Examples

### Example 1: Creating a TDLC Line Description

```
CRTLINTDLC LIND(WNFLINE) WSC(CTL01)
```

This command creates a TDLC line description named WSFLINE that is attached to work station controller CTL01.

### Example 2: Creating a TDLC Line Description Associated with a Network Controller

```
CRTLINTDLC LIND(NETLINE) WSC(CTL01) NETCTL(NETC01)
```

This command creates a TDLC line description named NETLINE that is attached to work station controller CTL01, and NETC01 is used as network controller to run TCP/IP over the connection.

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---

## Error messages

### \*ESCAPE Messages

#### CPF2718

Line description &1 not created due to errors.

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## Create Line Desc (Token-Ring) (CRTLINTRN)

Where allowed to run: All environments (\*ALL)  
 Threadsafte: No

Parameters  
 Examples  
 Error messages

The Create Line Description (Token-Ring Network) (CRTLINTRN) command creates a line description for a token-ring network line.

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### Parameters

Keyword	Description	Choices	Notes
LIND	Line description	<i>Name</i>	Required, Key, Positional 1
RSRCNAME	Resource name	<i>Name</i> , *NWID, *NWSD	Required, Key, Positional 2
NWITYPE	NWI type	*FR	Optional, Key
ONLINE	Online at IPL	*YES, *NO	Optional
VRYWAIT	Vary on wait	15-180, *NOWAIT	Optional
MAXCTL	Maximum controllers	1-256, 40	Optional
NWI	Attached NWI	<i>Name</i> , *NONE	Optional
NWIDLCI	DLC identifier	1-1018, *NONE	Optional
NWS	Network server description	Single values: *NONE Other values: <i>Element list</i>	Optional
	Element 1:	<i>Name</i>	
	Element 2: Port number	1-3, *INTERNAL	
LINESPEED	Line speed	4M, 16M, 100M, *AUTO, *NWI	Optional
DUPLEX	Duplex	<i>Character value</i> , *HALF, *FULL, *AUTO	Optional
MAXFRAME	Maximum frame size	265-16393, 265, 521, 1033, 1466, 1556, 1600, 1994, 4060, 8156, 16393	Optional
LECFRAME	LEC frame size	1516, 4544, 9234, 18190	Optional
ADPTADR	Local adapter address	<i>Character value</i> , *ADPT	Optional
EXCHID	Exchange identifier	X'05600000'-X'056FFFFF', *SYSGEN	Optional
SSAP	SSAP list	Single values: *SYSGEN Other values (up to 24 repetitions): <i>Element list</i>	Optional
	Element 1: Source service access point	X'02'-X'FE'	
	Element 2: SSAP maximum frame	265-16393, *MAXFRAME, 265, 521, 1033, 1466, 1994, 4060, 8156, 16393	
	Element 3: SSAP type	*CALC, *NONSNA, *SNA, *HPR	
ACCTYPE	ATM access type	*SVC, *PVC	Optional
PVCID	PVC identifiers	<i>Element list</i>	Optional
	Element 1: Virtual path identifier	0-7	
	Element 2: Virtual circuit identifier	32-4095	
USELECSADR	Use LECS address	*YES, *NO	Optional

Keyword	Description	Choices	Notes
LESATMADR	LES ATM address	Single values: <b>*NONE</b> Other values: <i>Element list</i>	Optional
	Element 1: Network prefix	<i>Hexadecimal value</i>	
	Element 2: End system identifier	<i>Hexadecimal value</i>	
	Element 3: Selector byte	<i>Hexadecimal value</i>	
EMLLANNAME	Emulated LAN name	<i>Character value, *NONE</i>	Optional
LECDSTIMO	LEC disconnect time out	1-30, <b>10</b> , *NOMAX	Optional
TEXT	Text 'description'	<i>Character value, *BLANK</i>	Optional
NETCTL	Network controller	<i>Name</i>	Optional
ACTLANMGR	Activate LAN manager	<b>*YES</b> , *NO	Optional
TRNLOGLVL	TRLAN manager logging level	<b>*OFF</b> , *MIN, *MED, *MAX	Optional
TRNMGRMODE	TRLAN manager mode	<b>*OBSERVING</b> , *CONTROLLING	Optional
LOGCFGCHG	Log configuration changes	<b>*LOG</b> , *NOLOG	Optional
TRNINFBCN	Token-ring inform of beacon	<b>*YES</b> , *NO	Optional
FCNADR	Functional address	Single values: <b>*NONE</b> Other values (up to 31 repetitions): C00000000001, C00000000002, C00000000004, C00000000008, C00000000010, C00000000020, C00000000040, C00000000080, C00000000100, C00000000200, C00000000400, C00000000800, C00000001000, C00000002000, C00000004000, C00000008000, C00000010000, C00000020000, C00000040000, C00000080000, C00000100000, C00000200000, C00000400000, C00000800000, C00001000000, C00002000000, C00004000000, C00008000000, C00010000000, C00020000000, C00040000000	Optional
ELYTKNRLS	Early token release	*YES, *NO, <b>*LINESPEED</b>	Optional
THRESHOLD	Error threshold level	<b>*OFF</b> , *MIN, *MED, *MAX	Optional
LINKSPEED	Link speed	1200-603979776000, 4M, 10M, <b>16M</b> , 100M, *MIN, *MAX	Optional
COSTCNN	Cost/connect time	0-255, <b>0</b>	Optional
COSTBYTE	Cost/byte	0-255, <b>0</b>	Optional
SECURITY	Security for line	<b>*NONSECURE</b> , *PKTSWTNET, *UNDGRDCBL, *SECURECND, *GUARDCND, *ENCRYPTED, *MAX	Optional
PRPDLY	Propagation delay	*MIN, <b>*LAN</b> , *TELEPHONE, *PKTSWTNET, *SATELLITE, *MAX	Optional
USRDFN1	User-defined 1	0-255, <b>128</b>	Optional
USRDFN2	User-defined 2	0-255, <b>128</b>	Optional
USRDFN3	User-defined 3	0-255, <b>128</b>	Optional
AUTOCRTCTL	Autocreate controller	*YES, <b>*NO</b>	Optional
AUTODLTCTL	Autodelete controller	1-10000, <b>1440</b> , *NONE	Optional
CMNRCYLMT	Recovery limits	Single values: *SYSVAL Other values: <i>Element list</i>	Optional
	Element 1: Count limit	0-99, <b>2</b>	
	Element 2: Time interval	0-120, <b>5</b>	
MSGQ	Message queue	Single values: <b>*SYSVAL</b> , *SYSOPR Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Message queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i>	
AUT	Authority	<i>Name</i> , <b>*CHANGE</b> , *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional



---

## Line description (LIND)

Specifies the name of the line description

This is a required parameter.

---

## Resource name (RSRCNAME)

Specifies the resource name that identifies the hardware the description represents.

**Note:** Use the Work with Hardware Resources (WRKHDWRSC) command with \*CMN specified for the TYPE parameter to help determine the resource name. The resource name is on the port. For example, the resource name may be CMN01 on an Ethernet port.

**Note:** The value specified on the RSRCTYPE parameter cannot be changed from \*NWSD to another value or from another value to \*NWSD.

### \*NWID

The resource name specified on the attached frame relay network interface description is used.

### \*NWSD

The resource name is determined by the network server description used.

*name* Specify the resource name of the communications port.

This is a required parameter.

---

## NWI type (NWITYPE)

Specifies the network interface type.

**Note:** This parameter is ignored when RSRCTYPE is not \*NWID.

\*FR The network interface type is frame relay.

---

## Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

\*YES The line is automatically varied on at initial program load (IPL).

\*NO This line is not automatically varied on at IPL.

---

## Vary on wait (VRYWAIT)

Specifies whether the line is varied on asynchronously or synchronously. For synchronous vary on, this parameter specifies how long the system waits for the vary on to complete.

### **\*NOWAIT**

The system does not wait for vary on completion. The line is varied on asynchronously.

### *vary-on-wait*

Specify the time (in seconds) to wait. Valid values range from 15 through 180. The system waits until the line is varied on, or until the specified time passes, before completing the Vary Configuration (VRYCFG) command.

### **Notes:**

1. When ONLINE(\*YES) is used, specifying a wait time in the line description affects system IPL time. In such cases, system IPL time is influenced by the amount of time required to synchronously vary on the line or reach the wait-time value.
2. The time required to vary on a line is the time it takes to:
  - Put tasks in place to manage the line
  - Activate the communications I/O processor (IOP), including downloading the IOP model-unique Licensed Internal Code
  - Establish the communications tasks and processes

Normal vary-on time ranges from 5 through 45 seconds, but can be longer, depending on the system, line protocol, and other factors.

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---

## Maximum controllers (MAXCTL)

Specifies the maximum number of controllers that the line supports.

### *maximum-controllers*

Specify value ranging from 1 to 256. The number must be large enough to account for all of the controllers that are currently active to this line, and for those controllers you know will be attached in the near future.

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---

## Attached NWI (NWI)

Specifies the network interface description to use.

**Note:** NWI(\*NONE) must be specified when RSRNAME(\*NWID) is not specified. Otherwise, NWI(\*NONE) can be specified only when NWIDLICI(\*NONE) is also specified.

### **\*NONE**

No network interface is specified.

*name* Specify the name of the network interface description to be used.

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---

## DLC identifier (NWIDLICI)

Specifies the data link connection identifier (DLCI) for the network interface.

**Note:** NWIDLCI(\*NONE) must be specified when RSRCTYPE(\*NWID) is not specified. Otherwise, NWIDLCI(\*NONE) can be specified only when NWI(\*NONE) is also specified.

**\*NONE**

A DLCI is not specified for the network interface.

***data-link-connection-ID***

Specify the DLCI for the network interface to which this line permanently attaches. Valid values range from 1 through 1018.

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---

## Network server description (NWS)

Specifies the network server name to which this line is attached.

**Note:** The NWS parameter must be specified when RSRCTYPE(\*NWS) is specified.

When the network server description is of TYPE(\*AIX), only \*INTERNAL can be specified for the network server port and the line must be a token-ring line.

The possible Network server description values are:

**\*NONE**

No server description is specified.

***name*** Specify the name of an existing network server description to be used.

The possible Network server port value is:

**\*INTERNAL**

The internal network server port to which the line is attached. There can only be one internal network server port configured for each network server.

***network-server-port***

Specify the network server port to which the line is attached. Valid values are 1 and 2.

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---

## Line speed (LINESPEED)

Specifies the line speed in bits per second (bps).

**Note:** When RSRCTYPE(\*NWID) and NWI(\*FR) are specified, \*NWI must be specified on this parameter.

**4M** The line speed is 4M bps.

**16M** The line speed is 16M bps.

**100M** The line speed is 100M bps.

**\*AUTO**

The line speed value will be determined by the hardware using auto-negotiation.

**\*NWI** The line speed used is for a network interface.

**Note:** LINESPEED(\*NWI) is only valid when RSRCTYPE(\*NWID) and NWI(\*FR) are specified.

Duplex (DUPLEX) parameter set to \*AUTO, if it has a default value and line speed (LINESPEED) parameter has 100M or \*AUTO.

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## Duplex (DUPLEX)

Specifies whether the hardware can send and receive data simultaneously. In half duplex mode, the hardware must alternate between sending data and receiving data. In full duplex mode, one cable is dedicated to send data and another cable is dedicated to receive data. Therefore, data can be sent and received simultaneously. A hub is required for full duplex.

### \*HALF

The line communicates using half duplex mode.

\*FULL The line communicates using full duplex mode.

### \*AUTO

The duplex value will be determined by the hardware using auto-negotiation.

**Note:** Duplex (DUPLEX) parameter set to \*AUTO, if it has a default value and line speed (LINESPEED) parameter has 100M or \*AUTO.

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## Maximum frame size (MAXFRAME)

Specifies the maximum frame size that can be transmitted and received on this line description.

A default of 1556 bytes is used when RSRCTYPE(\*NWID) and NWITYPE(\*FR) are specified. A default of 4060 is used when RSRCTYPE(\*NWID) and NWITYPE(\*ATM) are specified. Otherwise, a default of 4105 bytes is used.

### NOTES

1. If the token-ring adapter supports only a 4M LINESPEED, values 4472 and lower can be specified.
2. When RSRCTYPE(\*NWID) and NWITYPE(\*FR) are specified, valid values for this parameter range from 265 through 8148 bytes. The MAXFRAME value is provided by your telephone carrier from which you should subtract 44 bytes for the size of the header.
3. When RSRCTYPE(\*NWID) and NWITYPE(\*ATM) are specified, valid values for this parameter range from 265 through 16393 bytes. The MAXFRAME value is provided by your telephone carrier from which you should subtract 20 bytes for the size of the header.

### *maximum-frame-size*

Specify the maximum frame size value to be used. The valid frame sizes (in bytes) range from 265 through 8148 bytes when the network interface is a frame relay. Otherwise, valid frame sizes (in bytes) range from 265 through 16393.

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**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## LEC frame size (LECFRAME)

Specifies the LAN emulation client (LEC) frame size that can be transmitted and received on this line description.

**Note:** MAXFRAME must always be at least 20 less than this field.

**4544** The LEC frame size is 4544 bytes.

**1516** The LEC frame size is 1516 bytes.

**9234** The LEC frame size is 9234 bytes.

**18190** The LEC frame size is 18190 bytes.

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## Local adapter address (ADPTADR)

Specifies the local system's token-ring adapter address.

### \*ADPT

This value gives the user the present token-ring address for this token-ring adapter card. This address can be shown by using the Display Line Description (DSPLIND) command for this line description after it has successfully varied on.

**Note:** This value is not valid when RSRCTYPE(\*NWID) and NWITYPE(\*FR) are specified, or RSRCTYPE(\*NWSD) is specified.

### *local-adapter-address*

Specify an adapter address of your choice to describe this system in the token-ring network. Valid values are hexadecimal 400000000000 through 7FFFFFFFFFFFFF.

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## Exchange identifier (EXCHID)

Specifies the hexadecimal exchange identifier that is used to identify the local system to the remote system. The 8-digit hexadecimal exchange identifier contains three digits for the block number and five digits for the identifier of this system.

### \*SYSGEN

This value allows the operating system to create the exchange identifier. Use the Display Line Description (DSPLIND) command to see the resulting exchange identifier.

### *exchange-ID*

Specify an 8-character (four hexadecimal bytes) exchange identifier ranging from 05600000 through 056FFFFFFF.

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## SSAP list (SSAP)

Specifies the source service access point (SSAP) information, including an SSAP value, a maximum frame size, and an SSAP type.

You can enter multiple values for this parameter.

The possible **source service access point** values are:

#### **\*SYSGEN**

The system generates the source service access points 04, 12, AA or C8.

The possible SSAPs value is:

#### ***source-service-access-point***

Specify a source service access point for receiving and transmitting data. A maximum of 24 SSAP values can be specified.

- For Transmission Control Protocol/Internet Protocol (TCP/IP) applications, the SSAP must be AA.
- For Systems Network Architecture (SNA) applications, the SSAP must be a hex value ranging from 04 through 9C in multiples of four (04, 08, 0C, and so on).
- For high-performance routing (HPR) applications, the SSAP must be hex C8.
- For non-SNA applications, the SSAP must be a hex value ranging from 02 through FE in multiples of two (02, 04, 06, and so on).

The possible **SSAP maximum frame size** values are:

#### **\*MAXFRAME**

The system uses the value specified on the MAXFRAME parameter of this command for the SSAP maximum frame size.

#### ***SSAP-maximum-frame***

Specify the maximum SSAP frame size (the maximum size of the data field that can be transmitted or received). When RSRCTYPE(\*NWID) and NWITYPE(\*FR) are specified, valid values for this parameter range from 265 through 8148 bytes. Otherwise, valid values for this parameter range from 265 through 16393 bytes.

**Note:** This value cannot be larger than the value specified on the MAXFRAME parameter.

The possible **SSAP type** values are:

#### **\*CALC**

The system calculates the value to use.

**\*SNA** The SSAP used is used for SNA communications. Valid values range from 04 through hex 9C in multiples of four (04, 08, 0C, and so on).

#### **\*NONSNA**

The SSAP is used for non-SNA communications. Valid values range from hex 02 through hex FE in multiples of two (02,04, 06, and so on).

**\*HPR** The SSAP is used for HPR communications. It also can be used for SNA applications. The valid value is hex C8.

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**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## **ATM access type (ACCTYPE)**

Specifies the type of access to the ATM network.

**\*SVC** This line represents a LAN emulation client using switched virtual circuits.

**\*PVC** This line represents a LAN emulation client using a permanent virtual circuit.

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**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## PVC identifiers (PVCID)

Specifies the virtual path identifier and virtual circuit identifier pairs associated with this permanent virtual circuit.

**Note:** PVCID is required if ACCTYPE(\*PVC) is specified.

The possible **Virtual Path Identifier** value is:

### *virtual-path-id*

Specify a number that represents the virtual path identifier. This number must be in the range of 0 to 7.

The possible **Virtual Circuit Identifier** value is:

### *virtual-circuit-id*

Specify a number that represents the virtual circuit identifier. This number must be in the range of 32 to 4095.

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**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## Use LECS address (USELECSADR)

Specifies whether the LAN emulation configuration server (LECS) should be connected to request the remote LAN emulation server (LES) address.

**\*YES** The LECS address is used.

**\*NO** The LECS address is not used.

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**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## LES ATM address (LESATMADR)

Specifies the ATM network address of the remote LAN emulation server.

**Note:** This parameter cannot be \*NONE if USELECSADR(\*NO) is specified.

The possible **Single Value** is:

### **\*NONE**

The ATM network address is not used.

The possible **Network prefix** value is:

### *network-prefix*

Specify the network prefix of the ATM address of the remote server. This is a 26 digit hexadecimal value.

The possible **End system identifier** value is:

*end-system-identifier*

Specify the end system identifier of the remote server. This is a 12 digit hexadecimal value.

The possible **Selector byte** value is:

*selector byte*

Specify the selector byte of the remote server. This is a two digit hexadecimal value.

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**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## Emulated LAN name (EMLLANNAME)

Specifies the emulated LAN name.

**\*NONE**

The emulated LAN name not used.

*emulated-LAN-name*

Specify the emulated LAN name. A maximum of 32 characters can be specified.

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**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## LEC disconnect time out (LECDSTIMO)

Specifies the amount of time in minutes a LAN emulation (LE) client waits before disconnecting an idle virtual circuit connection to another client.

**10** The LE client waits 10 minutes.

**\*NOMAX**

The LE client waits indefinitely.

*LEC-disconnect-timeout*

Specify the number of minutes the LE client waits before disconnecting an idle virtual circuit connection to another client. The value must be in the range of 1 to 30 minutes.

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## Text 'description' (TEXT)

Specifies text that briefly describes the line description.

**\*BLANK**

Text is not specified.

*character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

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## Network controller (NETCTL)

Specifies the name of an existing network controller.

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## Activate LAN manager (ACTLANMGR)

Specifies whether Local Area Network (LAN) Manager is activated for this line.

### NOTES:

1. ACTLANMGR(\*YES) must be specified when RSRCTYPE(\*NWID) is specified.
2. ACTLANMGR(\*NO) will ignore the values in TRNLOGLVL, TRNMGRMODE, LOGCFGCHG, and TRNINFBCN.

**\*YES** LAN manager support is activated for this line.

**\*NO** LAN manager support is not activated for this line.

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## TRLAN manager logging level (TRNLOGLVL)

Specifies the error logging level used by the TRLAN Manager.

**Note:** TRNLOGLVL(\*OFF) must be specified when RSRCTYPE(\*NWID) is specified.

**\*OFF** All error reporting on the specified line is stopped.

**\*MIN** The minimum reporting level, which reports only conditions that indicate degraded performance, is used.

**\*MED** The medium reporting level, which reports conditions that indicate potential degraded performance in addition to the minimum reporting level, is used.

**\*MAX** The maximum reporting level, which reports all error conditions, including the information that would be reported for \*MIN and \*MED reporting levels, is used.

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## TRLAN manager mode (TRNMGRMODE)

Specifies which mode of network manager will be active on this line. A controlling manager can do functions that an observing manager can not do such as removing stations and performing a path test.

However, only one controlling manager should be active on any one ring.

**Note:** TRNMGRMODE(\*OBSERVING) must be specified when RSRCTYPE(\*NWID) is specified.

### \*OBSERVING

This line's manager will function as an observing network manger.

### \*CONTROLLING

This line's manager will function as a controlling network manger.

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## Log configuration changes (LOGCFGCHG)

Specifies if this line's network manager will keep track of changes that happen to the nearest active upstream neighbor (NAUN).

**Note:** LOGCFGCHG(\*LOG) must be specified when RSRCTYPE(\*NWID) is specified.

\*LOG The line manager logs the changes.

\*NOLOG

This line's manager will not log changes.

Top

---

## Token-ring inform of beacon (TRNINFBCN)

Specifies if this line's network manager will send a message to the QSYSOPR message queue when a beaconing condition occurs.

**Note:** TRNINFBCN(\*YES) must be specified when RSRCTYPE(\*NWID) is specified.

\*YES This line's manager will send a message to the QSYSOPR message queue when a beaconing condition occurs.

\*NO This line's manager will not send a message to the QSYSOPR message queue when a beaconing condition occurs but will instead log an entry in the QHST log.

Top

---

## Functional address (FCNADR)

Specifies whether token ring functional addresses are used.

\*NONE

A functional address is not used.

### *functional-address*

Specify a group of hexadecimal functional addresses that are encoded in bit-significant format. Valid values range from hex C00000000001 through hex C00040000000. The first digit must be C. Functional addresses must be unique.

#### **Active Monitor**

C00000000001

#### **Ring Parameter Server**

C00000000002

#### **Network Server Heartbeat**

C00000000004

#### **Ring Error Monitor**

C00000000008

#### **Configuration Report Server**

C00000000010

#### **Synchronous Bandwidth Manager**

C00000000020

#### **Locate Directory Server**

C00000000040

**NetBIOS**

C00000000080

**Bridge**

C00000000100

**IMPL Server**

C00000000200

**Ring Authorization Server**

C00000000400

**LAN Gateway**

C00000000800

**Ring Wiring Concentration**

C00000001000

**LAN Manager**

C00000002000

**User-defined**

C00000004000 through C00040000000

Top

---

**Early token release (ELYTKNRLS)**

Specifies if the early token release option is used by this line.

**Note:** ELYTKNRLS(\*LINESPEED) must be specified when RSRCTYPE(\*NWID) is specified.

**\*LINESPEED**

This line's LINESPEED parameter will select if the early token release option will be used or not used.

**\*YES** This line will use the early token release option.

**\*NO** This line will not use the early token release option.

Top

---

**Error threshold level (THRESHOLD)**

This parameter, and its values \*OFF, \*MIN, \*MED, and \*MAX, can be specified but it is not used by the system starting in release V2R3M0. The parameter may be removed in a later release.

Top

---

**Link speed (LINKSPEED)**

Specifies the link speed in bits per second (bps). This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

**4M** The link speed is 4 million bits per second.

**10M** The link speed is 10 million bits per second.

**16M** The link speed is 16 million bits per second.

**100M** The link speed is 100 million bits per second.

\***MIN** A link speed of less than 1200 bps is used.

\***MAX** A link speed greater than 100M bps is used.

*link-speed*

Specify the link speed. Valid values range from 1200 to 603979776000 bps.

Top

---

## Cost/connect time (COSTCNN)

Specifies the relative cost of being connected on the line. This parameter is required only if APPN is used on the system.

0 The cost per connect time is 0.

*cost-per-connect-time*

Specify a value ranging from 0 through 255.

Top

---

## Cost/byte (COSTBYTE)

Specifies the relative cost per byte for sending and receiving data on the line. Zero implies a low cost while 255 indicates a high cost. This parameter is valid only if APPN is used on the system.

0 The cost per byte is 0.

*cost-per-byte*

Specify a value ranging from 0 through 255.

Top

---

## Security for line (SECURITY)

Specifies the security level of the physical line. This parameter is valid only if APPN is used on the system.

\***NONSECURE**

There is no security on the line.

\***PKTSWTNET**

A packet switched network is used. Data does not always follow the same path through the network.

\***UNDRGRDCBL**

An underground cable is used.

\***SECURECND**

A secure, but unguarded, conduit is used.

\***GUARDCND**

A guarded conduit, protected against physical tapping, is used.

\***ENCRYPTED**

Data flowing on the line is encrypted.

\***MAX** A guarded conduit, protected against physical and radiation tapping is used.

---

## Propagation delay (PRPDLY)

Specifies the level of propagation delay on the line. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system. The order of the values from shortest to longest delay is \*MIN, \*LAN, \*TELEPHONE, \*PKTSWTNET, and \*SATELLITE.

\*LAN Propagation delay using a local area network.

\*MIN The minimum propagation delay is used.

### \*TELEPHONE

Propagation delay using telephone lines.

### \*PKTSWTNET

Propagation delay using a packet switched network.

### \*SATELLITE

Propagation delay using satellite communications.

\*MAX The maximum propagation delay is used.

Top

---

## User-defined 1 (USRDFN1)

This field is used to describe unique characteristics of the line that you want to control. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

128 The default value is 128.

### *user-defined-1*

Specify a value ranging from 0 through 255.

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---

## User-defined 2 (USRDFN2)

This field is used to describe unique characteristics of the line that you want to control. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

128 The default value is 128.

### *user-defined-2*

Specify a value ranging from 0 through 255.

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---

## User-defined 3 (USRDFN3)

This field is used to describe unique characteristics of the line that you want to control. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

128 The default value is 128.

### *user-defined-3*

Specify a value ranging from 0 through 255.

---

## Autocreate controller (AUTOCRTCTL)

Specifies whether the system automatically creates an advanced program-to-program communications (APPC) controller description when an incoming advanced peer-to-peer networking (advanced peer-to-peer networking (APPN)) call is received from an adjacent system on the Local Area Network (LAN).

**\*NO** A controller description is not automatically created for this line.

**\*YES** A controller description is automatically created for this line.

Top

---

## Autodelete controller (AUTODLTCTL)

Specifies how many minutes the system waits before automatically varying off and deleting automatically created advanced program-to-program communications (APPC) controller descriptions (associated with this line) which have gone to an idle state.

**1440** The controller description can be idle for 1440 minutes (24 hours).

**\*NONE**

The controller descriptions for this line are not automatically deleted.

*auto-delete-controller*

Specify a value ranging from 1 through 10000 minutes. The value 1440 is 24 hours.

Top

---

## Recovery limits (CMNRCYLMT)

Specifies the second-level communications recovery limits to be used for this line description.

The possible **count-limit** values are:

**2** Two recovery attempts are made within the specified time interval.

**\*SYSVAL**

The value in the QCMNRCYLMT system value is used.

*count-limit*

Specify the number of recovery attempts to be performed by the system. Valid values range from 0 through 99.

The possible **time-interval** values are:

**5** The specified number of recovery attempts are made within a 5-minute interval.

*time-interval*

Specify the number of minutes within which recovery attempts are made. Valid values range from 0 through 120 in 1-minute intervals.

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---

## Message queue (MSGQ)

Specifies the message queue to which operational messages are sent.

### \*SYSVAL

The value in the system value QCFGMSGQ is used.

### \*SYSOPR

Messages are sent to the system operator message queue (QSYS/QSYSOPR).

### Qualifier 1: Message queue

*name* Specify the name of the message queue to which operational messages are sent.

### Qualifier 2: Library

*name* Specify the name of the library where the message queue is located.

Top

---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### \*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### \*EXCLUDE

The user cannot access the object.

### \*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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## Examples

### Example 1: Creating a Token-Ring Line Description

```
CRTLINTRN LIND(TRLAN1) RSRNAME(LIN011)
TEXT('TOKEN-RING LINE')
```

This command creates a token-ring line (TRLAN1) with resource name LIN011 and exchange identifier 05612345.

### Example 2: Creating a Token-Ring Line Description

```
CRTLINTRN LIND(TRNLIN) RSRNAME(*NWS) NWS(REMODEL 2)
```

This command creates a token-ring line description named TRNLIN that is attached to port 2 of network server REMODEL.

Top

---

## Error messages

### \*ESCAPE Messages

#### CPF2718

Line description &1 not created due to errors.

Top



## Create Line Desc (Wireless) (CRTLINWLS)

Where allowed to run: All environments (\*ALL)  
 Threadsafes: No

Parameters  
 Examples  
 Error messages

The Create Line Description (Wireless) (CRTLINWLS) command creates a line description for a wireless local area network (LAN) line.

**Note:** Extended wireless line configuration data is contained in the source file and member specified on the INZFILE and INZMBR parameters, respectively. When the line is varied on, this configuration data is downloaded to the wireless adapter. It is recommended that INZPGM(QZXCINZ) and INZFILE(QEWLSRC) be used, and that the source member configuration initialization data be specified on the INZMBR parameter. For more information about downloading extended wireless line configuration data, see the LAN, Frame-Relay and ATM Support book, SC41-5404.

More information about using this command is in the Communications Configuration book, SC41-5401.

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### Parameters

Keyword	Description	Choices	Notes
LIND	Line description	<i>Name</i>	Required, Positional 1
RSRCNAME	Resource name	<i>Name</i>	Required, Positional 2
ONLINE	Online at IPL	<b>*YES</b> , <b>*NO</b>	Optional
VRYWAIT	Vary on wait	15-180, <b>*NOWAIT</b>	Optional
ADPTADR	Local adapter address	X'020000000000'-X'FEFFFFFFFF', <b>*ADPT</b>	Optional
EXCHID	Exchange identifier	X'05600000'-X'056FFFFFF', <b>*SYSGEN</b>	Optional
ETHSTD	Ethernet standard	<b>*ETHV2</b> , <b>*IEEE8023</b> , <b>*ALL</b>	Optional
SSAP	SSAP list	Single values: <b>*SYSGEN</b> Other values (up to 24 repetitions): <i>Element list</i>	Optional
	Element 1: Source service access point	X'02'-X'FE'	
	Element 2: SSAP maximum frame	265-1496, <b>*MAXFRAME</b> , 265, 521, 1033, 1466, 1493, 1496	
	Element 3: SSAP type	<b>*CALC</b> , <b>*NONSNA</b> , <b>*SNA</b>	
INZFILE	Initialization source file	<i>Qualified object name</i>	Optional
	Qualifier 1: Initialization source file	<i>Name</i> , <b>*NONE</b>	
	Qualifier 2: Library	<i>Name</i> , <b>*LIBL</b> , <b>*CURLIB</b>	
INZMBR	Initialization source member	<i>Name</i> , <b>*NONE</b>	Optional
INZPGM	Initialization program	<i>Qualified object name</i>	Optional
	Qualifier 1: Initialization program	<i>Name</i> , <b>*NONE</b>	
	Qualifier 2: Library	<i>Name</i> , <b>*LIBL</b> , <b>*CURLIB</b>	
TEXT	Text 'description'	<i>Character value</i> , <b>*BLANK</b>	Optional

Keyword	Description	Choices	Notes
NETCTL	Network controller	<i>Name</i>	Optional
GRPADR	Group address	Single values: <b>*NONE</b> Other values (up to 12 repetitions): X'010000000000'-X'FDFDFDFDFDFDF'	Optional
MAXCTL	Maximum controllers	1-256, <b>40</b>	Optional
LINKSPEED	Link speed	*MIN, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, <b>280000</b> , 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, *MAX	Optional
COSTCNN	Cost/connect time	0-255, <b>0</b>	Optional
COSTBYTE	Cost/byte	0-255, <b>0</b>	Optional
SECURITY	Security for line	<b>*NONSECURE</b> , *ENCRYPTED	Optional
PRPDLY	Propagation delay	<b>*LAN</b> , *MIN, *MAX	Optional
USRDFN1	User-defined 1	0-255, <b>128</b>	Optional
USRDFN2	User-defined 2	0-255, <b>128</b>	Optional
USRDFN3	User-defined 3	0-255, <b>128</b>	Optional
AUTOCRTCTL	Autocreate controller	*YES, <b>*NO</b>	Optional
AUTODLTCTL	Autodelete controller	1-10000, <b>1440</b> , *NONE	Optional
CMNRCYLMT	Recovery limits	Single values: *SYSVAL Other values: <i>Element list</i>	Optional
	Element 1: Count limit	0-99, <b>2</b>	
	Element 2: Time interval	0-120, <b>5</b>	
AUT	Authority	<i>Name</i> , <b>*CHANGE</b> , *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

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---

## Line description (LIND)

Specifies the name of the line description

This is a required parameter.

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---

## Resource name (RSRCNAME)

Specifies the resource name that describes the automatic call unit port. The resource name consists of the input/output adapter (IOA) resource name and the port number on the IOA. For example, if the resource name of the IOA is LIN01 and the port on the IOA is 1, then the resource name would be LIN011.

**Note:** You can use the Work with Hardware Resources (WRKHDWRSC) command with \*CMN specified for the TYPE parameter to help determine the resource name.

This is a required parameter.

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---

## Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

**\*YES** The line is automatically varied on at initial program load (IPL).

**\*NO** This line is not automatically varied on at IPL.

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---

## Vary on wait (VRYWAIT)

Specifies whether the line is varied on asynchronously or synchronously. For synchronous vary on, this parameter specifies how long the system waits for the vary on to complete.

**\*NOWAIT**

The system does not wait for vary on completion. The line is varied on asynchronously.

*vary-on-wait*

Specify the time (in seconds) to wait. Valid values range from 15 through 180. The system waits until the line is varied on, or until the specified time passes, before completing the Vary Configuration (VRYCFG) command.

**Notes:**

1. When ONLINE(\*YES) is used, specifying a wait time in the line description affects system IPL time. In such cases, system IPL time is influenced by the amount of time required to synchronously vary on the line or reach the wait-time value.
2. The time required to vary on a line is the time it takes to:
  - Put tasks in place to manage the line
  - Activate the communications I/O processor (IOP), including downloading the IOP model-unique Licensed Internal Code
  - Establish the communications tasks and processes

Normal vary-on time ranges from 5 through 45 seconds, but can be longer, depending on the system, line protocol, and other factors.

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## Local adapter address (ADPTADR)

Specifies the 12-character hexadecimal adapter address.

**\*ADPT**

The preset wireless adapter address is used as the local adapter address. The adapter address can be displayed by using the Display Line Description (DSPLIND) command after the line description has been successfully varied on.

*local-adapter-address*

Specify the local wireless adapter address to override the preset local address. The local adapter address must be an individual address (it cannot be a group address). Valid values range from 020000000000 through FFFFFFFF in hexadecimal format. The second digit (from the left) of the address must be 2, 6, A, or E.

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## Exchange identifier (EXCHID)

Specifies the hexadecimal exchange identifier that is used to identify the local system to the remote system. The 8-digit hexadecimal exchange identifier contains three digits for the block number and five digits for the identifier of this system.

### \*SYSGEN

This value allows the operating system to create the exchange identifier. Use the Display Line Description (DSPLIND) command to see the resulting exchange identifier.

### *exchange-ID*

Specify an 8-character (four hexadecimal bytes) exchange identifier ranging from 05600000 through 056FFFFF.

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---

## Ethernet standard (ETHSTD)

Specifies the Ethernet standard frame type that is used on this line.

\***ALL** All Ethernet standards can be used. However, Systems Network Architecture (SNA) data will be placed in IEEE 802.3 frames.

### \*ETHV2

Ethernet Version 2 frames are used for all data.

### \*IEEE8023

IEEE 802.3 frames are used for all data.

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---

## SSAP list (SSAP)

Specifies source service access points (SSAPs). This is the hexadecimal logical address used to route incoming data from the Ethernet bus to the proper user. A maximum frame size can be specified for each SSAP.

**Note:** Ethernet Version 2 (specified as \*ETHV2 on the ETHSTD parameter) does not allow the SSAP values of 06 and AA.

The destination service access point (DSAP), specified by the remote controller, must match one of the SSAPs specified in order for communication to occur. All SSAP values must be unique.

### \*SYSGEN

For ETHSTD(\*ALL or \*IEEE8023), the operating system creates three SSAPs: SSAP 04 for SNA applications; AA and 06 for TCP/IP applications. For ETHSTD(\*ETHV2), the system creates hex 04 for SNA.

The possible SSAPs value is:

### *source-service-access-point*

Specify up to 24 SSAPs, including hex AA and 06 for TCP/IP, and any hexadecimal number 04 through 9C that is divisible by four for SNA applications.

The possible Frame Size for SSAPs values are:

### \*MAXFRAME

The system determines the maximum frame size (data field size) that can be transmitted or

received. If ETHSTD(\*ALL or \*IEEE8023) is specified, \*CALC produces a frame size of 1496 for TCP/IP and SNA SSAPs. If ETHSTD(\*ETHV2) is specified, \*CALC produces a frame size of 1493 for SNA SSAPs.

#### ***SSAP-maximum-frame***

Specify the maximum frame size for each SSAP. Valid values for the maximum frame size range from 265 through 1496.

The possible SSAP Type values are:

#### **\*CALC**

The system determines the value to use.

**\*SNA** The SSAP is used for SNA communications. Valid values range from 04 through 9C and must be divisible by 4.

#### **\*NONSNA**

The SSAP is used for communications other than SNA communications. Valid values range from 02 through FE and must be divisible by 2.

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---

## **Initialization source file (INZFILE)**

Specifies the name of a source file containing configuration initialization data.

**Note:** The INZFILE and INZMBR parameters are required when downloading extended wireless line configuration data to the wireless adapter as discussed at the beginning of this command description.

#### **\*NONE**

No initialization file name is specified.

The name of the initialization file can be qualified by one of the following library values:

**\*LIBL** All libraries in the job's library list are searched until the first match is found.

#### **\*CURLIB**

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

**name** Specify the name of the library to be searched.

**name** Specify the name of a source file containing the initialization data. A value of \*NONE is accepted for this parameter. If a source file name has not been added prior to varying on this line description, then the current IOP defaults are used for initialization.

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---

## **Initialization source member (INZMBR)**

Specifies the name of a source file member containing configuration initialization data.

**Note:** The INZFILE and INZMBR parameters are required when downloading extended wireless line configuration data to the wireless adapter as discussed at the beginning of this command description.

#### **\*NONE**

No source file member name is specified.

*name* Specify the name of a source file member containing the initialization data. If a source member name has not been added prior to varying on this line description, the the current IOP defaults are used for initialization.

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---

## Initialization program (INZPGM)

Specifies the name of a program to manage configuration initialization data.

**Note:** For 2663 wireless adapters, it is recommended that INZPGM(QZXCINZ) be specified. This results in the values of INZFILE and INZMBR being passed to the Change Extended Wireless Line Member (CHGEWLM) command when the line is varied on.

### \*NONE

No initialization program name is specified.

The name of the initialization program can be qualified by one of the following library values:

\*LIBL All libraries in the job's library list are searched until the first match is found.

### \*CURLIB

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

*name* Specify the name of the library to be searched.

*name* Specify the name of a program to manage configuration initialization data. If a program name is specified, it is called when this line description is created. The names of the source file and member containing configuration initialization data are passed to this program as parameters.

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## Text 'description' (TEXT)

Specifies text that briefly describes the line description.

### \*BLANK

Text is not specified.

### *character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

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## Network controller (NETCTL)

Specifies the name of an existing network controller. This parameter can be specified for lines attached to a Transmission Control Protocol/Internet Protocol (TCP/IP) network.

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## Group address (GRPADR)

Specifies whether to include the adapter as part of a wireless group address. This address is used to identify all adapters on the wireless network that have the same group address.

**\*NONE**

A group address is not used.

***group-address***

Specify the address of the group of adapters to which the local adapter is added. Valid values range from 010000000000 through FDFFFFFFFF in hexadecimal format. The second digit (from the left) must be odd. All group addresses must be unique.

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---

## Maximum controllers (MAXCTL)

Specifies the maximum number of SNA controllers that the line supports.

**40** Up to 40 controllers are supported by the line.

***maximum-controllers***

Specify the maximum number of controllers supported by the line. This should be a number large enough to account for all of the controllers that are currently attached to this line, and for those controllers to be attached in the near future. Valid values range from 1 through 256.

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---

## Link speed (LINKSPEED)

Specifies the link speed in bits per second (bps). This parameter is valid only if APPN is used on the system.

**280000** A link speed of 280000 bps is used.

**4M** A link speed of 4 million bps is used.

**\*MIN** A link speed of less than 4M is used.

**\*MAX** A link speed greater than 4M is used.

***link-speed***

Specify the link speed. Valid values are: 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, and 4M.

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---

## Cost/connect time (COSTCNN)

Specifies the relative cost of being connected on the line. This parameter is required only if APPN is used on the system.

**0** The cost per connect time is 0.

***cost-per-connect-time***

Specify a value ranging from 0 through 255.

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---

## Cost/byte (COSTBYTE)

Specifies the relative cost per byte for sending and receiving data on the line. This parameter is required only if APPN is used on the system.

**0** The cost per byte is 0.

*cost-per-byte*

Specify a value ranging from 0 through 255.

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---

## Security for line (SECURITY)

Specifies the security level of the line.

**\*NONSECURE**

Normal priority is used.

**\*ENCRYPTED**

Data flowing on the line is encrypted.

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---

## Propagation delay (PRPDLY)

Specifies the level of propagation delay on the line. This parameter is valid only if Advanced Peer-to-Peer Networking (APPN) is used on the system.

**\*LAN** The local area network propagation delay is used.

**\*MIN** The minimum propagation delay is used.

**\*MAX** The maximum propagation delay is used.

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---

## User-defined 1 (USRDFN1)

Specifies the first of the three user-defined fields. This field is used to describe unique characteristics of the line that is controlled. This parameter is valid only if APPN is used on the system.

**Note:** Information about the values that are specified for this parameter is provided in the APPN Support information in the iSeries Information Center at <http://www.iseries.ibm.com/infocenter>.

**128** The value 128 is used.

*user-defined-1*

Specify a value ranging from 0 through 255.

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---

## User-defined 2 (USRDFN2)

Specifies the second of the three user-defined fields. This field is used to describe unique characteristics of the line that is controlled. This parameter is valid only if APPN is used on the system.



**Note:** Information about the values that are specified for this parameter is provided in the APPN Support information in the iSeries Information Center at <http://www.iseries.ibm.com/infocenter>.

**128** The value 128 is used.

*user-defined-2*

Specify a value ranging from 0 through 255.

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---

### User-defined 3 (USRDFN3)

Specifies the third of the three user-defined fields. This field is used to describe unique characteristics of the line that is controlled. This parameter is valid only if APPN is used on the system.

**Note:** Information about the values that are specified for this parameter is provided in the APPN Support information in the iSeries Information Center at <http://www.iseries.ibm.com/infocenter>.

**128** The value 128 is used.

*user-defined-3*

Specify a value ranging from 0 through 255.

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---

### Autocreate controller (AUTOCRTCTL)

Specifies whether the system automatically creates controller descriptions when calls are received from adjacent systems on the local area network (LAN).

**\*NO** The system does not automatically create a controller description when incoming calls are received.

**\*YES** The system automatically creates a controller description when incoming calls are received.

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---

### Autodelete controller (AUTODLTCTL)

Specifies the number of minutes an automatically created controller can remain in an idle state (switched from varied on to varied on pending) before the controller description and attached device descriptions are varied off and deleted.

**1440** The controller description can be idle for 1440 minutes (24 hours).

**\*NONE**

The system does not automatically delete or vary off the automatically configured idle controller descriptions.

*wait-time*

Specify the number of minutes to wait before deleting the automatically configured, idle controller descriptions for this line. Valid values range from 1 to 10000 minutes.

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## Recovery limits (CMNRCYLMT)

Specifies the number of recovery attempts made by the system before an inquiry message is sent to the system operator. Also specifies the time (in minutes) that must elapse before the system sends an inquiry message to the system operator indicating that the recovery attempt count limit is reached.

The possible Maximum Recovery Limit values are:

- 2 Two recovery attempts are made within the interval specified.

### *count-limit*

Specify the number of recovery attempts to be made. Valid values range from 0 through 99.

The possible Recovery Time Interval values are:

- 5 The specified number of recovery attempts is made within a 5-minute interval.

### *time-interval*

Specify the time interval (in minutes) at which the specified number of second-level recoveries are attempted. Valid values range from 0 through 120. If the value specified for *count-limit* is not 0, the value 0 specifies infinite recovery.

The possible Single Value values are:

### **\*SYSVAL**

The recovery limits specified in the QCMNRCYLMT system value are used.

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---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### **\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

- \*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

- \*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### **\*EXCLUDE**

The user cannot access the object.

### **\*LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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## Examples

```
CRTLINWLS  LIND(MYLINE)  RSRCNAME(LIN041)
           INZFILE(*NONE) INZMBR(*NONE)
```

This command creates a wireless line description named MYLINE with a resource name of LIN041. The source file name and member name for configuration initialization data are left unspecified, and can be changed later.

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---

## Error messages

None

[Top](#)



## Create Line Desc (X.25) (CRTLINX25)

Where allowed to run: All environments (\*ALL)  
 Threadsafte: No

Parameters  
 Examples  
 Error messages

The Create Line Description (X.25) (CRTLINX25) command creates a line description for an X.25 line.

Top

### Parameters

Keyword	Description	Choices	Notes
LIND	Line description	<i>Name</i>	Required, Positional 1
RSRCNAME	Resource name	<i>Name</i>	Required, Positional 2
LGLCHLE	Logical channel entries	Single values: *PROMPT Other values (up to 256 repetitions): <i>Element list</i>	Required, Positional 3
	Element 1: Logical channel identifier	<i>Character value</i>	
	Element 2: Logical channel type	*PVC, *SVCIN, *SVCBOTH, *SVCOUT	
	Element 3: PVC controller	<i>Name</i>	
NETADR	Local network address	<i>Character value</i>	Required, Positional 4
CNNINIT	Connection initiation	*LOCAL, *REMOTE, *WAIT, *CALLER	Required, Positional 5
ONLINE	Online at IPL	*YES, *NO	Optional
INTERFACE	Physical interface	*X21BISV24, *X21BISV35, *RS232V24, *RS449V36, *X21, *INTMODEM	Optional
CNN	Connection type	*NONSWTPP, *SWTPP, *NONSWTCAL, *NONSWTANS	Optional
NWI	Attached nonswitched NWI	<i>Name</i>	Optional
NWICHLTYPE	NWI channel type	*B	Optional
NWICHLNBR	NWI channel number	1-30	Optional
SWTNWILST	Switched NWI list	Single values: *NONE Other values (up to 64 repetitions): <i>Element list</i>	Optional
	Element 1: NWI description	<i>Name</i>	
	Element 2: NWI channel type	*B	
	Element 3: NWI channel number	1-30, *CALC	
VRYWAIT	Vary on wait	15-180, *NOWAIT	Optional
LINESPEED	Line speed	*CALC, 600, 1200, 2400, 4800, 7200, 9600, 12000, 14400, 19200, 48000, 56000, 57600, 64000, 128000, 192000, 256000, 320000, 384000, 448000, 512000, 576000, 640000, 704000, 768000, 832000, 896000, 960000, 1024000, 1088000, 1152000, 1216000, 1280000, 1344000, 1408000, 1472000, 1536000, 1600000, 1664000, 1728000, 1792000, 1856000, 1920000, 1984000, 2048000	Optional
EXCHID	Exchange identifier	X'05600000'-X'056FFFFF', *SYSGEN	Optional

Keyword	Description	Choices	Notes
PKTMODE	Packet mode	*YES, *NO	Optional
INFTRFTYPE	Information transfer type	*UNRESTRICTED, *V110, *DOV, *SYNCMODEM	Optional
EXNNETADR	Extended network addressing	*YES, *NO	Optional
MAXFRAME	Maximum frame size	1024, 2048, 4096	Optional
DFTPKTSIZE	Default packet size	Element list	Optional
	Element 1: Transmit value	64, 128, 256, 512, 1024, 2048, 4096	
	Element 2: Receive value	*TRANSMIT, 64, 128, 256, 512, 1024, 2048, 4096	
MAXPKTSIZE	Maximum packet size	Element list	Optional
	Element 1: Transmit value	*DFTPKTSIZE, 64, 128, 256, 512, 1024, 2048, 4096	
	Element 2: Receive value	*DFTPKTSIZE, *TRANSMIT, 64, 128, 256, 512, 1024, 2048, 4096	
MODULUS	Modulus	8, 128	Optional
DFTWDWSIZE	Default window size	Element list	Optional
	Element 1: Transmit value	1-15, 2	
	Element 2: Receive value	1-15, *TRANSMIT	
ADRINSERT	Insert net address in packets	*YES, *NO	Optional
NETUSRID	Network user ID	Character value	Optional
CNNNBR	Connection number	Character value	Optional
CALLNBR	Calling number	Character value, *NONE	Optional
SWTCNN	Switched connection type	*BOTH, *ANS, *DIAL	Optional
CNNLSTOUT	Outgoing connection list	Name	Optional
CNNLSTOUTE	Connection list entry	Name	Optional
CNNLSTIN	Incoming connection list	Name, *NETATR	Optional
AUTOANS	Autoanswer	*YES, *NO	Optional
AUTODIAL	Autodial	*NO, *YES	Optional
DIALCMD	Dial command type	*NONE, *V25BIS	Optional
MDMINZCMD	Modem init command string	Character value, *NONE	Optional
CALLIMMED	Call immediate	*NO, *YES	Optional
AUTOCALL	Autocall unit	*NO, *YES	Optional
ACRSRCNAME	Autocall resource name	Name	Optional
PREDIALDLY	Predial delay	0-254, 6	Optional
REDIALDLY	Redial delay	0-254, 120	Optional
DIALRTY	Dial retry	0-254, 2	Optional
SWTDSC	Switched disconnect	*YES, *NO	Optional
SWTDSCTMR	Disconnect timers	Element list	Optional
	Element 1: Minimum connect timer	0-65535, 170	
	Element 2: Disconnection delay timer	0-65535, 0	
DSRDRPTMR	Data Set Ready drop timer	1-60, 6	Optional
AUTOANSTYP	Autoanswer type	*DTR, *CDSTL	Optional
RMTANSTMR	Remote answer timer	30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 105, 110, 115, 120	Optional
CLOCK	Clocking	*MODEM, *LOOP, *INVERT	Optional
SWTNWISLCT	Switched NWI selection	*FIRST, *CALC	Optional
TEXT	Text 'description'	Character value, *BLANK	Optional

Keyword	Description	Choices	Notes
X25DCE	X.25 DCE support	<u>*NO</u> , *YES, *NEG	Optional
NETCTL	Network controller	<i>Name</i>	Optional
SWTCTLLST	Switched controller list	Single values: *NONE, *ALL Other values (up to 64 repetitions): <i>Name</i>	Optional
IDLTMR	Idle timer	3-600, <u>40</u>	Optional
FRAMERTY	Frame retry	0-64, <u>7</u>	Optional
THRESHOLD	Error threshold level	<u>*OFF</u> , *MIN, *MED, *MAX	Optional
MODEM	Modem type supported	<u>*NORMAL</u> , *V54, *IBMWRAP	Optional
MODEMRATE	Modem data rate select	<u>*FULL</u> , *HALF	Optional
CTSTMR	Clear To Send timer	10-60, <u>25</u>	Optional
LINKSPEED	Link speed	<u>*INTERFACE</u> , *MIN, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 128000, 192000, 256000, 320000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, *MAX	Optional
COSTCNN	Cost/connect time	0-255, <u>128</u>	Optional
COSTBYTE	Cost/byte	0-255, <u>128</u>	Optional
SECURITY	Security for line	*NONSECURE, *PKTSWTNET, *UNDGRDCBL, *SECURECND, *GUARDCND, *ENCRYPTED, *MAX	Optional
PRPDLY	Propagation delay	*MIN, *LAN, *TELEPHONE, *PKTSWTNET, *SATELLITE, *MAX	Optional
USRDFN1	User-defined 1	0-255, <u>128</u>	Optional
USRDFN2	User-defined 2	0-255, <u>128</u>	Optional
USRDFN3	User-defined 3	0-255, <u>128</u>	Optional
CMNRCYLMT	Recovery limits	Single values: *SYSVAL Other values: <i>Element list</i>	Optional
	Element 1: Count limit	0-99, <u>2</u>	
	Element 2: Time interval	0-120, <u>5</u>	
MSGQ	Message queue	Single values: *SYSVAL, *SYSOPR Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Message queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i>	
AUT	Authority	<i>Name</i> , <u>*CHANGE</u> , *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

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## Line description (LIND)

Specifies the name of the line description

This is a required parameter.

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## Resource names (RSRCNAME)

**Note:** Use the Work with Hardware Resources (WRKHDWRSC) command with \*CMN specified for the TYPE parameter to help determine the resource name. The resource name is on the port. For example, the resource name may be CMN01 on an Ethernet port.

Specifies the resource name that identifies the hardware the description represents.

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## Logical channel entries (LGLCHLE)

Specifies, when using the Create Line X.25 Description (CRTLINX25) or Change Line Description X.25 (CHGLINX25) command, up to 256 entries to be added, removed, or changed in the logical channel table. A channel entry consists of a channel identifier, a logical channel type, and a PVC controller.

You can enter multiple values for this parameter.

The possible **channel identifier** values are:

**\*PROMPT**

Specifying \*PROMPT presents an interactive display that can be used to process current logical channel entries.

*channel-identifier*

Specify a three-character hexadecimal number ranging from 001 to FFF for the logical channel identifier. The first digit (from left to right) is the logical channel group number; the second and third digits make up the logical channel number. Specify a logical channel identifier. Valid values range from hexadecimal numeral 001 through FFF.

The possible **channel type** values are:

**\*PVC** The logical channel is a permanent virtual circuit.

**\*SVCIN**

The logical channel is a switched virtual circuit for incoming calls.

**\*SVCBOTH**

The logical channel is a switched virtual circuit for both incoming and outgoing calls.

**\*SVCOUT**

The logical channel is a switched virtual circuit for outgoing calls.

*PVC-controller*

Specify the name of the PVC controller to be assigned to the logical channel. This field is valid only if \*PVC is specified for the channel type.

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---

## Local network address (NETADR)

Specifies the local network address for this system. Up to 17 characters can be specified if \*YES is specified for the EXNNETADR parameter. Otherwise, up to 15 characters can be specified.

*local-network-address*

Specify the local network address.

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## Connection initiation (CNNINIT)

Specifies the method used to establish the X.25 data link connection.

**\*LOCAL**

The local system initiates the connection by issuing the set asynchronous balanced mode (SABM) communications command to establish the connection.

**\*REMOTE**

The remote system initiates the connection issuing the SABM communications command. The local system waits for the connection to be established.

**\*WAIT**

The local system waits for a disconnect (DISC) or disconnect mode (DM) from the DCE before attempting to activate the link.

**\*CALLER**

The connection is initiated from either the local system or the remote system based on call direction.

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---

## Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

**\*YES** The line is automatically varied on at initial program load (IPL).

**\*NO** This line is not automatically varied on at IPL.

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---

## Physical interface (INTERFACE)

Specifies the type of physical interface on the input/output adapter (IOA) port.

**\*X21BISV24 (X.25, BSC and SDLC only)**

X.21 bis/V.24 physical interface.

**\*X21BISV35 (X.25, BSC and SDLC only)**

X.21 bis/V.35 physical interface.

**\*X21 (X.25 and SDLC only)**

X.21 physical interface.

**\*RS232V24 (Async, BSC, X.25 and SDLC only)**

RS-232/V.24 physical interface.

**\*RS449V36 (Async, BSC, X.25 and SDLC only)**

RS-449/V.36 physical interface.

**\*INTMODEM**

The integrated modem interface is used.

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---

## Connection type (CNN)

Specifies the type of line connection.

**Note:** \*NONSWTCAL and \*NONSWTANS valid only when INTERFACE(\*INTMODEM), or INFTRFTYPE \*SYNCMODEM.

**\*NONSWTPP**

A nonswitched point-to-point line is used.

**\*SWTPP**

A switched point-to-point line is used.

**\*NONSWTCAL**

A nonswitched point-to-point line is used for call mode.

**\*NONSWTANS**

A nonswitched point-to-point line is used for answer mode.

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**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## Attached nonswitched NWI (NWI)

Specifies, for a nonswitched connection, the network interface description containing the channel to which this line permanently attaches.

**Note:** Valid only when RSRCTYPE(\*NWID) and CNN not \*SWTPP.

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**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## NWI channel type (NWICHLTYPE)

Specifies, for a nonswitched connection, the type of Integrated Services Digital Network (ISDN) channel that this line description uses. This parameter is pre-set to use one ISDN B-channel (a data-bearing channel) of the Network Interface description specified on the **Attached nonswitched NWI (NWI)** parameter.

**\*B** The B channel is used.

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**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## NWI channel number (NWICHLNBR)

Specifies, for a nonswitched connection, the channel number (1 through 30) of the network interface description that is used by this line description. 2, 23 or 30 channels are available for each network interface description, depending on whether the network interface is basic or primary rate and what the network type is, but only one line description can be permanently attached to a channel. The Display Network Interface Description (DSPNWID) command is used to display information about the channel numbers for a given NWID.

**Note:** Valid only when RSRCTYPE(\*NWID) and CNN not \*SWTPP.

**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## Switched NWI list (SWTNWILST)

Specifies, for ISDN/T1 switched connections, a list of network interface descriptions to which this line can be attached. A network interface description is chosen from the list based on the value specified by the switched NWI selection parameter (SWTNWISLCT) at the time an incoming or outgoing call is processed.

**Note:** Valid only when RSRNAME(\*NWID) and CNN(\*SWTPP).

The possible **Network Interface Description Name** values are:

**\*NONE**

No network interface description is specified.

*name* Specify, for switched connections, the name of the network interface description to which this line attaches.

The possible **Network Interface Channel Type** values are:

**\*B** The B channel is used.

The possible **Network Interface Channel-Number** values are:

**\*CALC**

The system selects one of the 30 channel numbers (based on availability) defined for the network interface description when an incoming or outgoing call is processed.

*NWI-channel-number*

Specify a channel number (1 to 30) to which the line description is restricted.

---

## Vary on wait (VRYWAIT)

Specifies whether the line is varied on asynchronously or synchronously. For synchronous vary on, this parameter specifies how long the system waits for the vary on to complete.

**\*NOWAIT**

The system does not wait for vary on completion. The line is varied on asynchronously.

*vary-on-wait*

Specify the time (in seconds) to wait. Valid values range from 15 through 180. The system waits until the line is varied on, or until the specified time passes, before completing the Vary Configuration (VRYCFG) command.

**Notes:**

1. When ONLINE(\*YES) is used, specifying a wait time in the line description affects system IPL time. In such cases, system IPL time is influenced by the amount of time required to synchronously vary on the line or reach the wait-time value.
2. The time required to vary on a line is the time it takes to:
  - Put tasks in place to manage the line

- Activate the communications I/O processor (IOP), including downloading the IOP model-unique Licensed Internal Code
- Establish the communications tasks and processes

Normal vary-on time ranges from 5 through 45 seconds, but can be longer, depending on the system, line protocol, and other factors.

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## Line speed (LINESPEED)

Specifies the line speed in bits per second (bps).

**9600** The line speed is 9600 bps.

**\*CALC**

The system calculates the value to use.

*line-speed*

Specify one of the following values (in bps) for the line speed:

600	57600	576000	1152000	1728000
1200	64000	640000	1216000	1792000
2400	128000	704000	1280000	1856000
4800	192000	768000	1344000	1920000
7200	256000	832000	1408000	1984000
14400	320000	896000	1472000	2048000
19200	384000	960000	1536000	
48000	448000	1024000	1600000	
56000	512000	1088000	1664000	

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## Exchange identifier (EXCHID)

Specifies the hexadecimal exchange identifier that is used to identify the local system to the remote system. The 8-digit hexadecimal exchange identifier contains three digits for the block number and five digits for the identifier of this system.

**\*SYSGEN**

This value allows the operating system to create the exchange identifier. Use the Display Line Description (DSPLIND) command to see the resulting exchange identifier.

*exchange-ID*

Specify an 8-character (four hexadecimal bytes) exchange identifier ranging from 05600000 through 056FFFFF.

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**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

## Packet mode (PKTMODE)

Specifies whether to access the ISDN or T1 virtual circuit service.

**\*NO** The ISDN/T1 network is used to provide transparent access to an X.25 packet switched network external to the ISDN/T1 (Case A).

**\*YES** The ISDN/T1 virtual circuit service is accessed (Case B).

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**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## Information transfer type (INFTRFTYPE)

Specifies the information transfer type. The information transfer type determines the layer 1 protocol.

**Note:** Valid only when RSRNAME(\*NWID) and CNN not \*SWTPP.

### \*UNRESTRICTED

The data-channel traffic appears as digital information; no physical transformation is required and each B-channel operates at capacity (64k bps).

**\*V110** The transfer type is V-series Recommendation 110. Each B-channel operates at 56k bps.

**\*DOV** Allows Data Over Voice (DOV) digital data to be transferred over an ISDN/T1 voice call. Also, this is referred to as Data Over Voice Bearer Service (DOVBS), Data Over Speech Bearer Service (DOSBS), TollSaver, or TollMizer. This option should only be used if an ISDN voice call is less expensive than an ISDN data call or if a bearer service for data is not available. The remote location must also support this feature. Data is transferred at 56Kbps in each direction.

### \*SYNCMODEM

Allows data from the integrated synchronous modem to be transferred over an ISDN/T1 voice call. This option should be used to connect to a remote location that is using a synchronous modem on an analog telephone line. Data is transferred at modem speeds up to 33.6Kbps from the remote analog device to this digital connection and up to 56Kbps from this digital connection to the remote analog device.

---

## Extended network addressing (EXNNETADR)

Specifies whether network addressing is extended to permit the use of 17 characters in an address name.

**\*NO** Network addresses can be up to 15 characters.

**\*YES** Network addresses can be up to 17 characters.

---

## Maximum frame size (MAXFRAME)

Specifies the maximum frame size that can be transmitted and received on this line description.

**1024** The default frame size is 1024.

### *maximum-frame-size*

Specify one of the following values: 1024, 2048, or 4096.

---

## Default packet size (DFTPKTSIZE)

Specifies the default packet sizes used for transmission and reception on this line. The values specified should match the default values used by the X.25 network.

The possible **transmission** values are:

**128** The default packet size is 128.

### *transmit-packet-size*

Specify a default packet size for transmission to all controllers that will attach to this line. The controller commands can override this default with the DFTPKTSIZE parameter on the controller commands. The valid values for the packet size are 64, 128, 256, 512, 1024, 2048, and 4096.

The possible **reception** values are:

### **\*TRANSMIT**

The value specified as the default packet size for transmission is used as the default for reception.

### *receive-packet-size*

Specify a default packet size for reception for all controllers that will attach to this line. The controller commands can override this default with the DFTPKTSIZE parameter on the controller commands. The valid values for the packet size are 64, 128, 256, 512, 1024, 2048, and 4096.

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## Maximum packet size (MAXPKTSIZE)

Specifies the maximum packet sizes for transmission and reception on this line. These values should match the maximum packet sizes supported for transmission and reception by the X.25 network. The value specified must not be less than the default packet size specified.

The possible **transmission** values are:

### **\*DFTPKTSIZE**

The maximum packet size for transmission is the same as the default packet size for transmission.

### *max-transmit-packet-size*

Specify a packet size for transmission to all controllers attached to this line. The valid values for the packet size are 64, 128, 256, 512, 1024, 2048, and 4096.

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## Modulus (MODULUS)

Specifies whether the extended sequence numbers are used.

**8** Extended sequence numbers are not used (Modulus 8).

**128** Extended sequence numbers are used (Modulus 128).

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## Default window size (DFTWDWSIZE)

Specifies the default packet window size for transmission to and reception from controllers attached to this line. The controllers can override this default by specifying the **X.25 default window size (DFTWDWSIZE)** parameter on the controller commands.

The possible **transmission** values are:

**2** The default packet window size is 2.

### *transmit-window-size*

Specify the appropriate default window size. If you specified modulus 8, valid values range from 1 through 7. If you specified modulus 128, valid values range from 1 through 15.

The possible **reception** values are:

### **\*TRANSMIT**

The value specified as the default window size for transmission is used as the default for reception.

### *receive-window-size*

Specify the appropriate default window size. If you specified modulus 8, valid values range from 1 through 7. If you specified modulus 128, valid values range from 1 through 15.

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## Insert net address in packets (ADRINSERT)

Specifies whether the system inserts the local network address in call request packets.

**\*YES** The local network address is inserted in packets.

**\*NO** The local network address is not inserted in packets.

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## Network user ID (NETUSRID)

For switched lines, this parameter allows the network subscriber to request network user identification (NUI) information be encoded in the NUI Selection Facility for all call request packets sent by the local system on this line.

### *network-user-identification*

Specify a NUI up to 214 hexadecimal characters in length.

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## Connection number (CNNNBR)

Specifies the number used to connect to this line. This is the telephone number to be dialed by the modem. A maximum of 32 characters can be specified.

### *connection-number*

Specifies the connection number.

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## Calling number (CALLNBR)

Specifies the local telephone number of the line that is used for the V.25 bis Call Request with Identification (CRI) dial command. When V.25 bis CRI dialing is used, the system takes the called (connection) number (CANNBR parameter), adds a separator character (;), and puts the calling number at the end. The default, \*NONE, indicates that Call Request Normal (CRN) is used.

Specify the calling number only when the modem and network support the CRI dial command.

### \*NONE

Call Request Normal (CRN) is used. CRN dialing sends only the connection number to the V.25 bis modem.

### *calling-number*

Specify the local telephone number if V.25 bis CRI dialing is required. The number can be up to 32 characters in length. See your modem documentation to determine the values allowed by the modem.

**Note:** Specify the calling number only if both the modem and network support the V.25 bis CRI dial command.

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## Switched connection type (SWTCNN)

Specifies whether the switched (Async, BSC, SDLC, or IDLC) line or switched network backup (Async, BSC, or SDLC) line is used for incoming calls, outgoing calls, or both.

### \*BOTH

The line is used for both incoming and outgoing calls.

\*ANS The line is used for incoming calls only.

### \*DIAL

The line is used for outgoing calls only.

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**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## Outgoing connection list (CNLSTOUT)

Specifies, for ISDN switched connections, the name of a connection list object that contains the ISDN assigned numbers for a dial-out operation to the ISDN.

### \*NONE

A user specified connection list for dial-out operations is not used. The connection list is automatically configured if OSI Communications Subsystems/400 is installed.

*name* Specify the name of the connection list for dial out operations.

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**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

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## Connection list entry (CNLSTOUTE)

Specifies, for ISDN switched connections, the entry name from the connection list used to make a call to the ISDN. The connection list must be specified on the CNLSTOUT parameter.

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**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

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## Incoming connection list (CNLSTIN)

Specifies for ISDN switched connections the name of the connection list that is used to retrieve call information (or connection) for identifying authorized incoming calls.

### \*NETATR

The connection list used by this line description is taken from the list of system default network attributes that were identified at IPL (Initial Program Load). The Display Network Attributes (DSPNETA) command can be used to see the name of the connection list.

*name* Specify the name of the connection list used for this line description.

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## Autoanswer (AUTOANS)

Specifies, for switched or switched network backup lines (Async, BSC, SDLC, or X.25 line), whether the system automatically answers a call from a remote system to establish the connection, or whether the system operator manually answers the call and places the modem in data mode.

**Note:** \*YES is a valid option only if the modem has the automatic answer feature.

\*YES The incoming call is automatically answered by the automatic answer feature.

\*NO The incoming call must be manually answered.

Top

---

## Autodial (AUTODIAL)

Specifies, for switched lines, whether the system automatically calls a remote system to establish a connection or if the system operator must manually place the call.

\*NO The line connection is made by manually dialing the X.25 network.

\*YES The line connection is made by the system automatically dialing the X.25 network.

Top

---

## Dial command type (DIALCMD)

Specifies the type of dial command used to establish a switched connection with a remote system.

**\*NONE**

No dial command is used. (An automatic call unit is used to establish the connection.)

**\*V25BIS**

V.25 bis is a recommendation which allows the use of one physical interface for call establishment and data transmission. It is referred to as a serial automatic call interface because the digits are presented serially on the link from the system to the modem.

Top

---

## Modem init command string (MDMINZCMD)

Specifies the modem initialization command string sent to set the modem.

**Note:** Valid only when INTERFACE(\*INTMODEM) or INFTRFTYPE(\*SYNCMODEM) is specified.

**\*NONE**

No command string is sent to the modem.

***command-string***

Specifies up to 60 characters that represent the command string sent to the modem. Valid characters are upper case A thru Z, lower case a thru z, numbers 0 thru 9, and special characters:

- Period
- Less than sign
- Left parenthesis
- Plus sign
- Ampersand
- Asterisk
- Right parenthesis
- Semicolon
- Minus sign
- Slash
- Comma
- Underline
- Greater than sign
- Question mark
- Colon
- Equal sign
- Spaces
- Number sign
- Double quote
- Exclamation point
- At sign
- Hat symbol
- Percent
- Left square bracket
- Right square bracket
- Back slash

**Note:** The modem initialization string must begin with the two characters 'AT'.

Top

---

## Call immediate (CALLIMMED)

Specifies, for switched lines, whether a call (using the number specified in the C>NNNBR parameter) is made immediately after varying on the line.

**\*NO** The system does not try to immediately call after varying on.

**\*YES** The system does try to immediately call after varying on.

---

## Autocall unit (AUTOCALL)

Specifies, for switched or switched network backup lines (Async, BSC, SDLC, or X.25 line), whether the line has an associated automatic call unit that can automatically call the remote system.

**\*NO** No automatic call unit is associated with this line.

**\*YES** An automatic call unit is associated with this line.

Top

---

## Autocall resource name (ACRSRCNAME)

Specifies the automatic call resource name that describes the automatic call unit port that is used to establish a connection with a remote system. Use the Work with Hardware Resources (WRKHDWRSC) command to determine the resource name.

Top

---

## Predial delay (PREDIALDLY)

Specifies the time interval to wait before dialing a number.

**6** The default value of six provides a 3-second delay.

*predial-delay*

Specify a value ranging from 0 through 254 units. Each unit represents 0.5 second. To indicate no delay, specify a value of 0.

Top

---

## Redial delay (REDIALDLY)

Specifies the time interval to wait (in 0.5 second intervals) before re-dialing when the call attempt is unsuccessful.

**120** The default value of 120 provides a 60-second delay.

*redial-delay*

Specify a value ranging from 0 through 254 units. Each unit represents 0.5 second. To indicate no delay, specify a value of 0.

Top

---

## Dial retry (DIALRTY)

Specifies the number of re-dial attempts made by the system before considering the dialing unsuccessful.

**2** The default number of retries is 2.

*dial-retry*

Specify a value ranging from 0 through 254.

Top

---

## Switched disconnect (SWTDSC)

Specifies whether the line is dropped when the last switched virtual circuit (SVC) is cleared and the switched disconnect timers (SWTDSCTMRs) have expired.

\***YES** The switched connection is dropped.

\***NO** The switched connection is not dropped.

Top

---

## Disconnect timers (SWTDSCTMR)

Specifies the timers used for disconnecting switched X.25 lines from the network or remote system. The minimum connect timer specifies the minimum length of time the system keeps the connection active. This timer is started when the connection is established. The disconnect delay timer specifies the length of time the system waits before attempting to disconnect the switched connection when no SVCs are active on the line or the last SVC completes and the **minimum-connect-timer** has expired.

The possible **minimum-connect-timer** values are:

*min-connect-timer*

Specify a value ranging from 0 through 65535 seconds.

The possible **disconnect-delay-timer** values are:

*disconnect-delay-timer*

Specify a value ranging from 0 through 65535 seconds.

Top

---

## Data Set Ready drop timer (DSRDRPTMR)

Specifies the amount of time that the system waits for the modem to exit the Data Set Ready (DSR) state before signaling an error.

*drop-timer*

Specify a value ranging from 1 through 60 seconds.

Top

---

## Autoanswer type (AUTOANSTYP)

Specifies the method that the system uses to answer incoming calls.

\***DTR** The system enters the Data Terminal Ready state, signals the modem to answer calls, and waits for the modem to enter the Data Set Ready (DSR) state.

\***CDSTL**

The system enters the Connect Data Set to Line (CDSTL) state after monitoring the Ring Indicator to signal the modem to answer the call.

Top

---

## Remote answer timer (RMTANSTMR)

Specifies the amount of time that system waits for the modem to enter the Data Set Ready (DSR) state after dialing before signaling an error.

### *answer-timer*

Specify a value ranging from 30 through 120 seconds in 5-second intervals.

Top

---

## Clocking (CLOCK)

Specifies how the clocking function for the line is provided.

### \*MODEM

The modem supplies the clocking function.

### \*LOOP

The receiving clock provided by the modem data circuit-terminating equipment (DCE) is looped back to the modem DCE on the system data terminal equipment (DTE) transmitting clock. This option can be used to improve high speed data transmission when the modem DCE supports such an option.

### \*INVERT

The transmit clock provided by the modem data circuit-terminating equipment (DCE) is inverted before use. This option can be used when having problems with high speed data transmission and the modem (DCE) does not support looped clocking. The valid interfaces for \*INVERT are \*X21, \*X21BISV35, and \*RS449V36.

Top

**Note:** This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of OS/400.

---

## Switched NWI selection (SWTNWISLCT)

Specifies the method used to select network interfaces from the switched network interface list.

### \*FIRST

Selection begins with the first network interface specified in the switched network interface list.

### \*CALC

The system calculates which network interface is selected.

Top

---

## Text 'description' (TEXT)

Specifies text that briefly describes the line description.

### \*BLANK

Text is not specified.

### *character-value*

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

---

## X.25 DCE support (X25DCE)

Specifies whether the system communicates through the X.25 data circuit-terminating equipment (DCE) support. This allows a system to communicate with another system without going through an X.25 network.

- \*NO The system does not communicate through the X.25 DCE support.
- \*YES The system does communicate through the X.25 DCE support.
- \*NEG The operating system negotiates with another system about whether to communicate through the X.25 DCE support. This value can only be specified for switched lines.

Top

---

## Network controller (NETCTL)

Specifies the name of an existing network controller.

Top

---

## Switched controller list (SWTCTLLST)

Specifies the names of up to 64 switched asynchronous controllers or specify \*ALL for an unlimited number of switched asynchronous X.25 controllers that can establish a connection with an X.25 switched virtual circuit (SVC). The controller descriptions must already exist. This parameter is valid only if the line is used to attach switched asynchronous X.25 controllers created by the Create Controller Description (Async) (CRTCTLASC) command. Attaching controllers that specify C>NNNBR(\*ANY) or ANSNBR(\*ANY) may result in a reordering of this list.

You can enter multiple values for this parameter.

- \*ALL All X.25 switched controllers that are created using the Create Controller Description (Async) (CRTCTLASC) command and list this line description on the Switched Line List (SWTLINLST) parameter can be used to establish a connection with an X.25 switched virtual circuit (SVC).
- \*NONE No switched asynchronous controller is specified.

*names* Specify the switched controller names. Up to 64 switched controllers can be specified.

Top

---

## Idle timer (IDLTMR)

Specifies the maximum amount of time (in 0.1 second intervals) that the system waits for acknowledgment from the network for each frame sent before re-transmission.

**Note:** The IDLTMR value should be greater than or equal to the following equation:  $(2 * P + (\text{MAXPKTSIZE} * 8) / \text{LINESPEED} + D) * 10$ , where "P" is the propagation delay (in seconds) of the medium that connects you to the network, MAXPKTSIZE is the maximum transmit packet size, and "D" is the DCE (Data Circuit-terminating Equipment) processing overhead (in seconds). Contact your network provider for information regarding these two values.

**40** The default for this parameter is 40.

### *idle-timer*

Specify a value ranging from 3 through 600. Each unit represents 0.1 seconds, which provides a timeout value ranging from 0.3 through 60 seconds.

Top

---

## Frame retry (FRAMERTY)

Specifies, for a primary, negotiable, or X.25 line, the number of retries for an unanswered command frame or unacknowledged information frame before indicating the error.

### *frame-retry*

Specify a value from 0 to 64 for the number of retries.

Top

---

## Error threshold level (THRESHOLD)

Specifies the temporary error threshold level being monitored by the system. A permanent error is reported only if the errors occurred consecutively and exceeded the retry limit.

**Note:** Specifying the THRESHOLD parameter affects all threshold errors. They cannot be specified individually.

- \*OFF No threshold errors are reported.
- \*MIN The threshold for errors is set to a minimum monitoring level.
- \*MED The threshold for errors is set to a medium monitoring level.
- \*MAX The threshold for errors is set to a maximum monitoring level.

Top

---

## Modem type supported (MODEM)

Specifies the type of modem supported on the communications line. Refer to the modem manual to determine the appropriate value to select.

### \*NORMAL

No attempt is made to run diagnostic tests to your modem.

- \*V54 Certain types of diagnostic tests (as defined by the CCITT recommendations) are run to your modem. This system supports CCITT V.54 loop 3, (a local loop back,) and loop 2, (which is a remote loop back).

### \*IBMWRAP

An IBM modem with wrap test capabilities is used on the communications line.

### \*IBMLPDA1

An IBM modem with Link Problem Determination Aid-1 (LPDA-1) is used on the line.

### \*IBMLPDA2

An IBM modem with Link Problem Determination Aid-2 (LPDA-2) is used on the line.

Top

---

## Modem data rate select (MODEMRATE)

Specifies the speed at which the line operates if the modem has the data rate select feature.

**\*FULL** The line operates at the full rate of the modem.

**\*HALF**  
The line operates at half the full rate of the modem.

Top

---

## Clear To Send timer (CTSTMR)

Specifies the amount of time the system waits for the modem to enter or exit the Clear to Send (CTS) state before signaling an error.

*cts-timer*  
Specify a value ranging from 10 through 60 seconds.

Top

---

## Link speed (LINKSPEED)

Specifies the link speed in bits per second (bps). This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

**\*INTERFACE (SDLC and X.25 only)**  
The link speed is based on the physical interface type: 9600 bps for RS-232/V.24 and X.21 bis/V.24, 48000 bps for V.35 and X.21 bis/V.35, and 64000 bps for X.21.

**\*MIN** A link speed of less than 1200 bps is used.

**\*MAX** A link speed greater than 100M bps is used.

*link-speed*  
Specify the link speed. Valid values are: 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 128000, 192000, 256000, 320000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, and 16M.

Top

---

## Cost/connect time (COSTCNN)

Specifies the relative cost of being connected on the line. Zero implies a low cost while 255 indicates a high cost. This parameter is valid only if APPN is used on the system.

**\*CNN (SDLC and IDLC only)**  
The cost per connection time is based on the connection type: Zero for nonswitched connections and 128 for switched connections.

*cost-per-connect-time*  
Specify a value ranging from 0 through 255.

Top



---

## Cost/byte (COSTBYTE)

Specifies the relative cost per byte for sending and receiving data on the line. Zero implies a low cost while 255 indicates a high cost. This parameter is valid only if APPN is used on the system.

### \*CNN (SDLC and IDLC only)

The cost per byte is based on the connection type: Zero for nonswitched connections and 128 for switched connections.

### *cost-per-byte*

Specify a value ranging from 0 through 255.

Top

---

## Security for line (SECURITY)

Specifies the security level of the physical line. This parameter is valid only if APPN is used on the system.

### \*NONSECURE

There is no security on the line.

### \*PKTSWTNET

A packet switched network is used. Data does not always follow the same path through the network.

### \*UNDRGRDCBL

An underground cable is used.

### \*SECURECND

A secure, but unguarded, conduit is used.

### \*GUARDCND

A guarded conduit, protected against physical tapping, is used.

### \*ENCRYPTED

Data flowing on the line is encrypted.

\*MAX A guarded conduit, protected against physical and radiation tapping is used.

Top

---

## Propagation delay (PRPDLY)

Specifies the level of propagation delay on the line. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system. The order of the values from shortest to longest delay is

\*MIN, \*LAN, \*TELEPHONE, \*PKTSWTNET, and \*SATELLITE.

\*MIN The minimum propagation delay is used.

\*LAN Propagation delay using a local area network.

### \*TELEPHONE

Propagation delay using telephone lines.

### \*PKTSWTNET

Propagation delay using a packet switched network.

### \*SATELLITE

Propagation delay using satellite communications.

\*MAX The maximum propagation delay is used.

Top

---

## User-defined 1 (USRDFN1)

This field is used to describe unique characteristics of the line that you want to control. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

128 The default value is 128.

*user-defined-1*

Specify a value ranging from 0 through 255.

Top

---

## User-defined 2 (USRDFN2)

This field is used to describe unique characteristics of the line that you want to control. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

128 The default value is 128.

*user-defined-2*

Specify a value ranging from 0 through 255.

Top

---

## User-defined 3 (USRDFN3)

This field is used to describe unique characteristics of the line that you want to control. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

128 The default value is 128.

*user-defined-3*

Specify a value ranging from 0 through 255.

Top

---

## Recovery limits (CMNRCYLMT)

Specifies the second-level communications recovery limits to be used for this line description.

The possible **count-limit** values are:

2 Two recovery attempts are made within the specified time interval.

\*SYSVAL

The value in the QCMNRCYLMT system value is used.

*count-limit*

Specify the number of recovery attempts to be performed by the system. Valid values range from 0 through 99.

The possible **time-interval** values are:

5 The specified number of recovery attempts are made within a 5-minute interval.

### *time-interval*

Specify the number of minutes within which recovery attempts are made. Valid values range from 0 through 120 in 1-minute intervals.

Top

---

## Message queue (MSGQ)

Specifies the message queue to which operational messages are sent.

### \*SYSVAL

The value in the system value QCFGMSGQ is used.

### \*SYSOPR

Messages are sent to the system operator message queue (QSYS/QSYSOPR).

### Qualifier 1: Message queue

*name* Specify the name of the message queue to which operational messages are sent.

### Qualifier 2: Library

*name* Specify the name of the library where the message queue is located.

Top

---

## Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### \*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### \*EXCLUDE

The user cannot access the object.

### \*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

---

## Examples

```
CRTLINX25  LIND(X251)  RSRNAME(LIN011)
           LGLCHLE((111 *PVC CTL1) (222 *SVCIN))
           NETADR(12345)  CNNINIT(*LOCAL)  TEXT('X.25 Line')
```

This command creates an X.25 line (X251) with resource name LIN011, two logical channels (with an attached PVC controller), a network address of 12345, and local connection initiation.

---

## Error messages

### \*ESCAPE Messages

#### CPF2718

Line description &1 not created due to errors.

---

## Create Locale (CRTLOCALE)

Where allowed to run: All environments (\*ALL)  
Threadsafe: No

Parameters  
Examples  
Error messages

The Create Locale (CRTLOCALE) command creates a locale object (\*LOCALE) using the source information from the file provided on the SRCFILE parameter.

A locale is an object that can determine how data is processed, printed, and displayed. Locales are made up of categories that define language, cultural data, and character sets. Locales, in the form of a system object, are not shipped with the AS/400 system. Rather, the locale definition source files are provided.

For more information about locales, see the Globalization information in the iSeries Information Center at <http://www.ibm.com/eserver/series/infocenter>.

### Restriction

Locales must be created in the QSYS file system.

Top

---

## Parameters

Keyword	Description	Choices	Notes
LOCALE	Locale name	<i>Path name</i>	Required, Positional 1
SRCFILE	Source file path name	<i>Path name</i>	Required, Positional 2
CCSID	Coded character set ID	1-65533, *JOB, *UTF	Required, Positional 3
GENLVL	Generation severity level	<u>10</u> , 20	Optional
TEXT	Text 'description'	<i>Character value</i> , *BLANK	Optional
OUTPUT	Output	*PRINT, *NONE	Optional
OPTION	Source listing options	<i>Element list</i>	Optional
	Element 1: Source listing	<i>Integer</i> , *SRC, *NOSRC	
	Element 2: Second level messages	<i>Integer</i> , *SECLVL, *NOSECLVL	
REPLACE	Replace object	*YES, *NO	Optional
DTAAUT	Public authority for data	<i>Name</i> , *INDIR, *NONE, *RWX, *RX, *RW, *WX, *R, *W, *X, *EXCLUDE	Optional
OBJAUT	Public authority for object	Single values: *INDIR, *NONE, *ALL Other values (up to 4 repetitions): *OBJEXIST, *OBJMGT, *OBJALTER, *OBJREF	Optional

Top

---

## Locale name (LOCALE)

Specifies the path name of the locale being created.

---

## Source file path name (SRCFILE)

Specifies the path name of the source file that contains the description of the locale being created. If the CCSID of the file is 65535, the job default CCSID is assumed by this command. If the file is from the QSYS file system, then it must be a database source physical file.

**Note:** If the source file is not a record file, then each line in the source file must have been terminated with a newline or linefeed character when the source file was created.

Top

---

## Coded character set ID (CCSID)

Specifies the coded character set ID (CCSID) in which to store the locale information for the locale object.

The possible values are:

- \***JOB** Specifies that the job CCSID is used for the locale information. If the job CCSID is 65535, the job default CCSID is used.
- \***UTF** Specifies that two locales will be created, one for UTF8 and one for UTF32. The UTF8 locale name will have `_8` appended to the specified locale name. The UTF32 locale name will have `_4` appended to the specified locale name. The locale name specified will be limited to 8 characters in length when `CCSID(*UTF)` is specified.

### *coded-character-set-ID*

Specify the CCSID used for the locale information.

Top

---

## Generation severity level (GENLVL)

Specifies the severity level at which the creation operation can be controlled. The severity level of the messages generated in the creation operation indicate the type of errors that have occurred.

**Note:** If errors occur with a severity level greater than 20, the locale is not created.

The possible values are:

- 10 The locale is created with level 10 severity errors.
- 20 The locale is created with level 20 severity errors.

Top

---

## Text 'description' (TEXT)

Specifies the text that briefly describes the locale.

The possible values are:

### \***BLANK**

Text is not specified.

*'description'*

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

---

## Output (OUTPUT)

Specifies whether or not a compiler listing is produced.

The possible values are:

**\*PRINT**

The compiler listing is produced. The information contained in the listing depends on the values specified on the OPTION parameter.

**\*NONE**

The compiler listing is not produced. To improve compile-time performance, this value should be specified when a listing is not required.

Top

---

## Source listing options (OPTION)

Specifies the types of output lists created when this command is processed.

The possible values are:

**\*SRC** The source input used to create the locale is printed.

**\*NOSRC**

The source input used to create the locale is not printed.

**\*NOSECLVL**

Only the first-level error message text is included in the source listing.

**\*SECLVL**

Second-level error message text is printed.

Top

---

## Replace object (REPLACE)

Specifies whether an existing version of the locale is replaced by the current locale.

The possible values are:

**\*YES** The existing locale is replaced with the new version. The old version is moved to the library QRPLOBJ and renamed based on the system date and time. The text description of the original locale is not used as the text description for the new locale. The old locale is deleted at the next IPL or you can use the Delete Locale (DLTLOCALE) command to delete it.

**\*NO** The local is not replaced and an error message is issued.

Top

---

## Public authority for data (DTAAUT)

Specifies the public authority given users for the data in the object created.

The possible values are:

### **\*INDIR**

The authority for the object being created is determined by the directory it is being created in. If \*INDIR is used for DTAAUT, it is also required for OBJAUT.

**\*RWX** The users are given \*RWX authority to the objects. \*RWX authority allows the user to perform all operations on the object except those limited to the owner or controlled by object existence, object management, object alter, and object reference authority. The user can change the object and perform basic functions on the object. \*RWX authority provides object operational authority and all the data authorities.

**\*RX** \*RX authority allows the user to perform basic operations on the object, such as run a program or display the contents of a file. The user is prevented from changing the object. \*RX authority provides object operational authority and read and execute authorities.

**\*RW** \*RW authority allows the user to view the contents of an object and modify the contents of an object. \*RW authority provides object operational authority and data read, add, update, and delete authorities.

**\*WX** \*WX authority allows the user to modify the contents of an object and run a program or search a library or directory. \*WX authority provides object operational authority and data add, update, delete, and execute authorities.

**\*R** \*R authority allows the user to view the contents of an object. \*R authority provides object operational authority and data read authority.

**\*W** \*W authority allows the user to modify the contents of an object. \*W authority provides object operational authority and data add, update, and delete authorities.

**\*X** \*X authority allows the user to run a program or search a library or directory. \*X authority provides object operational authority and data execute authority.

### **\*EXCLUDE**

Exclude authority prevents the user from accessing the object. The OBJAUT value must be \*NONE if this special value is used.

### **\*NONE**

The users will not be given any of the data authorities to the objects. This value cannot be used with OBJAUT value of \*NONE.

### ***authorization-list-name***

Specify the name of the authorization list used.

Top

---

## Public authority for object (OBJAUT)

Specifies the authorities given users to the object.

The possible values are:

### **\*INDIR**

The object authority is based on the authority for the directory where this object is being created. If \*INDIR is used for DTAAUT, it is also required for OBJAUT.



**\*NONE**

None of the other object authorities (existence, management, alter, or reference) will be given to the users. If \*EXCLUDE or an authorization list name is specified for the DTAAUT parameter, this value must be specified.

**\*ALL** All of the other object authorities (existence, management, alter, and reference) will be given to the users.

Or specify up to four (4) of the following values:

**\*OBJEXIST**

The users will be given object existence authority to the object.

**\*OBJMGT**

The users will be given object management authority to the object.

**\*OBJALTER**

The users will be given object alter authority to the object.

**\*OBJREF**

The users will be given object reference authority to the object.

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---

## Examples

```
CRTLOCALE  LOCALE('/QSYS.LIB/MYLIB.LIB/USLOCALE.LOCALE')
           SRCFILE('/QSYS.LIB/MYLIB.LIB/LSRC.FILE/USLOCALE.MBR')
           CCSID(37) TEXT('Locale for USA')
```

This command creates a locale named USLOCALE in the library called MYLIB in the QSYS.LIB file system with a CCSID of 37. The text parameter describes this as a locale for the USA.

```
CRTLOCALE  LOCALE('/QSYS.LIB/MYLIB.LIB/USLOCALE.EXAMPLE')
           SRCFILE('/QSYS.LIB/MYLIB.LIB/LSRC.FILE/EXAMPLE.MBR')
           CCSID(*UTF) TEXT('UTF Locale examples')
```

This command creates two locales named EXAMPLE\_4 with a CCSID of 1232 and EXAMPLE\_8 with a CCSID of 1208 in the library called MYLIB in the QSYS.LIB file system. The text parameter describes them as UTF locale examples.

Top

---

## Error messages

**\*ESCAPE Messages****CPF3BE1**

Locale object &1 not created.

Top



# Create Menu (CRTMNU)

Where allowed to run: All environments (\*ALL)  
 Threadsafef: No

Parameters  
 Examples  
 Error messages

The Create Menu (CRTMNU) command is used to create a menu object. Both Display File (\*DSPF) and Program (\*PGM) menus can be created by using this command. A menu can be displayed using the Go to Menu (GO) command.

## Restrictions:

- You must have change (\*CHANGE), read (\*READ), and add (\*ADD) authorities for the library where the menu is to be created.

[Top](#)

## Parameters

Keyword	Description	Choices	Notes
MENU	Menu	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Menu	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
TYPE	Menu type	*DSPF, *PGM, *UIM	Required, Positional 2
DSPF	Display file	<i>Qualified object name</i>	Optional
	Qualifier 1: Display file	<i>Name, *MENU</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
MSGF	Message file	<i>Qualified object name</i>	Optional
	Qualifier 1: Message file	<i>Name, *MENU</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
CMDLIN	Command line	*LONG, *SHORT, *NONE	Optional
DSPKEY	Display function keys	*NO, *YES	Optional
PGM	Program	<i>Qualified object name</i>	Optional
	Qualifier 1: Program	<i>Name, *MENU</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
SRCFILE	Source file	<i>Qualified object name</i>	Optional
	Qualifier 1: Source file	<i>Name, QMNUSRC</i>	
	Qualifier 2:	<i>Name, *LIBL, *CURLIB</i>	
SRCMBR	Source member	<i>Name, *MENU</i>	Optional
OPTION	Source listing options	Values (up to 3 repetitions): *SOURCE, *NOSOURCE, *SRC, *NOSRC, *NOSECLVL, *SECLVL, *NOEVENTF, *EVENTF	Optional
INCFILE	Include file	Single values: *SRCFILE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Include file	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
CURLIB	Current library	<i>Name, *NOCHG, *MNULIB, *CRTDFT</i>	Optional
PRDLIB	Product library	<i>Name, *NOCHG, *NONE</i>	Optional

Keyword	Description	Choices	Notes
CHRID	Character identifier	Integer, *DEV <del>D</del> , *JOBCCSID, *CHRIDCTL	Optional
REPLACE	Replace menu	*YES, *NO	Optional
TEXT	Text 'description'	Character value, *SRCMBRTXT, *BLANK	Optional
AUT	Authority	Name, *LIBCRTAUT, *CHANGE, *ALL, *USE, *EXCLUDE	Optional

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## Menu (MENU)

Specifies the menu to be created.

This is a required parameter.

### Qualifier 1: Menu

*name* Specify the name of the menu.

### Qualifier 2: Library

#### \*CURLIB

The current library for the job is used to store the new menu. If no library is specified as the current library for the job, QGPL is used.

*name* Specify the library where the menu is to be stored.

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## Menu type (TYPE)

Specifies the type of menu to be created.

**Note:** \*DSPF must be specified for values to be specified for the **Display file (DSPF)** and **Message file (MSGF)** parameters. The **Program (PGM)** parameter is valid only if \*PGM is specified here.

This is a required parameter.

#### \*DSPF

An existing display file and message file are used to create a menu.

\*PGM The menu being created calls a program when the menu is requested.

\*UIM The menu is created using the UIM tag language found in the file specified for the **Source file (SRCFILE)** and **Source member (SRCMBR)** parameters.

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## Display file (DSPF)

Specifies the display file to be used in creating the menu object. The display file must include one record format with the same name as the display file itself, called the menu format. Help formats may also be included in the file.

Help formats follow the naming convention #Hxxyy, where xx is the first and yy is the last menu option to which the help format applies. For example, #H0306 would apply to menu options 3 to 6. #H0000 designates the general help for the menu.

The display file must have a separate indicator area (INDARA keyword) and contain no subfile descriptions.

This parameter can be specified only if \*DSPF is specified for the **Menu type (TYPE)** parameter.

#### Qualifier 1: Display file

##### \*MENU

The display file has the same name as the menu name specified for the **Menu (MENU)** parameter.

*name* Specify the name of the display file to be used.

#### Qualifier 2: Library

\*LIBL All libraries in the library list for the current thread are searched until the first match is found.

##### \*CURLIB

The current library for the job is used to locate the display file. If no library is specified as the current library for the job, QGPL is used.

*name* Specify the library where the display file is located.

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## Message file (MSGF)

Specifies the message file containing the commands to run when a menu option is selected. The MSGIDs of the messages in this file are of the form USRxxxx where xxxx is the menu option number typed on the command line.

**Note:** If the message file being created is to be used for menus, you must add message file members to the file using the Add Message Description (ADDMSGD) command.

#### Qualifier 1: Message file

##### \*MENU

The message file containing the commands to run has the same name as the menu name specified for the **Menu (MENU)** parameter.

*name* Specify the name of the message file to be used.

#### Qualifier 2: Library

\*LIBL All libraries in the library list for the current thread are searched until the first match is found.

##### \*CURLIB

The current library for the job is used to locate the message file. If no library is specified as the current library for the job, QGPL is used.

*name* Specify the library where the message file is located.

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## Command line (CMDLIN)

Specifies whether a long command line, a short command line, or no command line (an option line) is used.

**\*LONG**

A 153-byte long command line is used.

**\*SHORT**

A 73-byte long command line is used.

**\*NONE**

No command line is used. A 4-byte option line is used.

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## Display function keys (DSPKEY)

Specifies whether the function key legend appears at the bottom of the menu when the menu is shown.

**\*NO** The function key legend is not shown at the bottom of the display.

**\*YES** The function key legend is shown at the bottom of the display.

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## Program (PGM)

Specifies the program to call when the menu is shown.

Three parameters are passed to the program:

- The first parameter is the ten-character name of the menu object which identifies the program to call.
- The second parameter is the ten-character name of the library containing the menu object.
- The third parameter is a two-character binary return code declared as a variable in the called program. The program must set one of the following return codes:

Return Code	Hex	Description
0	0000	Call the program (display the menu) again
-1	FFFF	Exit function requested
-2	FFFE	Previous function requested
-4	FFFC	Home function requested (display the home menu)

### Qualifier 1: Program

**\*MENU**

The program called has the same name as the menu name specified for the **Menu (MENU)** parameter.

*name* Specify the name of the program to be called.

### Qualifier 2: Library

**\*LIBL** All libraries in the library list for the current thread are searched until the first match is found.

**\*CURLIB**

The current library for the job is used to locate the program. If no library is specified as the current library for the job, QGPL is used.

*name* Specify the library where the program is located.

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## Source file (SRCFILE)

Specifies the source file containing the menu description source statements.

### Qualifier 1: Source file

#### QMNUSRC

The source file QMNUSRC contains the menu description source statements.

*name* Specify the name of the source file containing the menu description source statements.

### Qualifier 2: Library

\*LIBL All libraries in the library list for the current thread are searched until the first match is found.

#### \*CURLIB

The current library for the job is used to locate the source file. If no library is specified as the current library for the job, the QGPL library is used.

*name* Specify the name of the library where the source file is located.

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## Source member (SRCMBR)

Specifies the member of the source file containing the menu description.

#### \*MENU

The member name is the same as the menu name specified for the **Menu (MENU)** parameter.

*name* Specify the name of the source file member containing the menu description.

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## Source listing options (OPTION)

Specifies options for the output produced during the compile. Multiple option values can be specified in any order on this parameter. If neither or both of the values in each group are specified, the underlined value will be used.

**Note:** The underlined values for this parameter are similar to, but not actually default values, and therefore, cannot be changed with the Change Command Default (CHGCMDDFT) command.

### Source Listing Option

#### \*SRC or \*SOURCE

A source listing is produced.

#### \*NOSRC or \*NOSOURCE

No source listing is produced unless errors are detected.

### Second-Level Message Text Option

#### \*NOSECLVL

Second-level text is not provided with the first-level text when the messages are printed at the end of the listing.

#### \*SECLVL

Second-level text is provided with the first-level text when the messages are printed at the end of the listing.

## Event File Creation Option

### \*NOEVENTF

The compiler does not produce an event file for the CoOperative Development Environment/400 (CODE for OS/400).

### \*EVENTF

The compiler produces an event file that can be used by the CODE for OS/400 product. The event file is created as a member in the file EVFEVENT in your object library. The CODE for OS/400 product uses this file to offer error feedback integrated with the CODE for OS/400 editor. This value is normally specified by the CODE for OS/400 product on your behalf.

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## Include file (INCFILE)

Specifies the source file containing the members to be included.

**Note:** If the coded character set identifier (CCSID) of the source file is different than the CCSID of the primary source file specified for the **Source file (SRCFILE)** parameter, the CCSID is changed to the CCSID of the primary source file. The CCSID must be the same for all source members used to create the object.

### Single values

#### \*SRCFILE

The include file is the same file as the file specified for the SRCFILE parameter.

### Qualifier 1: Include file

*name* Specify the name of the source file containing the members to be included.

### Qualifier 2: Library

\*LIBL All libraries in the library list for the current thread are searched until the first match is found.

#### \*CURLIB

The current library for the job is used to locate the source file. If no library is specified as the current library for the job, the QGPL library is used.

*name* Specify the name of the library where the source file is located.

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## Current library (CURLIB)

Specifies the library used as the current library when menu is shown.

#### \*NOCHG

The current library does not change for the processing of this menu.

#### \*MNULIB

The current library is changed to the library containing the menu while the menu is shown.

#### \*CRTDFT

There is no current library when the menu is shown.

*name* Specify the library name used as the current library when the menu is shown.

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## Product library (PRDLIB)

Specifies the library used as the product library when the menu is shown.

**Note:** The product library for a command or menu remains in the library list while a command or menu is active, unless another command or menu changes the product library. When a command or menu that changed the product library ends, the product library is restored to what it was when the command or library started.

### \*NOCHG

The product library is not changed when the menu is shown and is not restored after exiting the menu.

### \*NONE

The product library entry in the library list is not used while the menu is shown.

*name* Specify the library name used as the product library when the menu is shown.

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## Character identifier (CHRID)

Specifies whether the character identifier (graphic character set and code page) of the menu object is changed to the character identifier of the device when the menu is displayed.

**Note:** This parameter can be specified only if \*UIM is specified for the **Menu type (TYPE)** parameter.

### \*DEV

No change occurs. The character identifier of the menu object is the same as the character identifier of the device.

### \*JOBCCSID

The character identifier of the menu object is changed from the CCSID of the file specified for the **Source file (SRCFILE)** parameter to the character identifier of the device.

### \*CHRIDCTL

The system checks the CHRIDCTL job attribute to determine whether to use \*JOBCCSID or \*DEV on the CHRID command parameter for this menu.

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## Replace menu (REPLACE)

Specifies whether an existing menu with the same name is replaced.

**Note:** The menu cannot be replaced if it is in use by this job or another job.

\*YES The existing menu is moved to the system library QRPLOBJ and replaced with the new menu.

\*NO The existing menu is not replaced with the new menu.

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## Text 'description' (TEXT)

Specifies the descriptive text associated with the menu.

### **\*SRCMBRTXT**

The text for the menu is obtained from the text associated with the source file member. Please note that this special value will only retrieve the text from the source file member if the menu is a \*UIM type. For other menu types, the text will be set to blanks.

### **\*BLANK**

No text description is given for the menu.

### ***character-value***

Specify no more than 50 characters of text, enclosed in apostrophes.

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## **Authority (AUT)**

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

### **\*LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library command (CRTLIB) for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

### **\*CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (\*OBJEXIST) and object management (\*OBJMGT) authorities. The user can change and perform basic functions on the object. \*CHANGE authority provides object operational (\*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

**\*ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (\*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

**\*USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (\*USE) authority provides object operational (\*OBJOPR), read (\*READ), and execute (\*EXECUTE) authorities.

### **\*EXCLUDE**

The user cannot access the object.

**name** Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

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## **Examples**

```
CRTMNU MENU(ARLIB/ARPER) TYPE(*PGM)
```

This command creates a menu named ARPER in library ARLIB. The menu calls a program (also named ARPER) when the menu is run.

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## Error messages

### \*ESCAPE Messages

#### CPF6AC3

Menu not created.

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## Appendix. Notices

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