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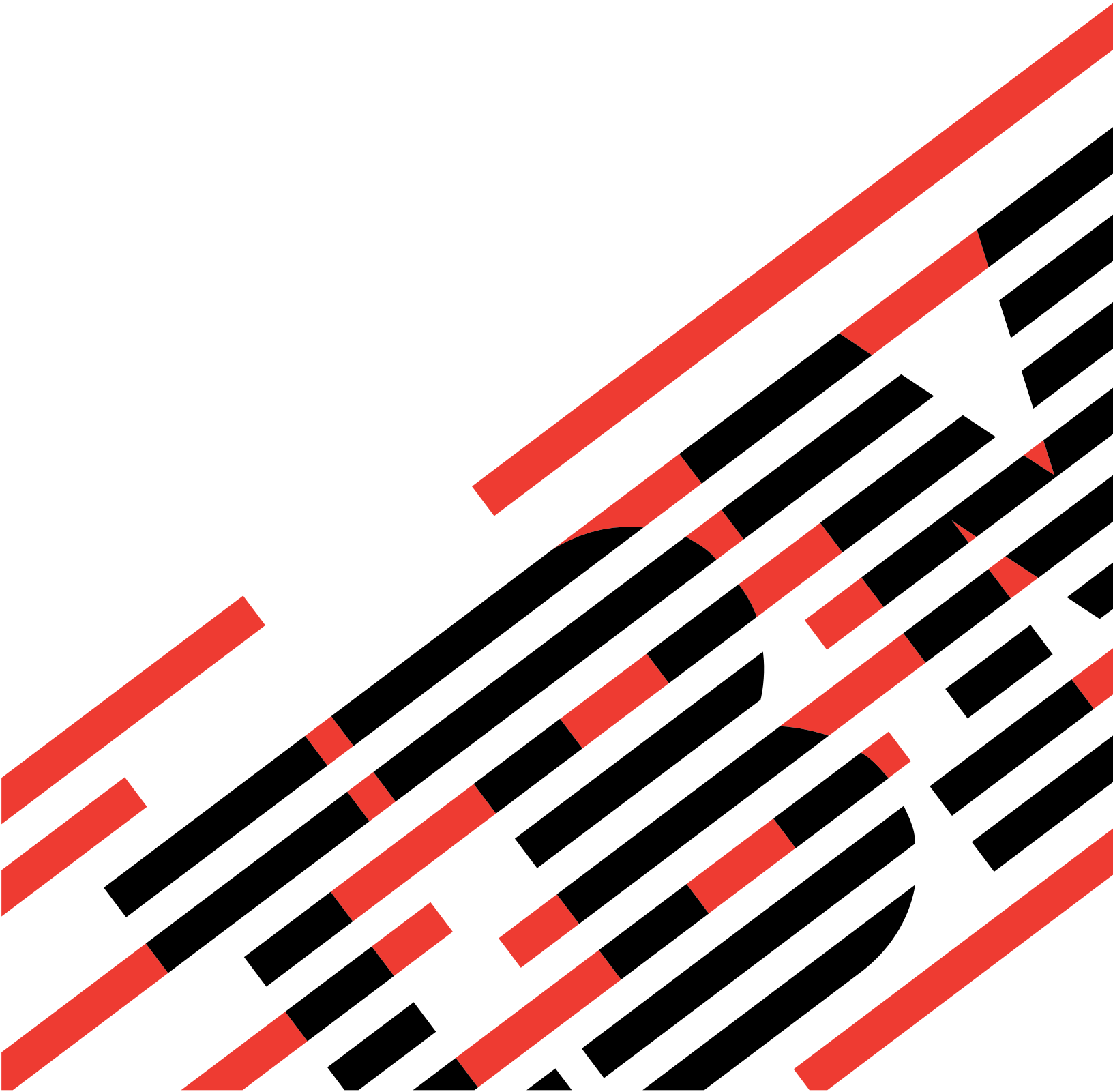
iSeries

Configuration APIs

Version 5 Release 3



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Note

Before using this information and the product it supports, be sure to read the information in "Notices," on page 271.

Sixth Edition (August 2005)

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 CISC models.

Contents

Configuration APIs

The Configuration APIs include the following:

APIs by category

General Configuration APIs

The general configuration application programming interfaces (APIs) allow you to get information about the configuration status of the system and about individual configuration descriptions.

The general configuration APIs are:

- "Change Configuration Description (QDCCCFGD) API" on page 2 (QDCCCFGD) changes the value of one or more parameters in an existing configuration description. This API is intended for applications using new configuration capabilities not yet available through CL commands.
- "List Configuration Descriptions (QDCLCFGD) API" on page 5 (QDCLCFGD) returns a list of configuration descriptions.
- » "Modify Partition Resources (dlpar_set_resources) API" on page 16 (dlpar_set_resources) modifies the configuration of the current partition.«
- "Open List of ASPs (QYASPOL) API" on page 18 (QYASPOL) generates a list of ASPs or information about an ASP.
- "Retrieve Configuration Status (QDCRCFGS) API" on page 34 (QDCRCFGS) retrieves the current status of a controller, device, line, or network interface.
- "Retrieve Controller Description (QDCRCTLD) API" on page 40 (QDCRCTLD) retrieves information about a controller description.
- "Retrieve Device Description (QDCRDEVD) API" on page 75 (QDCRDEVD) retrieves information about a device description.
- "Retrieve Line Description (QDCRLIND) API" on page 109 (QDCRLIND) retrieves information about a line description.
- "Retrieve Network Server Description (QDCRNWSD) API" on page 156 (QDCRNWSD) retrieves information about a network server description.
- » "Retrieve Partition Information (dlpar_get_info) API" on page 178 (dlpar_get_info) Returns information about configuration and CPU utilization of the partition on which this API is called.«

The device configuration exit programs are:

- » "Vary Configuration exit programs" on page 264 runs all exit programs for which the program data indicates the object type and configuration type match the object being varied on.«

Top | "Configuration APIs" | APIs by category

Change Configuration Description (QDCCCFGD) API

Required Parameter Group:	
1	Configuration description name
Input	Char(10)
2	Configuration description type
Input	Char(10)
3	Changes
Input	Char(*)
4	Error code
I/O	Char(*)
Default Public Authority: *USE	
Threadsafe: No	

The Change Configuration Object (QDCCCFGD) API changes the value of one or more parameters in an existing configuration description. » This API is intended for applications using new configuration capabilities not yet available through CL commands. «

Authorities and Locks

Configuration description authority
*CHANGE

Required Parameter Group

Configuration description name
INPUT; CHAR(10)

The name of the configuration description being changed. This parameter must be in uppercase.

Configuration description type
INPUT; CHAR(10)

The type of configuration description being changed. Possible values for this parameter are:

*CFGL	Configuration list
*CNNL	Connection list
*COSD	Class of service description
*CTLD	Controller description
*DEVD	Device description
*IPXD	IPX description
*LIND	Line description
*MODD	Mode description
*NTBD	NetBIOS description
*NWID	Network interface
*NWSD	Network server description

Changes
INPUT; CHAR(*)

The changes to be made to the specified configuration description. The information must be in the following format:

Number of variable length records
BINARY(4)
The total number of all of the variable length records.

Variable length records
Each variable length record contains a keyword plus its associated new value. Refer to "Format for Variable Length Record" for the format of this field.

Error code
I/O; CHAR(*)

The structure in which to return error information. For the format of the structure, see Error Code Parameter.

Format for Variable Length Record

The following table shows the format for the variable length record. For a detailed description of each field, see "Field Descriptions."

Offset			
Dec	**Hex**	**Type**	**Field**
0	0	BINARY(4)	Key
4	4	BINARY(4)	Length of new value
8	8	CHAR(*)	New value

If the length of the new value is longer than the data length of the key field, the data is truncated to the right. No message is issued.

If the length of the new value is shorter than the data length of the key field, the data is padded with blanks to the right. No message is issued.

It is not an error to specify a key more than once. If duplicate keys are specified, the last specified value for that key is used.

Field Descriptions

Key. The keyword parameter of the configuration description to be changed. Only specific keywords can be changed. The following table lists the valid key for the key-field area of the variable length record:

Key	Value	CFGD type	CFGD keyword
201	CHAR(5000)	*DEVD	USRDFNDTA

Length of new value. The length of the new value to be assigned to the keyword.

New value. The value to which a specific keyword is to be set.

Validation of New Values

Inclusion of any keyword parameter and its accompanying values in this API implies that the parsing of the value is supported in this API at a level equivalent to that provided by a Change (CHG) command that supports the same keyword.

In addition to the CPF26C9 escape message signaled to the caller, one or more CPD messages are placed on the caller's job log by the API to more fully describe the syntax error found while parsing the new value.

Error Messages

Message ID	Error Message Text
CPF24B4 E	Severe error while addressing parameter list.
CPF26A8 E	Configuration description type not valid for this API.
CPF26C7 E	Key not valid.
CPF26C9 E	New value not valid.
CPF260A E	Mode description not found.
CPF260F E	Configuration list not found.
CPF262C E	Mode description damaged.
CPF2625 E	Not able to allocate object &1.
CPF2634 E	Not authorized to object &1.
CPF266C E	Connection list not found.
CPF2670 E	Class of service description not found.
CPF2675 E	Class of service description damaged.
CPF27A4 E	Network interface description &1 not found.
CPF2702 E	Device description &1 not found.
CPF2703 E	Controller description &1 not found.
CPF2704 E	Line description &1 not found.
CPF3CF1 E	Error code parameter not valid.
CPF3C4D E	Length &1 for key &2 not valid.
CPF3C88 E	Number of variable length records &1 is not valid.
CPF3C90 E	Literal value cannot be changed.
CPF8FCF E	IPX description not found.
CPF8F5D E	NetBIOS description not found.
CPF8104 E	Controller description &4 damaged.
CPF8105 E	Device description &4 damaged.
CPF811D E	Network interface description &4 damaged.
CPF811E E	Connection list damaged.
CPF8124 E	Configuration list damaged.
CPF8125 E	Line description &4 damaged.
CPF814D E	NetBIOS description &4 damaged.
CPF815C E	IPX description damaged.
CPF9872 E	Program or service program &1 in library &2 ended. Reason code &3.

API introduced: V3R7

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List Configuration Descriptions (QDCLCFGD) API

Required Parameter Group:	
1	Qualified user space name
Input	Char(20)
2	Format name
Input	Char(8)
3	Configuration description type
Input	Char(10)
4	Object qualifier
Input	Char(40)
5	Status qualifier
Input	Char(20)
6	Error code
I/O	Char(*)
Default Public Authority: *USE	
Threadsafe: Yes	

The List Configuration Descriptions (QDCLCFGD) API returns a list of configuration descriptions. The list elements are all of one type (such as line, controller, or device). The list contents can be further restricted by one or more qualifiers, specified as parameters.

Authorities and Locks

Configuration Description Authority
*USE

User Space Authority
*CHANGE

User Space Library Authority
*EXECUTE

(If one or more listed objects do not meet the authority requirement, they will be omitted from the returned list. Only objects to which the user has proper authority are in the list.)

Required Parameter Group

Qualified user space name
INPUT; CHAR(20)

The user space that receives the information, and the library in which it is located. The user must have read/write access to this space. The first 10 characters contain the user space name, and the second 10 characters contain the library name.

You can use these special values for the library name:

**CURLIB*	The job's current library
**LIBL*	The library list

Format name
INPUT; CHAR(8)

The content and format of the list returned. The possible format names are:

CFGD0100	List of selected configuration descriptions
CFGD0200	List of selected configuration descriptions, plus current status of each one

See "Format of Configuration Lists" on page 9 for a description of these formats.

Configuration description type
INPUT; CHAR(10)

The type of configuration descriptions to be included in the list. The possible description types are:

**LIND*	Line descriptions
**CTLD*	Controller descriptions
**DEVD*	Device descriptions
**NWID*	Network interface descriptions
**NWSD*	Network server descriptions
**NTBD*	NetBIOS descriptions
**IPXD*	Internetwork Packet Exchange (IPX) descriptions

Object qualifier
INPUT; CHAR(40)

A restriction on the objects to be listed. If a qualifier is specified that is inconsistent with the configuration description type parameter, an error message is returned. A null list is returned if no configuration descriptions meet the qualifications. If this parameter is set to all blanks, no object qualification is performed. This parameter is divided into four 10-character fields.

The primary qualifier value is placed in the first 10 characters of the parameter. The allowable values are:

Object name	Object of this name only, of the specified configuration description type
Generic object name	All objects that have names matching the generic string, of the specified configuration description type
**ALL*	All objects of the specified configuration description type
**APPC*	APPC controllers and devices only
**ASP*	Auxiliary storage pool devices only
**ASYNC*	Asynchronous lines, controllers, and devices only
**ATM*	Asynchronous transfer mode network interfaces only
**BSC*	BSC lines, controllers, and devices only
**CMN*	Communications controllers or devices only
**CRP*	Cryptographic devices only
**DDI*	Distributed data interface lines only
**DKT*	Diskette devices only
**DSP*	Display devices only
**ELAN*	Ethernet lines only
**FAX*	Fax lines only
**FNC*	Finance controllers and devices only
**FR*	Frame relay network interfaces and lines only
**HOST*	Host controllers and devices only
**IDLC*	IDLC lines only
**INTRA*	Intrasystem devices only
**ISDN*	Integrated Services Digital Network (ISDN) network interfaces only

**LANPRT*	LAN printer devices only
**LCLDSP*	Local display devices only
**LCLPRT*	Local printer devices only
**LOC*	Devices that match the specified remote location name only
**LWS*	Local work station controllers only
**MLB*	Media library devices only
**NET*	Network lines, controllers, or devices only
**OPT*	Optical devices only
**OPTICAL*	All optical devices and optical media library devices (equivalent to *OPT plus *OPTMLB)
**OPTMLB*	Optical media library devices only
**PPP*	Point-to-point lines only
**PRT*	Printer devices only
**RMTDSP*	Remote display devices only
**RMTPRT*	Remote printer devices only
**RSRC*	Network interfaces, lines, controllers, or devices that match the specified resource name only
**RTL*	Retail controllers and devices only
**RWS*	Remote work station controllers only
**SDLC*	SDLC lines only
**SNPT*	SNPT devices and SNPT-class devices only (SNPT-class devices include printer, display, finance, and retail devices)
**SNUF*	SNA upline facility devices only
**T1*	Network interface of type T1.
**TAP*	Tape devices and controllers only
**TAPE*	All tape devices and tape media library devices (equivalent to *TAP plus *TAPMLB)
**TAPMLB*	Tape media library devices only
**TDLC*	TDLC lines only
**TRLAN*	Token-ring lines only
**VWS*	Virtual work station controllers only
**VRTDSP*	Virtual display devices only
**VRTPRT*	Virtual printer devices only
**WLS*	Wireless lines only
**WS*	Work station controllers only
**X25*	X.25 lines only

The information in the following tables describes the requirements for the first (primary qualifier), second, third, and fourth 10 characters of this parameter.

If...	**Then...**
Configuration description type parameter is *NWSD and the primary qualifier equals an object name	The last 2 characters of the 10-character primary qualifier must be blanks
Note: This is because network server names can only be up to 8 characters.	

If...	**Then...**
Configuration description type parameter is *NWSD	Primary qualifier must be specified as only *ALL, *RSRC, or an object name

If...	Then...
Configuration description type parameter is *NTBD	Primary qualifier must be specified as only *ALL or an object name
Configuration description type parameter is *IPXD	Primary qualifier must be specified as only *ALL or an object name

If...	Then...
Configuration description type parameter is *DEVD and primary qualifier is *LOC	Remote location name to be used is placed in second 10 characters
Note: If a remote location name is specified with any other combination of the configuration description type parameter and primary qualifier, an error message is returned.	

If...	Then...
Primary qualifier is *RSRC	Resource name to be used is placed in second 10 characters
Note: If a resource name is specified with any other primary qualifier, an error message is returned.	

If...	Then...
Configuration description type parameter is *CTLD or *DEVD	Type qualifier value may be placed in third 10 characters
Note: If a type qualifier is specified with any other value for the configuration description type parameter, an error message is returned. A list of valid type values can be found in the Local Device Configuration  book. If the type value is not valid, a null list is returned.	

If...	Then...
Configuration description type parameter is *CTLD or *DEVD and type qualifier is coded in third 10 characters	Model qualifier value may be placed in fourth 10 characters
Note: If a model qualifier value is specified with any other value for the configuration description type parameter or if the type qualifier is blank, an error message is returned. A list of valid model values can be found in the Local Device Configuration book. If the model value is not valid, a null list is returned.	

Status qualifier

INPUT; CHAR(20)

A logical operator and a status value that are used to qualify which configuration descriptions are included in the list. The first 10 bytes contain a logical operator, left-justified. The valid values for the logical operator are:

*GT	Greater than
*GE	Greater than, or equal to
*LT	Less than
*LE	Less than, or equal to
*EQ	Equal to
*NE	Not equal to

The second 10 bytes contain a value denoting status, left-justified. The allowed status values, in order of precedence, are:

*ACTIVE	Object is active.
*VARYON	Object is varied on.
*VARYOFF	Object is varied off.

The value in the second 10 bytes has an inherent hierarchy: *ACTIVE is ″greater than″ *VARYON, and *VARYON is ″greater than″ *VARYOFF. The two values are used together to form a logical qualifier. For example, ″*GE *VARYON ″ causes only objects that are active or varied on to be listed. Objects that are currently varied off are excluded. Both values must be present if either is present. An invalid logical qualifier results in a null list being returned. This qualifier must be blank if the configuration description type parameter is *NTBD or *IPXD.

Error code

I/O; CHAR(*)

The structure in which to return error information. For the format of the structure, see Error Code Parameter.

Format of Configuration Lists

To request a list of configuration descriptions of a specific type, use format CFGD0100. To request the current status for each description returned, use format CFGD0200.

The configuration description list consists of:

- A user area
- A generic header
- An input parameter section
- A header section
- A list data section:
  - CFGD0100 format
  - CFGD0200 format

For details about the user area and generic header, see User Space Format for List APIs. For details about the remaining items, see the following sections. For detailed descriptions of the fields in the list returned, see "Field Descriptions" on page 11.

When you retrieve list entry information from a user space, you must use the entry size returned in the generic header. The size of each entry may be padded at the end. If you do not use the entry size, the result may not be valid. For examples of how to process lists, see the API Examples.

Input Parameter Section

Offset		Type	Field
Dec	Hex		
0	0	CHAR(10)	User space name specified
10	A	CHAR(10)	User space library name specified
20	14	CHAR(8)	Format name specified
28	1C	CHAR(10)	Configuration description type specified
38	26	CHAR(40)	Object qualifier specified
78	4E	CHAR(20)	Status qualifier specified
98	62	CHAR(2)	Reserved

Header Section

Offset		Type	Field
Dec	Hex		
0	0	CHAR(10)	Configuration description type used
10	A	CHAR(40)	Object qualifier used
50	32	CHAR(20)	Status qualifier used
70	46	CHAR(2)	Reserved
72	48	CHAR(10)	User space name used
82	52	CHAR(10)	User space library name used

CFGD0100 Format

Offset		Type	Field
Dec	Hex		
0	CHAR(10)		Configuration description name

Offset		Type	Field
Dec	Hex		
10	A	CHAR(10)	Configuration description category
20	14	CHAR(8)	Retrieve API format name
28	1C	CHAR(4)	Configuration description command suffix

CFGD0200 Format

Offset		Type	Field
Dec	Hex		
0	0	BINARY(4)	Current status: numeric code
4	4	CHAR(10)	Configuration description name
14	E	CHAR(10)	Configuration description category
24	18	CHAR(20)	Current status: displayable text
44	2C	CHAR(50)	Text description
94	5E	CHAR(10)	Job name
104	68	CHAR(10)	User name
114	72	CHAR(6)	Job number
120	78	CHAR(10)	Pass-through device
130	82	CHAR(8)	Retrieve API format name
138	8A	CHAR(4)	Configuration description command suffix

Field Descriptions

Configuration description name. The name of an object selected for inclusion in the list.

Configuration description category. The value returned in this field depends on the value specified for the configuration description type parameter when the API was called, as follows:

- **Line description**

  If the configuration description type parameter is *LIND (line description), the value is one of the following.

  Note: The Retrieve Line Description (QDCRLIND) API can be used to retrieve detailed information about the configuration description. Use a format name shown in the following table as input when you call the QDCRLIND API.

Line Description Category	Line Description API Format Name	Line Description Command Suffix
*ASYNC	LIND0300	ASC
*BSC	LIND0400	BSC
*DDI	LIND1200	DDI
*ELAN	LIND0500	ETH
*FAX	LIND1400	FAX
*FR	LIND1300	FR
*IDLC	LIND0600	IDLC

Line Description Category	Line Description API Format Name	Line Description Command Suffix
*NET	LIND0700	NET
*PPP	LIND1600	PPP
*SDLC	LIND0800	SDLC
*TDLC	LIND0900	TDLC
*TRLAN	LIND1000	TRN
*WLS	LIND1500	WLS
*X25	LIND1100	X25

- **Controller description**

  If the configuration description type parameter is *CTLD (controller description), the value is one of the following:

  Note: The Retrieve Controller Description (QDCRCTLD) API can be used to retrieve detailed information about the configuration description. Use a format name shown in the following table as input when you call the QDCRCTLD API.

Controller Description Category	Controller Description API Format Name	Controller Description Command Suffix
*APPC	CTLD0300	APPC
*ASYNC	CTLD0400	ASC
*BSC	CTLD0500	BSC
*FNC	CTLD0600	FNC
*HOST	CTLD0700	HOST
*LWS	CTLD1200	LWS
*NET	CTLD0800	NET
*RTL	CTLD0900	RTL
*RWS	CTLD1000	RWS
*TAP	CTLD1300	TAP
*VWS	CTLD1100	VWS
A specific controller type value	Appropriate format	Appropriate suffix

- **Device description**

  If the configuration description type parameter is *DEVD (device description), the value is one of the following.

  Note: The Retrieve Device Description (QDCRDEVD) API can be used to retrieve detailed information about the configuration description. Use a format name shown in the following table as input when you call the QDCRDEVD API.

Device Description Category	Device Description API Format Name	Device Description Command Suffix
*APPC	DEVD0200	APPC
*ASP	DEVD1900	ASP
*ASYNC	DEVD0300	ASC
*BSC	DEVD0400	BSC
*CRP	DEVD1800	CRP

Device Description Category	Device Description API Format Name	Device Description Command Suffix
*DKT	DEVD0500	DKT
*DSP	DEVD0600	DSP
*FNC	DEVD0700	FNC
*HOST	DEVD0800	HOST
*INTR	DEVD0900	INTR
*MLB	DEVD1700	MLB
*NET	DEVD1000	NET
*OPT	DEVD1600	OPT
*OPTMLB	DEVD1700	MLB
*PRT	DEVD1100	PRT
*RTL	DEVD1200	RTL
*SNPT	DEVD1300	SNPT
*SNUF	DEVD1400	SNUF
*TAP	DEVD1500	TAP
*TAPMLB	DEVD1700	MLB
A specific device type value	Appropriate format	Appropriate suffix

- **Network interface description**

  If the configuration description type parameter is *NWID (network interface description), the value is one of the following:

  Note: There is no API available to retrieve network interface descriptions. Therefore, the API format name is set to blanks and is not included in the following table.

Network Interface Description Category	Network Interface Description Command Suffix
*ATM	ATM
*FR	FR
*ISDN	ISDN
*T1	T1

- **Network server description**

  If the configuration description type parameter is *NWSD (network server description), the value is one of the following:

  Note: The Retrieve Network Server Description (QDCRNWSD) API can be used to retrieve detailed information about the configuration description. Use a format name shown in the following table as input when you call the QDCRNWSD API. The command suffix is set to blanks.

Network Server Description Category	Network Server Description API Format Name
*AIX	NWSD0500
*BASE	NWSD0400
*GUEST	NWSD0700
*LANSERVER	NWSD0200
*NETWARE	NWSD0300

Network Server Description Category	Network Server Description API Format Name
*WINDOWSNT	NWSD0600

Note: The category values are derived from the command that is used to create the configuration description.

Configuration description command suffix. The configuration description command suffix consists of the last characters (up to 4) that are associated with the create and change command for the configuration description types.

Note: For the format name values, see the tables defined for the configuration description category field.

Configuration description type specified. The value specified for the type of configuration description to be included in the list.

The possible types are:

*LIND	Line descriptions
*CTLD	Controller descriptions
*DEVD	Device descriptions
*NWID	Network interface descriptions
*NWSD	Network server descriptions
*NTBD	NetBIOS descriptions
*IPXD	Internetwork Packet Exchange (IPX) descriptions

Configuration description type used. The type of configuration description included in the list.

Current status. The current status of the selected object using two fields:

- Current status: numeric code
- Current status: displayable text

Note: The displayable text will be returned translated. This text is retrieved from message CPX2651 in message file QCPFMSG in *LIBL. » If the job CCSID, message file CCSID, or message description CCSID is 65535 the displayable text is returned in the CCSID of the message description and not in the CCSID found in the generic header of the user space. « The value is one of the following:

Status Numeric Code (decimal)	Status Displayable Text
0	VARIED OFF
5	AS/36 DISABLED
20	VARY ON PENDING
30	VARIED ON
40	CONNECT PENDING
50	SIGNON DISPLAY
60	ACTIVE
62	AS/36 ENABLED
63	ACTIVE READER
66	ACTIVE WRITER
70	HELD
75	POWERED OFF
80	RCYPND
90	RCYCNL

Status Numeric Code (decimal)	Status Displayable Text
95	SYSTEM REQUEST
96	REBUILD
100	FAILED
103	FAILED READER
106	FAILED WRITER
107	SHUTDOWN
110	DIAGNOSTIC MODE
111	DAMAGED
112	LOCKED
113	UNKNOWN

Format name specified. The name specified for the format to be used in generating the list. The possible formats are:

CFGD0100	List of selected configuration descriptions
CFGD0200	List of selected configuration descriptions, plus current status of each one

Job name. The name of the job associated with an active device, if applicable.

Job number. The job number portion of a fully qualified job name.

Object qualifier specified. The qualifier values specified that define which objects are to be included in the generated list. See the object qualifier (page 6) parameter in the Required Parameter Group for details on the possible values.

Object qualifier used. The qualifier values used to determine which objects are included in the list.

Pass-through device. The name of an upstream device used to complete a pass-through session, if applicable. This field is only filled in for SNA pass-through devices. These devices are created using the Create Device Description (SNA Pass-Through) (CRTDEVSNPT) command. If an SNA pass-through device does not exist, the field is blank.

Reserved. Space included for alignment.

Retrieve API format name. The format name that is used to retrieve detailed information about a configuration description by using a retrieve API. The following are the available APIs:

Retrieve Line Description (QDCRLIND)
Retrieve Controller Description (QDCRCTLD)
Retrieve Device Description (QDCRDEVD)
Retrieve Network Server Description (QDCRNWSD)

Note: This field is filled in only for configuration description categories of *LIND, *CTLD, *DEVD, and *NWSD. For the format name values, see the tables defined for the configuration description category field.

Status qualifier specified. The status values specified that define which configuration descriptions are to be included in the generated list. See the status qualifier (page 9) parameter in the Required Parameter Group for details on the possible values.

Status qualifier used. The status values used to determine which configuration descriptions are included in the list.

Text description. The text that describes the selected object.

User name. The user name portion of a fully qualified job name.

User space library name specified. The name specified for the library that contains the user space to receive the generated list.

User space library name used. The actual name of the library used to contain the user space that received the list.

User space name specified. The name specified for the user space that is to receive the generated list.

User space name used. The actual name of the user space that received the list.

Error Messages

Message ID	Error Message Text
CPF24B4 E	Severe error while addressing parameter list.
CPF26A8 E	Configuration description type not valid for this API.
CPF26A9 E	Object qualifier not valid for this API.
CPF26AA E	Status qualifier not valid for this API.
CPF3C21 E	Format name &1 is not valid.
CPF3C90 E	Literal value cannot be changed.
CPF3CF1 E	Error code parameter not valid.
CPF9872 E	Program or service program &1 in library &2 ended. Reason code &3.

API introduced: V2R3

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Modify Partition Resources (dlpar_set_resources) API

Syntax:

```
#include <qpmlpmgt.h>
int dlpar_set_resources (void *attrbute_value, int attribute_id);
```

Service Program Name: QPMLPMGT

Default Public Authority: *EXCLUDE

Threadsafe: Yes

Modify Partition Attributes (dlpar_set_resources) API is used to modify the configuration of the current partition. The API accepts the identifier of the partition configuration attribute intended to be modified and the new value for this attribute . The API modifies one partition configuration attribute at a time.

The modification of partition configuration attributes by dlpar_set_resources() API is subject to configuration constraints which are enforced by iSeries Hypervisor.

Authorities and Locks

To use this API, caller's user profile must have *ALLOBJ special authority.

Parameters

Configuration attribute value
INPUT; CHAR(*)

This parameter contains a new value for the configuration attribute identified by the Configuration attribute ID parameter. This value will have a different format depending on the configuration attribute being processed as follows:

Attribute	Format
Current partition capacity	UNSIGNED BINARY(4)
Variable partition capacity weight	UNSIGNED BINARY(4)
Current interactive capacity	UNSIGNED BINARY(4)
Virtual processors	UNSIGNED BINARY(4)
Available memory	UNSIGNED BINARY(8)

Available memory is the amount of memory (in megabytes) that this partition should have.

Current interactive capacity is the percentage of the total system's interactive capacity that this partition is allowed to use. It is in the range of 0 - 100.

Current partition capacity is the amount of processor capacity (in units of 1/100 of a physical processor) that should be available in this partition.

Virtual processors is the number of virtual processors in this partition.

Variable partition capacity weight is the weighting factor that is used when assigning additional unused capacity (from the shared processor pool) to the partition. This factor is in the range of 0 - 255. A value of 0 effectively caps this partition at its entitled capacity.

Configuration attribute ID
INPUT; CHAR(*)

This parameter contains a new value for the configuration attribute identified by the Configuration attribute ID parameter. This value will have a different format depending on the configuration attribute being processed as follows:

1	Current partition capacity
2	Variable partition capacity weight
3	Current interactive capacity
4	Virtual processors
5	Available memory

Return Value

Depending on whether the call was successful, there are several possible return values:

0	API successfully changed configuration attribute.

Negative value API failed to change configuration attribute. Returned value is set to indicate the kind of error that prevented the change of the configuration attribute as follows:

-1 API was called with incorrect parameters.

-2 Configuration change was rejected because an LPAR configuration constraint, regarding the resource being configured, was violated.

-3 Configuration change failed because of hardware fault.

-4 Configuration change failed because of insufficient authority.

-5 Configuration change failed because of unexpected exception. (See joblog for the details about exception.)

API introduced: V5R3

Top | "Configuration APIs," on page 1 | APIs by category

Open List of ASPs (QYASPOL) API

Required Parameter Group:

1	Receiver variable
Output	Char(*)
2	Length of receiver variable
Input	Binary(4)
3	List information
Output	Char(80)
4	Number of records to return
Input	Binary(4)
5	Number of filters
Input	Binary(4)
6	Filter information
Input	Char(*)
7	Format name
Input	Char(8)
8	Error Code
I/O	Char(*)

Optional Parameter:

9	Sort information
Input	Char(*)

Default Public Authority: *USE

Threadsafe: No

The Open List of ASPs (QYASPOL) API generates a list of ASPs or information about an ASP. This can be any of the following:

- Identification of all ASPs configured to a system
- Attributes of an ASP
- Unassigned disk units or disk units assigned to an ASP
- Hardware problems during varyon of an independent ASP.
- Current varyon activity.
- Jobs using an independent ASP.

On successful completion of this API, a handle is returned in the list information parameter. You may use this handle on subsequent calls to the following APIs:

Get List Entries (QGYGTLE)

Close List (QGYCLST)

Authorities and Locks

None.

Required Parameter Group

Receiver variable

OUTPUT; CHAR(*)

The receiver variable that receives the information requested. You can specify the size of the area to be smaller than the format requested as long as you specify the length parameter correctly. As a result, the API returns only the data the area can hold.

Length of receiver variable

INPUT; BINARY(4)

The length of the receiver variable provided. The length of the receiver variable parameter may be specified up to the size of the receiver variable specified in the user program. If the length of receiver variable parameter specified is larger than the allocated size of the receiver variable specified in the user program, the results are not predictable.

List information

OUTPUT; CHAR(80)

The variable used to return status information about the list of opened ASPs. For a description of the layout of this parameter, see Format of Open List Information.

Number of records to return

INPUT; BINARY(4)

The number of records in the list to put into the receiver variable after filtering has been done. The valid values for this field are as follows:

-1	All records are built synchronously in the list by the main job.
0	All records are built asynchronously in the list by a server job.
records-to-return	If a positive number of records is specified, at least that many records are built synchronously (in order to return those records immediately to the caller of this API) and the remainder are built asynchronously by a server job.

Number of filters

INPUT; BINARY(4)

The number of filters provided in the filter information.

Filter information
INPUT; CHAR(*)

The information in this parameter is used to determine which ASPs to include in the list. See "Format of Filter Information" on page 32 for a description of the layout of this parameter.

Format name
INPUT; CHAR(8)

The format of the ASP information being returned. You must specify one of the following:

YASP0100 Identification of the ASPs configured to a system. This includes the system ASP and all user ASPs. The list is sorted by ASP number. For more information about the YASP0100 format, see "YASP0100 Format."

YASP0200 The basic attributes of the ASP. For more information about the YASP0200 format, see "YASP0200 Format" on page 21.

YASP0300 The disk units assigned to the ASP. For more information about the YASP0300 format, see "YASP0300 Format" on page 22.

YASP0400 The hardware error information related to use of an ASP. Records of this format are returned only if the ASP is an independent ASP and if any errors were detected. For more information about the YASP0400 format, see "YASP0400 Format" on page 23.

YASP0500 The progress status related to use of an ASP. A record of this format is returned only if the ASP is an independent ASP. For more information about the YASP0500 format, see "YASP0500 Format" on page 23.

YASP0600 Identification of the jobs and their threads currently using an ASP. Records of this format are returned only if the ASP is an independent ASP. » An entry will be returned for each thread in the job that is using the ASP. « For more information about the YASP0600 format, see "YASP0600 Format" on page 23.

Error code
I/O; CHAR(*)

The structure in which to return error information. For the format of the structure, see Error Code Parameter.

Optional Parameter

Sort information
INPUT; CHAR(*)

Information on which fields within the record of information to sort. See "Format of Sort Information" on page 33 for a description of the layout of this parameter. If this parameter is omitted, no sorting is done.

Format of Receiver Variable

The following tables describe the order and format of the data that is returned in the receiver variable.

YASP0100 Format

Offset		Type	Field
Dec	Hex		
0	0	BINARY(4)	ASP number
4	4	CHAR(10)	Resource name
14	E	CHAR(10)	Device description name
24	18	BINARY(4)	Version
28	1C	BINARY(4)	ASP usage

Offset		Type	Field
Dec	Hex		
32	20	BINARY(4)	ASP status
36	24	CHAR(18)	Database name

YASP0200 Format

Offset		Type	Field
Dec	Hex		
0	0	BINARY(4)	ASP number
4	4	BINARY(4)	Number of disk units
8	8	BINARY(4)	ASP capacity - total
12	C	BINARY(4)	ASP capacity available - total
16	10	BINARY(4)	ASP capacity - protected
20	14	BINARY(4)	ASP capacity available - protected
24	18	BINARY(4)	ASP capacity - unprotected
28	1C	BINARY(4)	ASP capacity available - unprotected
32	20	BINARY(4)	ASP system storage
36	24	BINARY(4)	Overflow storage
40	28	BINARY(4)	Space allocated to the error log
44	2C	BINARY(4)	Space allocated to the machine log
48	30	BINARY(4)	Space allocated to the machine trace
52	34	BINARY(4)	Space allocated for main storage dump
56	38	BINARY(4)	Space allocated to the microcode
60	3C	BINARY(4)	Storage threshold percentage
64	40	CHAR(2)	ASP type
66	42	CHAR(1)	Overflow recovery result
67	43	CHAR(1)	End immediate control
68	44	CHAR(1)	Compression recovery policy
69	45	CHAR(1)	Compressed disk units in ASP
70	46	CHAR(1)	Balance status
71	47	CHAR(1)	Balance type
72	48	CHAR(13)	Balance date and time
85	55	CHAR(3)	Reserved
88	58	BINARY(4)	Balance data moved
92	5C	BINARY(4)	Balance data remaining
96	60	BINARY(4)	Trace duration
100	64	CHAR(1)	Trace status
101	65	CHAR(13)	Trace date and time
114	72	CHAR(1)	Changes written to disk
115	73	CHAR(1)	Reserved

Offset		Type	Field
Dec	Hex		
116	74	BINARY(4)	Number of multiple connection disk units
120	78	BINARY(4)	Geographic mirror role
124	7C	BINARY(4)	Geographic mirror copy state
128	80	BINARY(4)	Geographic mirror copy data state «

YASP0300 Format

Offset		Type	Field
Dec	Hex		
0	0	BINARY(4)	ASP number
4	4	CHAR(4)	Disk type
8	8	CHAR(4)	Disk model
12	C	CHAR(10)	Disk serial number
22	16	CHAR(10)	Resource name
32	20	BINARY(4)	Disk unit number
36	24	BINARY(4)	Disk capacity
40	28	BINARY(4)	Disk storage available
44	2C	BINARY(4)	Disk storage reserved for system
48	30	CHAR(1)	Mirrored unit protected
49	31	CHAR(1)	Mirrored unit reported
50	32	CHAR(1)	Mirrored unit status
51	33	CHAR(1)	Reserved
52	34	BINARY(4)	Unit control
56	38	BINARY(4)	Blocks transferred to main storage
60	3C	BINARY(4)	Blocks transferred from main storage
64	40	BINARY(4)	Requests for data transfer to main storage
68	44	BINARY(4)	Requests for data transfer from main storage
72	48	BINARY(4)	Permanent blocks transferred from main storage
76	4C	BINARY(4)	Requests for permanent data transfer from main storage
80	50	BINARY(4)	Sample count
84	64	BINARY(4)	Not busy count
88	68	CHAR(1)	Compression status
89	69	CHAR(1)	Disk protection type
» 90	6A	CHAR(1)	Compressed unit
91	6B	CHAR(1)	Storage allocation restricted unit
92	6C	CHAR(1)	Availability parity set unit
93	6D	CHAR(1)	Multiple connection unit «

YASP0400 Format

Offset		Type	Field
Dec	Hex		
0	0	BINARY(4)	ASP number
4	4	CHAR(4)	Error code
8	8	BINARY(4)	Disk unit number
12	C	CHAR(1)	Mirrored unit identifier

YASP0500 Format

Offset		Type	Field
Dec	Hex		
0	0	BINARY(4)	ASP number
4	4	CHAR(2)	Transition target
6	6	CHAR(2)	Reserved
8	8	CHAR(16)	Function
24	18	BINARY(4)	Current count
28	1C	BINARY(4)	Total count
32	20	BINARY(4)	Current item count
36	24	BINARY(4)	Total item count

YASP0600 Format

Offset		Type	Field
Dec	Hex		
0	0	BINARY(4)	ASP number
4	4	BINARY(4)	Use identification
8	8	CHAR(10)	Job name
18	12	CHAR(10)	Job user name
28	1C	CHAR(6)	Job number
34	22	CHAR(2)	Reserved
36	24	CHAR(8)	Thread identifier
44	2C	UNSIGNED BINARY(4)	Thread handle
48	30	CHAR(4)	Thread status

Field Descriptions

Note: Megabytes, as used in this topic, means millions of bytes.

ASP capacity - protected. The total number of used and unused megabytes in the ASP that are protected by mirroring or device parity. A special value of -2 is returned if the size of this field is exceeded.

ASP capacity available - protected. The number of unused megabytes in the ASP that are protected by mirroring or device parity. A special value of -2 is returned if the size of this field is exceeded.

ASP capacity - total. The total number of used and unused megabytes in the ASP. A special value of -2 is returned if the size of this field is exceeded.

ASP capacity available - total. The total number of unused megabytes in the ASP. A special value of -2 is returned if the size of this field is exceeded.

ASP capacity - unprotected. The total number of used and unused megabytes in the ASP that are not protected by mirroring or device parity. A special value of -2 is returned if the size of this field is exceeded.

ASP capacity available - unprotected. The number of unused megabytes in the ASP that are not protected by mirroring or device parity. A special value of -2 is returned if the size of this field is exceeded.

ASP number. A unique identifier for an auxiliary storage pool.

ASP status. The device configuration status of an auxiliary storage pool. The possible ASP status values are:

0	There is no status. This value is used for the system ASP and any basic user ASPs.
1	The status of the ASP is varyoff.
2	The status of the ASP is varyon.
3	The status of the ASP is active.
4	The status of the ASP is available.

ASP system storage. The amount of storage in megabytes currently allocated in the ASP for system use.

ASP type. The type of ASP. The possible ASP types are:

00	The ASP is the system ASP.
10	The ASP is a user ASP that does not contain libraries.
11	The ASP is a user ASP that does contain libraries.

ASP usage. The use that is assigned to the auxiliary storage pool. The possible ASP usage values are:

0	The usage attribute does not apply or is not known. This value is used for the system ASP, any basic user ASPs and any independent ASPs whose use cannot be determined (eg, one whose disk drives are not powered on).
1	The ASP is a user-defined file system ASP.
2	The ASP is a primary ASP.
3	The ASP is a secondary ASP.

Availability parity set unit. An indicator of whether a disk unit is in an availability parity set.

0	The disk unit is not in an availability parity set.
1	The disk unit is in an availability parity set.

Balance data moved. The number of megabytes that have been moved by the balance function. A special value of -2 is returned if the size of this field is exceeded.

Balance data remaining. The number of megabytes that remain to be moved by the balance function before the move is considered complete. A special value of -2 is returned if the size of this field is exceeded.

Balance date and time. The date and time of the last status change for the balance function. The 13 characters are:

1	Century, where 0 indicates years 19xx and 1 indicates years 20xx.
2-7	The date, in YYMMDD (year, month, day) format.
8-13	The time of day, in HHMMSS (hours, minutes, seconds) format.

Balance status. The current status of the balance function for this ASP. The following special values are returned:

0	No balance activity has occurred for this ASP.
1	The ASP balance function is currently running for this ASP.
2	The ASP balance function is currently in the process of ending. Either the time limit has run out or the End ASP Balance (ENDASPBAL) command was issued for this ASP.
3	The ASP balance function has run, but was ended before the ASP was completely balanced. The Start ASP Balance (STRASPBAL) command can be used to restart the balance function.
4	The ASP balance function has completed running. The ASP is completely balanced.

Balance type. The type of balance activity that is currently running or was done last. The possible types of ASP balancing are:

0	No ASP balance activity was requested for the ASP.
1	Capacity balancing to redistribute data so that the percentage of disk space used is the same on all disk units within the ASP.
2	Usage balancing to redistribute data so that the percentage of disk activity is the same on all disk units within the ASP. High-use and low-use data is identified by running the Trace ASP Balance (TRCASPBAL) command. Usage balancing moves data among the disk units, guided by the trace results, in an attempt to equalize the utilizations.
3	The Heirarchical Storage Management (HSM) balance can be run only on an ASP that contains a mixture of high-performance and low-performance disk units. An example of low-performance disk units is compressed disk units. The HSM balance function moves high-use data to high-performance units and moves low-use data to low-performance units. The high-use and low-use data is identified by running the Trace ASP Balance (TRCASPBAL) command.

Blocks transferred from main storage. The number of 512-byte blocks transferred to the disk unit since the last IPL. This value wraps around to zero and continues counting in the case of an overflow of the field with no indication of the overflow having occurred.

Blocks transferred to main storage. The number of 512-byte blocks transferred from the disk unit since the last IPL. This value wraps around to zero and continues counting in the case of an overflow of the field with no indication of the overflow having occurred.

Changes written to disk. An indicator of whether all changes made the previous time the IASP was online were written to disk. Varyoff processing attempts to write changed IASP storage but, in some failures, it may not be successful.

0	Not all changes were written.
1	All changes were written.

Compressed disk units in ASP. Whether there are compressed disk units in the ASP. The following special values are returned:

0	No compressed disk units in this ASP.
1	Compressed and uncompressed disk units in this ASP.
2	All disk units in this ASP are compressed.

Compressed unit. The compression attribute of the disk unit.

0	Data on the disk unit is not compressed.
1	Data on the disk unit is compressed.

Compression recovery policy. The compression recovery policy for the ASP. If the ASP has compressed drives as part of its configuration, this value controls how overflow situations are handled for this ASP. The following policies allow the user to control what is done when the ASP appears full. For more information about the compression recovery policy, see the Backup and Recovery  book. The following values are returned:

1	When the system detects that the ASP capacity is about to be exceeded, the system posts system reference code (SRC) A6xx 0277 in the system control panel and waits for a limited time for space to become available. If space becomes available before the limited time ends, the SRC is removed from the system control panel and normal operations resume. If space does not become available before the limited time ends, data overflows into the system ASP.
2	When the system detects that the ASP capacity is about to be exceeded, the data immediately overflows into the system ASP.
3	When the system detects that the ASP capacity is about to be exceeded, the system posts SRC A6xx 0277 in the system control panel and waits indefinitely for space to become available. The user must take action before normal operation resumes. Possible actions include deleting objects from the ASP or changing the compression recovery policy to a value that allows the ASP to overflow.

Compression status. The current status of compression for this disk unit. The following values are returned:

0	Compression for this disk unit is not active.
1	Compression for this disk unit is active.

Current count. The number of entities that have been processed by the function. The definition of an entity depends on the function; it may be an object, an address, a data structure, and so on.

Current item count. The number of items that have been processed by the function. The definition of an item depends on the function.

Database name. The name that is assigned to the database that this ASP defines. If the ASP is neither a primary or secondary ASP, this field consists of blanks.

Device description name. The name of the device description that brought the independent ASP to varyon/active state. If the ASP is not an independent ASP or if it is an independent ASP, but its state is not varyon/active, this field consists of blanks.

Disk capacity. The total size of the disk unit in megabytes.

Disk model. The model of the disk unit.

Disk protection type. The type of protection that has been assigned to this disk unit. The following values are returned:

0	No storage protection has been set up for this disk unit.
1	This disk unit has been set up with mirrored protection.
2	This disk unit is part of a parity protection array.

Disk serial number. The serial number of the disk unit.

Disk storage available. The number of megabytes of space not currently assigned.

Disk storage reserved for system. The number of megabytes of auxiliary storage on the disk unit reserved for use by the system. This storage contains system data related to hardware configuration, hardware error processing, and so forth.

Disk type. The type of disk unit.

Disk unit number. A unique identifier for each non-mirrored unit or mirrored pair among the configured disk units. Both mirrored units of a mirrored pair have the same disk unit number. The value of the disk unit number is assigned by the system when the disk unit is assigned to the ASP.

End immediate control. This field has meaning in the system ASP (ASP 1) only.

0	If a request for space in the system ASP cannot be satisfied because there is not enough storage, the system will be allowed to continue running.
1	If a request for space in the system ASP cannot be satisfied because there is not enough storage, the system will be ended immediately.

Error code. An error code that identifies a hardware problem related to the use of an independent ASP (error codes are not available for other ASP types). An error code of less than 1000 is an error. An error code of 1000 or greater is a warning. The possible error code values » and their descriptions and recovery actions can be found in message file QSYS/QCPFMSG in these messages: CPDB8E0, CPDB8E1, CPDB8E2 and CPDB8E3. «

Function. The function that is currently running as part of a state transition for an ASP. The possible values are:

C600450A00000000	DASD checker running.
C600420402000000	Storage management recovery.
C600420403000000	Synchronization of mirrored data.
C600420500000000	Synchronization of mirrored data.
C600426006010000	Scanning DASD pages.
C600426006020000	Directory recovery - processing permanent directory.
C600405300000000	Context rebuild.
C600405500000000	Authority recovery.
C600405600000000	Journal recovery.
C600405700000000	Data base recovery.
C600405800000000	Journal synchronization.
C600405900000000	Commit recovery.
C600406000000000	Data base initialization.
C600406100000000	Journal cleanup.
C600406200000000	Commit initialization.
C900297000000000	Damage notification and database, journal, commit (Part 1).

C900297300000000	Database recovery (Part 1).
C900297600000000	Journal recovery (Part 1).
C9002AA000000000	Database, journal, commit (Part 2).
C9002AA100000000	Commit recovery (Part 2).
C9002AA200000000	Journal recovery (Part 2).
C9002AA300000000	Database recovery (Part 2).
C9002AA500000000	POSIX directory recovery.
C9002AB000000000	Database access path recovery.
0000000000000000	Unidentified activity.

Geographic mirror copy data state. The condition of the data on the target.

0	Remote IASP mirroring is not configured.
1	The remote copy is absolutely in sync with the production copy.
2	The remote copy contains usable data. A detached mirror copy always has this state.
3	There is incoherent data in the mirror copy and the data cannot be used.

Geographic mirror copy state. The mirror state of the mirror copy.

0	Remote IASP mirroring is not configured.
1	The system attempts to perform geographic mirroring when the IASP is online.
2	The geographic mirroring role is resuming.
3	The system is resuming and the IASP is online and performing synchronization.
4	The geographic mirroring mirror copy is detached and geographic mirroring is not being performed.

Geographic mirror role. The current role of a physical IASP.

0	Remote IASP mirroring is not configured.
1	System does not own a physical IASP copy.
2	Remote mirror role is unknown.
196	System owns a detached mirror copy.
212	System owns the mirror copy.
215	System owns the production copy.

Job name. The simple job name of the job that is using an ASP.

Job number. The system-assigned job number of the job that is using an ASP.

Job user name. The user name under which the job that is using an ASP was started.

Mirrored unit identifier. One of a pair of mirrored units. The possible values are:

0	The disk unit is not mirrored or the error does not relate to a specific disk unit.
1	The first half of a mirrored pair.
2	The second half of a mirrored pair.

Mirrored unit protected. The mirrored status of the mirrored pair of which this unit is a member.

0	One mirrored unit of a mirrored pair is not active.
1	Both mirrored units of a mirrored pair are active.

Mirrored unit reported. This mirrored unit reported present. Information concerning this unit may or may not be current.

0	The mirrored unit is missing. Information concerning the unit may not be current.
1	The mirrored unit reported at the time this information was gathered. The information is current to that point in time.

Mirrored unit status. The mirrored status of the unit.

1	This mirrored unit of a mirrored pair is active (that is, online with current data).
2	This mirrored unit is being synchronized.
3	This mirrored unit is suspended.

» **Multiple connection unit.** A disk unit may have multiple resource names. Each resource name represents a unique connection to the disk unit. All active connections are used to communicate with the disk unit. This attribute indicates whether the disk unit has more than one connection.

0	The disk unit has only one connection.
1	The disk unit has more than one connection. «

Not busy count. The number of times the disk queue was empty during the same time period that the sample count was taken.

Number of disk units. The total number of disk units in the ASP. If mirroring is active for disk units within the ASP, the mirrored pair of units is counted as one.

»

Number of multiple connection units. The total number of disk units with multiple connections.

«

Overflow recovery result. An indicator of the result of the ASP overflow recovery operation, which is performed during IPL at the user's request. When this operation is requested, the machine attempts to recover the user ASP from an overflow condition by moving overflowed auxiliary storage from the system ASP back to the user ASP during the storage management recovery step of an IPL.

0	All overflowed storage was successfully moved.
1	ASP overflow recovery failed due to insufficient space in the user ASP.
2	ASP overflow recovery was cancelled prior to completion.

Overflow storage. The number of megabytes of storage that has overflowed from the user ASP into the system ASP. A special value of -2 is returned if the size of this field is exceeded.

Permanent blocks transferred from main storage. The number of 512-byte blocks of permanent storage transferred to the disk unit since the last IPL. If the field overflows, this value wraps around to zero and continues counting, with no indication that the overflow condition occurred.

Requests for data transfer from main storage. The number of output data transfer requests processed for the disk unit since the last IPL. If the field overflows, this value wraps around to zero and continues counting, with no indication that the overflow occurred. This value is not directly related to the number of blocks transferred for the disk unit because the number of blocks to be transferred for a given transfer request can vary greatly.

Requests for data transfer to main storage. The number of input data transfer requests processed for the disk unit since the last IPL. If the field overflows, this value wraps around to zero and continues counting, with no indication that the overflow occurred. This value is not directly related to the number of blocks transferred for the disk unit because the number of blocks to be transferred for a given transfer request can vary greatly.

Requests for permanent data transfer from main storage. The number of output permanent data transfer requests processed for the disk unit since the last IPL. If the field overflows, this value wraps around to zero and continues counting, with no indication that the overflow occurred. This value is not directly related to the permanent blocks transferred from main storage for the disk unit because the number of blocks transferred for a given transfer request can vary greatly.

Reserved. An ignored field.

Resource name. The unique system-assigned name of the disk unit.

Sample count. The number of times the disk queue was checked to determine whether or not the queue is empty.

Space allocated for main storage dump. The number of megabytes of auxiliary storage allocated to the main storage dump space.

Space allocated to the microcode. The number of megabytes of auxiliary storage allocated to the microcode and space used by the microcode.

Space allocated to the error log. The number of megabytes of auxiliary storage allocated to the error log.

Space allocated to the machine log. The number of megabytes of auxiliary storage allocated to the machine log.

Space allocated to the machine trace. The number of megabytes of auxiliary storage allocated to the machine trace.

» **Storage allocation restricted unit.** An indicator of whether new storage allocations are allowed on the disk unit.

0	The disk unit does not allow new storage allocations.
1	The disk unit allows new storage allocations. «

Storage threshold percentage. When the storage in the ASP reaches this percentage, a warning message is sent to the QSYSOPR message queue. When this percentage is reached for the system ASP (ASP 1), message CPF0907 is sent. When this percentage is reached for one of the user ASPs, message CPI0953 is sent.

Thread handle. A value that addresses a particular thread within a job. While the thread identifier uniquely identifies the thread within the job, the thread handle can improve performance when referencing the thread. » «

Thread identifier. A value that uniquely identifies a thread within a job. » «

Thread status. The current status of the thread. » « Refer to the description of Thread status in Work Management API Attribute Descriptions for the possible values that can be returned. » «

Total count. The total number of entities to be processed by the function. The definition of an entity depends on the function; it may be an object, an address, a data structure, and so forth.

Total item count. The total number of items that are to be processed by the function. An item is a part of an object, but has no precise definition; that is, items differ by object type if an object type has them at all.

Trace date and time. The date and time of the last status change for the trace function. The 13 characters are:

1	Century, where 0 indicates years 19xx and 1 indicates years 20xx.
2-7	The date, in YYMMDD (year, month, day) format.
8-13	The time of day, in HHMMSS (hours, minutes, seconds) format.

Trace duration. The number of minutes that the trace function has run collecting data for this ASP. The trace can be run multiple times for an ASP.

Trace status. The current status of the trace function. The trace gathers statistics about the data on the disk units within the ASP. This data is used by the balance functions. The following special values are returned:

0	There is no current trace data for this ASP.
1	The trace function is currently running for this ASP.
2	The trace function is currently in the process of ending. Either the time limit has run out or the trace was stopped through use of the Trace ASP Balance (TRCASPBAL) command.
3	The trace function has completed running. The statistics for the ASP have been gathered and are ready for the balance function to start.
4	The trace data for this ASP is being cleared.
5	The trace function has completed and the statistics for the ASP have been gathered. The ASP is ready for further collection or for the balance function to start.

Transition target. The state transition target of the ASP. The possible values are:

00	The ASP is not in a state transition.
01	The ASP is in the process of making a transition to the varyon state.
02	The ASP is in the process of making a transition to the active state.
03	The ASP is in the process of making a transition to the available state. 

Unit control. The disk status for the disk unit. The possible values for the field are:

0	There is no unit control value.
1	The disk unit is active.
2	The disk unit has failed.
3	Some other disk unit in the disk subsystem has failed.
4	There is a hardware failure within the disk subsystem that affects performance, but does not affect the function of the disk unit.
5	There is a hardware failure within the disk subsystem that does not affect the function or performance of the disk unit.
6	The disk unit's parity protection is being rebuilt.
7	The disk unit is not ready.
8	The disk unit is write protected.
9	The disk unit is busy.
10	The disk unit is not operational.
11	The disk unit has returned a status that is not recognizable by the system.
12	The disk unit cannot be accessed.
13	The disk unit is read/write protected.

Use identification. An identification of how an ASP is being used.

0 Objects in the ASP are being used through library-based access, through the Integrated File System or both.

Version. The version of objects in an independent ASP.

0 Objects are usable by a system at release level V5R1M0.
1 Objects are usable by a system at release level V5R2M0.
2 Objects are usable by a system at release level V5R3M0.

Format of Filter Information

Offset		Type	Field
Dec	Hex		
0	0	BINARY(4)	Size of filter entry
4	4	BINARY(4)	Filter key
8	8	BINARY(4)	Size of filter data
12	C	CHAR(*)	Filter data

Field Descriptions

Filter data. When the filter key is 1 (an ASP number), the filter data contains the number of the ASP for which information is to be returned. A value larger than 0 is the number of the ASP. A zero or negative number has special meaning as follows:

0 No ASPs are selected. If the requested format is YASP0300, disk unit records are returned for those disk units that are not assigned to an ASP. For all other formats, no records are returned.
-1 All ASPs are selected.
-2 All user ASPs are selected.
-3 All independent ASPs are selected.

When the filter key is 2, 3, or 4, the filter data contains respectively the resource name, device description name, or database name of the ASP for which information is to be returned.

Filter key. The field to use to filter the list information. The filter key and its corresponding filter data length and filter data is:

Entry size	Key	Data size	Filter data
16	1	BINARY(4)	ASP number
24	2	CHAR(10)	Resource name
24	3	CHAR(10)	Device description name
32	4	CHAR(18)	Database name

Size of filter entry. The combined size of all fields in the filter entry (size, key, and data).

Format of Sort Information

Offset		Type	Field
Dec	Hex		
0	0	BINARY(4)	Number of keys to sort on
Offsets vary. These fields repeat for each sort key field.		BINARY(4)	Sort key field starting position
		BINARY(4)	Sort key field length
		BINARY(2)	Sort key field data type
		CHAR(1)	Sort order
		CHAR(1)	Reserved

Field Descriptions

Number of keys to sort on. The number of fields within the record structure on which to sort. If 0 is specified, the list is not sorted.

The following special value is supported for format YASP0600 only.

-1 The list of jobs threads are order by ASP number, job name, job user name, job number, thread identifier and use identification. This parameter is only used with format YASP0600.

Reserved. Reserved field. This field must be set to hexadecimal or binary zero.

Sort key field data type. Data type of field to sort. Refer to the Sort (QLGSORT) API for information on the list of data types available.

Sort key field length. The length of the field on which to sort.

Sort key field starting position. Within the record of information, the starting position of the field on which to sort.

Sort order. Whether the list should be sorted in ascending or descending order according to the key.

1 Sort in ascending order.
2 Sort in descending order.

Error Messages

Message ID	Error Message Text
CPF24B4 E	Severe error while addressing parameter list.
CPF3C19 E	Error occurred with receiver variable specified.
CPF3C21 E	Format name &1 is not valid.
CPF3C90 E	Literal value cannot be changed.
CPF3CF1 E	Error code parameter not valid.
CPF9872 E	Program or service program &1 in library &2 ended. Reason code &3.
GUI0002 E	&1 is not valid for length of receiver variable.
GUI0027 E	&1 is not valid for number of records to return.
GUI0141 E	Filter specification is not valid.
GUI0149 E	&1 is not valid for number of keys to sort on.

API introduced: V4R4

Retrieve Configuration Status (QDCRCFGS) API

Required Parameter Group:	
1	Receiver variable
Output	Char(*)
2	Length of receiver variable
Input	Binary(4)
3	Format name
Input	Char(8)
4	Configuration description type
Input	Char(10)
5	Configuration description name
Input	Char(10)
6	Error Code
I/O	Char(*)

Default Public Authority: *USE

Threadsafe: Yes

The Retrieve Configuration Status (QDCRCFGS) API retrieves the current status of a line, controller, device, network interface, or network server description.

Authorities and Locks

Configuration Description Authority
*USE

Required Parameter Group

Receiver variable
OUTPUT; CHAR(*)

The variable that is to receive the status information. Format CFGS0100 describes the layout of the status information returned in this variable.

Length of receiver variable
INPUT; BINARY(4)

The length of the area referenced by the receiver variable parameter. If the amount of information to be returned is greater than this value, the information is truncated to this length.

Format name
INPUT; CHAR(8)

The content and format of the status information returned for the specified configuration description. The format name is:

See "Format of Status Information" for a description of this format.

Configuration description type
INPUT; CHAR(10)

The type of configuration description object for which status is being retrieved. The possible values are:

**LIND*	The object is a line description.
**CTLD*	The object is a controller description.
**DEVD*	The object is a device description.
**NWID*	The object is a network interface description.
**NWSD*	The object is a network server description.

Configuration description name
INPUT; CHAR(10)

The name of the line, controller, device or network interface for which status is being retrieved.

Error code
I/O; CHAR(*)

The structure in which to return error information. For the format of the structure, see Error Code Parameter.

Format of Status Information

Following is the format of the status information returned. For detailed descriptions of the fields in the list, see "Field Descriptions" on page 36.

CFGS0100 Format

Offset			
Dec	**Hex**	**Type**	**Field**
0	0	BINARY(4)	Bytes returned
4	4	BINARY(4)	Bytes available
8	8	BINARY(4)	Current status: numeric code
12	C	CHAR(7)	Date information retrieved
19	13	CHAR(6)	Time information retrieved
25	19	CHAR(20)	Current Status: displayable text
45	2D	CHAR(10)	Job name
55	37	CHAR(10)	User name
65	41	CHAR(6)	Job number
71	47	CHAR(10)	Pass-through device
81	51	CHAR(3)	Reserved
84	54	BINARY (4)	Offset to list of active conversations
88	58	BINARY(4)	Number of active conversations
92	5C	BINARY(4)	Entry length for list of active conversations
96	60	BINARY(4)	Offset to list of multiple job information
100	64	BINARY(4)	Number of multiple jobs

Offset		Type	Field
Dec	Hex		
104	68	BINARY(4)	Entry length for list of multiple jobs
These fields repeat for each active conversation		BINARY(4)	Conversation status numeric value
		CHAR(20)	Conversation status text value
		CHAR(10)	Conversation mode name
		CHAR(10)	Conversation job name
		CHAR(10)	Conversation user name
		CHAR(6)	Conversation job number
These fields repeat for each additional job		CHAR(10)	Multiple job name
		CHAR(10)	Multiple job user name
		CHAR(6)	Multiple job number

Field Descriptions

Bytes available. The number of bytes of data available to be returned. All available data is returned if enough space is provided.

Bytes returned. The number of bytes of data returned.

Conversation job name. The job name portion of the qualified job name for an active conversation on an APPC device.

Conversation job number. The job number portion of the qualified job name for an active conversation on an APPC device.

Conversation mode name. The mode name for an active conversation on an APPC device.

Conversation status numeric value. A numeric value that represents the current status of an active conversation on an APPC device. See the current status field for valid status values.

Conversation status text value. A text value that represents the current status of an active conversation on an APPC device. See the current status field for valid status values.

Conversation user name. The user name portion of the qualified job name for an active conversation on an APPC device.

Current status. The current status of the selected object using two fields:

- Current status: numeric code
- Current status: displayable text

Note: The displayable text is translated when it is returned. This text is retrieved from message CPX2651 in message file QCPFMSG in library *LIBL.

Possible values follow:

Status Numeric Code (decimal)	Status Displayable Text
0	VARIED OFF
1	OPERATIONAL

Status Numeric Code (decimal)	Status Displayable Text
2	AS/36 DISABLED
5	DEALLOCATED
6	UNPROTECTED
7	ALLOCATED
8	STAND-ALONE
10	VARY OFF PENDING
20	VARY ON PENDING
21	VARY ON PENDING/DETACHED
22	VARY ON PENDING/ALLOCATE
30	VARIED ON
31	VARIED ON/ALLOCATE
32	VARYON/CNNPENDING
33	AS/36 ENABLED
40	CONNECT PENDING
50	SIGNON DISPLAY
51	ACTIVE/CNN PENDING
60	ACTIVE
61	ACTIVE/DETACHED
62	ACTIVE/SOURCE
63	ACTIVE READER
64	ACTIVE/TARGET
65	ACTIVE/ALLOCATE
66	ACTIVE WRITER
67	AVAILABLE
70	HELD
71	HELD/DETACHED
72	HELD/SOURCE
73	HELD/TARGET
74	HELD/ALLOCATE
75	POWERED OFF
80	RCYPND
81	RCYPND/DETACHED
82	RCYPND/SOURCE
83	RCYPND/TARGET
84	RCYPND/ALLOCATE
90	RCYCNL
91	RCYCNL/DETACHED
92	RCYCNL/SOURCE
93	RCYCNL/TARGET
94	RCYCNL/ALLOCATE
95	SYSTEM REQUEST
96	REBUILD
100	FAILED
101	FAILED/DETACHED
102	FAILED/SOURCE
103	FAILED READER
104	FAILED/TARGET
105	FAILED/ALLOCATE
106	FAILED WRITER
107	SHUTDOWN
110	DIAGNOSTIC MODE
111	*DAMAGED
112	*LOCKED

Status Numeric Code (decimal)	Status Displayable Text
113	*UNKNOWN
200	INVALID STATUS

Date information retrieved. The date that the information was provided by the API. This is returned as 7 characters in the form CYYMMDD, where:

C	Century, where 0 indicates years 19*xx* and 1 indicates years 20*xx*.
YY	Year
MM	Month
DD	Day

Entry length for list of active conversations. The entry length, in bytes, of each element in the list of active conversations returned with this format. A value of zero is returned if the list is empty.

Entry length for list of multiple jobs. The entry length, in bytes, of each element in the list of multiple jobs returned with this format. A value of zero is returned if the list is empty.

Job name. The name of the job associated with an active device, if applicable.

Job number. The job number portion of a fully qualified job name.

Multiple job name. The job name portion of the qualified job name for optical, media library, or network (*TEL type only) devices that are being used by more than one job.

Multiple job number. The job number portion of the qualified job name for optical, media library, or network (*TEL type only) devices that are being used by more than one job.

Multiple job user name. The user name portion of the qualified job name for optical, media library, or network (*TEL type only) devices that are being used by more than one job.

Number of active conversations. The number of entries in the list of active conversations returned with this format. A value of zero is returned if the list is empty.

Number of multiple jobs. The number of entries in the list of multiple jobs returned with this format. A value of zero is returned if the list is empty.

Offset to list of active conversations. The offset, in bytes, to the list of active conversations returned with this format. A value of zero is returned if the list is empty.

Offset to list of multiple job information. The offset, in bytes, to the list of multiple jobs returned with this format. A value of zero is returned if the list is empty.

Pass-through device. The name of an upstream device used to complete a pass-through session, if applicable.

Reserved. An ignored field.

Time information retrieved. The time that the information was provided by the API. It is returned as 6 characters in the form HHMMSS, where:

HH	Hour
MM	Minute

SS Second

User name. The user name portion of a fully qualified job name.

Error Messages

Message ID	Error Message Text
CPF24B4 E	Severe error while addressing parameter list.
CPF2625 E	Not able to allocate object &1.
CPF2634 E	Not authorized to object &1.
CPF26A8 E	Configuration description type not valid for this API.
CPF26AE E	Network server description &1 not found.
CPF2702 E	Device description &1 not found.
CPF2703 E	Controller description &1 not found.
CPF2704 E	Line description &1 not found.
CPF27A4 E	Network interface description &1 not found.
CPF3C19 E	Error occurred with receiver variable specified.
CPF3C21 E	Format name &1 is not valid.
CPF3C24 E	Length of the receiver variable is not valid.
CPF3C90 E	Literal value cannot be changed.
CPF3CF1 E	Error code parameter not valid.
CPF8104 E	Controller description &4 damaged.
CPF8105 E	Device description &4 damaged.
CPF811D E	Network interface description &4 damaged.
CPF8125 E	Line description &4 damaged.
CPF814C E	Network server description &4 damaged.
CPF9872 E	Program or service program &1 in library &2 ended. Reason code &3.

API introduced: V2R3

Top | "Configuration APIs," on page 1 | APIs by category

Retrieve Controller Description (QDCRCTLD) API

Required Parameter Group:	
1	Receiver variable
Output	Char(*)
2	Length of receiver variable
Input	Binary(4)
3	Format name
Input	Char(8)
4	Controller name
Input	Char(10)
5	Error code
I/O	Char(*)
Default Public Authority: *USE	
Threadsafe: Yes	

The Retrieve Controller Description (QDCRCTLD) API retrieves information about a controller description.

Authorities and Locks

Controller Description Authority
*USE

Device Description Authority
*USE

Controller Description Lock
*EXCLRD

Device Description Lock
*EXCLRD

Required Parameter Group

Receiver variable
OUTPUT; CHAR(*)

The variable that is to receive the controller information.

Length of receiver variable
INPUT; BINARY(4)

The length of the area referenced by the receiver variable parameter. If the amount of information to be returned is greater than this value, the information will be truncated to this length.

Format name
INPUT; CHAR(8)

The content and format of the information returned for each controller description. The possible format names are:

CTLD0100 Basic controller information.
CTLD0200 Basic controller information, plus list of attached devices.
CTLD0300 Detailed information for controller category *APPC
CTLD0400 Detailed information for controller category *ASC
CTLD0500 Detailed information for controller category *BSC
CTLD0600 Detailed information for controller category *FNC
CTLD0700 Detailed information for controller category *HOST
CTLD0800 Detailed information for controller category *NET
CTLD0900 Detailed information for controller category *RTL
CTLD1000 Detailed information for controller category *RWS
CTLD1100 Detailed information for controller category *VWS
CTLD1200 Detailed information for controller category *LWS
CTLD1300 Detailed information for controller category *TAP

See "Format of Controller Information" for a description of these formats.

Controller name
INPUT; CHAR(10)

The name of the controller description to be retrieved.

Error code
I/O; CHAR(*)

The structure in which to return error information. For the format of the structure, see Error Code Parameter.

Format of Controller Information

When the controller category is unknown, specify CTLD0100 or CTLD0200 and the basic information (including controller category) will be returned. When the controller category is known, specify one of the other category-specific formats.

For detailed descriptions of the fields returned in these formats, see "Field Descriptions" on page 59.

CTLD0100 Format

Use this format to find out the controller category, plus some very basic information about the controller. Then you may use the returned controller category to select one of the other (category-specific) formats to call the API again for detailed information about the controller description. This format also returns the number of devices currently attached to this controller.

Offset			
Dec	**Hex**	**Type**	**Field**
0	0	BINARY(4)	Bytes returned
4	4	BINARY(4)	Bytes available
8	8	BINARY(4)	Number of attached devices
12	C	CHAR(7)	Date information retrieved
19	13	CHAR(6)	Time information retrieved
25	19	CHAR(10)	Controller name
35	23	CHAR(10)	Controller category
45	2D	CHAR(10)	Online at IPL
55	37	CHAR(50)	Text description
105	69	CHAR(3)	Reserved

CTLD0200 Format

This format returns basic controller information, plus a list of attached devices. Some basic information is also included for each attached device.

Offset		Type	Field
Dec	**Hex**		
0	0		Returns everything from format CTLD0100
108	6C	BINARY(4)	Offset to list of attached devices
112	70	BINARY(4)	Entry length for list of attached devices
These fields repeat for each attached device		CHAR(10)	Attached device name
		CHAR(10)	Device category
		CHAR(10)	Device type
		CHAR(50)	Device text description

CTLD0300 Format

This format returns detailed information about a controller of category *APPC.

Offset		Type	Field
Dec	**Hex**		
0	0		Returns everything from format CTLD0100
108	6C	BINARY(4)	Maximum frame size
112	70	BINARY(4)	IDLC default window size
116	74	BINARY(4)	IDLC frame retry
120	78	BINARY(4)	IDLC response timer
124	7C	BINARY(4)	IDLC connect retry
128	80	BINARY(4)	Predial delay
132	84	BINARY(4)	Redial delay
136	88	BINARY(4)	Dial retries
140	8C	BINARY(4)	Disconnect timer: minimum connect
144	90	BINARY(4)	Disconnect timer: disconnect delay
148	94	BINARY(4)	Short-hold mode disconnect limit
152	98	BINARY(4)	Short-hold mode disconnect timer
156	9C	BINARY(4)	SDLC poll limit
160	A0	BINARY(4)	SDLC out limit
164	A4	BINARY(4)	SDLC connect poll retry
168	A8	BINARY(4)	SDLC NDM poll timer
172	AC	BINARY(4)	LAN frame retry
176	B0	BINARY(4)	LAN connection retry
180	B4	BINARY(4)	LAN response timer
184	B8	BINARY(4)	LAN connection timer

Offset		Type	Field
Dec	Hex		
188	BC	BINARY(4)	LAN acknowledgement timer
192	C0	BINARY(4)	LAN inactivity timer
196	C4	BINARY(4)	LAN acknowledgement frequency
200	C8	BINARY(4)	LAN maximum outstanding frames
204	CC	BINARY(4)	LAN access priority
208	D0	BINARY(4)	LAN window step
212	D4	BINARY(4)	Default packet size: transmit
216	D8	BINARY(4)	Default packet size: receive
220	DC	BINARY(4)	Negotiated packet size: transmit
224	E0	BINARY(4)	Negotiated packet size: receive
228	E4	BINARY(4)	Default window size: transmit
232	E8	BINARY(4)	Default window size: receive
236	EC	BINARY(4)	Negotiated window size: transmit
240	F0	BINARY(4)	Negotiated window size: receive
244	F4	BINARY(4)	X.25 frame retry
248	F8	BINARY(4)	X.25 connection retry
252	FC	BINARY(4)	X.25 response timer
256	100	BINARY(4)	X.25 connection timer
260	104	BINARY(4)	X.25 delayed connection timer
264	108	BINARY(4)	X.25 acknowledgement timer
268	10C	BINARY(4)	X.25 inactivity timer
272	110	BINARY(4)	APPN transmission group number
276	114	BINARY(4)	Autodelete device
280	118	BINARY(4)	User-defined 1
284	11C	BINARY(4)	User-defined 2
288	120	BINARY(4)	User-defined 3
292	124	BINARY(4)	Recovery limits: count limit
296	128	BINARY(4)	Recovery limits: time interval
300	12C	BINARY(4)	Offset to list of attached devices
304	130	BINARY(4)	Entry length for list of attached devices
308	134	BINARY(4)	Offset to list of switched lines
312	138	BINARY(4)	Number of switched lines
316	13C	BINARY(4)	Entry length for list of switched lines
320	140	CHAR(10)	Link type
330	14A	CHAR(10)	Controller type
340	154	CHAR(10)	Switched connection
350	15E	CHAR(10)	Short-hold mode
360	168	CHAR(10)	Switched network backup
370	172	CHAR(10)	Activate switched network backup
380	17C	CHAR(10)	APPN capable

Offset		Type	Field
Dec	Hex		
390	186	CHAR(10)	Attached nonswitched line name
400	190	CHAR(10)	Character code
410	19A	CHAR(10)	Remote network identifier
420	1A4	CHAR(10)	Remote control point name
430	1AE	CHAR(10)	Exchange identifier
440	1B8	CHAR(12)	System service control point identifier
452	1C4	CHAR(10)	Initial connection
462	1CE	CHAR(10)	Dial initiation
472	1D8	CHAR(32)	Connection number
504	1F8	CHAR(10)	Answer number
514	202	CHAR(10)	Activate X.25 network address
524	20C	CHAR(10)	Connection list
534	216	CHAR(10)	Connection list entry
544	220	CHAR(10)	Switched disconnect
554	22A	CHAR(10)	Data link role
564	234	CHAR(10)	Station address
574	23E	CHAR(10)	SDLC poll priority
584	248	CHAR(12)	LAN remote adapter address
596	254	CHAR(10)	Destination service access point
606	25E	CHAR(10)	Source service access point
616	268	CHAR(10)	X.25 network level
626	272	CHAR(10)	X.25 link protocol
636	27C	CHAR(10)	X.25 logical channel ID
646	286	CHAR(10)	X.25 connection password
656	290	CHAR(10)	X.25 switched line selection
666	29A	CHAR(10)	X.25 user group ID
676	2A4	CHAR(10)	X.25 reverse charging
686	2AE	CHAR(10)	APPC CP session support
696	2B8	CHAR(10)	Remote APPN node type
706	2C2	CHAR(10)	APPN minimum switched status
716	2CC	CHAR(10)	Model controller description
726	2D6	CHAR(10)	Connection network identifier
736	2E0	CHAR(10)	Connection network CP name
746	2EA	CHAR(10)	Control owner
756	2F4	CHAR(218)	User facilities
974	3CE	CHAR(10)	Autocreate device
984	3D8	CHAR(10)	APPN/HPR capable
994	3E2	CHAR(10)	Active switched line
1004	3EC	CHAR(8)	Remote system name
1012	3F4	CHAR(10)	HPR path switching

Offset		Type	Field
Dec	Hex		
1022	3FE	CHAR(10)	System job name
1032	408	BINARY(4)	Current maximum frame size
1036	40C	CHAR(10)	Message queue: name
1046	416	CHAR(10)	Message queue: library
1056	420	CHAR(10)	Current message queue: name
1066	42A	CHAR(10)	Current message queue: library
1076	434	CHAR(10)	Branch extender role
These fields repeat for each attached device		CHAR(10)	Attached device name
		CHAR(2)	Reserved
These fields repeat for each switched line		CHAR(10)	Switched line name
		CHAR(2)	Reserved

CTLD0400 Format

This format returns detailed information about a controller of category *ASC.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format CTLD0100
108	6C	BINARY(4)	Predial delay
112	70	BINARY(4)	Redial delay
116	74	BINARY(4)	Dial retries
120	78	BINARY(4)	File transfer acknowledgement timer
124	7C	BINARY(4)	File transfer retry
128	80	BINARY(4)	Default packet size: transmit
132	84	BINARY(4)	Default packet size: receive
136	88	BINARY(4)	Negotiated packet size: transmit
140	8C	BINARY(4)	Negotiated packet size: receive
144	90	BINARY(4)	Default window size: transmit
148	94	BINARY(4)	Default window size: receive
152	98	BINARY(4)	Negotiated window size: transmit
156	9C	BINARY(4)	Negotiated window size: receive
160	A0	BINARY(4)	Recovery limits: count limit
164	A4	BINARY(4)	Recovery limits: time interval
168	A8	BINARY(4)	Offset to list of attached devices
172	AC	BINARY(4)	Entry length for list of attached devices
176	B0	BINARY(4)	Offset to list of switched lines
180	B4	BINARY(4)	Number of entries in list of switched lines
184	B8	BINARY(4)	Entry length for list of switched lines
188	BC	CHAR(10)	Link type

Offset		Type	Field
Dec	Hex		
198	C6	CHAR(10)	Switched connection
208	D0	CHAR(10)	Switched network backup
218	DA	CHAR(10)	Activate switched network backup
228	E4	CHAR(10)	Attached nonswitched line name
238	EE	CHAR(10)	Initial connection
248	F8	CHAR(32)	Connection number
280	118	CHAR(10)	Answer number
290	122	CHAR(10)	Activate X.25 network address
300	12C	CHAR(10)	Switched disconnect
310	136	CHAR(10)	Remote verify
320	140	CHAR(10)	Local location name
330	14A	CHAR(10)	Local identifier
340	154	CHAR(10)	PAD emulation
350	15E	CHAR(10)	X.25 logical channel ID
360	168	CHAR(10)	X.25 switched line selection
370	172	CHAR(10)	X.25 user group ID
380	17C	CHAR(10)	X.25 reverse charging
390	186	CHAR(218)	User facilities
608	260	CHAR(10)	Message queue: name
618	26A	CHAR(10)	Message queue: library
628	274	CHAR(10)	Current message queue: name
638	27E	CHAR(10)	Current message queue: library
648	288	CHAR(10)	System job name
These fields repeat for each attached device		CHAR(10)	Attached device name
		CHAR(2)	Reserved
These fields repeat for each switched line		CHAR(10)	Switched line name
		CHAR(2)	Reserved

CTLD0500 Format

This format returns detailed information about a controller of category *BSC.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format CTLD0100
108	6C	BINARY(4)	Predial delay
112	70	BINARY(4)	Redial delay
116	74	BINARY(4)	Dial retries
120	78	BINARY(4)	Recovery limits: count limit
124	7C	BINARY(4)	Recovery limits: time interval

Offset		Type	Field
Dec	Hex		
128	80	BINARY(4)	Offset to list of attached devices
132	84	BINARY(4)	Entry length for list of attached devices
136	88	BINARY(4)	Offset to list of switched lines
140	8C	BINARY(4)	Number of entries in list of switched lines
144	90	BINARY(4)	Entry length for list of switched lines
148	94	BINARY(4)	Offset to list of remote identifiers
152	98	BINARY(4)	Number of entries in list of remote identifiers
156	9C	BINARY(4)	Entry length for list of remote identifiers
160	A0	CHAR(10)	Connection type
170	AA	CHAR(10)	Switched network backup
180	B4	CHAR(10)	Activate switched network backup
190	BE	CHAR(10)	Attached nonswitched line name
200	C8	CHAR(10)	Application type
210	D2	CHAR(10)	Initial connection
220	DC	CHAR(32)	Connection number
252	FC	CHAR(10)	Local identifier
262	106	CHAR(10)	RJE host type
272	110	CHAR(80)	RJE host signon/logon
352	160	CHAR(10)	Current message queue: name
362	16A	CHAR(10)	Current message queue: library
372	174	CHAR(10)	System job name
These fields repeat for each attached device		CHAR(10)	Attached device name
		CHAR(2)	Reserved
These fields repeat for each switched line		CHAR(10)	Switched line name
		CHAR(2)	Reserved
These fields repeat for each remote identifier		CHAR(30)	Remote identifier
		CHAR(2)	Reserved

CTLD0600 Format

This format returns detailed information about a controller of category *FNC.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format CTLD0100
108	6C	BINARY(4)	Maximum frame size
112	70	BINARY(4)	Predial delay
116	74	BINARY(4)	Redial delay
120	78	BINARY(4)	Dial retries
124	7C	BINARY(4)	Short-hold mode disconnect limit

Offset		Type	Field
Dec	Hex		
128	80	BINARY(4)	Short-hold mode disconnect timer
132	84	BINARY(4)	SDLC poll limit
136	88	BINARY(4)	SDLC out limit
140	8C	BINARY(4)	SDLC connect poll retry
144	90	BINARY(4)	SDLC NDM poll timer
148	94	BINARY(4)	LAN frame retry
152	98	BINARY(4)	LAN connection retry
156	9C	BINARY(4)	LAN response timer
160	A0	BINARY(4)	LAN connection timer
164	A4	BINARY(4)	LAN acknowledgement timer
168	A8	BINARY(4)	LAN inactivity timer
172	AC	BINARY(4)	LAN acknowledgement frequency
176	B0	BINARY(4)	LAN maximum outstanding frames
180	B4	BINARY(4)	LAN access priority
184	B8	BINARY(4)	LAN window step
188	BC	BINARY(4)	Default packet size: transmit
192	C0	BINARY(4)	Default packet size: receive
196	C4	BINARY(4)	Negotiated packet size: transmit
200	C8	BINARY(4)	Negotiated packet size: receive
204	CC	BINARY(4)	Default window size: transmit
208	D0	BINARY(4)	Default window size: receive
212	D4	BINARY(4)	Negotiated window size: transmit
216	D8	BINARY(4)	Negotiated window size: receive
220	DC	BINARY(4)	X.25 frame retry
224	E0	BINARY(4)	X.25 connection retry
228	E4	BINARY(4)	X.25 response timer
232	E8	BINARY(4)	X.25 connection timer
236	EC	BINARY(4)	X.25 delayed connection timer
240	F0	BINARY(4)	X.25 acknowledgement timer
244	F4	BINARY(4)	X.25 inactivity timer
248	F8	BINARY(4)	Recovery limits: count limit
252	FC	BINARY(4)	Recovery limits: time interval
256	100	BINARY(4)	Offset to list of attached devices
260	104	BINARY(4)	Entry length for list of attached devices
264	108	BINARY(4)	Offset to list of switched lines
268	10C	BINARY(4)	Number of entries in list of switched lines
272	110	BINARY(4)	Entry length for list of switched lines
276	114	CHAR(10)	Controller type
286	11E	CHAR(10)	Controller model
296	128	CHAR(10)	Link type

Offset		Type	Field
Dec	Hex		
306	132	CHAR(10)	Switched connection
316	13C	CHAR(10)	Short-hold mode
326	146	CHAR(10)	Switched network backup
336	150	CHAR(10)	Activate switched network backup
346	15A	CHAR(10)	Attached nonswitched line name
356	164	CHAR(10)	Character code
366	16E	CHAR(10)	Exchange identifier
376	178	CHAR(12)	System service control point identifier
388	184	CHAR(10)	Initial connection
398	18E	CHAR(32)	Connection number
430	1AE	CHAR(10)	Answer number
440	1B8	CHAR(10)	Activate X.25 network address
450	1C2	CHAR(10)	Switched disconnect
460	1CC	CHAR(10)	Station address
470	1D6	CHAR(10)	SDLC poll priority
480	1E0	CHAR(12)	LAN remote adapter address
492	1EC	CHAR(10)	Destination service access point
502	1F6	CHAR(10)	Source service access point
512	200	CHAR(10)	X.25 network level
522	20A	CHAR(10)	X.25 link protocol
532	214	CHAR(10)	X.25 logical channel ID
542	21E	CHAR(10)	X.25 connection password
552	228	CHAR(10)	X.25 switched line selection
562	232	CHAR(10)	X.25 user group ID
572	23C	CHAR(10)	X.25 reverse charging
582	246	CHAR(218)	User facilities
800	320	BINARY(4)	Current maximum frame size
804	324	CHAR(10)	Current message queue: name
814	32E	CHAR(10)	Current message queue: library
824	338	CHAR(10)	System job name
These fields repeat for each attached device		CHAR(10)	Attached device name
		CHAR(2)	Reserved
These fields repeat for each switched line		CHAR(10)	Switched line name
		CHAR(2)	Reserved

CTLD0700 Format

This format returns detailed information about a controller of category *HOST.

Offset		Type	Field
Dec	Hex		
0	00		Returns everything from format CTLD0100
108	6C	BINARY(4)	Maximum frame size
112	70	BINARY(4)	IDLC default window size
116	74	BINARY(4)	IDLC frame retry
120	78	BINARY(4)	IDLC response timer
124	7C	BINARY(4)	IDLC connect retry
128	80	BINARY(4)	Predial delay
132	84	BINARY(4)	Redial delay
136	88	BINARY(4)	Dial retries
140	8C	BINARY(4)	Disconnect timer: minimum connect
144	90	BINARY(4)	Disconnect timer: disconnect delay
148	94	BINARY(4)	LAN frame retry
152	98	BINARY(4)	LAN connection retry
156	9C	BINARY(4)	LAN response timer
160	A0	BINARY(4)	LAN connection timer
164	A4	BINARY(4)	LAN acknowledgement timer
168	A8	BINARY(4)	LAN inactivity timer
172	AC	BINARY(4)	LAN acknowledgement frequency
176	B0	BINARY(4)	LAN maximum outstanding frames
180	B4	BINARY(4)	LAN access priority
184	B8	BINARY(4)	LAN window step
188	BC	BINARY(4)	Default packet size: transmit
192	C0	BINARY(4)	Default packet size: receive
196	C4	BINARY(4)	Negotiated packet size: transmit
200	C8	BINARY(4)	Negotiated packet size: receive
204	CC	BINARY(4)	Default window size: transmit
208	D0	BINARY(4)	Default window size: receive
212	D4	BINARY(4)	Negotiated window size: transmit
216	D8	BINARY(4)	Negotiated window size: receive
220	DC	BINARY(4)	X.25 frame retry
224	E0	BINARY(4)	X.25 response timer
228	E4	BINARY(4)	X.25 acknowledgement timer
232	E8	BINARY(4)	X.25 inactivity timer
236	EC	BINARY(4)	APPN transmission group number
240	F0	BINARY(4)	Autodelete device
244	F4	BINARY(4)	User-defined 1
248	F8	BINARY(4)	User-defined 2
252	FC	BINARY(4)	User-defined 3
256	100	BINARY(4)	Recovery limits: count limit

Offset		Type	Field
Dec	Hex		
260	104	BINARY(4)	Recovery limits: time interval
264	108	BINARY(4)	Offset to list of attached devices
268	10C	BINARY(4)	Entry length for list of attached devices
272	110	BINARY(4)	Offset to list of switched lines
276	114	BINARY(4)	Number of entries in list of switched lines
280	118	BINARY(4)	Entry length for list of switched lines
284	11C	CHAR(10)	Link type
294	126	CHAR(10)	Switched connection
304	130	CHAR(10)	Short-hold mode
314	13A	CHAR(10)	Switched network backup
324	144	CHAR(10)	Activate switched network backup
334	14E	CHAR(10)	APPN capable
344	158	CHAR(10)	Attached nonswitched line name
354	162	CHAR(10)	Character code
364	16C	CHAR(10)	Remote network identifier
374	176	CHAR(10)	Remote control point name
384	180	CHAR(10)	Adjacent link station
394	18A	CHAR(12)	System service control point identifier
406	196	CHAR(10)	Local exchange identifier
416	1A0	CHAR(10)	Initial connection
426	1AA	CHAR(10)	Dial initiation
436	1B4	CHAR(32)	Connection number
468	1D4	CHAR(10)	Answer number
478	1DE	CHAR(10)	Activate X.25 network address
488	1E8	CHAR(10)	Connection list
498	1F2	CHAR(10)	Connection list entry
508	1FC	CHAR(10)	Switched disconnect
518	206	CHAR(10)	Station address
528	210	CHAR(12)	LAN remote adapter address
540	21C	CHAR(10)	Destination service access point
550	226	CHAR(10)	Source service access point
560	230	CHAR(10)	X.25 network level
570	23A	CHAR(10)	X.25 link protocol
580	244	CHAR(10)	X.25 logical channel ID
590	24E	CHAR(10)	X.25 connection password
600	258	CHAR(10)	X.25 switched line selection
610	262	CHAR(10)	X.25 user group ID
620	26C	CHAR(10)	X.25 reverse charging
630	276	CHAR(10)	APPC CP session support
640	280	CHAR(10)	Remote APPN node type

Offset		Type	Field
Dec	Hex		
650	28A	CHAR(10)	APPN minimum switched status
660	294	CHAR(10)	Recontact at vary off
670	29E	CHAR(10)	Autocreate device
680	318	CHAR(218)	User facilities
898	382	CHAR(10)	APPN/HPR capable
908	38C	CHAR(10)	Primary DLUS name—PU name
918	396	CHAR(10)	Primary DLUS name—network ID
928	3A0	CHAR(10)	Backup DLUS name—PU name
938	3AA	CHAR(10)	Backup DLUS name—network ID
948	3B4	CHAR(10)	Dependent PU name
958	3BE	CHAR(2)	Reserved/unused for alignment
960	3C0	BINARY(4)	Activation timer
964	3C4	BINARY(4)	Reconnect timer
968	3C8	CHAR(10)	HPR path switching
978	3D2	CHAR(2)	Reserved
980	3D4	BINARY(4)	Current maximum frame size
984	3D8	CHAR(10)	Message queue: name
994	3E2	CHAR(10)	Message queue: library
1004	3EC	CHAR(10)	Current message queue: name
1014	3F6	CHAR(10)	Current message queue: library
1024	400	CHAR(10)	Branch extender role
1034	40A	CHAR(10)	System job name
These fields repeat for each attached device		CHAR(10)	Attached device name
		CHAR(2)	Reserved
These fields repeat for each switched line		CHAR(10)	Switched line name
		CHAR(2)	Reserved

CTLD0800 Format

This format returns detailed information about a controller of category *NET.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format CTLD0100
108	6C	BINARY(4)	Connection response timer
112	70	BINARY(4)	Offset to list of attached devices
116	74	BINARY(4)	Entry length for list of attached devices
120	78	CHAR(10)	Attached line
130	82	CHAR(2)	Reserved
132	84	CHAR(10)	Current message queue: name

Offset		Type	Field
Dec	Hex		
142	8E	CHAR(10)	Current message queue: library
152	98	CHAR(10)	System job name
These fields repeat for each attached device		CHAR(10)	Attached device name
		CHAR(2)	Reserved

CTLD0900 Format

This format returns detailed information about a controller of category *RTL.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format CTLD0100
108	6C	BINARY(4)	Maximum frame size
112	70	BINARY(4)	Predial delay
116	74	BINARY(4)	Redial delay
120	78	BINARY(4)	Dial retries
124	7C	BINARY(4)	SDLC poll limit
128	80	BINARY(4)	SDLC out limit
132	84	BINARY(4)	SDLC connect poll retry
136	88	BINARY(4)	SDLC NDM poll timer
140	8C	BINARY(4)	LAN frame retry
144	90	BINARY(4)	LAN connection retry
148	94	BINARY(4)	LAN response timer
152	98	BINARY(4)	LAN connection timer
156	9C	BINARY(4)	LAN acknowledgement timer
160	A0	BINARY(4)	LAN inactivity timer
164	A4	BINARY(4)	LAN acknowledgement frequency
168	A8	BINARY(4)	LAN maximum outstanding frames
172	AC	BINARY(4)	LAN access priority
176	B0	BINARY(4)	LAN window step
180	B4	BINARY(4)	Default packet size: transmit
184	B8	BINARY(4)	Default packet size: receive
188	BC	BINARY(4)	Negotiated packet size: transmit
192	C0	BINARY(4)	Negotiated packet size: receive
196	C4	BINARY(4)	Default window size: transmit
200	C8	BINARY(4)	Default window size: receive
204	CC	BINARY(4)	Negotiated window size: transmit
208	D0	BINARY(4)	Negotiated window size: receive
212	D4	BINARY(4)	X.25 frame retry
216	D8	BINARY(4)	X.25 connection retry

Offset		Type	Field
Dec	Hex		
220	DC	BINARY(4)	X.25 response timer
224	E0	BINARY(4)	X.25 connection timer
228	E4	BINARY(4)	X.25 delayed connection timer
232	E8	BINARY(4)	Recovery limits: count limit
236	EC	BINARY(4)	Recovery limits: time interval
240	F0	BINARY(4)	Offset to list of attached devices
244	F4	BINARY(4)	Entry length for list of attached devices
248	F8	BINARY(4)	Offset to list of switched lines
252	FC	BINARY(4)	Number of entries in list of switched lines
256	100	BINARY(4)	Entry length for list of switched lines
260	104	CHAR(10)	Controller type
270	10E	CHAR(10)	Controller model
280	118	CHAR(10)	Link type
290	122	CHAR(10)	Switched line
300	12C	CHAR(10)	Switched network backup
310	136	CHAR(10)	Activate switched network backup
320	140	CHAR(10)	Attached nonswitched line name
330	14A	CHAR(10)	Character code
340	154	CHAR(10)	Exchange identifier
350	15E	CHAR(12)	System service control point identifier
362	16A	CHAR(10)	Initial connection
372	174	CHAR(32)	Connection number
404	194	CHAR(10)	Answer number
414	19E	CHAR(10)	Activate X.25 network address
424	1A8	CHAR(10)	Switched disconnect
434	1B2	CHAR(10)	Station address
444	1BC	CHAR(10)	SDLC poll priority
454	1C6	CHAR(12)	LAN remote adapter address
466	1D2	CHAR(10)	Destination service access point
476	1DC	CHAR(10)	Source service access point
486	1E6	CHAR(10)	X.25 network level
496	1F0	CHAR(10)	X.25 logical channel ID
506	1FA	CHAR(10)	X.25 connection password
516	204	CHAR(10)	X.25 switched line selection
526	20E	CHAR(10)	X.25 user group ID
536	218	CHAR(10)	X.25 reverse charging
546	222	CHAR(218)	User facilities
764	2FC	BINARY(4)	Current maximum frame size
768	300	CHAR(10)	Current message queue: name
778	30A	CHAR(10)	Current message queue: library

Offset		Type	Field
Dec	Hex		
788	314	CHAR(10)	System job name
These fields repeat for each attached device		CHAR(10)	Attached device name
		CHAR(2)	Reserved
These fields repeat for each switched line		CHAR(10)	Switched line name
		CHAR(2)	Reserved

CTLD1000 Format

This format returns detailed information about a controller of category *RWS.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format CTLD0100
108	6C	BINARY(4)	Device wait timer
112	70	BINARY(4)	Maximum frame size
116	74	BINARY(4)	IDLC default window size
120	78	BINARY(4)	IDLC frame retry
124	7C	BINARY(4)	IDLC response timer
128	80	BINARY(4)	IDLC connect retry
132	84	BINARY(4)	Predial delay
136	88	BINARY(4)	Redial delay
140	8C	BINARY(4)	Dial retries
144	90	BINARY(4)	Short-hold mode disconnect limit
148	94	BINARY(4)	Short-hold mode disconnect timer
152	98	BINARY(4)	SDLC poll limit
156	9C	BINARY(4)	SDLC out limit
160	A0	BINARY(4)	SDLC connect poll retry
164	A4	BINARY(4)	SDLC NDM poll timer
168	A8	BINARY(4)	LAN frame retry
172	AC	BINARY(4)	LAN connection retry
176	B0	BINARY(4)	LAN response timer
180	B4	BINARY(4)	LAN connection timer
184	B8	BINARY(4)	LAN acknowledgement timer
188	BC	BINARY(4)	LAN inactivity timer
192	C0	BINARY(4)	LAN acknowledgement frequency
196	C4	BINARY(4)	LAN maximum outstanding frames
200	C8	BINARY(4)	LAN access priority
204	CC	BINARY(4)	LAN window step
208	D0	BINARY(4)	Default packet size: transmit
212	D4	BINARY(4)	Default packet size: receive

Offset		Type	Field
Dec	Hex		
216	D8	BINARY(4)	Negotiated packet size: transmit
220	DC	BINARY(4)	Negotiated packet size: receive
224	E0	BINARY(4)	Default window size: transmit
228	E4	BINARY(4)	Default window size: receive
232	E8	BINARY(4)	Negotiated window size: transmit
236	EC	BINARY(4)	Negotiated window size: receive
240	F0	BINARY(4)	X.25 frame retry
244	F4	BINARY(4)	X.25 connection retry
248	F8	BINARY(4)	X.25 response timer
252	FC	BINARY(4)	X.25 connection timer
256	100	BINARY(4)	X.25 delayed connection timer
260	104	BINARY(4)	X.25 acknowledgement timer
264	108	BINARY(4)	X.25 inactivity timer
268	10C	BINARY(4)	Allocation retry timer
272	110	BINARY(4)	Recovery limits: count limit
276	114	BINARY(4)	Recovery limits: time interval
280	118	BINARY(4)	Offset to list of attached devices
284	11C	BINARY(4)	Entry length for list of attached devices
288	120	BINARY(4)	Offset to list of switched lines
292	124	BINARY(4)	Number of entries in list of switched lines
296	128	BINARY(4)	Entry length for list of switched lines
300	12C	CHAR(10)	Controller type
310	136	CHAR(10)	Controller model
320	140	CHAR(10)	Link type
330	14A	CHAR(10)	Switched connection
340	154	CHAR(10)	Short-hold mode
350	15E	CHAR(10)	Switched network backup
360	168	CHAR(10)	Activate switched network backup
370	172	CHAR(10)	Attached nonswitched line name
380	17C	CHAR(10)	TDLC line name
390	186	CHAR(10)	Character code
400	190	CHAR(10)	Remote location name
410	19A	CHAR(10)	Local location name
420	1A4	CHAR(10)	Remote network identifier
430	1AE	CHAR(10)	Exchange identifier
440	1B8	CHAR(12)	System service control point identifier
452	1C4	CHAR(10)	Initial connection
462	1CE	CHAR(10)	Dial initiation
472	1D8	CHAR(32)	Connection number
504	1F8	CHAR(10)	Answer number

Offset		Type	Field
Dec	Hex		
514	202	CHAR(10)	Activate X.25 network address
524	20C	CHAR(10)	Connection list
534	216	CHAR(10)	Connection list entry
544	220	CHAR(10)	Station address
554	22A	CHAR(10)	SDLC poll priority
564	234	CHAR(12)	LAN remote adapter address
576	240	CHAR(10)	Destination service access point
586	24A	CHAR(10)	Source service access point
596	254	CHAR(10)	X.25 network level
606	25E	CHAR(10)	X.25 link protocol
616	268	CHAR(10)	X.25 logical channel ID
626	272	CHAR(10)	X.25 connection password
636	27C	CHAR(10)	X.25 switched line selection
646	286	CHAR(10)	X.25 user group ID
656	290	CHAR(10)	X.25 reverse charging
666	29A	CHAR(218)	User facilities
884	374	CHAR(10)	Autocreate device
894	37E	CHAR(10)	Switched disconnect
904	388	CHAR(10)	Associated APPC device
914	392	CHAR(10)	Serial number
924	39C	CHAR(10)	Release level
934	3A6	CHAR(2)	Reserved
936	3A8	BINARY(4)	Current maximum frame size
940	3AC	CHAR(10)	Message queue: name
950	3B6	CHAR(10)	Message queue: library
960	3C0	CHAR(10)	Current message queue: name
970	3CA	CHAR(10)	Current message queue: library
980	3D4	CHAR(10)	System job name
These fields repeat for each attached device		CHAR(10)	Attached device name
		CHAR(10)	Serial number
These fields repeat for each switched line		CHAR(10)	Switched line name
		CHAR(2)	Reserved

CTLD1100 Format

This format returns detailed information about a controller of category *VWS.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format CTLD0100

Offset		Type	Field
Dec	Hex		
108	6C	BINARY(4)	Offset to list of attached devices
112	70	BINARY(4)	Entry length for list of attached devices
116	74	CHAR(10)	Message queue: name
126	7E	CHAR(10)	Message queue: library
136	88	CHAR(10)	Current message queue: name
146	92	CHAR(10)	Current message queue: library
156	9C	CHAR(10)	System job name
166	A6	CHAR(2)	Reserved
168	A8	BINARY(4)	Device wait timer
These fields repeat for each attached device		CHAR(10)	Attached device name
		CHAR(2)	Reserved

CTLD1200 Format

This format returns detailed information about a controller of category *LWS.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format CTLD0100
108	6C	BINARY(4)	Device wait timer
112	70	BINARY(4)	Offset to list of attached devices
116	74	BINARY(4)	Entry length for list of attached devices
120	78	CHAR(10)	Controller type
130	82	CHAR(10)	Controller model
140	8C	CHAR(10)	Resource name
150	96	CHAR(10)	TDLC line name
160	A0	CHAR(10)	Automatic configuration
170	AA	CHAR(10)	Initialization source file name
180	B4	CHAR(10)	Initialization source file library name
190	BE	CHAR(10)	Initialization source member name
200	C8	CHAR(10)	Initialization program name
210	D2	CHAR(10)	Initialization program library name
220	DC	CHAR(10)	Message queue: name
230	E6	CHAR(10)	Message queue: library
240	F0	CHAR(10)	Current message queue: name
250	FA	CHAR(10)	Current message queue: library
260	104	CHAR(10)	System job name
These fields repeat for each attached device		CHAR(10)	Attached device name
		CHAR(2)	Reserved

CTLD1300 Format

This format returns detailed information about a controller of category *TAP.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format CTLD0100
108	6C	BINARY(4)	Offset to list of attached devices
112	70	BINARY(4)	Entry length for list of attached devices
116	74	CHAR(10)	Controller type
126	7E	CHAR(10)	Controller model
136	88	CHAR(10)	Resource name
146	92	CHAR(10)	Automatic configuration
These fields repeat for each attached device		CHAR(10)	Attached device name
		CHAR(2)	Reserved

Field Descriptions

Some of the fields in the various formats returned by this API are described in greater detail in the Control Language (CL) information for the particular command that was used to create the controller description object. They are also described in the online help for the particular command. For these fields, the CL parameter keyword is specified in parentheses following the field name. The CL command name is specified in the field description.

In certain cases, numeric values are assigned by this API to represent character values for some of the returned fields. Where a numeric value is assigned, the numeric value and the equivalent character value are listed as an *Exception* in the following field descriptions.

Activate switched network backup. Shows whether the switched network backup is activated.

Activate X.25 network address. The current X.25 network address for active X.25 controller descriptions.

Activation timer (ACTTMR). This timer is used when the system attempts to activate a session to the remote dependent-logical-unit-server (DLUS) node (initial connection *DIAL). It is the amount of time this system will wait for an answer from the remote DLUS. (See the ACTTMR parameter in the Control Language (CL) information for the CRTCTLHOST command.)

Active switched line. The switched line that is active and that the controller is using for communications. If no switched line is active, the value in this field is blanks.

Adjacent link station (ADJLNKSTN). The link station name of the adjacent system. (See the ADJLNKSTN parameter in the Control Language (CL) information for the CRTCTLHOST command.)

Allocation retry timer (ALCRTYTMR). The time to wait between attempts to activate devices associated with this controller. (See the ALCRTYTMR parameter in the Control Language (CL) information for the CRTCTLRWS command.)

Answer number (ANSNBR). The X.25 network addresses from which this controller can accept calls. (See the ANSNBR parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLASC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

APPC CP session support (CPSSN). Whether this controller supports control point-to-control point sessions. (See the CPSSN parameter in the Control Language (CL) information for the CRTCTLAPPC or CRTCTLHOST command.)

Application type (APPTYPE). The type of application that this controller is to be used for. (See the APPTYPE parameter in the Control Language (CL) information for the CRTCTLBSC command.)

APPN capable (APPN). Whether the local system appears to the adjacent system as either a network node or an end node in the local system network attributes, or the local system appears to the adjacent system as a low-entry networking node. (See the APPN parameter in the Control Language (CL) information for the CRTCTLAPPC or CRTCTLHOST command.)

APPN/HPR capable (HPR). Whether to use APPN high-performance routing (HPR) support. (See the HPR parameter in the Control Language (CL) information for the CRTCTLAPPC or CRTCTLHOST command.)

APPN minimum switched status (MINSWTSTS). The minimum status required for this controller description to be considered eligible for APPN routing. (See the MINSWTSTS parameter in the Control Language (CL) information for the CRTCTLAPPC or CRTCTLHOST command.)

APPN transmission group number (TMSGRPNBR). The value to be used by the APPN support for transmission group negotiation with the remote system. (See the TMSGRPNBR parameter in the Control Language (CL) information for the CRTCTLAPPC or CRTCTLHOST command.)

Exception:

- Value of -11 implies *CALC

Associated APPC device. The APPC device associated with the remote workstation controller description. This is the device name that is displayed when F15 (Display associated APPC device) is used on the Display Controller Description (DSPCTLD) command. If there is no associated APPC device, the value in this field is blanks.

Attached device name (DEV). The name of one or more devices to be attached to this controller. (See the DEV parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLASC, CRTCTLBSC, CRTCTLFNC, CRTCTLHOST, CRTCTLLWS, CRTCTLNET, CRTCTLRTL, CRTCTLRWS, CRTCTLTAP, or CRTCTLVWS command.)

Attached line. For network controllers, the name of the line that connects the network to the system.

Attached nonswitched line name (LINE). The name of the line description that connects the network to the system. (See the LINE parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLASC, CRTCTLBSC, CRTCTLFNC, CRTCTLHOST, CRTCTLNET, CRTCTLRTL, or CRTCTLRWS command.)

Autocreate device (AUTOCRTDEV). Which devices are automatically created. (See the AUTOCRTDEV parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLHOST, or CRTCTLRWS command.)

Autodelete device (AUTODLTDEV). The number of minutes an automatically created device can remain in an idle state with no bound sessions and no active conversations on the device. (See the AUTODLTDEV parameter in the Control Language (CL) information for the CRTCTLAPPC or CRTCTLHOST command.)

Exception:

- Value of -2 implies *NO

Automatic configuration. Whether this controller has been configured automatically.

Bytes available. The number of bytes of data available to be returned. All available data is returned if enough space is provided.

Bytes returned. The number of bytes of data returned.

Backup DLUS name—network ID (BKUDLUS). The backup DLUS network ID. This is the network ID of the APPN network (subnet) that the remote DLUS resides in. It is the network qualified CP name of the remote DLUS (SSCP) that the iSeries dependent-logical-unit-requester (DLUR) host controller communicates with in the absence of the primary DLUS node. (See the BKUDLUS parameter in the Control Language (CL) information for the CRTCTLHOST command.)

Backup DLUS name—PU name (BKUDLUS). The backup DLUS name. This is the physical unit name of the remote DLUS. This is the network qualified CP name of the remote DLUS (SSCP) that the iSeries DLUR host controller communicates with in the absence of the primary DLUS node. (See the BKUDLUS parameter in the Control Language (CL) information for the CRTCTLHOST command.)

Branch extender role (BEXROLE). The role of the the local system in an APPN network for the remote controller being configured. This parameter is used only when the local system supports the branch extender function. (See the BEXROLE parameter in the Control Language (CL) information for the CRTCTLAPPC or CRTCTLHOST command.)

Character code (CODE). The type of character code (EBCDIC or ASCII) used to send the information in a remote work station data stream over the communications line. (See the CODE parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

Connection list (CNNLSTOUT). The name of a connection list containing the network-assigned numbers used for outgoing calls on this controller. (See the CNNLSTOUT parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLHOST, or CRTCTLRWS command.)

» **Note:** This field is no longer supported as of V5R3M0. «

Connection list entry (CNNLSTOUTE). The name of the connection list entry containing the network-assigned numbers used for outgoing calls on this controller. (See the CNNLSTOUTE parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLHOST, or CRTCTLRWS command.)

» **Note:** This field is no longer supported as of V5R3M0. «

Connection network CP name (CNNCPNAME). The name of the connection network control point. (See the CNNCPNAME parameter in the Control Language (CL) information for the CRTCTLAPPC command.)

Connection network identifier (CNNNETID). The name of the connection network identifier. (See the CNNNETID parameter in the Control Language (CL) information for the CRTCTLAPPC command.)

Connection number (CNNNBR). The number (for a switched connection or a nonswitched connection with switched network backup) of the remote controller that is called from the system to establish a connection. (See the CNNNBR parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLASC, CRTCTLBSC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

Connection response timer (CNNRSPTMR). The amount of time to wait for a response to an incoming connection request. (See the CNNRSPTMR parameter in the Control Language (CL) information for the CRTCTLNET command.)

Connection type (CNN). The type of connection this BSC controller will be used on. (See the CNN parameter in the Control Language (CL) information for the CRTCTLBSC command.)

Control owner. Whether this description is owned by the system or the user. *USER identifies the user as the owner, and *SYS identifies the system as the owner. If the system is the control owner, the user cannot make any changes to the description.

Controller category. This value will be one of the following:

*APPC

*ASC

*BSC

*FNC

*HOST

*LWS

*NET

*RTL

*RWS

*TAP

*VWS

The category value is derived from the command used to create the controller description.

Controller model (MODEL). The model number of the controller. (See the MODEL parameter in the Control Language (CL) information for the CRTCTLFNC, CRTCTLLWS, CRTCTLRTL, CRTCTLRWS, or CRTCTLTAP command.)

Controller name (CTLD). The name of the controller description. (See the CTLD parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLASC, CRTCTLBSC, CRTCTLFNC, CRTCTLHOST, CRTCTLLWS, CRTCTLNET, CRTCTLRTL, CRTCTLRWS, CRTCTLTAP, or CRTCTLVWS command.)

Controller type (TYPE). The type of controller being described. (See the TYPE parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLFNC, CRTCTLLWS, CRTCTLRTL, CRTCTLRWS, or CRTCTLTAP command.)

Current maximum frame size. The maximum frame size that is currently being used by this controller. This field is only valid for controllers that have been varied on and are connected to a LAN.

Current message queue (MSGQ). The message queue to which messages are currently being sent using this controller description. This field is valid only for controllers that are varied on. Note that the value of the current message queue may be different from the message queue field (MSGQ parameter) under certain error conditions. (See the MSGQ parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLASC, CRTCTLHOST, CRTCTLLWS, CRTCTLRWS, or CRTCTLVWS command.) This information is returned in two separate fields:

- *Name* of the queue
- *Library* in which the queue can be found

Data link role (ROLE). Whether the remote system is primary, secondary, or dynamically negotiates its role. (See the ROLE parameter in the Control Language (CL) information for the CRTCTLAPPC command.)

Date information retrieved. The date that the information was provided by the API. This is returned as 7 characters in the form CYYMMDD, where:

C	Century, where 0 indicates years 19*xx* and 1 indicates years 20*xx*.
YY	Year
MM	Month
DD	Day

Default packet size (DFTPKTSIZE). The default packet size to use on the virtual circuit represented by this controller. This information is returned in two separate fields:

- *Transmit*
- *Receive*

(See the DFTPKTSIZE parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLASC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

Exceptions:

- Value of -10 implies *TRANSMIT
- Value of -16 implies *LIND

Default window size (DFTWDWSIZE). The default window size to use on the virtual circuit represented by this controller. This information is returned in two separate fields:

- *Transmit*
- *Receive*

(See the DFTWDWSIZE parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLASC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

Exceptions:

- Value of -10 implies *TRANSMIT
- Value of -16 implies *LIND

Dependent PU name. The dependent location name that is used for DLUR, which provides additional security for the connection.

Destination service access point (DSAP). The logical address that this system will send to when it communicates with the remote controller. (See the DSAP parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

Device category. This value will be one of the following:

*APPC

*ASC

*ASP

*BSC

*CRP

*DKT

*DSP

*FNC

*HOST

*INTR

*MLB

*NET

*OPT

*PRT

*RTL

*SNPT

*SNUF

*TAP

The category value is derived from the command used to create the device description.

Device name. The name of a device associated with this controller.

Device text description. A brief description of a device associated with this controller.

Device type (TYPE). The type of device being described. (See the TYPE parameter in the Control Language (CL) information for the CRTDEVDKT, CRTDEVDSP, CRTDEVFNC, CRTDEVMLB, CRTDEVNET, CRTDEVOPT, CRTDEVPRT, or CRTDEVTAP command.)

Device wait timer (DEVWAITTMR). The device wait time-out value. (See the DEVWAITTMR parameter in the Control Language (CL) information for the CRTCTLLWS, CRTCTLRWS, or CRTCTLVWS command.)

Dial initiation (DIALINIT). Whether or not the system should dial the remote system or controller immediately when this controller description is varied on. (See the DIALINIT parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLHOST, or CRTCTLRWS command.)

Dial retries (DIALRTY). The number of times to retry dialing the number before considering the dialing unsuccessful. (See the DIALRTY parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLASC, CRTCTLBSC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

Disconnect timer (DSCTMR). The options for automatic disconnection. These options are returned in two separate fields:

- *Minimum connect*: The minimum length of time the link stays active after the connection has been made.
- *Disconnect delay*: The length of time the system delays disconnection after the last session for the controller is ended.

(See the DSCTMR parameter in the Control Language (CL) information for the CRTCTLAPPC or CRTCTLHOST command.)

Entry length for list of attached devices. Entry length in bytes of each element in the list of attached devices returned with this format. A value of zero is returned if the list is empty.

Entry length for list of remote identifiers. Entry length in bytes of each element in the list of remote identifiers returned with this format. A value of zero is returned if the list is empty.

Entry length for list of switched lines. Entry length in bytes of each element in the list of switched lines returned with this format. A value of zero is returned if the list is empty.

Exchange identifier (EXCHID). A hexadecimal value used to identify the remote controller. (See the EXCHID parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLFNC, CRTCTLRTL, or CRTCTLRWS command.)

File transfer acknowledgement timer (ACKTMR). The time allowed, in seconds, for an acknowledgement when using file transfer support. (See the ACKTMR parameter in the Control Language (CL) information for the CRTCTLASC command.)

File transfer retry (RETRY). The number of attempts to transmit a frame after an unsuccessful transmission when using file transfer support. (See the RETRY parameter in the Control Language (CL) information for the CRTCTLASC command.)

HPR path switching (HPRPTHSWT). Whether or not path switching is done for HPR connections that use this controller at the time the controller is varied off. (See the HPRPTHSWT parameter in the Control Language (CL) information for the CRTCTLAPPC or CRTCTLHOST command.)

IDLC connect retry (IDLCCNNRTY). The number of times to retry a transmission at connection time. (See the IDLCCNNRTY parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLHOST, or CRTCTLRWS command.)

Exceptions:

- Value of -8 implies *NOMAX
- Value of -16 implies *LIND

» **Note:** This field is no longer supported as of V5R3M0. «

IDLC default window size (IDLCWDWSIZ). The default window size used for this line description. (See the IDLCWDWSIZ parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLHOST, or CRTCTLRWS command.)

Exception:

- Value of -16 implies *LIND

» **Note:** This field is no longer supported as of V5R3M0. «

IDLC frame retry (IDLCFRMRTY). The maximum number of transmissions to attempt before reporting an error. (See the IDLCFRMRTY parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLHOST, or CRTCTLRWS command.)

Exception:

- Value of -16 implies *LIND

» **Note:** This field is no longer supported as of V5R3M0. «

IDLC response timer (IDLCRSPTMR). The length of time to wait before retransmitting a frame when an acknowledgement is not received. (See the IDLCRSPTMR parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLHOST, or CRTCTLRWS command.)

Exception:

- Value of -16 implies *LIND

Note: This field is no longer supported as of V5R3M0.

Initial connection (INLCNN). Whether the initial switched connection is made by the system when it answers an incoming call or by a call started from the system. (See the INLCNN parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLASC, CRTCTLBSC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

Initialization program library name. The name of the library in which the initialization program resides.

Initialization program name. The name of a program that is called to manage configuration initialization data.

Initialization source file library name. The name of the library in which the initialization source file resides.

Initialization source file name. The name of a source file containing configuration initialization data.

Initialization source member name. The name of a source member containing configuration initialization data.

LAN access priority (LANACCPTY). The priority set in the actual frames that the system will send to the remote controller. (See the LANACCPTY parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

Exception:

- Value of -11 implies *CALC

LAN acknowledgement frequency (LANACKFRQ). The maximum number of frames the system can receive before sending an acknowledgement to the remote controller. (See the LANACKFRQ parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

Exception:

- Value of -11 implies *CALC

LAN acknowledgement timer (LANACKTMR). The length of time the system will delay before sending an acknowledgement to the remote controller for a received data frame. (See the LANACKTMR parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

Exception:

- Value of -11 implies *CALC

LAN connection retry (LANCNNRTY). The number of times a frame will be retransmitted during the connection establishment if there is no acknowledgement from the remote controller in the time period specified by the LANCNNTMR parameter. (See the LANCNNRTY parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

Exception:

- Value of -11 implies *CALC

LAN connection timer (LANCNNTMR). The length of time to wait for an acknowledgement from the remote controller during the connection establishment before retransmitting a frame. (See the LANCNNTMR parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

Exception:

- Value of -11 implies *CALC

LAN frame retry (LANFRMRTY). The number of times a frame will be retransmitted if there is no acknowledgement from the remote controller in the time period specified by the LANRSPTMR parameter. (See the LANFRMRTY parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

Exception:

- Value of -11 implies *CALC

LAN inactivity timer (LANINACTMR). The length of time that the system will wait for a frame from the remote controller before requesting data with a frame of its own. (See the LANINACTMR parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

Exception:

- Value of -11 implies *CALC

LAN maximum outstanding frames (LANMAXOUT). The maximum number of outstanding frames that the system sends to the remote controller before it waits for an acknowledgment. (See the LANMAXOUT parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

Exception:

- Value of -11 implies *CALC

LAN remote adapter address (ADPTADR). The adapter address of the remote controller. (See the ADPTADR parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

LAN response timer (LANRSPTMR). The length of time to wait for an acknowledgement from the remote controller before retransmitting a data frame. (See the LANRSPTMR parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

Exception:

- Value of -11 implies *CALC

LAN window step (LANWDWSTP). Whether the number of outstanding frames (frames sent without receiving an acknowledgement from the remote system) should be reduced during periods of network congestion. (See the LANWDWSTP parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

Exception:

- Value of -3 implies *NONE

Link type (LINKTYPE). The type of line this controller will be attached to. (See the LINKTYPE parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLASC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

Local exchange identifier (LCLEXCHID). A hexadecimal value used to identify the local system to the remote system. (See the LCLEXCHID parameter in the Control Language (CL) information for the CRTCTLHOST command.)

Local identifier (LCLID). The name that, when combined with the local location name, identifies your controller to a remote system. (See the LCLID parameter in the Control Language (CL) information for the CRTCTLASC or CRTCTLBSC command.)

Local location name (LCLLOCNAME). The name which, when combined with the local identifier, identifies your controller to a remote system. (See the LCLLOCNAME parameter in the Control Language (CL) information for the CRTCTLASC or CRTCTLRWS command.)

Maximum frame size (MAXFRAME). The maximum path information unit (PIU) size that the controller can send or receive. (See the MAXFRAME parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL or CRTCTLRWS command.)

Exception:

- Value of -17 implies *LINKTYPE

Message queue (MSGQ). The message queue to which operational messages for this controller should normally be sent. Note that this is the value entered on the MSGQ parameter of the CL command, but under certain error conditions it may not be the message queue currently in use. See the current message queue field to determine what message queue is actually being used at a given time. (See the MSGQ parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLASC, CRTCTLHOST, CRTCTLLWS, CRTCTLRWS, or CRTCTLVWS command.) This information is returned in two separate fields:

- *Name* of the queue
- *Library* in which the queue can be found

Model controller description (MDLCTL). Whether this controller description is to be used as a model controller for automatically created controller descriptions associated with the line description specified on the SWTLINLST parameter. (See the MDLCTL parameter in the Control Language (CL) information for the CRTCTLAPPC command.)

Negotiated packet size (DFTPKTSIZE). The default packet size to use on the virtual circuit represented by this controller. This information is returned in two separate fields:

- *Transmit*
- *Receive*

(See the DFTPKTSIZE parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLASC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

Negotiated window size. The default window size to use on the virtual circuit represented by this controller. This information is returned in two separate fields:

- *Transmit*
- *Receive*

(See the DFTWDWSIZE parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLASC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

Number of attached devices. The number of elements in the list of attached devices returned with this format. A value of zero is returned if the list is empty.

Number of remote identifiers. The number of elements in the list of remote identifiers returned with this format. A value of zero is returned if the list is empty.

Number of switched lines. The number of elements in the list of switched lines returned with this format. A value of zero is returned if the list is empty.

Offset to list of attached devices. The offset in bytes to the first element in the list of attached devices returned with this format. A value of zero is returned if the list is empty.

Offset to list of remote identifiers. The offset in bytes to the first element in the list of remote identifiers returned with this format. A value of zero is returned if the list is empty.

Offset to list of switched lines. The offset in bytes to the first element in the list of switched lines returned with this format. A value of zero is returned if the list is empty.

Online at IPL (ONLINE). Whether the controller is varied on automatically when the system is turned on or you want to vary it on manually by using the Vary Configuration (VRYCFG) command. (See the ONLINE parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLASC, CRTCTLBSC, CRTCTLFNC, CRTCTLHOST, CRTCTLLWS, CRTCTLNET, CRTCTLRTL, CRTCTLRWS, CRTCTLTAP, or CRTCTLVWS command.)

PAD emulation (PADEML). Whether or not this controller is to emulate an X.25 packet assembler/disassembler (PAD). (See the PADEML parameter in the Control Language (CL) information for the CRTCTLASC command.)

Predial delay (PREDIALDLY). The length of time to wait before dialing the number to establish a connection to the specified controller. (See the PREDIALDLY parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLASC, CRTCTLBSC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

Primary DLUS name—network ID (PRIDLUS). The primary DLUS network ID. This is the network ID of the APPN network (subnet) that the remote DLUS resides in. It is the network qualified CP name of the remote DLUS (SSCP) that the iSeries DLUR host controller prefers to communicate with. (See the PRIDLUS parameter in the Control Language (CL) information for the CRTCTLHOST command.)

Primary DLUS name—PU name (PRIDLUS). The primary DLUS name. This is the physical unit name of the remote DLUS. This is the network qualified CP name of the remote DLUS (SSCP) that the iSeries DLUR host controller prefers to communicate with. (See the PRIDLUS parameter in the Control Language (CL) information for the CRTCTLHOST command.)

Reconnect timer (RECNNTMR). This timer is used when a session outage occurs to the remote DLUS node. It is the amount of time the iSeries DLUR support will wait for the DLUS node to drive an activation request back to the system. (See the RECNNTMR parameter in the Control Language (CL) information for the CRTCTLHOST command.)

Recontact at vary off (RECONTACT). Whether a recontact request is to be sent to the host system when this controller is varied off normally. (See the RECONTACT parameter in the Control Language (CL) information for the CRTCTLHOST command.)

Recovery limits (CMNRCYLMT). The second-level communications recovery limit for each controller description. These limits are returned in two separate fields:

- *Count limit*: The number of second-level recovery attempts to be automatically performed by the system.

- *Time interval*: The length of time (in minutes) in which the specified number of second-level recoveries can be attempted.

(See the CMNRCYLMT parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLASC, CRTCTLBSC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

Exception:

- Value of -14 implies *SYSVAL

Redial delay (REDIALDLY). The length of time to wait before redialing the number to establish a connection to the specified controller if the previous attempt was unsuccessful. (See the REDIALDLY parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLASC, CRTCTLBSC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

Release level. The release level reported by the remote control unit the last time the controller was varied on. The value is blanks when no release level is reported.

Remote control point name (RMTCPNAME). The name of the remote control point. (See the RMTCPNAME parameter in the Control Language (CL) information for the CRTCTLAPPC or CRTCTLHOST command.)

Remote identifier. The identifier used to identify the remote system to the local system.

Remote location name (RMTLOCNAME). The name by which the remote work station controller is known to the network. (See the RMTLOCNAME parameter in the Control Language (CL) information for the CRTCTLRWS command.)

Remote network identifier (RMTNETID). The name of the remote network in which the adjacent control point resides. (See the RMTNETID parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLHOST, or CRTCTLRWS command.)

Remote APPN node type (NODETYPE). The type of node that this controller represents. (See the NODETYPE parameter in the Control Language (CL) information for the CRTCTLAPPC or CRTCTLHOST command.)

Remote system name (RMTSYSNAME). The remote system name supplied should be a current system name of an adjacent system to which there is an OptiConnect bus connection. The current system name of that system can be found by using the Display Network Attributes (DSPNETA) command on that system. (See the RMTSYSNAME parameter in the Control Language (CL) information for the CRTCTLAPPC command.)

Remote verify (RMTVFY). Whether a remote system requires verification if a generic controller and device are configured to accept calls from any X.25 network address. (See the RMTVFY parameter in the Control Language (CL) information for the CRTCTLASC command.)

Reserved. Space included for alignment.

Resource name (RSRCNAME). The unique name that is assigned by the system to the physical equipment (in this case, a communications port) attached to the system. (See the RSRCNAME parameter in the Control Language (CL) information for the CRTCTLLWS or CRTCTLTAP command.)

RJE host type (RJEHOST). The name of the host system used by remote job entry. (See the RJEHOST parameter in the Control Language (CL) information for the CRTCTLBSC command.)

RJE host signon/logon (RJELOGON). The logon information required by the host system if you specified remote job entry as the application type. (See the RJELOGON parameter in the Control Language (CL) information for the CRTCTLBSC command.)

SDLC connect poll retry (CNNPOLLRTY). The number of connect poll retries that will be attempted before the system indicates an error in contacting the remote system. (See the CNNPOLLRTY parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLFNC, CRTCTLRTL, or CRTCTLRWS command.)

Exceptions:

- Value of -8 implies *NOMAX
- Value of -11 implies *CALC

SDLC NDM poll timer (NDMPOLLTMR). The minimum interval at which a secondary station should be polled if a poll from the primary to the secondary station (which is in normal disconnect mode) does not result in receiving the appropriate response. (See the NDMPOLLTMR parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLFNC, CRTCTLRTL, or CRTCTLRWS command.)

Exception:

- Value of -11 implies *CALC

SDLC out limit (OUTLMT). The number of additional frame sequences the system will send to the controller before polling the next station in the poll list. (See the OUTLMT parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLFNC, CRTCTLRTL, or CRTCTLRWS command.)

Exception:

- Value of -18 implies *POLLLMT

SDLC poll limit (POLLLMT). The number of additional consecutive polls the system will send to a controller when that controller responds by sending a number of frames equal to the maximum outstanding frames (MAXOUT parameter) specified on the line description. (See the POLLLMT parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLFNC, CRTCTLRTL, or CRTCTLRWS command.)

SDLC poll priority (POLLPTY). Whether this controller should have priority when being polled. (See the POLLPTY parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLFNC, CRTCTLRTL, or CRTCTLRWS command.)

Serial number. The serial number reported by the resource the last time the resource was varied on. The value is blanks when no serial number is reported.

Short-hold mode (SHM). Whether this controller is used for X.21 short-hold mode. (See the SHM parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLFNC, CRTCTLHOST, or CRTCTLRWS command.)

Short-hold mode disconnect limit (SHMDSCLMT). The number of consecutive nonproductive responses (RR or RNR) that are required from the remote station before the connection can be suspended for this X.21 short-hold mode connection. (See the SHMDSCLMT parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLFNC, or CRTCTLRWS command.)

Exception:

- Value of -8 implies *NOMAX

Short-hold mode disconnect timer (SHMDSCTMR). The minimum length of time that the primary station will maintain the connection to the remote system for this X.21 short-hold mode controller. (See the SHMDSCTMR parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLFNC, or CRTCTLRWS command.)

Source service access point (SSAP). The logical address this system will use when it sends data to the remote controller. (See the SSAP parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

Station address (STNADR). The station address to be used when communicating with the remote system using SDLC. (See the STNADR parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

Switched connection (SWITCHED). Whether this controller is attached to a switched line, a local area network, or an X.25 switched virtual circuit (SVC) connection. (See the SWITCHED parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLASC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

Switched disconnect (SWTDSC). Whether the switched connection is dropped when the last session is unbound and the disconnect timer (DSCTMR) has ended. (See the SWTDSC parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLASC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

Switched line. Whether this controller is attached to a switched line. (See the SWITCHED parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLASC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

Switched line name (SWTLINLST). The name of a line that can be connected to this controller for switched connections. (See the SWTLINLST parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLASC, CRTCTLBSC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

Switched network backup (SNBU). Whether you want the switched network backup capability. (See the SNBU parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLASC, CRTCTLBSC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

System job name. The name of the system job that is associated with this controller.

System service control point identifier (SSCPID). The system service control point identifier that the system sends to the remote system in the activate physical unit (ACTPU) request. (See the SSCPID parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

TDLC line name. The name of a line associated with this controller.

Text description (TEXT). A brief description of the controller and its location. (See the TEXT parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLASC, CRTCTLBSC, CRTCTLFNC, CRTCTLHOST, CRTCTLLWS, CRTCTLNET, CRTCTLRTL, CRTCTLRWS, CRTCTLTAP, or CRTCTLVWS command.)

Time information retrieved. The time that the information was provided by the API. It is returned as 6 characters in the form HHMMSS, where:

HH	Hour
MM	Minute
SS	Second

User facilities (USRFCL). Allows network subscribers to request network-supplied facilities that are not available through the system parameters. (See the USRFCL parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLASC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

User-defined 1, 2, and 3 (USRDFN1, USRDFN2, USRDFN3). Used to describe any unique characteristics of this connection that you want to control. (See the USRDFN1, USRDFN2, or USRDFN3 parameter in the Control Language (CL) information for the CRTCTLAPPC or CRTCTLHOST command.)

Exception:

- Value of -16 implies *LIND

X.25 acknowledgement timer (X25ACKTMR). The ELLC LT2 acknowledgement timer, which is only used for controllers that have the X.25 link protocol (LINKPCL) set to *ELLC. (See the X25ACKTMR parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLFNC, CRTCTLHOST, or CRTCTLRWS command.)

X.25 connection password. For X.25 SVC connections, the password used when connecting to this controller.

X.25 connection retry (X25CNNRTY). Same as the X25FRMRTY parameter, except that it applies only to logical link control (LLC) connection establishment, such as LSABME-LUA LLC protocol data units for ELLC and QSM-QUA for QLLC LLC protocol data units. (See the X25CNNRTY parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLFNC, CRTCTLHOST, or CRTCTLRWS command.)

X.25 connection timer (X25CNNTMR). Same as the X25RSPTMR parameter, except that it applies only to LLC connection establishment, such as LSABME-LUA LLC protocol data units for ELLC and QSM-QUA LLC protocol data units for QLLC. (See the X25CNNTMR parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLFNC, CRTCTLHOST, or CRTCTLRWS command.)

X.25 delayed connection timer (X25DLYTMR). The time between retries of polling exchange identifier commands when the system is trying to establish a connection to the remote data terminal equipment (DTE) represented by the controller description. (See the X25DLYTMR parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLFNC, CRTCTLHOST, or CRTCTLRWS command.)

Exception:

- Value of -11 implies *CALC

X.25 frame retry (X25FRMRTY). The number of times that a data or logical link disconnection protocol data unit (PDU) can be retransmitted if no acknowledgement is received from the adjacent logical link station in the remote DTE in the time specified by the X.25 response timer (X25RSPTMR). (See the X25FRMRTY parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

X.25 inactivity timer (X25INACTMR). The ELLC LTI inactivity timer, which is only used for controllers that have the X.25 link protocol (LINKPCL) set to *ELLC. (See the X25INACTMR parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLFNC, CRTCTLHOST, or CRTCTLRWS command.)

X.25 link protocol (LINKPCL). The logical link protocol to be used to communicate with the remote DTE represented by this controller description. (See the LINKPCL parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLFNC, CRTCTLHOST, or CRTCTLRWS command.)

X.25 logical channel ID (LGLCHLID). The logical channel identifier that is to be used for this controller. (See the LGLCHLID parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLASC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

X.25 network level (NETLVL). The level of the support by the X.25 network and the remote DTE represented by this controller description. (See the NETLVL parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

X.25 response timer (X25RSPTMR). The maximum amount of time allowed between the transmission of a data or logical link disconnection link protocol data unit (PDU) and the receipt of a corresponding acknowledgement from the adjacent link station on the remote DTE. (See the X25RSPTMR parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

X.25 reverse charging (RVSCRG). For incoming calls, whether reverse charging will be accepted, and for outgoing calls, whether reverse charging will be requested. (See the RVSCRG parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLASC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

X.25 switched line selection (SWTLINSLCT). Which of the lines listed on the SWTLINLST parameter will be selected for making the switched connection. (See the SWTLINSLCT parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLASC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

X.25 user group ID (USRGRPID). A value that is supplied as a unique identifier by the network if the closed user group facility is subscribed to. (See the USRGRPID parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLASC, CRTCTLFNC, CRTCTLHOST, CRTCTLRTL, or CRTCTLRWS command.)

Error Messages

Message ID	Error Message Text
CPF24B4 E	Severe error while addressing parameter list.
CPF2625 E	Not able to allocate object &1.
CPF2634 E	Not authorized to object &1.
CPF268B E	&1 not valid for controller &2.
CPF26A7 E	Category of object not compatible with API format.
CPF26D5 E	Function not supported.
CPF2702 E	Device description &1 not found.
CPF2703 E	Controller description &1 not found.
CPF3C19 E	Error occurred with receiver variable specified.
CPF3C21 E	Format name &1 is not valid.
CPF3C24 E	Length of the receiver variable is not valid.
CPF3CF1 E	Error code parameter not valid.
CPF3C90 E	Literal value cannot be changed.
CPF8104 E	Controller description &4 damaged.
CPF8105 E	Device description &4 damaged.
CPF8125 E	Line description &4 damaged.
CPF9872 E	Program or service program &1 in library &2 ended. Reason code &3.

API introduced: V2R3

Top | "Configuration APIs," on page 1 | APIs by category

Retrieve Device Description (QDCRDEVD) API

Required Parameter Group:	
1	Receiver variable
Output	Char(*)
2	Length of receiver variable
Input	Binary(4)
3	Format name
Input	Char(8)
4	Device name
Input	Char(10)
5	Error Code
I/O	Char(*)
Default Public Authority: *USE	
Threadsafe: Yes	

The Retrieve Device Description (QDCRDEVD) API retrieves information about a device description.

Authorities and Locks

Device Description Authority
*USE

Device Description Lock
*EXCLRD

Required Parameter Group

Receiver variable
OUTPUT; CHAR(*)

The variable that is to receive the device information.

Length of receiver variable
INPUT; BINARY(4)

The length of the area referenced by the receiver variable parameter. If the amount of information to be returned is greater than this value, the information will be truncated to this length.

Format name
INPUT; CHAR(8)

The content and format of the information returned for each device description. The possible format names are:

DEVD0100	Basic device information.
DEVD0200	Detailed information for device category *APPC
DEVD0300	Detailed information for device category *ASC
DEVD0400	Detailed information for device category *BSC
DEVD0500	Detailed information for device category *DKT
DEVD0600	Detailed information for device category *DSP

DEVD0700 Detailed information for device category *FNC
DEVD0800 Detailed information for device category *HOST
DEVD0900 Detailed information for device category *INTR
DEVD1000 Detailed information for device category *NET
DEVD1100 Detailed information for device category *PRT
DEVD1200 Detailed information for device category *RTL
DEVD1300 Detailed information for device category *SNPT
DEVD1400 Detailed information for device category *SNUF
DEVD1500 Detailed information for device category *TAP
DEVD1600 Detailed information for device category *OPT
DEVD1700 Detailed information for device category *MLB
DEVD1800 Detailed information for device category *CRP
DEVD1900 Detailed information for device category *ASP

See "Format of Device Information" for a description of these formats.

Device name
INPUT; CHAR(10)

The name of the device description to be retrieved.

Error code
I/O; CHAR(*)

The structure in which to return error information. For the format of the structure, see Error Code Parameter.

Format of Device Information

When the device category is unknown, specify DEVD0100 and the basic information (including device category) will be returned. When the device category is known, specify one of the other category-specific formats.

For detailed descriptions of the fields returned in these formats, see "Field Descriptions" on page 90.

DEVD0100 Format

Use this format to find out the device category, plus some basic information about the device. Then you may use the returned device category to select one of the other (category-specific) formats to call the API again for detailed information about the device description.

Offset			
Dec	**Hex**	**Type**	**Field**
0	0	BINARY(4)	Bytes returned
4	4	BINARY(4)	Bytes available
8	8	CHAR(7)	Date information retrieved
15	F	CHAR(6)	Time information retrieved
21	15	CHAR(10)	Device name
31	1F	CHAR(10)	Device category
41	29	CHAR(10)	Online at IPL
51	33	CHAR(50)	Text description
101	65	CHAR(3)	Reserved

DEVD0200 Format

This format returns detailed information about a device of category *APPC.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format DEVD0100
104	68	BINARY(4)	Offset to list of mode names
108	6C	BINARY(4)	Number of mode names
112	70	BINARY(4)	Entry length for list of mode names
116	74	CHAR(10)	Remote location name
126	7E	CHAR(10)	Local location name
136	88	CHAR(10)	Remote network identifier
146	92	CHAR(10)	Attached nonswitched controller name
156	9C	CHAR(10)	Message queue: name
166	A6	CHAR(10)	Message queue: library
176	B0	CHAR(10)	Local location address
186	BA	CHAR(10)	APPN capable
196	C4	CHAR(10)	Single session: indication
206	CE	CHAR(10)	Single session: number of conversations
216	D8	CHAR(10)	Locally controlled session
226	E2	CHAR(10)	Pre-established session
236	EC	CHAR(10)	Secure location
246	F6	CHAR(10)	Automatically configured
256	100	BINARY(4)	Offset to list of active modes
260	104	BINARY(4)	Number of active modes
264	108	BINARY(4)	Entry length for list of active modes
268	10C	CHAR(10)	Current message queue: name
278	116	CHAR(10)	Current message queue: library
These fields repeat for each mode name		CHAR(10)	Mode name
		CHAR(2)	Reserved
These fields repeat for each active mode		CHAR(10)	Mode name
		CHAR(10)	Allocated by job name
		CHAR(10)	Allocated by user name
		CHAR(6)	Allocated by job number

DEVD0300 Format

This format returns detailed information about a device of category *ASC.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format DEVD0100
104	68	CHAR(10)	Remote location name

Offset		Type	Field
Dec	Hex		
114	72	CHAR(10)	Attached nonswitched controller name
124	7C	CHAR(10)	Allocated by job name
134	86	CHAR(10)	Allocated by user name
144	90	CHAR(6)	Allocated by job number
150	96	CHAR(10)	Current message queue: name
160	A0	CHAR(10)	Current message queue: library

DEVD0400 Format

This format returns detailed information about a device of category *BSC.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format DEVD0100
104	68	BINARY(4)	Record length
108	6C	BINARY(4)	Block length
112	70	CHAR(10)	Local location address
122	7A	CHAR(10)	Remote location name
132	84	CHAR(10)	Attached nonswitched controller name
142	8E	CHAR(10)	Connection type
152	98	CHAR(10)	Application type
162	A2	CHAR(10)	Contention resolution winner
172	AC	CHAR(10)	Blocking type
182	B6	CHAR(10)	Separator character
192	C0	CHAR(10)	Remote BSCEL
202	CA	CHAR(10)	Transmit in transparent mode
212	D4	CHAR(10)	Compress and decompress data
222	DE	CHAR(10)	Truncate trailing blanks
232	E8	CHAR(10)	Group separator type
242	F2	CHAR(10)	Emulated device
252	FC	CHAR(10)	Emulated keyboard
262	106	CHAR(10)	Emulated numeric lock
272	110	CHAR(10)	Emulated work station
282	11A	CHAR(10)	Allocated by job name
292	124	CHAR(10)	Allocated by user name
302	12E	CHAR(6)	Allocated by job number
308	134	CHAR(10)	Current message queue: name
318	13E	CHAR(10)	Current message queue: library

DEVD0500 Format

This format returns detailed information about a device of category *DKT.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format DEVD0100
104	68	CHAR(10)	Device type
114	72	CHAR(10)	Device model
124	7C	CHAR(10)	Resource name

DEVD0600 Format

This format returns detailed information about a device of category *DSP.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format DEVD0100
104	68	BINARY(4)	Character identifier: graphic character set
108	6C	BINARY(4)	Character identifier: code page
112	70	BINARY(4)	Maximum length of request unit
116	74	BINARY(4)	Inactivity timer
120	78	BINARY(4)	DBCS feature: RAM size
124	7C	BINARY(4)	Activation timer
128	80	BINARY(4)	Switch setting
132	84	BINARY(4)	Device port
136	88	BINARY(4)	Maximum outstanding frames
140	8C	BINARY(4)	Idle timer
144	90	BINARY(4)	NRM poll timer
148	94	BINARY(4)	Frame retry
152	98	BINARY(4)	Offset to list of auxiliary devices
156	9C	BINARY(4)	Number of auxiliary devices
160	A0	BINARY(4)	Entry length for list of auxiliary devices
164	A4	CHAR(10)	Device class
174	AE	CHAR(10)	Device type
184	B8	CHAR(10)	Device model
194	C2	CHAR(10)	Local location address
204	CC	CHAR(10)	Attached nonswitched controller name
214	D6	CHAR(10)	Keyboard language type
224	E0	CHAR(10)	Drop line at signoff
234	EA	CHAR(10)	Allow blinking cursor
244	F4	CHAR(10)	Print device
254	FE	CHAR(10)	Remote location name
264	108	CHAR(10)	Local location name

Offset		Type	Field
Dec	Hex		
274	112	CHAR(10)	Remote network identifier
284	11C	CHAR(10)	Control session device description
294	126	CHAR(10)	Associated printer: name
304	130	CHAR(10)	Associated printer: remote network identifier
314	13A	CHAR(10)	Alternate printer: name
324	144	CHAR(10)	Alternate printer: remote network identifier
334	14E	CHAR(10)	Output queue: name
344	158	CHAR(10)	Output queue: library
354	162	CHAR(10)	Printer
364	16C	CHAR(10)	Print file: name
374	176	CHAR(10)	Print file: library
384	180	CHAR(10)	Work station customizing object: name
394	18A	CHAR(10)	Work station customizing object: library
404	194	CHAR(10)	Application type
414	19E	CHAR(10)	DBCS feature: matrix size
424	1A8	CHAR(10)	DBCS feature: language ID
434	1B2	CHAR(10)	DBCS feature: last code point
444	1BC	CHAR(10)	SNA pass-through device
454	1C6	CHAR(10)	SNA pass-through group name
464	1D0	CHAR(10)	Emulated device
474	1DA	CHAR(10)	Emulated device model
484	1E4	CHAR(10)	Emulating ASCII device
494	1EE	CHAR(10)	Physical attachment
504	1F8	CHAR(10)	Line speed
514	202	CHAR(10)	Word length
524	20C	CHAR(10)	Parity type
534	216	CHAR(10)	Stop bits
544	220	CHAR(20)	ASCII terminal identifier
564	234	CHAR(10)	Associated APPC device
574	23E	CHAR(256)	Host signon/logon command
830	33E	CHAR(1)	Pass-through indicator
831	33F	CHAR(10)	Automatically configured
841	349	CHAR(3)	Reserved
844	34C	BINARY(4)	Shared session number
848	350	CHAR(10)	Dependent location name
858	35A	CHAR(1)	Network protocol
859	35B	CHAR(18)	Network protocol address
877	36D	CHAR(15)	Internet Protocol (IP) internet address in dotted decimal form
892	37C	CHAR(10)	Allocated by job name
902	386	CHAR(10)	Allocated by user name

Offset		Type	Field
Dec	Hex		
912	390	CHAR(6)	Allocated by job number
918	396	CHAR(10)	Current message queue: name
928	3A0	CHAR(10)	Current message queue: library
938	3AA	CHAR(1)	Server network protocol
939	3AB	CHAR(18)	Server network protocol address
957	3BD	CHAR(15)	Server Internet Protocol (IP) internet address in dotted decimal form
These fields repeat for each auxiliary device		BINARY(4)	Auxiliary device address
		CHAR(10)	Auxiliary device type
		CHAR(2)	Reserved

DEVD0700 Format

This format returns detailed information about a device of category *FNC.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format DEVD0100
104	68	BINARY(4)	Maximum length of request unit
108	6C	BINARY(4)	Inactivity timer
112	70	BINARY(4)	Activation timer
116	74	CHAR(10)	Device type
126	7E	CHAR(10)	Local location address
136	88	CHAR(10)	Remote location name
146	92	CHAR(10)	Attached nonswitched controller name
156	9C	CHAR(10)	Device class
166	A6	CHAR(10)	SNA pass-through device
176	B0	CHAR(10)	SNA pass-through group name
186	BA	CHAR(10)	Allocated by job name
196	C4	CHAR(10)	Allocated by user name
206	CE	CHAR(6)	Allocated by job number
212	D4	CHAR(10)	Current message queue: name
222	DE	CHAR(10)	Current message queue: library

DEVD0800 Format

This format returns detailed information about a device of category *HOST.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format DEVD0100

Offset		Type	Field
Dec	Hex		
104	68	BINARY(4)	Maximum length of request unit
108	6C	CHAR(10)	Local location address
118	76	CHAR(10)	Remote location name
128	80	CHAR(10)	Attached nonswitched controller name
138	8A	CHAR(10)	Application type
148	94	CHAR(10)	Emulated device
158	9E	CHAR(10)	Emulated device model
168	A8	CHAR(10)	Emulated keyboard
178	B2	CHAR(10)	Emulated numeric lock
188	BC	CHAR(10)	Emulated work station
198	C6	CHAR(10)	End session with host
208	D0	CHAR(10)	Dependent location name
218	DA	CHAR(10)	Allocated by job name
228	E4	CHAR(10)	Allocated by user name
238	EE	CHAR(6)	Allocated by job number
244	F4	CHAR(10)	Current message queue: name
254	FE	CHAR(10)	Current message queue: library

DEVD0900 Format

This format returns detailed information about a device of category *INTR.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format DEVD0100
104	68	CHAR(10)	Remote location name
114	72	CHAR(10)	Allocated by job name
124	7C	CHAR(10)	Allocated by user name
134	86	CHAR(6)	Allocated by job number

DEVD1000 Format

This format returns detailed information about a device of category *NET.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format DEVD0100
104	68	CHAR(10)	Network type
114	72	CHAR(10)	Attached nonswitched controller name
124	7C	CHAR(10)	Allocated by job name
134	86	CHAR(10)	Allocated by user name

Offset		Type	Field
Dec	Hex		
144	90	CHAR(6)	Allocated by job number
150	96	CHAR(10)	Current message queue: name
160	A0	CHAR(10)	Current message queue: library

DEVD1100 Format

This format returns detailed information about a device of category *PRT.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format DEVD0100
104	68	BINARY(4)	Font identifier: integer value of point size
108	6C	BINARY(4)	Maximum length of request unit
112	70	BINARY(4)	Pacing
116	74	BINARY(4)	Maximum pending requests
120	78	BINARY(4)	Print request timer
124	7C	BINARY(4)	Character identifier: graphic character set
128	80	BINARY(4)	Character identifier: code page
132	84	BINARY(4)	DBCS feature: RAM size
136	88	BINARY(4)	Inactivity timer
140	8C	BINARY(4)	Activation timer
144	90	BINARY(4)	Switch setting
148	94	BINARY(4)	Device port
152	98	CHAR(10)	Device class
162	A2	CHAR(10)	Device type
172	AC	CHAR(10)	Device model
182	B6	CHAR(10)	Advanced Function Printing
192	C0	CHAR(10)	AFP attachment
202	CA	CHAR(10)	Local location address
212	D4	CHAR(10)	Attached nonswitched controller name
222	DE	CHAR(10)	Font identifier: identifier
232	E8	CHAR(10)	Form feed
242	F2	CHAR(10)	Separator drawer
252	FC	CHAR(10)	Printer error message
262	106	CHAR(10)	Message queue: name
272	110	CHAR(10)	Message queue: library
282	11A	CHAR(10)	Application type
292	124	CHAR(10)	Print while converting
302	12E	CHAR(10)	Form definition: name
312	138	CHAR(10)	Form definition: library

Offset		Type	Field
Dec	Hex		
322	142	CHAR(10)	Work station customizing object: name
332	14C	CHAR(10)	Work station customizing object: library
342	156	CHAR(10)	SNA remote location name
352	160	CHAR(10)	Local location name
362	16A	CHAR(10)	Remote network identifier
372	174	CHAR(10)	Control session device description
382	17E	CHAR(10)	Mode name
392	188	CHAR(10)	DBCS feature: matrix size
402	192	CHAR(10)	DBCS feature: language ID
412	19C	CHAR(10)	DBCS feature: last code point
422	1A6	CHAR(10)	SNA pass-through device
432	1B0	CHAR(10)	SNA pass-through group name
442	1BA	CHAR(10)	Emulated device
452	1C4	CHAR(10)	Emulated device model
462	1CE	CHAR(10)	Emulating ASCII device
472	1D8	CHAR(10)	Physical attachment
482	1E2	CHAR(10)	Auxiliary printer
492	1EC	CHAR(10)	Language type
502	1F6	CHAR(10)	Line speed
512	200	CHAR(10)	Word length
522	20A	CHAR(10)	Parity type
532	214	CHAR(10)	Stop bits
542	21E	CHAR(10)	Number of drawers
552	228	CHAR(10)	Print quality
562	232	CHAR(10)	Transform enabled
572	23C	CHAR(20)	Manufacturer type and model
592	250	CHAR(10)	Paper source 1
602	25A	CHAR(10)	Paper source 2
612	264	CHAR(10)	Envelope source
622	26E	CHAR(10)	ASCII code page 899 support
632	278	CHAR(10)	Separator exit program: name
642	282	CHAR(10)	Separator exit program: library
652	28C	CHAR(256)	Host signon/logon command
908	38C	CHAR(10)	Automatically configured
918	396	CHAR(2)	Reserved
920	398	BINARY(4)	Offset to list of switched lines
924	39C	BINARY(4)	Number of switched lines
928	3A0	BINARY(4)	Entry length for list of switched lines
932	3A4	CHAR(12)	Adapter address
944	3B0	CHAR(10)	Adapter type

Offset		Type	Field
Dec	Hex		
954	3BA	CHAR(10)	Adapter connection type
964	3C4	BINARY(4)	Offset to list of user-defined options
968	3C8	BINARY(4)	Number of user-defined options
972	3CC	BINARY(4)	Entry length for list of user-defined options
976	3D0	BINARY(4)	Offset to user-defined data
980	3D4	BINARY(4)	Length of user-defined data
984	3D8	CHAR(10)	LAN attachment
994	3E2	CHAR(10)	User-defined object name
1004	3EC	CHAR(10)	User-defined object library
1014	3F6	CHAR(10)	User-defined object type
1024	400	CHAR(10)	User driver program name
1034	40A	CHAR(10)	User driver program library
1044	414	CHAR(10)	User-defined data transform program name
1054	41E	CHAR(10)	User-defined data transform program library
1064	428	CHAR(255)	Remote location name
1319	527	CHAR(1)	Reserved
1320	528	CHAR(10)	Font identifier: real value of point size
1330	532	CHAR(10)	Remote location name type
1340	53C	CHAR(15)	System driver program name
1355	54B	CHAR(10)	Reserved
1365	555	CHAR(10)	Image configuration
1375	55F	CHAR(10)	Reserved
1385	569	CHAR(1)	Network protocol
1386	56A	CHAR(18)	Network protocol address
1404	57C	CHAR(15)	Internet Protocol (IP) internet address in dotted decimal form
1419	58B	CHAR(10)	Dependent location name
1429	595	CHAR(10)	Allocated by job name
1439	59F	CHAR(10)	Allocated by user name
1449	5A9	CHAR(6)	Allocated by job number
1455	5AF	CHAR(10)	Current message queue: name
1465	5B9	CHAR(10)	Current message queue: library
1475	5C3	CHAR(1)	Server network protocol
1476	5C4	CHAR(18)	Server network protocol address
1494	5D6	CHAR(15)	Server Internet Protocol (IP) internet address in dotted decimal form
1509	5E5	CHAR(1)	Reserved
1510	5E6	CHAR(10)	Published printer
1520	5F0	BINARY(4)	Offset to list of publishing information
1524	5F4	BINARY(4)	Number of publishing list entries
1528	5F8	BINARY(4)	Entry length for list of publishing information

Offset		Type	Field
Dec	Hex		
1532	5FC	CHAR(10)	Use secure connection
1542	606	CHAR(10)	Validation list: name
1552	610	CHAR(10)	Validation list: library
1562	61A	CHAR(2)	Reserved
These fields repeat for each switched line		CHAR(10)	Switched line name
		CHAR(2)	Reserved
These fields repeat for each user-defined option		CHAR(10)	User-defined option
		CHAR(2)	Reserved
Variable- length string containing user-defined data		CHAR(*)	User-defined data
These fields repeat for each publishing list entry		CHAR(10)	Duplex supported
		CHAR(10)	Color supported
		BINARY(4)	Pages per minute black
		BINARY(4)	Pages per minute color
		CHAR(30)	Location
		CHAR(2)	Reserved
		BINARY(4)	Offset to list of data stream formats supported
		BINARY(4)	Number of data stream formats supported
		BINARY(4)	Entry length for data stream format supported
These fields repeat for each data stream format supported		CHAR(10)	Data stream supported
		CHAR(2)	Reserved

DEVD1200 Format

This format returns detailed information about a device of category *RTL.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format DEVD0100
104	68	BINARY(4)	Pacing
108	6C	BINARY(4)	Maximum length of request unit
112	70	BINARY(4)	Inactivity timer
116	74	BINARY(4)	Activation timer
120	78	CHAR(10)	Local location address
130	82	CHAR(10)	Remote location name
140	8C	CHAR(10)	Attached nonswitched controller name
150	96	CHAR(10)	Application type
160	A0	CHAR(10)	Device class
170	AA	CHAR(10)	SNA pass-through device

Offset		Type	Field
Dec	Hex		
180	B4	CHAR(10)	SNA pass-through group name
190	BE	CHAR(10)	Allocated by job name
200	C8	CHAR(10)	Allocated by user name
210	D2	CHAR(6)	Allocated by job number
216	D8	CHAR(10)	Current message queue: name
226	E2	CHAR(10)	Current message queue: library

DEVD1300 Format

This format returns detailed information about a device of category *SNPT.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format DEVD0100
104	68	BINARY(4)	Activation timer
108	6C	CHAR(10)	Local location address
118	76	CHAR(10)	SNA pass-through class
128	80	CHAR(10)	Attached nonswitched controller name
138	8A	CHAR(10)	SNA pass-through device
148	94	CHAR(10)	SNA pass-through group name
158	9E	CHAR(10)	Dependent location name
168	A8	CHAR(10)	Allocated by job name
178	B2	CHAR(10)	Allocated by user name
188	BC	CHAR(6)	Allocated by job number
194	C2	CHAR(10)	Current message queue: name
204	CC	CHAR(10)	Current message queue: library

DEVD1400 Format

This format returns detailed information about a device of category *SNUF.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format DEVD0100
104	68	BINARY(4)	Record length
108	6C	BINARY(4)	Block length
112	70	CHAR(10)	Local location address
122	7A	CHAR(10)	Remote location name
132	84	CHAR(10)	Attached nonswitched controller name
142	8E	CHAR(10)	Program start request capable
152	98	CHAR(10)	Special host application

Offset		Type	Field
Dec	Hex		
162	A2	CHAR(10)	Application identifier
172	AC	CHAR(10)	Host type
182	B6	CHAR(10)	Default program: name
192	C0	CHAR(10)	Default program: library
202	CA	CHAR(10)	HCP emulation
212	D4	CHAR(10)	Dependent location name
222	DE	CHAR(10)	Allocated by job name
232	E8	CHAR(10)	Allocated by user name
242	F2	CHAR(6)	Allocated by job number
248	F8	CHAR(10)	Current message queue: name
258	102	CHAR(10)	Current message queue: library

DEVD1500 Format

This format returns detailed information about a device of category *TAP.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format DEVD0100
104	68	BINARY(4)	Reserved
108	6C	CHAR(10)	Device type
118	76	CHAR(10)	Device model
128	80	CHAR(10)	Resource name
138	8A	CHAR(10)	Message queue: name
148	94	CHAR(10)	Message queue: library
158	9E	CHAR(10)	Attached nonswitched controller name
168	A8	CHAR(10)	Assign device at vary on
178	B2	CHAR(10)	Unload device at vary off

DEVD1600 Format

This format returns detailed information about a device of category *OPT.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format DEVD0100
104	68	CHAR(10)	Device type
114	72	CHAR(10)	Device model
124	7C	CHAR(10)	Resource name
134	86	CHAR(10)	Message queue: name
144	90	CHAR(10)	Message queue: library

DEVD1700 Format

This format returns detailed information about a device of category *MLB.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format DEVD0100
104	68	BINARY(4)	Offset to list of drive resources
108	6C	BINARY(4)	Number of drive resources
112	70	BINARY(4)	Entry length for list of drive resources
116	74	BINARY(4)	Unload wait time
120	78	BINARY(4)	Maximum device time
124	7C	CHAR(10)	Device class
134	86	CHAR(10)	Device type
144	90	CHAR(10)	Device model
154	9A	CHAR(10)	Resource name
164	A4	CHAR(10)	Message queue: name
174	AE	CHAR(10)	Message queue: library
184	B8	CHAR(10)	Generate cartridge identifiers
194	C2	CHAR(10)	First robot device description
204	CC	BINARY(4)	Resource allocation priority
208	D0	BINARY(4)	Initial mount wait time
212	D4	BINARY(4)	End of volume mount wait time
216	D8	BINARY(4)	Offset to list of robot device descriptions
220	DC	BINARY(4)	Number of robot device descriptions
224	E0	BINARY(4)	Entry length for list of robot device descriptions
228	E4	BINARY(4)	Offset to list of robot hosts
232	E8	BINARY(4)	Number of robot hosts
236	EC	BINARY(4)	Entry length for list of robot hosts
240	F0	CHAR(45)	Internet address
285	11D	CHAR(3)	Reserved
These fields repeat for each drive resource		CHAR(10)	Drive resource name
		CHAR(20)	Drive resource text allocation
		CHAR(2)	Reserved
		BINARY(4)	Drive resource numeric allocation
		CHAR(20)	Drive resource text status
		BINARY(4)	Drive resource numeric status
These fields repeat for each robot device description		CHAR(10)	Robot device description
These fields repeat for each robot host		CHAR(255)	Robot host
		CHAR(1)	Reserved

DEVD1800 Format

This format returns detailed information about a device of category *CRP.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format DEVD0100
104	68	CHAR(10)	Device type
114	72	CHAR(10)	Resource name
124	7C	CHAR(10)	Message queue: name
134	86	CHAR(10)	Message queue: library
144	90	CHAR(10)	PKA key store file: name
154	9A	CHAR(10)	PKA key store file: library
164	A4	CHAR(10)	DES key store file: name
174	AE	CHAR(10)	DES key store file: library
184	B8	CHAR(10)	Allocated by job name
194	C2	CHAR(10)	Allocated by user name
204	CC	CHAR(6)	Allocated by job number
210	D2	CHAR(10)	Current message queue: name
220	DC	CHAR(10)	Current message queue: library
230	E6	CHAR(10)	Device model
240	FA	CHAR(10)	Application type

DEVD1900 Format

This format returns detailed information about a device of category *ASP.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format DEVD0100
104	68	CHAR(10)	Resource name
114	72	CHAR(10)	Message queue: name
124	7C	CHAR(10)	Message queue: library
134	86	CHAR(10)	Current message queue: name
144	90	CHAR(10)	Current message queue: library
154	9A	CHAR(18)	Relational database name

Field Descriptions

Some of the fields in the various formats returned by this API are described in greater detail in the Control Language (CL) information for the particular command that was used to create the device

description object. They are also described in the online help for the particular command. For these fields, the CL parameter keyword is specified in parentheses following the field name. The CL command name is specified in the field description.

In certain cases, numeric values are assigned by this API to represent character values for some of the returned fields. Where a numeric value is assigned, the numeric value and the equivalent character value are listed as an *Exception* in the following field descriptions.

Activation timer (ACTTMR). The number of seconds that the system should wait for the device to respond to an activation request from the host. (See the ACTTMR parameter in the Control Language (CL) information for the CRTDEVDSP, CRTDEVFNC, CRTDEVPRT, or CRTDEVRTL command.)

Adapter address. The remote adapter address for an ASCII printer directly attached to the LAN.

Adapter connection type. The adapter connection type for an ASCII printer directly attached to the LAN.

Adapter type. The adapter type for an ASCII printer directly attached to the LAN.

Advanced Function Printing (AFP). Whether this printer is used for Advanced Function Printing(TM) support. (See the AFP(TM) parameter in the Control Language (CL) information for the CRTDEVPRT command.)

AFP attachment (AFPATTACH). The type of attachment that is used for printers that are configured for Advanced Function Printing support. (See the AFPATTACH parameter in the Control Language (CL) information for the CRTDEVPRT command.)

Allocated by job name. The name portion of the qualified job name of the job that has allocated this device description. The value *NONE indicates that this device is not allocated by a job.

Allocated by job number. The number portion of the qualified job name of the job that has allocated this device description.

Allocated by user name. The user name portion of the qualified job name of the job that has allocated this device description.

Allow blinking cursor (ALWBLN). Whether or not the cursor will blink for display devices. (See the ALWBLN parameter in the Control Language (CL) information for the CRTDEVDSP command.)

Alternate printer name. The name of the secondary printer that is specified for a session.

Alternate printer remote network identifier (RMTNETID). The name of the remote network identifier that is specified for the alternate printer. (See the RMTNETID parameter in the Control Language (CL) information for the CRTDEVAPPC, CRTDEVDSP, or CRTDEVPRT command.)

Application identifier (APPID). The VTAM(R) application identifier of the CICS/VS or IMS/VS host subsystem with which the iSeries server communicates. (See the APPID parameter in the Control Language (CL) information for the CRTDEVSNUF command.)

Application type (APPTYPE). The application type this device uses. (See the APPTYPE parameter in the Control Language (CL) information for the CRTDEVBSC, CRTDEVCRP, CRTDEVDSP, CRTDEVHOST, CRTDEVPRT, or CRTDEVRTL command.)

APPN capable (APPN). Whether or not networking is used. (See the APPN parameter in the Control Language (CL) information for the CRTDEVAPPC command.)

ASCII code page 899 support. Whether this printer has ASCII code page 899 installed.

ASCII terminal identifier. A user-specified terminal identifier for the physical device.

Assign device at vary on (ASSIGN). Whether the tape device is assigned to the system when it is varied on. (See the ASSIGN parameter in the Control Language (CL) information for the CRTDEVTAP command.)

Associated APPC device. The name of an APPC device associated with a display station.

Associated printer name. The name of the primary printer that is specified for a session.

Associated printer remote network identifier (RMTNETID). The name of the remote network identifier that is specified for the associated printer. (See the RMTNETID parameter in the Control Language (CL) information for the CRTDEVAPPC, CRTDEVDSP, or CRTDEVPRT command.)

Attached nonswitched controller name (CTL). The name of the controller description to which this device is attached. (See the CTL parameter in the Control Language (CL) information for the CRTDEVAPPC, CRTDEVASC, CRTDEVBSC, CRTDEVDSP, CRTDEVFNC, CRTDEVHOST, CRTDEVNET, CRTDEVPRT, CRTDEVRTL, CRTDEVSNPT, CRTDEVSNUF, or CRTDEVTAP command.)

Automatically configured. Whether this device has been configured automatically.

Auxiliary device address (AUXDEV). The address of an additional device attached to an IEEE-48 port on this device. (See the AUXDEV parameter in the Control Language (CL) information for the CRTDEVDSP command.)

Auxiliary device type (AUXDEV). The type of additional device attached to an IEEE-48 port on this device. (See the AUXDEV parameter in the Control Language (CL) information for the CRTDEVDSP command.)

Auxiliary printer. For ASCII printers, whether the printer is attached to a display station.

Block length (BLKLEN). The maximum block length (in bytes) for data to be transmitted when communicating with this device. (See the BLKLEN parameter in the Control Language (CL) information for the CRTDEVBSC or CRTDEVSNUF command.)

Blocking type (BLOCK). Whether you or the iSeries server will block and deblock transmitted records. (See the BLOCK parameter in the Control Language (CL) information for the CRTDEVBSC command.)

Bytes available. The number of bytes of data available to be returned. All available data is returned if enough space is provided.

Bytes returned. The number of bytes of data returned.

Character identifier (CHRID). The character identifier that this display station supports. This identifier has two parts, which are returned in separate fields:

- *Graphic character set*
- *Code page*

(See the CHRID parameter in the Control Language (CL) information for the CRTDEVDSP or CRTDEVPRT command.)

Exceptions:

- Value of -14 implies *SYSVAL
- Value of -27 implies *KBDTYPE

Color supported (PUBLISHINF). Whether the printer device supports color ink printing. (See the PUBLISHINF parameter in the Control Language (CL) information for the CRTDEVPRT command.)

Compress and decompress data (DTACPR). Whether or not to have blanks in BSC data compressed for output and decompressed for input. (See the DTACPR parameter in the Control Language (CL) information for the CRTDEVBSC command.)

Connection type (CNN). The connection type. (See the CNN parameter in the Control Language (CL) information for the CRTDEVBSC command.)

Contention resolution winner (CTNWIN). Which BSC system is to be the primary unit and which is to be the secondary unit for contention resolution on a BSC line. (See the CTNWIN parameter in the Control Language (CL) information for the CRTDEVBSC command.)

Control session device description. Which control session device description created or selected a specific device description that is being used in a session.

Current message queue (MSGQ). The message queue to which messages are currently being sent using this device description. This field is valid only for devices that are varied on. Note that the value of the current message queue may be different from the message queue field (MSGQ parameter) under certain error conditions. (See the MSGQ parameter in the Control Language (CL) information for the CRTDEVAPPC, CRTDEVASP, CRTDEVCRP, CRTDEVMLB, CRTDEVOPT, CRTDEVPRT, or CRTDEVTAP command.) This information is returned in two separate fields:

- *Name* of the queue
- *Library* in which the queue can be found

Data stream supported. A data stream format supported by this printer device. (See the PUBLISHINF parameter in the Control Language (CL) information for the CRTDEVPRT command.)

Date information retrieved. The date that the information was provided by the API. This is returned as 7 characters in the form CYYMMDD, where:

C	Century, where 0 indicates years 19*xx* and 1 indicates years 20*xx*.
YY	Year
MM	Month
DD	Day

DBCS feature (IGCFEAT). The values that should be specified for DBCS display stations and printers. This information is returned in four separate fields:

- *RAM size*: The relative buffer size.
- *Matrix size*: The number of matrix points used to create the character.
- *Language ID*: A letter code that identifies the language used.
- *Last code point*: The code point of the last double-byte character.

(See the IGCFEAT parameter in the Control Language (CL) information for the CRTDEVDSP or CRTDEVPRT command.)

Default program (DFTPGM). The program to be called if a program start request is received from a host system that is not using an `*EXEC/*EXEX/*TXTC/*TXTX` format. This information is returned in two separate fields:

- *Name* of the program
- *Library* in which the program can be found

(See the DFTPGM parameter in the Control Language (CL) information for the CRTDEVSNUF command.)

DES key store file (DESKEYFILE). The name of the key store file containing the data encryption standard (DES) keys to be used with this cryptographic device. (See the DESKEYFILE parameter in the Control Language (CL) information for the CRTDEVCRP command.) This information is returned in two separate fields:

- *Name* of the DES file
- *Library* in which the file can be found

Dependent location name (DEPLOCNAME). The dependent logical location name that is used for the dependent-logical-unit requester (DLUR), which provides additional security for the connection. (See the DEPLOCNAME parameter in the Control Language (CL) information for the CRTDEVDSP, CRTDEVHOST, CRTDEVPRT, CRTDEVSNPT, or CRTDEVSNUF command.)

Device category. This value will be one of the following:

*APPC

*ASC

*ASP

*BSC

*CRP

*DKT

*DSP

*FNC

*HOST

*INTR

*MLB

*NET

*OPT

*PRT

*RTL

*SNPT

*SNUF

*TAP

The category value is derived from the command used to create the device description.

Device class (DEVCLS). The class of the device. (See the DEVCLS parameter in the Control Language (CL) information for the CRTDEVDSP, CRTDEVFNC, CRTDEVMLB, CRTDEVPRT, or CRTDEVRTL command.)

Device model (MODEL). The model number of the device. (See the MODEL parameter in the Control Language (CL) information for the CRTDEVDKT, CRTDEVDSP, CRTDEVPRT, or CRTDEVTAP command.)

Device name (DEVD). The name of the device description. (See the DEVD parameter in the Control Language (CL) information for the CRTDEVAPPC, CRTDEVASC, CRTDEVASP, CRTDEVBSC, CRTDEVCRP, CRTDEVDKT, CRTDEVDSP, CRTDEVFNC, CRTDEVHOST, CRTDEVINTR, CRTDEVMLB, CRTDEVNET, CRTDEVOPT, CRTDEVPRT, CRTDEVRTL, CRTDEVSNPT, CRTDEVSNUF, or CRTDEVTAP command.)

Device port (PORT). The identification of the port to which this device is currently attached. (See the PORT parameter in the Control Language (CL) information for the CRTDEVDSP or CRTDEVPRT command.)

Device type (TYPE). The type of device this description represents.

Exception:

- Value of *TAP implies that a self-configuring tape device is emulating a device type that contains characters outside the range of 0 to 9 and A to Z.

(See the TYPE parameter in the Control Language (CL) information for the CRTDEVDKT, CRTDEVDSP, CRTDEVFNC, CRTDEVMLB, CRTDEVNET, CRTDEVOPT, CRTDEVPRT, or CRTDEVTAP command.)

Drive resource name (RSRCNAME). The resource name of a drive within this library. (See the RSRCNAME parameter in the Control Language (CL) information for the CRTDEVMLB command.)

Drive resource numeric allocation. A numeric value that represents the drive's current allocation.

Numeric Allocation (Decimal)	Text Allocation
1	OPERATIONAL
5	DEALLOCATED
6	UNPROTECTED
7	ALLOCATED
100	FAILED

Drive resource text allocation. A text value that represents the current allocation of the drive within this library. Possible values are allocated, deallocated, unprotected, operational, and failed.

Note: The displayable text is translated when it is returned. This text is retrieved from message CPX2651 in message file QCPFMSG in library *LIBL.

Drive resource numeric status. A numeric value that represents the drive's current status.

Numeric Status (Decimal)	Text Status
1	OPERATIONAL
60	ACTIVE
68	UNAVAILABLE
100	FAILED

Drive resource text status. A text value that represents the current status of the drive within this library. Possible values are operational, active, unavailable and failed.

Note: The displayable text is translated when it is returned. This text is retrieved from message CPX2651 in message file QCPFMSG in library *LIBL.

Drop line at signoff (DROP). Whether display stations attached to controllers on switched lines will be disconnected by the system when all work stations on the line are no longer being used. (See the DROP parameter in the Control Language (CL) information for the CRTDEVDSP command.)

Duplex supported (PUBLISHINF). Whether the printer device supports duplex printing. (See the PUBLISHINF parameter in the Control Language (CL) information for the CRTDEVPRT command.)

Emulated device (EMLDEV). The type of device that is to be emulated. For devices of category *DSP and *PRT, this is a twinaxial device. For devices of category *HOST, this is a 3270 device. (See the EMLDEV parameter in the Control Language (CL) information for the CRTDEVBSC, CRTDEVDSP, CRTDEVHOST, or CRTDEVPRT command.)

Emulated device model. The model of the device type that is to be emulated.

Emulated keyboard (EMLKBD). The type of 3278 display keyboard that is to be emulated. (See the EMLKBD parameter in the Control Language (CL) information for the CRTDEVBSC or CRTDEVHOST command.)

Emulated numeric lock (EMLNUMLCK). Whether numeric input fields allow only numeric data on a 5250 keyboard. (See the EMLNUMLCK parameter in the Control Language (CL) information for the CRTDEVBSC or CRTDEVHOST command.)

Emulated work station (EMLWRKSTN). The name of an emulated device associated with a real display station or printer device. (See the EMLWRKSTN parameter in the Control Language (CL) information for the CRTDEVBSC or CRTDEVHOST command.)

Emulating ASCII device (EMLASCII). Whether this device emulates a supported ASCII device type. (See the EMLASCII parameter in the Control Language (CL) information for the CRTDEVDSP or CRTDEVPRT command.)

End of volume mount wait time (EOVMNTWAIT). The maximum amount of time a request will wait for allocation of a tape resource for the end of volume mount. (See the EOVMNTWAIT parameter in the Control Language (CL) information for the CRTDEVMLB command.)

Exceptions:

- Value of -31 implies *JOB
- Value of -32 implies *IMMED
- Value of -8 implies *NOMAX

End session with host. Whether a request-shutdown or unbind will be used to end a session.

Entry length for list of active modes. The entry length in bytes of each element in the list of active modes that are returned with this format. A value of zero is returned if the list is empty.

Entry length for list of auxiliary devices. The entry length in bytes of each element in the list of auxiliary devices returned with this format. A value of zero is returned if the list is empty.

Entry length for data stream format supported. The entry length in bytes of each element in the list of data streams supported.

Entry length for list of drive resources. The entry length in bytes of each element in the list of drive resources.

Entry length for list of mode names. The entry length in bytes of each element in the list of mode names returned with this format. A value of zero is returned if the list is empty.

Entry length for list of publishing information. The entry length in bytes of each element in the list of publishing information. A value of zero is returned if the list is empty.

Entry length for list of robot device descriptions. The entry length in bytes of each element in the list of robot device descriptions.

Entry length for list of robot hosts. The entry length in bytes of each element in the list of robot hosts.

Entry length for list of switched lines. The entry length in bytes of each element in the list of switched lines returned with this format. A value of zero is returned if the list is empty.

Entry length for list of user-defined options. The entry length in bytes of each element in the list of user-defined options returned with this format.

Envelope source (ENVELOPE). The type of envelope to be used in paper source three. (See the ENVELOPE parameter in the Control Language (CL) information for the CRTDEVPRT command.)

First robot device description (ROBOTDEV). For a library device with a robot, the name of the device description used to communicate with the robot. This field always contains the first robot device. For a list of the robot device description, see the robot device description field for this format. For an explanation of robots in library devices, see the Local Device Configuration  book. (See the ROBOTDEV parameter in the Control Language (CL) information for the CRTDEVMLB command.)

Font identifier (FONT). The font identifier and point size that are used by *IPDS, 3812, and 5219 printers. This information is returned in separate fields:

- *Font identifier*
- *Point size (integer value)*
- *Point size (real value)*

(See the FONT parameter in the Control Language (CL) information for the CRTDEVPRT command.)

Exception:

- Value of -3 implies *NONE

Form definition (FORMDF). The form definition to be used for print requests that do not specify a form definition. This information is returned in two separate fields:

- *Name* of the form definition
- *Library* in which the form definition can be found

(See the FORMDF parameter in the Control Language (CL) information for the CRTDEVPRT command.)

Form feed (FORMFEED). The mode in which forms are fed into the *IPDS, 4212, or 5219 printers. (See the FORMFEED parameter in the Control Language (CL) information for the CRTDEVPRT command.)

Frame retry (FRAMERTY). The number of retries for an unanswered command frame or an unacknowledged information frame. (See the FRAMERTY parameter in the Control Language (CL) information for the CRTDEVDSP command.)

Generate cartridge IDs (GENCTGID). For tape library devices without bar-code readers, indicates how cartridge identifiers are generated. Possible values are as follows:

- *VOLID
- *SYSGEN

(See the GENCTGID parameter in the Control Language (CL) information for the CRTDEVMLB command.) For an explanation of cartridge identifiers, see the Local Device Configuration  book.

Group separator type (GRPSEP). The separator for groups of data (data sets, documents, and so forth). (See the GRPSEP parameter in the Control Language (CL) information for the CRTDEVBSC command.)

HCP emulation (HCPEML). The type of host command processor emulated session that this device description will be used for. (See the HCPEML parameter in the Control Language (CL) information for the CRTDEVSNUF command.)

Host signon/logon command (LOGON). The logon string that is sent to the host network when the file is opened. (See the LOGON parameter in the Control Language (CL) information for the CRTDEVDSP or CRTDEVPRT command.)

Host type (HOST). The type of host system with which the device will communicate. (See the HOST parameter in the Control Language (CL) information for the CRTDEVSNUF command.)

Idle timer (IDLTMR). The time that the system waits for a response. (See the IDLTMR parameter in the Control Language (CL) information for the CRTDEVDSP command.)

Image configuration (IMGCFG). The transform services for a variety of image and print data-stream formats. (See the IMGCFG parameter in the Control Language (CL) information for the CRTDEVPRT command.)

Inactivity timer (INACTTMR). The amount of time the device can be inactive before the session is ended. (See the INACTTMR parameter in the Control Language (CL) information for the CRTDEVDSP, CRTDEVFNC, CRTDEVPRT, or CRTDEVRTL command.)

Exceptions:

- Value of -8 implies *NOMAX
- Value of -19 implies *ATTACH
- Value of -20 implies *SEC15
- Value of -21 implies *SEC30

Initial mount wait time (INLMNTWAIT). The maximum amount of time a request will wait for allocation of a tape resource for the initial mount. (See the INLMNTWAIT parameter in the Control Language (CL) information for the CRTDEVMLB command.)

Exceptions:

- Value of -31 implies *JOB
- Value of -32 implies *IMMED
- Value of -8 implies *NOMAX

Internet address (INTNETADR). Specifies the address of the TCP/IP interface that is used when starting TCP/IP support. (See the INTNETADR parameter in the Control Language (CL) information for the CRTDEVMLB command.)

Internet Protocol (IP) internet address in dotted decimal form. A 32-bit address usually written as 4 decimal numbers, each representing 8 bits of the address. An example internet address is 128.12.28.43.

Each system on the TCP/IP network is assigned a unique internet address that is used in all communications with the system.

Note: This field applies only to display or printer devices that are used by TELNET or TCP/IP over Twinax.

Keyboard language type (KBDTYPE). The 3-character keyboard type identified for type 3277, 3278, or 3279 display stations. (See the KBDTYPE parameter in the Control Language (CL) information for the CRTDEVDSP command.)

LAN attachment. The type of LAN attachment that is used when *LAN is specified for the device class (DEVCLS) parameter.

Language type. The keyboard language type for an ASCII printer.

Length of user-defined data. The length, in bytes, of the user-defined data that is returned with this format. A value of zero is returned if no data exists.

Line speed (LINESPEED). A line speed for use with this device. (See the LINESPEED parameter in the Control Language (CL) information for the CRTDEVDSP or CRTDEVPRT command.)

Local location address (LOCADR). The local location address. (See the LOCADR parameter in the Control Language (CL) information for the CRTDEVAPPC, CRTDEVBSC, CRTDEVDSP, CRTDEVFNC, CRTDEVHOST,CRTDEVPRT, CRTDEVRTL, CRTDEVSNPT, or CRTDEVSNUFcommand.)

Local location name (LCLLOCNAME). The name by which the local iSeries server is known to other devices in the network. (See the LCLLOCNAME parameter in the Control Language (CL) information for the CRTDEVAPPC, CRTDEVDSP, or CRTDEVPRT command.)

Locally controlled session (LCLCTLSSN). Whether the single session is locally or remotely controlled. (See the LCLCTLSSN parameter in the Control Language (CL) information for the CRTDEVAPPC command.)

Location (PUBLISHINF). The location of the printer device. (See the PUBLISHINF parameter in the Control Language (CL) information for the CRTDEVPRT command.)

Manufacturer type and model (MFRTYPMDL). The manufacturer, type, and model for a printer using transform support. (See the MFRTYPMDL parameter in the Control Language (CL) information for the CRTDEVPRT command.)

Maximum device time (MAXDEVTIME). The maximum amount of time a volume can remain mounted in an internal device if there are requests for other volumes. (See the MAXDEVTIME parameter in the Control Language (CL) information for the CRTDEVMLB command.)

Exception:

- Value of -22 implies *SYSGEN

Maximum length of request unit (MAXLENRU). The default maximum size of the request/response unit (RU) that can be sent or received by the local system if the maximum size is not specified in the bind command received from the host system. (See the MAXLENRU parameter in the Control Language (CL) information for the CRTDEVDSP, CRTDEVFNC, CRTDEVHOST, CRTDEVPRT, or CRTDEVRTL command.)

Exception:

- Value of -11 implies *CALC

Maximum outstanding frames (MAXOUT). The maximum number of frames that are sent to a remote system before it must respond. (See the MAXOUT parameter in the Control Language (CL) information for the CRTDEVDSP command.)

Maximum pending requests (MAXPNDRQS). The maximum number of print requests that can be queued for printers configured for Advanced Function Printing support. (See the MAXPNDRQS parameter in the Control Language (CL) information for the CRTDEVPRT command.)

Message queue (MSGQ). The message queue to which operational messages for this device should normally be sent. Note that this is the value entered on the MSGQ parameter of the CL command, but under error conditions for certain types of devices (APPC and Printer), it may not be the message queue currently in use. See the current message queue field to determine what message queue is actually being used at a given time. (See the MSGQ parameter in the Control Language (CL) information for the CRTDEVAPPC, CRTDEVASP, CRTDEVCRP, CRTDEVMLB, CRTDEVOPT, CRTDEVPRT, or CRTDEVTAP command.) This information is returned in two separate fields:

- *Name* of the queue
- *Library* in which the queue can be found

Mode name (MODE). The names used by the local iSeries server and the remote system to refer to the group of sessions between the local and remote locations with the same characteristics. (See the MODE parameter in the Control Language (CL) information for the CRTDEVAPPC or CRTDEVPRT command.)

Network protocol. The following defines the network protocol:

- Internet Protocol (IP) value is X'02'.
- Internetwork Packet Exchange (IPX) value is X'06'.

Note: This field applies only to display and printer devices that are used by TELNET.

Network protocol address. The network address is uniquely assigned to each system and is used in all communications with the system.

The following format defines the network address based on the network protocol:

- Internet Protocol (IP)
  - CHAR(2) TCP port number
  - CHAR(4) Internet address
- Internetwork Packet Exchange (IPX)
  - CHAR(4) Network identifier
  - CHAR(6) Node identifier
  - CHAR(2) Socket number

Note: This field applies only to display and printer devices that are used by TELNET.

Network type. The type of network the device represents.

NRM poll timer (NRMPOLLTMR). The time interval for polling this device in normal response mode. (See the NRMPOLLTMR parameter in the Control Language (CL) information for the CRTDEVDSP command.)

Number of active modes. The number of elements in the list of active modes that are returned with this format. A value of zero is returned if the list is empty.

Number of auxiliary devices. The number of elements in the list of auxiliary devices returned with this format. A value of zero is returned if the list is empty.

Number of data stream formats supported. The number of data stream formats supported by this printer device. A value of zero is returned if the list is empty.

Number of drawers. The number of drawers the printer physically supports, not which drawer the paper is selected from. The individual print files sent to the printer determine which drawer is selected.

Number of drive resources. The number of elements in the list of drive resources. A value of zero is returned if the list is empty.

Number of mode names. The number of elements in the list of mode names returned with this format. A value of zero is returned if the list is empty.

Number of publishing entries. The number of elements in the list of publishing entries. A value of zero is returned if the list is empty.

Number of robot device descriptions. The number of elements in the list of robot device descriptions. A value of zero is returned if the list is empty.

Number of robot hosts. The number of elements in the list of robot hosts. A value of zero is returned if the list is empty.

Number of switched lines. The number of entries in the list of switched lines returned with this format. A value of zero is returned if the list is empty.

Number of user-defined options. The number of elements in the list of user-defined options that is returned with this format. A value of zero is returned if the list is empty.

Offset to list of active modes. The offset in bytes to the first element in the list of active modes that are returned with this format. A value of zero is returned if the list is empty.

Offset to list of auxiliary devices. The offset in bytes to the first element in the list of auxiliary devices returned with this format. A value of zero is returned if the list is empty.

Offset to list of data stream formats supported. The offset in bytes to the first element in the list of data stream formats supported by the printer device. A value of zero is returned if the list has a value of *UNKNOWN.

Note: The offset of the data stream formats supported is the offset from the begining of the DEVD1100 format.

Offset to list of drive resources. The offset in bytes to the first element in the list of drive resources. A value of zero is returned if the list is empty.

Offset to list of mode names. The offset in bytes to the first element in the list of mode names returned with this format. A value of zero is returned if the list is empty.

Offset to list of publishing information. The offset in bytes to the first element in the list of publishing information returned with this format. A value of zero is returned if the list is empty.

Offset to list of robot device descriptions. The offset in bytes to the first element in the list of robot device descriptions. A value of zero is returned if the list is empty.

Offset to list of robot hosts. The offset in bytes to the first element in the list of robot hosts. A value of zero is returned if the list is empty.

Offset to list of switched lines. The offset in bytes to the list of switched lines returned with this format. A value of zero is returned if the list is empty.

Offset to list of user-defined options. The offset in bytes to the first element in the list of user-defined options that are returned with this format. A value of zero is returned if the list is empty.

Offset to user-defined data. The offset in bytes to the user-defined data that is returned with this format. A value of zero is returned if no data exists.

Online at IPL (ONLINE). Whether the device is varied on automatically when the system is turned on or you want to vary it on manually by using the Vary Configuration (VRYCFG) command. (See the ONLINE parameter in the Control Language (CL) information for the CRTDEVAPPC, CRTDEVASC, CRTDEVBSC, CRTDEVCRP, CRTDEVDKT, CRTDEVDSP, CRTDEVFNC, CRTDEVHOST, CRTDEVINTR, CRTDEVMLB, CRTDEVNET, CRTDEVOPT, CRTDEVPRT, CRTDEVRTL, CRTDEVSNPT, CRTDEVSNUF, or CRTDEVTAP command.)

Output queue (OUTQ). The output queue to be used for printed output associated with this display station. This information is returned in two separate fields:

- *Name* of the queue
- *Library* in which the queue can be found

(See the OUTQ parameter in the Control Language (CL) information for the CRTDEVDSP command.)

Pacing (PACING). The number of request units (RUs) that can be sent or received before a pacing response must be sent or received. (See the PACING parameter in the Control Language (CL) information for the CRTDEVPRT or CRTDEVRTL command.)

Pages per minute black (PUBLISHINF). The number of black ink pages per minute the printer device can produce. A value of negative one is returned if the pages per minute is *UNKNOWN. (See the PUBLISHINF parameter in the Control Language (CL) information for the CRTDEVPRT command.)

Pages per minute color (PUBLISHINF). The number of color ink pages per minute the printer device can produce. A value of negative one is returned if the pages per minute is *UNKNOWN. (See the PUBLISHINF parameter in the Control Language (CL) information for the CRTDEVPRT command.)

Paper source 1 (PPRSRC1). The type of paper to be used in paper source one. (See the PPRSRC1 parameter in the Control Language (CL) information for the CRTDEVPRT command.)

Paper source 2 (PPRSRC2). The type of paper to be used in paper source two. (See the PPRSRC2 parameter in the Control Language (CL) information for the CRTDEVPRT command.)

Parity type (PARITY). For ASCII devices, the parity used to communicate over the attachment between the controller and the device. (See the PARITY parameter in the Control Language (CL) information for the CRTDEVDSP or CRTDEVPRT command.)

Pass-through indicator. Whether the current session is a pass-through session on a device. Possible values follow:

0	Not pass-through
1	5250 emulation type display
2	Virtual display using Virtual Terminal APIs (not TELNET)
3	Virtual display (TELNET)
4	Pass-through device (Start Pass-Through (STRPASTHR) command used)

PKA key store file (PKAKEYFILE). The name of the key store file containing the public key algorithm (PKA) keys to be used with this cryptographic device. This information is returned in two separate fields:

- *Name* of the PKA file

- *Library* in which the file can be found

(See the PKAKEYFILE parameter in the Control Language (CL) information for the CRTDEVCRP command.)

Physical attachment (ATTACH). The attachment of a display station to the ASCII workstation controller. (See the ATTACH parameter in the Control Language (CL) information for the CRTDEVDSP or CRTDEVPRT command.)

Pre-established session (PREESTSSN). Whether the single session is to be established when connection with the remote system is established. (See the PREESTSSN parameter in the Control Language (CL) information for the CRTDEVAPPC command.)

Print device (PRTDEV). The name of the printer to be used for printed output from this display device. (See the PRTDEV parameter in the Control Language (CL) information for the CRTDEVDSP command.)

Print file (PRTFILE). The alternative printer device file to be used when no associated work station printer exists or when an error occurs during an attempt to use the work station printer. This information is returned in two separate fields:

- *Name* of the device file
- *Library* in which the device file can be found

(See the PRTFILE parameter in the Control Language (CL) information for the CRTDEVDSP command.)

Print quality (PRTQLTY). For printers, the quality of print to be produced. (See the PRTQLTY parameter in the Control Language (CL) information for the CRTDEVPRT command.)

Print request timer (PRTRQSTMR). The number of seconds to wait after a print request has been sent to a continuous forms printer before the last printed output is forced into the output hopper. (See the PRTRQSTMR parameter in the Control Language (CL) information for the CRTDEVPRT command.)

Exception:

- Value of -8 implies *NOMAX

Print while converting (PRTCVT). Allows printers configured as AFP(*YES) to begin printing a spooled file while that file is being converted to an Advanced Function Printing data stream (AFPDS). (See the PRTCVT parameter in the Control Language (CL) information for the CRTDEVPRT command.)

Printer (PRINTER). The device name of the printer to be associated with the display device. (See the PRINTER parameter in the Control Language (CL) information for the CRTDEVDSP command.)

Printer error message (PRTERRMSG). Whether to have the printer send inquiry messages or informational messages for recoverable errors. (See the PRTERRMSG parameter in the Control Language (CL) information for the CRTDEVPRT command.)

Program start request capable (PGMSTRRQS). Whether or not to have the device reserved for program start requests. (See the PGMSTRRQS parameter in the Control Language (CL) information for the CRTDEVSNUF command.)

Published printer (PUBLISHINF). Whether the printer information is published in the LDAP directory. Valid values are *YES and *NO. (See the PUBLISHINF parameter in the Control Language (CL) information for the CRTDEVPRT command.)

Record length (RCDLEN). The maximum record length allowed when communicating with this device. (See the RCDLEN parameter in the Control Language (CL) information for the CRTDEVBSC or CRTDEVSNUF command.)

Relational database name (RDB). The name of the relational database associated with the auxiliary storage pool (ASP). (See the RDB parameter in the Control Language (CL) information for the CRTDEVASP command.)

Remote BSCEL (RMTBSCEL). Whether this device will communicate with a remote system that can recognize BSCEL commands and messages. (See the RMTBSCEL parameter in the Control Language (CL) information for the CRTDEVBSC command.)

Remote location name (RMTLOCNAME). The SNA network ID and control point name, an internet protocol (IP) host name, or an internet address of the printer device. (See the RMTLOCNAME parameter in the Control Language (CL) information for the CRTDEVAPPC, CRTDEVASC, CRTDEVBSC, CRTDEVDSP, CRTDEVFNC, CRTDEVHOST, CRTDEVINTR, CRTDEVPRT, CRTDEVRTL, or CRTDEVSNUF command.)

Exception:

- The remote network ID is not filled in if it is *NETATR or *NONE.

Remote location name type. The remote location name type is *SNA or *IP.

Remote network identifier (RMTNETID). The 8-character name of the remote network in which the location resides. (See the RMTNETID parameter in the Control Language (CL) information for the CRTDEVAPPC, CRTDEVDSP, or CRTDEVPRT command.)

Reserved. Space included for alignment.

Resource allocation priority (RSCALCPTY). The priority of a job when requesting a resource. (See the RSCALCPTY parameter in the Control Language (CL) information for the CRTDEVMLB command.)

Exception:

- Value of -31 implies *JOB

Resource name (RSRCNAME). The unique name that is assigned by the system to the physical equipment attached to the system. For an explanation of resource names for devices, see the Local Device Configuration book. (See the RSRCNAME parameter in the Control Language (CL) information for the CRTDEVASP, CRTDEVCRP, CRTDEVDKT, CRTDEVMLB, CRTDEVOPT, or CRTDEVTAP command.)

Robot device description (ROBOTDEV). For library devices with separate robots, the name of the device description used to communicate with the robot. For an explanation of robots in library devices, see the Local Device Configuration book. (See the ROBOTDEV parameter in the Control Language (CL) information for the CRTDEVMLB command.)

Robot host (ROBOTHOST). Specifies the TCP/IP host name or Internet address of the robotic library manager. For an explanation of robots in library devices, see the Local Device Configuration book. (See the ROBOTHOST parameter in the Control Language (CL) information for the CRTDEVMLB command.)

Secure location (SECURELOC). Whether or not the remote location is secure. If the remote location is secure, then an already verified indicator is allowed to be sent with program start requests. If it is not

secure, then either no security information is allowed or the User ID with encrypted password is retrieved. (See the SECURELOC parameter in the Control Language (CL) information for the CRTDEVAPPC command.)

Separator character (SEPCHAR). The separator character to be used (if you specified *SEP for the blocking type). (See the SEPCHAR parameter in the Control Language (CL) information for the CRTDEVBSC command.)

Separator drawer (SEPDRAWER). The sheet feeding drawer for file and job separators. (See the SEPDRAWER parameter in the Control Language (CL) information for the CRTDEVPRT command.)

Separator exit program (SEPPGM). A user exit program to be called when printing the job and file separators. This information is returned in two separate fields:

- *Name* of the program
- *Library* in which the program can be found

(See the SEPPGM parameter in the Control Language (CL) information for the CRTDEVPRT command.)

Server network protocol. The following defines the server network protocol:

- Internet Protocol (IP) value is X'02'.
- Internetwork Packet Exchange (IPX) value is X'06'.

Note: This field applies only to display and printer devices that are used by TELNET.

Server network protocol address. The server network address is uniquely assigned to each system and is used in all communications with the system.

The following format defines the server network address based on the server network protocol:

- Internet Protocol (IP)
  - CHAR(2) TCP port number
  - CHAR(4) Internet address
- Internetwork Packet Exchange (IPX)
  - CHAR(4) Network identifier
  - CHAR(6) Node identifier
  - CHAR(2) Socket number

Note: This field applies only to display and printer devices that are used by TELNET.

Server Internet Protocol (IP) internet address in dotted decimal form. A 32-bit address usually written as 4 decimal numbers, each representing 8 bits of the address. An example internet address is 128.12.28.43.

Each system on the TCP/IP network is assigned a unique internet address that is used in all communications with the system.

Note: This field applies only to display or printer devices that are used by TELNET or TCP/IP over Twinax.

Shared session number. The shared session number that is associated with this device.

Single session (SNGSSN). Whether communications with the remote location is limited to one session. If communications is limited to one session, a maximum number of conversations may also be specified. This information is returned in two separate fields:

- *Indication* of whether communications is limited to one session
- *Number of conversations* allowed if limited to one session

(See the SNGSSN parameter in the Control Language (CL) information for the CRTDEVAPPC command.)

SNA pass-through class (SNPTCLS). Whether this device is to be used as an upstream or downstream pass-through device. (See the SNPTCLS parameter in the Control Language (CL) information for the CRTDEVSNPT command.)

SNA pass-through device (SNPTDEV). The name of the pass-through device with which this device is associated. (See the SNPTDEV parameter in the Control Language (CL) information for the CRTDEVDSP, CRTDEVFNC, CRTDEVPRT, CRTDEVRTL, or CRTDEVSNPT command.)

SNA pass-through group name (SNPTGRP). The name of a group of upstream SNA pass-through devices with which this device can be associated. (See the SNPTGRP parameter in the Control Language (CL) information for the CRTDEVDSP, CRTDEVFNC, CRTDEVPRT, CRTDEVRTL, or CRTDEVSNPT command.)

SNA remote location name (RMTLOCNAME). The name of the remote location with which your system will be communicating. (See the RMTLOCNAME parameter in the Control Language (CL) information for the CRTDEVAPPC, CRTDEVASC, CRTDEVBSC, CRTDEVDSP, CRTDEVFNC, CRTDEVHOST, CRTDEVINTR, CRTDEVPRT, CRTDEVRTL, or CRTDEVSNUF command.)

Special host application (SPCHOSTAPP). Whether this device is used to communicate with a special host application. (See the SPCHOSTAPP parameter in the Control Language (CL) information for the CRTDEVSNUF command.)

Stop bits (STOPBITS). For ASCII devices, the number of stop bits used to communicate over the attachment between the controller and the device. (See the STOPBITS parameter in the Control Language (CL) information for the CRTDEVDSP or CRTDEVPRT command.)

Switch setting. The value of the current switch settings at the actual device, equivalent to the current device address.

Switched line name. The name of a switched line associated with an ASCII printer directly attached to the LAN.

System driver program name (SYSDRVPGM). The name of a system-defined driver program. It is used to provide the capability for sending OS/400 print output to a printer attached over a TCP/IP network. (See the SYSDRVPGM parameter in the Control Language (CL) information for the CRTDEVPRT command.)

Text description (TEXT). A brief description of the device and its location. (See the TEXT parameter in the Control Language (CL) information for the CRTDEVAPPC, CRTDEVASC, CRTDEVASP, CRTDEVBSC, CRTDEVCRP, CRTDEVDKT, CRTDEVDSP, CRTDEVFNC, CRTDEVHOST, CRTDEVINTR, CRTDEVMLB, CRTDEVNET, CRTDEVOPT, CRTDEVPRT, CRTDEVRTL, CRTDEVSNPT, CRTDEVSNUF, or CRTDEVTAP command.)

Time information retrieved. The time that the information was provided by the API. It is returned as 6 characters in the form HHMMSS, where:

HH	Hour
MM	Minute
SS	Second

Transform enabled. Whether this printer will use the host-based transform support to convert SCS to ASCII.

Transmit in transparent mode (TRNSPY). Whether transparency is to be used by this device. (See the TRNSPY parameter in the Control Language (CL) information for the CRTDEVBSC command.)

Truncate trailing blanks (TRUNC). Whether trailing blanks are to be removed from the output records. (See the TRUNC parameter in the Control Language (CL) information for the CRTDEVBSC command.)

Unload device at vary off. Whether the tape device will be unloaded when the device is varied off.

Unload wait time (UNLOADWAIT). The amount of time the system waits for another request to a mounted volume before unloading the volume if there are outstanding requests for an available device. (See the UNLOADWAIT parameter in the Control Language (CL) information for the CRTDEVMLB command.)

Use 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. (See the SECURECNN parameter in the Control Language (CL) information for the CRTDEVPRT command.)

More information about the secure connection can be found in the Printer Device Programming  book.

User-defined data. A string of data that is associated with the printer device description and specified by the user. See the "Change Configuration Description (QDCCCFGD) API" on page 2 API for information on how to set this data.

User-defined data transform program library. The name of the library that contains the data transform program.

User-defined data transform program name (USRDTATFM). The name of the user-defined data transform program to be used by the user driver program. See the user driver program name field. (See the USRDTATFM parameter in the Control Language (CL) information for the CRTDEVPRT command.)

User-defined object library. The name of the library that contains the user-defined object.

User-defined object name. The name of the user-defined object that is to be used by the user driver program.

User-defined object type. The type of the user-defined object that is to be used by the user driver program.

User-defined option. An option to be accessed by the user driver program.

User driver program library. The name of the library that contains the user-defined driver program.

User driver program name. The name of a user-defined driver program.

Validation list (VLDL). 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. (See the VLDL parameter in the Control Language (CL) information for the CRTDEVPRT command.)

- *Name* of the validation list

- *Library* in which the validation list can be found

More information about building a validation list can be found in the Printer Device Programming book.

Word length (WORDLEN). For ASCII devices, the word length used to communicate over the attachment between the controller and the device. (See the WORDLEN parameter in the Control Language (CL) information for the CRTDEVDSP or CRTDEVPRT command.)

Work station customizing object (WSCST). The object containing pointers to the work station customizing tables for this device. This information is returned in two separate fields:

- *Name* of the customizing object
- *Library* in which the object can be found

(See the WSCST parameter in the Control Language (CL) information for the CRTDEVDSP or CRTDEVPRT command.)

Error Messages

Message ID	Error Message Text
CPF24B4 E	Severe error while addressing parameter list.
CPF2625 E	Not able to allocate object &1.
CPF2634 E	Not authorized to object &1.
CPF26A7 E	Category of object not compatible with API format.
CPF2702 E	Device description &1 not found.
CPF3C19 E	Error occurred with receiver variable specified.
CPF3C21 E	Format name &1 is not valid.
CPF3C24 E	Length of the receiver variable is not valid.
CPF3CF1 E	Error code parameter not valid.
CPF3C90 E	Literal value cannot be changed.
CPF8104 E	Controller description &4 damaged.
CPF8105 E	Device description &4 damaged.
CPF9872 E	Program or service program &1 in library &2 ended. Reason code &3.

API introduced: V2R3

Top | "Configuration APIs," on page 1 | APIs by category

Retrieve Line Description (QDCRLIND) API

Required Parameter Group:	
1	Receiver variable
Output	Char(*)
2	Length of receiver variable
Input	Binary(4)
3	Format name
Input	Char(8)
4	Line name
Input	Char(10)
5	Error code
I/O	Char(*)
Default Public Authority: *USE	
Threadsafe: Yes	

The Retrieve Line Description (QDCRLIND) API retrieves information about a line description.

Authorities and Locks

Controller Description Authority
*USE

Line Description Authority
*USE

Controller Description Lock
*EXCLRD

Line Description Lock
*EXCLRD

Required Parameter Group

Receiver variable
OUTPUT; CHAR(*)

The variable that is to receive the line information.

Length of receiver variable
INPUT; BINARY(4)

The length of the area referenced by the receiver variable parameter. If the amount of information to be returned is greater than this value, the information will be truncated to this length.

Format name
INPUT; CHAR(8)

The content and format of the information returned for each line description. The possible format names are:

LIND0100 Basic line information

LIND0200 Basic line information, plus list of attached nonswitched controllers
LIND0300 Detailed information for line category *ASC
LIND0400 Detailed information for line category *BSC
LIND0500 Detailed information for line category *ETH
LIND0600 Detailed information for line category *IDLC
LIND0700 Detailed information for line category *NET
LIND0800 Detailed information for line category *SDLC
LIND0900 Detailed information for line category *TDLC
LIND1000 Detailed information for line category *TRN
LIND1100 Detailed information for line category *X25
LIND1200 Detailed information for line category *DDI
LIND1300 Detailed information for line category *FR
LIND1400 Detailed information for line category *FAX
LIND1500 Detailed information for line category *WLS
LIND1600 Detailed information for line category *PPP

Note: Formats LIND0600 and LIND0700 are no longer supported.

See "Format of Line Information" for a description of these formats.

Line name
INPUT; CHAR(10)

The name of the line description to be retrieved.

Error code
I/O; CHAR(*)

The structure in which to return error information. For the format of the structure, see Error Code Parameter.

Format of Line Information

When the line category is unknown, specify LIND0100 or LIND0200, and the basic information (including line category) will be returned. When the line category is known, specify one of the other category-specific formats.

For detailed descriptions of the fields returned in these formats, see "Field Descriptions" on page 132.

LIND0100 Format

Use this format to find out the line category, plus some basic information about the line. Then you may use the returned line category to select one of the other (category-specific) formats to call the API again for detailed information about the line description. This format also returns the number of controllers currently attached to this line.

Offset			
Dec	**Hex**	**Type**	**Field**
0	0	BINARY(4)	Bytes returned
4	4	BINARY(4)	Bytes available
8	8	BINARY(4)	Number of attached nonswitched controllers
12	C	CHAR(7)	Date information retrieved
19	13	CHAR(6)	Time information retrieved
25	19	CHAR(10)	Line name
35	23	CHAR(10)	Line category

Offset		Type	Field
Dec	Hex		
45	2D	CHAR(10)	Online at IPL
55	37	CHAR(50)	Text description
105	69	CHAR(3)	Reserved

LIND0200 Format

This format returns basic line information, plus a list of attached nonswitched controllers. Some basic information is also included for each attached nonswitched controller.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format LIND0100
108	6C	BINARY(4)	Offset to list of attached nonswitched controllers
112	70	BINARY(4)	Entry length for list of attached nonswitched controllers
These fields repeat for each nonswitched controller		CHAR(10)	Attached nonswitched controller name
		CHAR(10)	Controller category
		CHAR(10)	Controller type
		CHAR(50)	Controller text description

LIND0300 Format

This format returns detailed information about a line of category *ASC.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format LIND0100
108	6C	BINARY(4)	Vary on wait
112	70	BINARY(4)	Line speed
116	74	BINARY(4)	Inactivity timer
120	78	BINARY(4)	Maximum buffer size
124	7C	BINARY(4)	Idle timer
128	80	BINARY(4)	Data Set Ready drop timer
132	84	BINARY(4)	Clear to Send timer
136	88	BINARY(4)	Remote answer timer
140	8C	BINARY(4)	Recovery limits: count limit
144	90	BINARY(4)	Recovery limits: time interval
148	94	BINARY(4)	Offset to list of attached nonswitched controllers
152	98	BINARY(4)	Entry length for list of attached nonswitched controllers
156	9C	BINARY(4)	Offset to list of switched controllers
160	A0	BINARY(4)	Number of switched controllers
164	A4	BINARY(4)	Entry length for list of switched controllers

Offset		Type	Field
Dec	Hex		
168	A8	BINARY(4)	Offset to list of active switched controllers
172	AC	BINARY(4)	Number of active switched controllers
176	B0	BINARY(4)	Entry length for list of active switched controllers
180	B4	BINARY(4)	Offset to list of EOR characters
184	B8	BINARY(4)	Number of EOR characters
188	BC	BINARY(4)	Entry length for list of EOR characters
192	C0	CHAR(10)	Resource name
202	CA	CHAR(10)	Physical Interface
212	D4	CHAR(10)	Connection type
222	DE	CHAR(10)	Switched network backup
232	E8	CHAR(10)	Activate switched network backup
242	F2	CHAR(10)	Autocall unit
252	FC	CHAR(10)	Data bits per character
262	106	CHAR(10)	Type of parity
272	110	CHAR(10)	Stop bits
282	11A	CHAR(10)	Duplex
292	124	CHAR(10)	Echo support
302	12E	CHAR(10)	Modem type supported
312	138	CHAR(10)	Modem data rate select
322	142	CHAR(10)	Switched connection type
332	14C	CHAR(10)	Autoanswer
342	156	CHAR(10)	Autodial
352	160	CHAR(10)	Dial command type
362	16A	CHAR(10)	Autocall resource name
372	174	CHAR(32)	Calling number
404	194	CHAR(10)	Error threshold level
414	19E	CHAR(10)	Flow control
424	1A8	CHAR(10)	XON character
434	1B2	CHAR(10)	XOFF character
444	1BC	CHAR(10)	Autoanswer type
454	1C6	CHAR(10)	Autoconfigured for AS/36
464	1D0	CHAR(2)	Reserved
466	1D2	CHAR(40)	Set modem to ASYNC command
506	1FA	CHAR(60)	Modem initialization command
566	236	CHAR(10)	Current message queue: name
576	240	CHAR(10)	Current message queue: library
586	24a	CHAR(2)	Reserved
These fields repeat for each nonswitched controller		CHAR(10)	Attached nonswitched controller name
		CHAR(2)	Reserved

Offset		Type	Field
Dec	Hex		
These fields repeat for each switched controller		CHAR(10)	Switched controller name
		CHAR(2)	Reserved
These fields repeat for each active switched controller		CHAR(10)	Active switched controller name
		CHAR(2)	Reserved
These fields repeat for each EOR character		BINARY(4)	Number of trailing characters
		CHAR(10)	EOR character
		CHAR(2)	Reserved

LIND0400 Format

This format returns detailed information about a line of category *BSC.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format LIND0100
108	6C	BINARY(4)	Vary on wait
112	70	BINARY(4)	Line speed
116	74	BINARY(4)	Inactivity timer
120	78	BINARY(4)	Maximum buffer size
124	7C	BINARY(4)	Receive timer
128	80	BINARY(4)	Continue timer
132	84	BINARY(4)	Contention state retry
136	88	BINARY(4)	Data state retry
140	8C	BINARY(4)	Transmit TTD or WACK retry
144	90	BINARY(4)	Receive TTD or WACK retry
148	94	BINARY(4)	Data Set Ready drop timer
152	98	BINARY(4)	Clear To Send timer
156	9C	BINARY(4)	Remote answer timer
160	A0	BINARY(4)	Recovery limits: count limit
164	A4	BINARY(4)	Recovery limits: time interval
168	A8	BINARY(4)	Offset to list of attached nonswitched controllers
172	AC	BINARY(4)	Entry length for list of attached nonswitched controllers
176	B0	BINARY(4)	Offset to list of switched controllers
180	B4	BINARY(4)	Number of switched controllers
184	B8	BINARY(4)	Entry length for list of switched controllers
188	BC	BINARY(4)	Offset to list of active switched controllers
192	C0	BINARY(4)	Number of active switched controllers
196	C4	BINARY(4)	Entry length for list of active switched controllers
200	C8	CHAR(10)	Resource name
210	D2	CHAR(10)	Application type

Offset		Type	Field
Dec	Hex		
220	DC	CHAR(10)	Physical Interface
230	E6	CHAR(10)	Connection type
240	F0	CHAR(10)	Switched network backup
250	FA	CHAR(10)	Activate switched network backup
260	104	CHAR(10)	Autocall unit
270	10E	CHAR(10)	Station address
280	118	CHAR(10)	Clocking
290	122	CHAR(10)	Duplex
300	12C	CHAR(10)	Modem type supported
310	136	CHAR(10)	Modem data rate select
320	140	CHAR(10)	Switched connection type
330	14A	CHAR(10)	Autoanswer
340	154	CHAR(10)	Autodial
350	15E	CHAR(10)	Dial command type
360	168	CHAR(10)	Autocall resource name
370	172	CHAR(32)	Calling number
402	192	CHAR(10)	Character code
412	19C	CHAR(10)	SYN characters
422	1A6	CHAR(10)	Error threshold level
432	1B0	CHAR(10)	Include STX character in the LRC
442	1BA	CHAR(10)	Autoanswer type
452	1C4	CHAR(10)	Autoconfigured for AS/36
462	1CE	CHAR(10)	Current message queue: name
472	1D8	CHAR(10)	Current message queue: library
482	1E2	CHAR(2)	Reserved
These fields repeat for each nonswitched controller		CHAR(10)	Attached nonswitched controller name
		CHAR(2)	Reserved
These fields repeat for each switched controller		CHAR(10)	Switched controller name
		CHAR(2)	Reserved
These fields repeat for each active switched controller		CHAR(10)	Active switched controller name
		CHAR(2)	Reserved

LIND0500 Format

This format returns detailed information about a line of category *ETH.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format LIND0100

Offset		Type	Field
Dec	Hex		
108	6C	BINARY(4)	Vary on wait
112	70	BINARY(4)	Maximum controllers
116	74	BINARY(4)	Link speed
120	78	BINARY(4)	Cost per connect time
124	7C	BINARY(4)	Cost per byte
128	80	BINARY(4)	User-defined 1
132	84	BINARY(4)	User-defined 2
136	88	BINARY(4)	User-defined 3
140	8C	BINARY(4)	Autodelete controller
144	90	BINARY(4)	Recovery limits: count limit
148	94	BINARY(4)	Recovery limits: time interval
152	98	BINARY(4)	Offset to list of active switched controllers
156	9C	BINARY(4)	Number of active switched controllers
160	A0	BINARY(4)	Entry length for list of active switched controllers
164	A4	BINARY(4)	Offset to list of SSAPs
168	A8	BINARY(4)	Number of SSAPs
172	AC	BINARY(4)	Entry length for list of SSAPs
176	B0	BINARY(4)	Offset to list of group addresses
180	B4	BINARY(4)	Number of group addresses
184	B8	BINARY(4)	Entry length for list of group addresses
188	BC	CHAR(10)	Resource name
198	C6	CHAR(10)	Network controller
208	D0	CHAR(12)	Local adapter address
220	DC	CHAR(10)	Exchange identifier
230	E6	CHAR(10)	Ethernet standard
240	F0	CHAR(10)	Error threshold level
250	FA	CHAR(10)	Security for line
260	104	CHAR(10)	Propagation delay
270	10E	CHAR(10)	Autocreate controller
280	118	BINARY(4)	Port number
284	11C	CHAR(10)	Attached nonswitched NWI
294	128	CHAR(10)	Network interface DLC identifier
304	130	CHAR(10)	Network server description
314	13A	CHAR(10)	Duplex
324	144	BINARY(4)	Line Speed
328	148	CHAR(10)	Generate test frame
338	152	CHAR(2)	Reserved
340	154	BINARY(4)	LAN emulation client (LEC) cache aging time
344	158	BINARY(4)	Address resolution protocol (ARP) retry count
348	15C	BINARY(4)	Address resolution protocol (ARP) retry timer

Offset		Type	Field
Dec	Hex		
352	160	BINARY(4)	Maximum address resolution protocol (ARP) entries
356	164	BINARY(4)	LAN emulation client (LEC) disconnect time out
360	168	BINARY(4)	Offset to list of PVC identifiers
364	16C	BINARY(4)	Number of PVC identifiers
368	170	BINARY(4)	Entry length for list of PVC identifiers
372	174	CHAR(13)	ATM access type
385	181	CHAR(32)	Emulated LAN name
417	1A1	CHAR(26)	Local ATM address: network prefix
443	1BB	CHAR(12)	Local ATM address: end-system-identifier
455	1C7	CHAR(2)	Local ATM address: LAN emulation client (LEC) selector byte
457	1C9	CHAR(26)	LAN emulation server (LES) ATM address: network prefix
483	1E3	CHAR(12)	LAN emulation server (LES) ATM address: end system identifier
495	1EF	CHAR(2)	LAN emulation server (LES) ATM address: selector byte
497	1F1	CHAR(26)	Last contacted LAN emulation server (LES) ATM address: network prefix
523	20B	CHAR(12)	Last contacted LAN emulation server (LES) ATM address: end system identifier
535	217	CHAR(2)	Last contacted LAN emulation server (LES) ATM address: selector byte
537	219	CHAR(10)	Use LAN emulation configuration server (LECS) address
547	223	CHAR(10)	Network interface type
557	22D	CHAR(32)	Reported emulated LAN name
589	24D	CHAR(3)	Reserved
592	250	BINARY(4)	LAN emulation client (LEC) frame size
596	254	BINARY(4)	Link speed multiplier
600	258	CHAR(10)	Message queue: name
610	262	CHAR(10)	Message queue: library
620	26C	CHAR(10)	Current message queue: name
630	276	CHAR(10)	Current message queue: library
640	280	CHAR(10)	Enable for TCP/IP
650	28A	CHAR(2)	Reserved
652	28C	BINARY(4)	Maximum frame size
656	290	BINARY(4)	Current line speed
660	294	CHAR(10)	Current duplex
670	29E	CHAR(10)	Virtual hardware
» 680	2A8	CHAR(10)	Associated port resource name
690	2B2	CHAR(1)	IOP attach flag
691	2B3	CHAR(1)	Reserved «
These fields repeat for each active switched controller		CHAR(10)	Active switched controller name
		CHAR(2)	Reserved

Offset		Type	Field
Dec	Hex		
These fields repeat for each SSAP		BINARY(4)	SSAP maximum frame
		CHAR(10)	SSAP address
		CHAR(10)	SSAP type
This field repeats for each group address		CHAR(12)	Group address
This field repeats for each PVC identifier		BINARY(4)	PVC identifier

LIND0600 Format

This format returns detailed information about a line of category *IDLC.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format LIND0100
108	6C	BINARY(4)	Vary on wait
112	70	BINARY(4)	Line speed
116	74	BINARY(4)	CRC errors received
120	78	BINARY(4)	Short frame
124	7C	BINARY(4)	Receive overrun
128	80	BINARY(4)	Transmit underrun
132	84	BINARY(4)	Frame aborts
136	88	BINARY(4)	Retransmitted frames
140	8C	BINARY(4)	Frame sequence errors
144	90	BINARY(4)	Maximum frame size
148	94	BINARY(4)	Default window size
152	98	BINARY(4)	Frame retry limit
156	9C	BINARY(4)	Response timer
160	A0	BINARY(4)	Connect retry count
164	A4	BINARY(4)	Link speed
168	A8	BINARY(4)	Cost per connect time
172	AC	BINARY(4)	Cost per byte
176	B0	BINARY(4)	User-defined 1
180	B4	BINARY(4)	User-defined 2
184	B8	BINARY(4)	User-defined 3
188	BC	BINARY(4)	Recovery limits: count limit
192	C0	BINARY(4)	Recovery limits: time interval
196	C4	BINARY(4)	Offset to list of attached nonswitched controllers
200	C8	BINARY(4)	Entry length for list of attached nonswitched controllers
204	CC	BINARY(4)	Offset to list of active switched controllers
208	D0	BINARY(4)	Number of active switched controllers

Offset		Type	Field
Dec	Hex		
212	D4	BINARY(4)	Entry length for list of active switched controllers
216	D8	BINARY(4)	Offset to list of switched NWIs
220	DC	BINARY(4)	Number of switched NWIs
224	E0	BINARY(4)	Entry length for list of switched NWIs
228	E4	CHAR(10)	Connection type
238	EE	CHAR(10)	Attached nonswitched NWI
248	F8	CHAR(10)	NWI channel type
258	102	CHAR(10)	NWI channel number
268	10C	CHAR(10)	Switched connection type
278	116	CHAR(10)	Connection list
288	120	CHAR(10)	Exchange identifier
298	12A	CHAR(10)	Error threshold level
308	134	CHAR(13)	Information transfer type
321	141	CHAR(10	Switched NWI selection
331	14B	CHAR(10)	Security for line
341	155	CHAR(10)	Propagation delay
351	15F	CHAR(10)	Current message queue: name
361	169	CHAR(10)	Current message queue: library
These fields repeat for each nonswitched controller		CHAR(10)	Attached nonswitched controller name
		CHAR(2)	Reserved
These fields repeat for each active switched controller		CHAR(10)	Active switched controller name
		CHAR(2)	Reserved
These fields repeat for each switched NWI		CHAR(10)	NWI name
		CHAR(10)	NWI channel type
		CHAR(10)	NWI channel number
		CHAR(2)	Reserved

LIND0700 Format

This format returns detailed information about a line of category *NET.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format LIND0100
108	6C	BINARY(4)	Offset to list of attached nonswitched controllers
112	70	BINARY(4)	Entry length for list of attached nonswitched controllers
116	74	CHAR(10)	Attached nonswitched NWI
126	7E	CHAR(10)	Current message queue: name
136	88	CHAR(10)	Current message queue: library

Offset		Type	Field
Dec	Hex		
These fields repeat for each nonswitched controller		CHAR(10)	Attached nonswitched controller name
		CHAR(2)	Reserved

LIND0800 Format

This format returns detailed information about a line of category *SDLC.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format LIND0100
108	6C	BINARY(4)	Vary on wait
112	70	BINARY(4)	Maximum controllers
116	74	BINARY(4)	Line speed
120	78	BINARY(4)	SHM call timer
124	7C	BINARY(4)	SHM maximum connect timer
128	80	BINARY(4)	SHM answer delay timer
132	84	BINARY(4)	Connect poll retry
136	88	BINARY(4)	Connect timer
140	8C	BINARY(4)	Short timer
144	90	BINARY(4)	Long timer
148	94	BINARY(4)	Short retry
152	98	BINARY(4)	Long retry
156	9C	BINARY(4)	Maximum frame size
160	A0	BINARY(4)	Maximum outstanding frames
164	A4	BINARY(4)	Inactivity timer
168	A8	BINARY(4)	Poll response delay
172	AC	BINARY(4)	Nonproductive receive timer
176	B0	BINARY(4)	Idle timer
180	B4	BINARY(4)	Connect poll timer
184	B8	BINARY(4)	Poll cycle pause
188	BC	BINARY(4)	Frame retry
192	C0	BINARY(4)	Fair polling timer
196	C4	BINARY(4)	Data Set Ready drop timer
200	C8	BINARY(4)	Clear To Send timer
204	CC	BINARY(4)	Remote answer timer
208	D0	BINARY(4)	Link speed
212	D4	BINARY(4)	Cost per connect time
216	D8	BINARY(4)	Cost per byte
220	DC	BINARY(4)	User-defined 1
224	E0	BINARY(4)	User-defined 2

Offset		Type	Field
Dec	Hex		
228	E4	BINARY(4)	User-defined 3
232	E8	BINARY(4)	Recovery limits: count limit
236	EC	BINARY(4)	Recovery limits: time interval
240	F0	BINARY(4)	Offset to list of attached nonswitched controllers
244	F4	BINARY(4)	Entry length for list of attached nonswitched controllers
248	F8	BINARY(4)	Offset to list of active switched controllers
252	FC	BINARY(4)	Number of active switched controllers
256	100	BINARY(4)	Entry length for list of active switched controllers
260	104	BINARY(4)	Offset to list of resource names
264	108	BINARY(4)	Number of resource names
268	10C	BINARY(4)	Entry length for list of resource names
272	110	BINARY(4)	Offset to list of call progress signal retry values
276	114	BINARY(4)	Number of call progress signal retry values
280	118	BINARY(4)	Entry length for list of call progress signal retry values
284	11C	CHAR(10)	Data link role
294	126	CHAR(10)	Physical interface
304	130	CHAR(10)	Connection type
314	13A	CHAR(10)	Switched network backup
324	144	CHAR(10)	Activate switched network backup
334	14E	CHAR(10)	SHM node type
344	158	CHAR(10)	Autocall unit
354	162	CHAR(10)	Exchange identifier
364	16C	CHAR(10)	NRZI data encoding
374	176	CHAR(10)	Clocking
384	180	CHAR(10)	Modem type supported
394	18A	CHAR(10)	Modem data rate select
404	194	CHAR(10)	Switched connection type
414	19E	CHAR(10)	Autoanswer
424	1A8	CHAR(10)	Autodial
434	1B2	CHAR(10)	Dial command type
444	1BC	CHAR(10)	Autocall resource name
454	1C6	CHAR(10)	SHM call format
464	1D0	CHAR(10)	SHM access code
474	1DA	CHAR(32)	Calling number
506	1FA	CHAR(10)	Station address
516	204	CHAR(10)	Error threshold level
526	20E	CHAR(10)	Duplex
536	218	CHAR(10)	Modulus
546	222	CHAR(10)	Autoanswer type
556	22C	CHAR(10)	Security for line

Offset		Type	Field
Dec	Hex		
566	236	CHAR(10)	Propagation delay
576	240	CHAR(10)	Autoconfigured for AS/36
586	24A	CHAR(60)	Modem initialization command
646	286	CHAR(10)	Current message queue: name
656	290	CHAR(10)	Current message queue: library
666	29A	CHAR(2)	Reserved
These fields repeat for each nonswitched controller		CHAR(10)	Attached nonswitched controller name
		CHAR(2)	Reserved
These fields repeat for each active switched controller		CHAR(10)	Active switched controller name
		CHAR(2)	Reserved
These fields repeat for each resource name		CHAR(10)	Resource name
		CHAR(2)	Reserved
These fields repeat for each call signal retry value		CHAR(10)	Call progress signal retry value
		CHAR(2)	Reserved

LIND0900 Format

This format returns detailed information about a line of category *TDLC.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format LIND0100
108	6C	BINARY(4)	Offset to list of attached nonswitched controllers
112	70	BINARY(4)	Entry length for list of attached nonswitched controllers
116	74	CHAR(10)	Attached work station controller
126	7E	CHAR(10)	Network controller
136	88	CHAR(10)	Current message queue: name
146	92	CHAR(10)	Current message queue: library
These fields repeat for each nonswitched controller		CHAR(10)	Attached nonswitched controller name
		CHAR(2)	Reserved

LIND1000 Format

This format returns detailed information about a line of category *TRN.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format LIND0100
108	6C	BINARY(4)	Vary on wait

Offset		Type	Field
Dec	Hex		
112	70	BINARY(4)	Maximum controllers
116	74	BINARY(4)	Line speed
120	78	BINARY(4)	Maximum frame size
124	7C	BINARY(4)	Link speed
128	80	BINARY(4)	Cost per connect time
132	84	BINARY(4)	Cost per byte
136	88	BINARY(4)	User-defined 1
140	8C	BINARY(4)	User-defined 2
144	90	BINARY(4)	User-defined 3
148	94	BINARY(4)	Autodelete controller
152	98	BINARY(4)	Recovery limits: count limit
156	9C	BINARY(4)	Recovery limits: time interval
160	A0	BINARY(4)	Offset to list of active switched controllers
164	A4	BINARY(4)	Number of active switched controllers
168	A8	BINARY(4)	Entry length for list of active switched controllers
172	AC	BINARY(4)	Offset to list of SSAPs
176	B0	BINARY(4)	Number of SSAPs
180	B4	BINARY(4)	Entry length for list of SSAPs
184	B8	BINARY(4)	Offset to list of function addresses
188	BC	BINARY(4)	Number of function addresses
192	C0	BINARY(4)	Entry length for list of function addresses
196	C4	CHAR(10)	Resource name
206	CE	CHAR(10)	Network controller
216	D8	CHAR(10)	TRLAN manager logging level: configured
226	E2	CHAR(10)	TRLAN manager logging level: current
236	EC	CHAR(12)	TRLAN manager mode
248	F8	CHAR(10)	Log configuration changes
258	102	CHAR(10)	Token-ring inform of beacon
268	10C	CHAR(12)	Local adapter address
280	118	CHAR(10)	Exchange identifier
290	122	CHAR(10)	Early token release
300	12C	CHAR(10)	Error threshold level
310	136	CHAR(10)	Security for line
320	140	CHAR(10)	Propagation delay
330	14A	CHAR(10)	Autocreate controller
340	154	BINARY(4)	Port number
344	158	CHAR(10)	Attached nonswitched NWI
354	162	CHAR(10)	Network interface DLC identifier
364	16C	CHAR(10)	Network server description
374	176	CHAR(10)	Autoconfigured for AS/36

Offset		Type	Field
Dec	Hex		
384	180	CHAR(10)	Duplex
394	18A	CHAR(10)	Activate LAN manager
404	194	BINARY(4)	LAN emulation client (LEC) cache aging time
408	198	BINARY(4)	Address resolution protocol (ARP) retry count
412	19C	BINARY(4)	Address resolution protocol (ARP) retry timer
416	1A0	BINARY(4)	LAN emulation client (LEC) frame size
420	1A4	BINARY(4)	Maximum address resolution protocol (ARP) entries
424	1A8	BINARY(4)	LAN emulation client (LEC) disconnect time out
428	1AC	BINARY(4)	Offset to list of PVC identifiers
432	1B0	BINARY(4)	Number of PVC identifiers
436	1B4	BINARY(4)	Entry length for list of PVC identifiers
440	1B8	CHAR(13)	ATM access type
453	1C5	CHAR(32)	Emulated LAN name
485	1E5	CHAR(26)	Local ATM address: network prefix
511	1FF	CHAR(12)	Local ATM address: end-system-identifier
523	20B	CHAR(2)	Local ATM address: LAN emulation client (LEC) selector byte
525	20D	CHAR(26)	LAN emulation server (LES) ATM address: network prefix
551	227	CHAR(12)	LAN emulation server (LES) ATM address: end system identifier
563	233	CHAR(2)	LAN emulation server (LES) ATM address: selector byte
565	235	CHAR(26)	Last contacted LAN emulation server (LES) ATM address: network prefix
591	24F	CHAR(12)	Last contacted LAN emulation server (LES) ATM address: end system identifier
603	25B	CHAR(2)	Last contacted LAN emulation server (LES) ATM address: selector byte
605	25D	CHAR(10)	Use LAN emulation configuration server (LECS) address
615	267	CHAR(10)	Network interface type
625	271	CHAR(32)	Reported emulated LAN name
657	291	CHAR(3)	Filler for alignment
660	294	BINARY(4)	Link speed multiplier
664	298	CHAR(10)	Message queue: name
674	2A2	CHAR(10)	Message queue: library
684	2AC	CHAR(10)	Current message queue: name
694	2B6	CHAR(10)	Current message queue: library
704	2C0	BINARY(4)	Current line speed
708	2C4	CHAR(10)	Current duplex
These fields repeat for each active switched controller		CHAR(10)	Active switched controller name
		CHAR(2)	Reserved

Offset		Type	Field
Dec	Hex		
These fields repeat for each SSAP		BINARY(4)	SSAP maximum frame
		CHAR(10)	SSAP address
		CHAR(10)	SSAP type
This field repeats for each function address		CHAR(12)	Function address
This field repeats for each PVC identifier		BINARY(4)	PVC identifier

LIND1100 Format

This format returns detailed information about a line of category *X25.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format LIND0100
108	6C	BINARY(4)	Vary on wait
112	70	BINARY(4)	Line speed
116	74	BINARY(4)	Maximum frame size
120	78	BINARY(4)	Default packet size: transmit
124	7C	BINARY(4)	Default packet size: receive
128	80	BINARY(4)	Maximum packet size: transmit
132	84	BINARY(4)	Maximum packet size: receive
136	88	BINARY(4)	Default window size: transmit
140	8C	BINARY(4)	Default window size: receive
144	90	BINARY(4)	Idle timer
148	94	BINARY(4)	Frame retry
152	98	BINARY(4)	Predial delay
156	9C	BINARY(4)	Redial delay
160	A0	BINARY(4)	Dial retries
164	A4	BINARY(4)	Switched disconnect timers: minimum connection
168	A8	BINARY(4)	Switched disconnect timers: disconnect delay
172	AC	BINARY(4)	Data Set Ready drop timer
176	B0	BINARY(4)	Clear To Send timer
180	B4	BINARY(4)	Remote answer timer
184	B8	BINARY(4)	Link speed
188	BC	BINARY(4)	Cost per connect time
192	C0	BINARY(4)	Cost per byte
196	C4	BINARY(4)	User-defined 1
200	C8	BINARY(4)	User-defined 2
204	CC	BINARY(4)	User-defined 3
208	D0	BINARY(4)	Recovery limits: count limit

Offset		Type	Field
Dec	Hex		
212	D4	BINARY(4)	Recovery limits: time interval
216	D8	BINARY(4)	Offset to list of switched controllers
220	DC	BINARY(4)	Number of switched controllers
224	E0	BINARY(4)	Entry length for list of switched controllers
228	E4	BINARY(4)	Offset to list of active switched controllers
232	E8	BINARY(4)	Number of active switched controllers
236	EC	BINARY(4)	Entry length for list of active switched controllers
240	F0	BINARY(4)	Offset to list of logical channel entries
244	F4	BINARY(4)	Number of logical channel entries
248	F8	BINARY(4)	Entry length for list of logical channel entries
252	FC	BINARY(4)	Offset to list of switched NWIs
256	100	BINARY(4)	Number of switched NWIs
260	104	BINARY(4)	Entry length for list of switched NWIs
264	108	CHAR(10)	Resource name
274	112	CHAR(20)	Local network address
294	126	CHAR(10)	Connection initiation
304	130	CHAR(10)	Physical interface
314	13A	CHAR(10)	Connection type
324	144	CHAR(10)	Attached nonswitched NWI
334	14E	CHAR(10)	NWI channel type
344	158	CHAR(10)	NWI channel number
354	162	CHAR(10)	X.25 DCE support
364	16C	CHAR(10)	Network controller
374	176	CHAR(10)	Exchange identifier
384	180	CHAR(10)	Packet mode
394	18A	CHAR(13)	Information transfer type
407	197	CHAR(10)	Extended network addressing
417	1A1	CHAR(10)	Modulus
427	1AB	CHAR(10)	Insert network address in packets
437	1B5	CHAR(10)	Error threshold level
447	1BF	CHAR(32)	Connection number
479	1DF	CHAR(32)	Calling number
511	1FF	CHAR(10)	Modem type supported
521	209	CHAR(10)	Modem data rate select
531	213	CHAR(10)	Switched connection type
541	21D	CHAR(10)	Outgoing connection list
551	227	CHAR(10)	Outgoing connection list entry
561	231	CHAR(10)	Incoming connection list
571	23B	CHAR(10)	Autoanswer
581	245	CHAR(10)	Autodial

Offset		Type	Field
Dec	Hex		
591	24F	CHAR(10)	Dial command type
601	259	CHAR(10)	Call immediate
611	263	CHAR(10)	Autocall unit
621	26D	CHAR(10)	Autocall resource name
631	277	CHAR(10)	Switched disconnect
641	281	CHAR(10)	Autoanswer type
651	28B	CHAR(10)	Switched NWI selection
661	295	CHAR(10)	Security for line
671	29F	CHAR(10)	Propagation delay
681	2A9	CHAR(214)	Network user identification facility
896	380	CHAR(10)	Clocking
906	38A	CHAR(10)	Autoconfigured for AS/36
916	394	CHAR(10)	Message queue: name
926	39E	CHAR(10)	Message queue: library
936	3A8	CHAR(10)	Current message queue: name
946	3B2	CHAR(10)	Current message queue: library
956	3BC	CHAR(60)	Modem initialization command
These fields repeat for each switched controller		CHAR(10)	Switched controller name
		CHAR(2)	Reserved
These fields repeat for each active switched controller		CHAR(10)	Active switched controller name
		CHAR(2)	Reserved
These fields repeat for each logical channel entry		CHAR(10)	Logical channel identifier
		CHAR(10)	Logical channel type
		CHAR(10)	Logical channel controller
		CHAR(2)	Reserved
These fields repeat for each switched NWI		CHAR(10)	NWI name
		CHAR(10)	NWI channel number
		CHAR(10)	NWI channel type
		CHAR(2)	Reserved

LIND1200 Format

This format returns detailed information about a line of category *DDI.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format LIND0100
108	6C	BINARY(4)	Vary on wait
112	70	BINARY(4)	Maximum controllers
116	74	BINARY(4)	Maximum frame size

Offset		Type	Field
Dec	Hex		
120	78	BINARY(4)	Token rotation time
124	7C	BINARY(4)	Link speed
128	80	BINARY(4)	Autodelete controller
132	84	BINARY(4)	Cost per connect time
136	88	BINARY(4)	Cost per byte
140	8C	BINARY(4)	User-defined 1
144	90	BINARY(4)	User-defined 2
148	94	BINARY(4)	User-defined 3
152	98	BINARY(4)	Recovery limits: count limit
156	9C	BINARY(4)	Recovery limits: time interval
160	A0	BINARY(4)	Offset to list of active switched controllers
164	A4	BINARY(4)	Number of active switched controllers
168	A8	BINARY(4)	Entry length for list of active switched controllers
172	AC	BINARY(4)	Offset to list of SSAPs
176	B0	BINARY(4)	Number of SSAPs
180	B4	BINARY(4)	Entry length for list of SSAPs
184	B8	BINARY(4)	Offset to list of group addresses
188	BC	BINARY(4)	Number of group addresses
192	C0	BINARY(4)	Entry length for list of group addresses
196	C4	CHAR(10)	Resource name
206	CE	CHAR(10)	NWI name
216	D8	CHAR(10)	Network interface DLC identifier
226	E2	CHAR(12)	Local adapter address
238	EE	CHAR(10)	Exchange identifier
248	F8	CHAR(10)	Attach mode
258	102	CHAR(10)	Security for line
268	10C	CHAR(10)	Propagation delay
278	116	CHAR(10)	Autocreate controller
288	120	CHAR(10)	Logging level
298	12A	CHAR(10)	Local manager mode
308	134	CHAR(10)	Network controller
318	13E	CHAR(10)	Message queue: name
328	148	CHAR(10)	Message queue: library
338	152	CHAR(10)	Current message queue: name
348	15C	CHAR(10)	Current message queue: library
358	166	CHAR(2)	Reserved
These fields repeat for each active switched controller		CHAR(10)	Active switched controller name
		CHAR(2)	Reserved

Offset		Type	Field
Dec	Hex		
These fields repeat for each SSAP		BINARY(4)	SSAP maximum frame
		CHAR(10)	SSAP address
		CHAR(10)	SSAP type
This field repeats for each group address		CHAR(12)	Group address

LIND1300 Format

This format returns detailed information about a line of category *FR.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format LIND0100
108	6C	BINARY(4)	Vary on wait
112	70	BINARY(4)	Maximum controllers
116	74	BINARY(4)	Maximum frame size
120	78	BINARY(4)	Link speed
124	7C	BINARY(4)	Cost per connect time
128	80	BINARY(4)	Cost per byte
132	84	BINARY(4)	User-defined 1
136	88	BINARY(4)	User-defined 2
140	8C	BINARY(4)	User-defined 3
144	90	BINARY(4)	Recovery limits: count limit
148	94	BINARY(4)	Recovery limits: time interval
152	98	BINARY(4)	Offset to list of active switched controllers
156	9C	BINARY(4)	Number of active switched controllers
160	A0	BINARY(4)	Entry length for list of active switched controllers
164	A4	BINARY(4)	Offset to list of SSAPs
168	A8	BINARY(4)	Number of SSAPs
172	AC	BINARY(4)	Entry length for list of SSAPs
176	B0	CHAR(10)	Attached nonswitched NWI
186	BA	CHAR(10)	Network interface DLC identifier
196	C4	CHAR(10)	Exchange identifier
206	CE	CHAR(10)	Security for line
216	D8	CHAR(10)	Propagation delay
226	E2	CHAR(10)	Network controller
236	EC	CHAR(10)	Message queue: name
246	F6	CHAR(10)	Message queue: library
256	100	CHAR(10)	Current message queue: name
266	10A	CHAR(10)	Current message queue: library

Offset		Type	Field
Dec	Hex		
These fields repeat for each active switched controller		CHAR(10)	Active switched controller name
		CHAR(2)	Reserved
These fields repeat for each SSAP		BINARY(4)	SSAP maximum frame
		CHAR(10)	SSAP address
		CHAR(10)	SSAP type

LIND1400 Format

This format returns detailed information about a line of category *FAX.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format LIND0100
108	6C	BINARY(4)	Vary on wait
112	70	BINARY(4)	Offset to list of attached nonswitched controllers
116	74	BINARY(4)	Entry length for list of attached nonswitched controllers
120	78	BINARY(4)	Offset to list of resource names
124	7C	BINARY(4)	Number of resource names
128	80	BINARY(4)	Entry length for list of resource names
132	84	CHAR(10)	Current message queue: name
142	8E	CHAR(10)	Current message queue: library
These fields repeat for each nonswitched controller		CHAR(10)	Attached nonswitched controller name
		CHAR(2)	Reserved
These fields repeat for each resource name		CHAR(10)	Resource name
		CHAR(2)	Reserved

LIND1500 Format

This format returns detailed information about a line of category *WLS.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format LIND0100
108	6C	BINARY(4)	Vary on wait
112	70	BINARY(4)	Maximum controllers
116	74	BINARY(4)	Link speed
120	78	BINARY(4)	Cost per connect time
124	7C	BINARY(4)	Cost per byte
128	80	BINARY(4)	User-defined 1
132	84	BINARY(4)	User-defined 2

Offset		Type	Field
Dec	Hex		
136	88	BINARY(4)	User-defined 3
140	8C	BINARY(4)	Autodelete controller
144	90	BINARY(4)	Recovery limits: count limit
148	94	BINARY(4)	Recovery limits: time interval
152	98	BINARY(4)	Offset to list of active switched controllers
156	9C	BINARY(4)	Number of active switched controllers
160	A0	BINARY(4)	Entry length for list of active switched controllers
164	A4	BINARY(4)	Offset to list of SSAPs
168	A8	BINARY(4)	Number of SSAPs
172	AC	BINARY(4)	Entry length for list of SSAPs
176	B0	BINARY(4)	Offset to list of group addresses
180	B4	BINARY(4)	Number of group addresses
184	B8	BINARY(4)	Entry length for list of group addresses
188	BC	CHAR(10)	Resource name
198	C6	CHAR(10)	Network controller
208	D0	CHAR(12)	Local adapter address
220	DC	CHAR(10)	Exchange identifier
230	E6	CHAR(10)	Ethernet standard
240	F0	CHAR(10)	Security for line
250	FA	CHAR(10)	Propagation delay
260	104	CHAR(10)	Autocreate controller
270	10E	CHAR(10)	Initialization source file name
280	118	CHAR(10)	Initialization source file library name
290	122	CHAR(10)	Initialization source member name
300	12C	CHAR(10)	Initialization program name
310	136	CHAR(10)	Initialization program library name
320	140	CHAR(10)	Current message queue: name
330	14A	CHAR(10)	Current message queue: library
These fields repeat for each controller		CHAR(10)	Active switched controller name
		CHAR(2)	Reserved
These fields repeat for each SSAP		BINARY(4)	SSAP maximum frame
		CHAR(10)	SSAP address
		CHAR(10)	SSAP type
This field repeats for each group address		CHAR(12)	Group address

LIND1600 Format

This format returns detailed information about a line of category *PPP.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format LIND0100
108	6C	BINARY(4)	Vary on wait
112	70	BINARY(4)	Line speed
116	74	BINARY(4)	Maximum frame size
120	78	BINARY(4)	Inactivity Timer
124	7C	BINARY(4)	Remote answer timer
128	80	BINARY(4)	Clear to send timer
132	84	BINARY(4)	Recovery limits: count limit
136	88	BINARY(4)	Recovery limits: time interval
140	8C	BINARY(4)	Link control protocol authentication values: remote peer challenge timer
144	90	BINARY(4)	Link control protocol authentication values: maximum authentication attempts
148	94	BINARY(4)	Link control protocol configuration values: configuration retry timer
152	98	BINARY(4)	Link control protocol configuration values: maximum configuration failures
156	9C	BINARY(4)	Link control protocol configuration values: maximum configuration requests
160	A0	BINARY(4)	Link control protocol configuration values: maximum termination requests
164	A4	CHAR(10)	Link control protocol configuration values: configuration retry timer
174	AE	CHAR(10)	Async control character map
184	B8	CHAR(10)	Resource name
194	C2	CHAR(10)	Physical interface
204	CC	CHAR(10)	Framing type
214	D6	CHAR(10)	Connection type
224	E0	CHAR(10)	Network controller
234	EA	CHAR(10)	NRZI
244	F4	CHAR(10)	Switched connection type
254	FE	CHAR(10)	Clocking
264	108	CHAR(10)	Dial command type
274	112	CHAR(40)	Set modem to ASYNC command
314	13A	CHAR(32)	Calling number
346	15A	CHAR(10)	Flow control
356	164	CHAR(10)	Attached nonswitched NWI
366	16E	CHAR(10)	NWI channel number
376	178	CHAR(13)	Information transfer type
389	185	CHAR(10)	Outgoing connection list
399	18F	CHAR(10)	Outgoing connection list entry
409	199	CHAR(10)	Incoming connection list

Offset		Type	Field
Dec	Hex		
419	1A3	CHAR(10)	Switched NWI selection
429	1AD	CHAR(10)	Compression
439	1B7	CHAR(10)	Message queue: name
449	1C1	CHAR(10)	Message queue: library
459	1CB	CHAR(10)	Current message queue: name
469	1D5	CHAR(10)	Current message queue: library
479	1DF	CHAR(60)	Modem init command string
539	21B	CHAR(1)	Reserved
540	21C	BINARY(4)	Offset to list of switched NWIs
544	220	BINARY(4)	Number of switched NWIs
548	224	BINARY(4)	Entry length for list of switched NWIs
These fields repeat for each switched NWI		CHAR(10)	NWI name
		CHAR(10)	NWI channel type
		CHAR(10)	NWI channel number
		CHAR(2)	Reserved

Field Descriptions

Some of the fields in the various formats returned by this API are described in greater detail in the Control Language (CL) information for the particular command that was used to create the line description object. They are also described in the online help for the particular command. For these fields, the CL parameter keyword is specified in parentheses following the field name. The CL command name is specified in the field description.

In certain cases, numeric values are assigned by this API to represent character values for some of the returned fields. Where a numeric value is assigned, the numeric value and the equivalent character value are listed as an *Exception* in the following field descriptions.

Activate LAN manager (ACTLANMGR). Whether the LAN manager support is activated. (See the ACTLANMGR parameter in the Control Language (CL) information for the CRTLINTRN command.)

Activate switched network backup. Whether the switched network backup is activated.

Active switched controller name. The name of a controller associated with this line.

Application type (APPTYPE). The type of application that this BSC line is used for. (See the APPTYPE parameter in the Control Language (CL) information for the CRTLINBSC command.)

ARP retry count. The number of times an address resolution protocol (ARP) request will be retried if no response is received.

ARP retry timer The amount of time to wait for a response to an address resolution protocol (ARP) request.

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. (See the ASSOCPORT parameter in the Control Language (CL) information for the CRTLINETH command.)

«

Async control character map. Control characters that either may not be successfully received over an asynchronous serial line or which may be spuriously introduced by other data communications equipment into a transmission on the line.

Attach mode. The attach mode specified when the line was created. The term attach mode means the same thing as station type.

Attached nonswitched controller name. The name of a controller associated with this line.

Attached nonswitched network interface (NWI). The name of the nonswitched network interface (NWI) description that contains the channel to which this line is to be attached. (See the NWI parameter in the Control Language (CL) information for the CRTLINDDI, CRTLINETH, CRTLINFR, CRTLINPPP, CRTLINTRN, or CRTLINX25 command.)

Attached workstation controller (WSC). The name of the controller description for the 5394 work station controller or the work station controller to which the personal computer is attached. (See the WSC parameter in the Control Language (CL) information for the CRTLINTDLC command.)

ATM access type (ACCTYPE). The type of access to the ATM network. (See the ACCTYPE parameter in the Control Language (CL) information for the CRTLINETH or CRTLINTRN command.)

» **Note:** This field is no longer supported as of V5R3M0. «

Autoanswer (AUTOANS). Whether you intend to use your modem's automatic answer function. (See the AUTOANS parameter in the Control Language (CL) information for the CRTLINASC, CRTLINBSC, CRTLINSDLC, or CRTLINX25 command.)

Autoanswer type (AUTOANSTYP). The method to be used by the system and modem to answer incoming calls. (See the AUTOANSTYP parameter in the Control Language (CL) information for the CRTLINASC, CRTLINBSC, CRTLINSDLC, or CRTLINX25 command.)

Autocall resource name (ACRSRCNAME). The name that is assigned by the system to a communications port from which a communications line attaches to an automatic call unit. (See the ACRSRCNAME parameter in the Control Language (CL) information for the CRTLINASC, CRTLINBSC, CRTLINSDLC, or CRTLINX25 command.)

Autocall unit (AUTOCALL). An associated automatic call unit. (See the AUTOCALL parameter in the Control Language (CL) information for the CRTLINASC, CRTLINBSC, CRTLINSDLC, or CRTLINX25 command.)

Autoconfigured for AS/36. The line was automatically configured for AS/36.

Autocreate controller (AUTOCRTCTL). Whether the system is to automatically create APPC controller descriptions when incoming calls are received from other systems on the local area network. (See the AUTOCRTCTL parameter in the Control Language (CL) information for the CRTLINDDI, CRTLINETH, CRTLINTRN, or CRTLINWLS command.)

Autodelete controller (AUTODLTCTL). The number of minutes the system should wait before automatically varying off and deleting automatically created controller descriptions associated with this

line. (See the AUTODLTCTL parameter in the Control Language (CL) information for the CRTLINDDI, CRTLINETH, CRTLINTRN, or CRTLINWLS command.)

Exception:

- Value of -3 means *NONE

Autodial (AUTODIAL). Whether or not you intend to use the automatic call function to dial the remote system or network to establish a switched line connection. (See the AUTODIAL parameter in the Control Language (CL) information for the CRTLINASC, CRTLINBSC, CRTLINSDLC, or CRTLINX25 command.)

Call immediate (CALLIMMED). For switched X.25 lines, whether a call should be made immediately after varying on the line description. (See the CALLIMMED parameter in the Control Language (CL) information for the CRTLINX25 command.)

Calling number (CALLNBR). The local connection number of a line. (See the CALLNBR parameter in the Control Language (CL) information for the CRTLINASC, CRTLINBSC, CRTLINPPP, CRTLINSDLC, or CRTLINX25 command.)

Call progress signal retry value (CPSRTY). Whether a call attempt should be retried if the specified call progress signal is received. (See the CPSRTY parameter in the Control Language (CL) information for the CRTLINSDLC command.)

Character code (CODE). The type of character code used. (See the CODE parameter in the Control Language (CL) information for the CRTLINBSC command.)

Clear to send timer (CTSTMR). The length of time that the system should wait for the modem (DCE) to raise or drop Clear to Send (CTS) before signaling an error. (See the CTSTMR parameter in the Control Language (CL) information for the CRTLINASC, CRTLINBSC, CRTLINPPP, CRTLINSDLC, or CRTLINX25 command.)

»

Exception:

- Value of -8 means *NOMAX

«

Clocking (CLOCK). The clocking function for the line is provided by the modem (*MODEM). (See the CLOCK parameter in the Control Language (CL) information for the CRTLINBSC, CRTLINPPP, CRTLINSDLC, or CRTLINX25 command.)

Compression (COMPRESS). The compression function is provided. (See the COMPRESS parameter in the Control Language (CL) information for the CRTLINPPP command.)

Connection initiation (CNNINIT). The values to initiate the X.25 data link connection. (See the CNNINIT parameter in the Control Language (CL) information for the CRTLINX25 command.)

Connection list (CNNLSTIN). The name of the connection list used to retrieve ISDN call information when authorizing incoming calls. (See the CNNLSTIN parameter in the Control Language (CL) information for the CRTLINPPP, or CRTLINX25 command.)

» **Note:** This field is no longer supported as of V5R3M0. «

Connection number (CNNNBR). For switched X.25 lines, the number of the remote DCE (packet switched data network) that can be contacted using this line description. (See the CNNNBR parameter in the Control Language (CL) information for the CRTLINX25 command.)

Connect poll retry (CNNPOLLRTY). The number of connect poll retries that will be attempted before the system indicates an error in contacting the remote system or controller. (See the CNNPOLLRTY parameter in the Control Language (CL) information for the CRTLINSDLC command.)

Connect poll timer (CNNPOLLTMR). The length of time that the system waits for the response to a poll while in normal disconnect mode before polling the next station. (See the CNNPOLLTMR parameter in the Control Language (CL) information for the CRTLINSDLC command.)

Connect retry count (IDLCCNNRTY). The number of times to retry a transmission at connection time. (See the IDLCCNNRTY parameter in the Control Language (CL) information for the CRTLINIDLC command.)

Exceptions:

- Value of -8 means *NOMAX
- Value of -9 means *CNN

Note: This field is no longer supported as of V5R3M0.

Connect timer (CNNTMR). The amount of time that an automatic answer connect request waits for an incoming call on an X.21 circuit-switched line. (See the CNNTMR parameter in the Control Language (CL) information for the CRTLINSDLC command.)

Exception:

- Value of -8 means *NOMAX

Connection type (CNN). The type of line connection. (See the CNN parameter in the Control Language (CL) information for the CRTLINASC, CRTLINBSC, CRTLINPPP, CRTLINSDLC, or CRTLINX25 command.)

Contention state retry (CTNRTY). The number of contention state retries that can be attempted before disconnecting the line. (See the CTNRTY parameter in the Control Language (CL) information for the CRTLINBSC command.)

Continue timer (CONTTMR). The length of time that the system waits before sending a TTD or WACK control character. (See the CONTTMR parameter in the Control Language (CL) information for the CRTLINBSC command.)

Controller category. This value will be one of the following:

*APPC

*ASC

*BSC

*FNC

*HOST

*LWS

*NET

*RTL

*RWS

*VWS

*TAP

The category value is derived from the command used to create the controller description.

Controller name (CTL). The names of one or more controller descriptions associated with this line. (See the CTL parameter in the Control Language (CL) information for the CRTLINASC, CRTLINBSC, CRTLINFAX, CRTLINSDLC, or CRTLINTDLC command.)

Controller text description. A brief description of a controller associated with this line.

Controller type. The type of controller being described. (See the TYPE parameter in the Control Language (CL) information for the CRTCTLAPPC, CRTCTLFNC, CRTCTLLWS, CRTCTLRTL, CRTCTLRWS, or CRTCTLTAP command.)

Cost per byte (COSTBYTE). The relative cost per byte of sending and receiving data on the line. (See the COSTBYTE parameter in the Control Language (CL) information for the CRTLINDDI, CRTLINETH, CRTLINFR, CRTLINSDLC, CRTLINTRN, CRTLINWLS, or CRTLINX25 command.)

Exception:

- Value of -9 means *CNN

Cost per connect time (COSTCNN). The relative cost of being connected on the line. (See the COSTCNN parameter in the Control Language (CL) information for the CRTLINDDI, CRTLINETH, CRTLINFR, CRTLINSDLC, CRTLINTRN, CRTLINWLS, or CRTLINX25 command.)

Exception:

- Value of -9 means *CNN

CRC errors received (CRCRCV). The level of error threshold monitoring done by the system for CRC errors received. (See the CRCRCV parameter in the Control Language (CL) information for the CRTLINIDLC command.)

Exceptions:

- Value of -4 means *OFF
- Value of -5 means *MIN
- Value of -6 means *MED
- Value of -7 means *MAX

» **Note:** This field is no longer supported as of V5R3M0. «

Current duplex (DUPLEX). The actual duplex mode being used by the hardware associated with the line description. The current duplex value with *AUTO is determined by the hardware. (See the DUPLEX parameter in the Control Language (CL) information for the CRTLINASC, CRTLINBSC, CRTLINETH, CRTLINSDLC, or CRTLINTRN command.)

Note: *AUTO is valid until the line is varied on. After the line is varied on, *AUTO is resolved to either *HALF or *FULL.

Current line speed (LINESPEED). The actual speed of the line description. This value is determined by the hardware. (See the LINESPEED parameter in the Control Language (CL) information for the CRTLINASC, CRTLINBSC, CRTLINETH, CRTLINPPP, CRTLINSDLC, CRTLINTRN, or CRTLINX25 command.)

Exceptions:

- Value of -11 means *CALC
- Value of -23 means 10M
- Value of -24 means 4M
- Value of -25 means 16M
- Value of -27 means *NWI
- Value of -29 means 100M
- Value of -30 means *AUTO
- Value of -34 means 1G

Note: The values *CALC, *NWI, and *AUTO can be returned only when the line is varied off. If the line is varied on, these values will be resolved to a discrete line speed.

Current message queue (MSGQ). The message queue to which messages are currently being sent using this line description. This field is valid only for lines that are varied on. Note that the value of the current message queue may be different from the message queue field (MSGQ parameter) under certain error conditions. (See the MSGQ parameter in the Control Language (CL) information for the CRTLINDDI, CRTLINETH, CRTLINFR, CRTLINPPP, CRTLINTRN, or CRTLINX25 command.) This information is returned in two separate fields:

- *Name* of the queue
- *Library* in which the queue can be found

Data bits per character (BITSCHAR). The data bits per character (either 7 or 8 bits excluding the parity bit). (See the BITSCHAR parameter in the Control Language (CL) information for the CRTLINASC command.)

Data link role (ROLE). Whether this system is the primary station or secondary station, or if this station should dynamically negotiate its role with the remote station when the line is varied on. (See the ROLE parameter in the Control Language (CL) information for the CRTLINSDLC command.)

Data set ready drop timer (DSRDRPTMR). The length of time that the system should wait for the modem (DCE) to drop Data Set Ready (DSR) after the system has dropped Data Terminal Ready (DTR) before signalling an error. (See the DSRDRPTMR parameter in the Control Language (CL) information for the CRTLINASC, CRTLINBSC, CRTLINSDLC, or CRTLINX25 command.)

Data state retry (DTASTTRTY). The time before retry when BSC is sending or receiving data on the communications line. (See the DTASTTRTY parameter in the Control Language (CL) information for the CRTLINBSC command.)

Date information retrieved. The date that the information was provided by the API. This is returned as 7 characters in the form CYYMMDD, as follows:

C	Century, where 0 indicates years 19*xx* and 1 indicates years 20*xx*.
YY	Year
MM	Month
DD	Day

Default packet size (DFTPKTSIZE). The default packet size to use for controllers attached to this line description. This information is returned in two separate fields:

- *Transmit*
- *Receive*

(See the DFTPKTSIZE parameter in the Control Language (CL) information for the CRTLINX25 command.)

Exception:

- Value of -10 means *TRANSMIT

Default window size: transmit/receive (IDLCWDWSIZ, DFTWDWSIZE) The default window size used for this line description. (See the DFTWDWSIZE parameter in the Control Language (CL) information for the CRTLINX25 command.)

Exceptions:

- Value of -9 means *CNN
- Value of -10 means *TRANSMIT

Dial command type (DIALCMD). The dial command type used to establish a connection with a remote system. (See the DIALCMD parameter in the Control Language (CL) information for the CRTLINASC, CRTLINBSC, CRTLINPPP, CRTLINSDLC, or CRTLINX25 command.)

Dial retries (DIALRTY). The number of times to retry dialing the number before considering the dialing unsuccessful. (See the DIALRTY parameter in the Control Language (CL) information for the CRTLINX25 command.)

Duplex (DUPLEX).

- *WAN (Async, SDLC, or Bisync)*: Whether the system will leave the request-to-send (RTS) modem signal on continuously, or whether the RTS will be raised when the system must transmit data and dropped when it is finished transmitting.
- *LAN (Ethernet or Token-Ring)*: Whether the hardware is able to send and receive data simultaneously. In half duplex, one wire must alternate between sending and receiving. With duplex, one wire is dedicated to send and another to receive, and hence simultaneous send and receive operations may occur. With full duplex, a hub is required. With *AUTO, the duplex value will be determined by the hardware.

(See the DUPLEX parameter in the Control Language (CL) information for the CRTLINASC, CRTLINBSC, CRTLINETH, CRTLINSDLC, or CRTLINTRN command.)

Early token release (ELYTKNRLS). Allows greater throughput on 16MB token-ring network lines. (See the ELYTKNRLS parameter in the Control Language (CL) information for the CRTLINTRN command.)

Echo support (ECHO). Whether the system is to send back (echo) to the remote station none of the characters that it receives, all of the characters it receives, or all data up to, but not including, the end-of-record character (*CNTL). (See the ECHO parameter in the Control Language (CL) information for the CRTLINASC command.)

Emulated LAN name (EMLLANNAME). Specifies the emulated LAN name. (See the EMLLANNAME parameter in the Control Language (CL) information for the CRTLINETH or CRTLINTRN command.)

» **Note:** This field is no longer supported as of V5R3M0. «

Enable for TCP/IP (TCPONLY). Whether you want the line description to be used for TCP/IP only.

Note: TCPONLY is not used after release V4R5. The field will contain blanks.

Entry length for list of active switched controllers. The entry length in bytes of each element in the list of active switched controllers returned with this format. A value of zero is returned if the list is empty.

Entry length for list of attached nonswitched controllers. The entry length in bytes of each element in the list of attached nonswitched controllers returned with this format. A value of zero is returned if the list is empty.

Entry length for list of call progress signal retry values. The entry length in bytes of each element in the list of call progress signal retry values returned with this format. A value of zero is returned if the list is empty.

Entry length for list of EOR characters. The entry length in bytes of each element in the list of end-of-record (EOR) characters returned with this format. A value of zero is returned if the list is empty.

Entry length for list of function addresses. The entry length in bytes of each element in the list of function addresses returned with this format. A value of zero is returned if the list is empty.

Entry length for list of group addresses. The entry length in bytes of each element in the list of group addresses returned with this format. A value of zero is returned if the list is empty.

Entry length for list of logical channel entries. The entry length in bytes of each element in the list of logical channel entries returned with this format. A value of zero is returned if the list is empty.

Entry length for list of PVC identifiers. The entry length in bytes of each element in the list of permanent virtual circuits (PVC) returned with this format. A value of zero is returned if the list is empty.

» **Note:** This field is no longer supported as of V5R3M0. «

Entry length for list of resource names. The entry length in bytes of each element in the list of resource names returned with this format. A value of zero is returned if the list is empty.

Entry length for list of SSAPs. The entry length in bytes of each element in the list of SSAPs returned with this format. A value of zero is returned if the list is empty.

Entry length for list of switched controllers. The entry length in bytes of each element in the list of switched controllers returned with this format. A value of zero is returned if the list is empty.

Entry length for list of switched NWIs. The entry length in bytes of each element in the list of switched network interface (NWI) descriptions returned with this format. A value of zero is returned if the list is empty.

» **Note:** This field is no longer supported as of V5R3M0. «

EOR character. The end-of-record character.

Error threshold level (THRESHOLD). The level of the error threshold that is monitored by the system. (See the THRESHOLD parameter in the Control Language (CL) information for the CRTLINASC, CRTLINBSC, CRTLINETH, CRTLINSDLC, CRTLINTRN, or CRTLINX25 command.)

Ethernet standard (ETHSTD). The standard used by the Ethernet local area network. (See the ETHSTD parameter in the Control Language (CL) information for the CRTLINETH or CRTLINWLS command.)

Exchange identifier (EXCHID). The exchange identifier that the local system can send to the remote controller or system. (See the EXCHID parameter in the Control Language (CL) information for the CRTLINDDI, CRTLINETH, CRTLINFR, CRTLINSDLC, CRTLINTRN, CRTLINWLS, or CRTLINX25 command.)

Extended network addressing (EXNNETADR). Whether extended network addressing is used by this line description and attached controller descriptions. (See the EXNNETADR parameter in the Control Language (CL) information for the CRTLINX25 command.)

Fair polling timer (FAIRPLLTMR). The maximum length of time (in seconds) that the system will send data to one or more stations on the line before polling stations without pending output requests. (See the FAIRPLLTMR parameter in the Control Language (CL) information for the CRTLINSDLC command.)

Flow control (FLOWCNTL). Whether you will use the XON and XOFF flow control characters to control the flow of data to your system. (See the FLOWCNTL parameter in the Control Language (CL) information for the CRTLINASC or CRTLINPPP command.)

Frame aborts (ABORTS). The level of error threshold monitoring done by the system for frame aborts. (See the ABORTS parameter in the Control Language (CL) information for the CRTLINIDLC command.)

Exceptions:

- Value of -4 means *OFF
- Value of -5 means *MIN
- Value of -6 means *MED
- Value of -7 means *MAX

» **Note:** This field is no longer supported as of V5R3M0. «

Frame retry (FRAMERTY). The number of retries for an unanswered or unacknowledged frame. (See the FRAMERTY parameter in the Control Language (CL) information for the CRTLINSDLC or CRTLINX25 command.)

Frame retry limit (IDLCFRMRTY). The maximum number of frame retransmissions to attempt before initiating recovery. (See the IDLCFRMRTY parameter in the Control Language (CL) information for the CRTLINIDLC command.)

Exception:

- Value of -9 means *CNN

» **Note:** This field is no longer supported as of V5R3M0. «

Frame sequence errors (FRMSEQERR). The level of error threshold monitoring done by the system for frame sequence errors. (See the FRMSEQERR parameter in the Control Language (CL) information for the CRTLINIDLC command.)

Exceptions:

- Value of -4 means *OFF
- Value of -5 means *MIN
- Value of -6 means *MED
- Value of -7 means *MAX

» **Note:** This field is no longer supported as of V5R3M0. «

Framing type (FRAMING). Specifies whether the line uses asynchronous or synchronous framing. (See the FRAMING parameter in the Control Language (CL) information for the CRTLINPPP command.)

Function address. Functional address used by token-ring network lines.

Generate test frame (GENTSTFRM). Whether the system will have test frames automatically generated. Test frames are used to detect whether the Ethernet network has become inoperational during idle periods. (See the GENTSTFRM parameter in the Control Language (CL) information for the CRTLINETH command.)

Group address. The group of addresses to which a subset of nodes on the network respond to, in addition to their local adapter addresses.

Idle timer (IDLTMR). The maximum allowable time between characters before the adapter forwards the receive buffer to the system. (See the IDLTMR parameter in the Control Language (CL) information for the CRTLINASC, CRTLINSDLC, or CRTLINX25 command.)

Inactivity timer (INACTTMR). The time that the system waits for activity on a line before disconnecting. (See the INACTTMR parameter in the Control Language (CL) information for the CRTLINASC, CRTLINBSC, CRTLINPPP, or CRTLINSDLC command.)

Exception:

- Value of -8 means *NOMAX

Include STX character in the LRC (STXLRC). Whether to exclude the start-of-text (STX) character in the longitudinal redundancy check (LRC) calculation. (See the STXLRC parameter in the Control Language (CL) information for the CRTLINBSC command.)

Incoming connection list (CNNLSTIN). The name of the connection list used to retrieve ISDN call information when authorizing incoming calls. (See the CNNLSTIN parameter in the Control Language (CL) information for the CRTLINPPP, or CRTLINX25 command.)

» **Note:** This field is no longer supported as of V5R3M0. «

Information transfer type (INFTRFTYPE). How data is to be encoded for the ISDN B-channel associated with this line description. (See the INFTRFTYPE parameter in the Control Language (CL) information for the CRTLINPPP, or CRTLINX25 command.)

» **Note:** This field is no longer supported as of V5R3M0. «

Initialization program library name. The name of the library in which the initialization program resides.

Initialization program name. The name of a program that is called to manage configuration initialization data.

Initialization source file library name. The name of the library in which the initialization source file resides.

Initialization source file name. The name of a source file containing configuration initialization data.

Initialization source member name. The name of a source member containing configuration initialization data.

Insert network address in packets (ADRINSERT). Whether the system inserts the local network address (NETADR) in call-request and call-accept packets. (See the ADRINSERT parameter in the Control Language (CL) information for the CRTLINX25 command.)

»

IOP attach flag. Specifies what type of Ethernet IOP is attached.

- A value of 0 means an I/O processor (IOP) performs the majority of the processing of network traffic.
- A value of 1 means System Licensed Internal Code performs the majority of the processing related to network traffic.
- A value of 2 means System Licensed Internal Code and the IOP split the processing of network traffic.

LAN emulation client frame size (LECFRAME). The LAN emulation client (LEC) frame size. (See the LECFRAME parameter in the Control Language (CL) information for the CRTLINTRN command.)

Exception:

- Value of -11 means *CALC

Note: This field is no longer supported as of V5R3M0.

Last contacted LES ATM address. Specifies the most recently used LAN emulation server (LES) ATM network address associated with this line.

- *Element 1: Network prefix*: The network prefix of the ATM address of the remote server. This is a 26 digit hexadecimal value.
- *Element 2: End-system-identifier*: The end system identifier of the remote server. This is a 12 digit hexadecimal value.
- *Element 3: Selector byte*: The selector byte of the remote server. This is a two digit hexadecimal value.

Note: These fields are no longer supported as of V5R3M0.

LEC cache aging time. Specifies the time-out period for which an address resolution protocol (ARP) entry will be cached without verification of that entry.

Note: This field is no longer supported as of V5R3M0.

LEC disconnect time out (LECDSCTIMO). The amount of time in minutes that a LAN emulation client will wait before disconnecting an idle virtual circuit connection to another client. (See the LECDSCTIMO parameter in the Control Language (CL) information for the CRTLINETH or CRTLINTRN command.)

Note: This field is no longer supported as of V5R3M0.

Exception:

- Value of -8 means *NOMAX

Line category. This value will be one of the following:

*ASC

*BSC

*DDI

*ETH

*FAX

*FR

*IDLC

*NET

*PPP

*SDLC

*TDLC

*TRN

*WLS

*X25

The category value is derived from the command used to create the line description.

Line name. The name of the line description.

Line speed (LINESPEED). The line speed in bits per second (bps). (See the LINESPEED parameter in the Control Language (CL) information for the CRTLINASC, CRTLINBSC, CRTLINETH, CRTLINPPP, CRTLINSDLC, CRTLINTRN, or CRTLINX25 command.)

Exception:

- Value of -11 means *CALC
- Value of -23 means 10M
- Value of -24 means 4M
- Value of -25 means 16M
- Value of -27 means *NWI
- Value of -29 means 100M
- Value of -30 means *AUTO
- Value of -34 means 1G

Link control protocol authentication values (LCPAUT). Specifies values controlling how the Link Control Protocol layer of OS/400 Point-to-Point Protocol (PPP) authenticates a remote peer. (See the LCPAUT parameter in the Control Language (CL) information for the CRTLINPPP command.) These values are returned in two separate fields:

- *Remote peer challenge timer*: Specifies the interval, in minutes, to periodically issue an authentication challenge to the remote peer.
- *Maximum authentication attempts*: Specifies the maximum number of unacknowledged authentication challenges sent to a remote peer before assuming that the peer is unable to respond.

Exceptions:

- Value of 0 means *NONE

Link control protocol 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. (See the LCPCFG parameter in the Control Language (CL) information for the CRTLINPPP command.) These values are returned in four separate fields:

- *Configuration retry timer*: Specifies the interval, in seconds, that the system waits before resending an unacknowledged configuration, termination, or authentication challenge request to a remote peer. This value is returned in two seperate fields:
  - As an integer representing tenths of a second.
  - As a CHAR(10) string with the real number value in seconds.
- *Maximum configuration failures*: 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.
- *Maximum configuration requests*: Specifies the maximum number of unacknowledged configuration requests sent to a remote peer before assuming that the peer is unable to respond.

- *Maximum termination requests*: Specifies the maximum number of unacknowledged termination request packets sent to a remote peer before assuming that the peer is unable to respond.

Link speed (LINKSPEED). The link speed in bits per second (bps). (See the LINKSPEED parameter in the Control Language (CL) information for the CRTLINDDI, CRTLINETH, CRTLINFR, CRTLINSDLC, CRTLINTRN, CRTLINWLS, or CRTLINX25 command.)

Exceptions:
- Value of -5 means *MIN
- Value of -7 means *MAX
- Value of -12 means *INTERFACE
- Value of -23 means 10 million bits per second
- Value of -24 means 4 million bits per second
- Value of -25 means 16 million bits per second
- Value of -29 means 100 million bits per second

Note: For Ethernet (LIND0500) and Token-Ring (LIND1000), link speeds over one gigabit per second must be retrieved from two parameters as follows: LINKSPEED = (link_speed_multiplier x (10**9)) + link_speed. For link speeds less than one gigabit per second, the link speed multiplier will contain zero.

Link speed multiplier. For Ethernet (LIND0500) and Token-Ring (LIND1000), link speeds over one gigabit per second must use this multiplier to calculate the actual link speed as follows: LINKSPEED = (link_speed_multiplier x (10**9)) + link_speed. For link speeds less than one gigabit per second, the link speed multiplier will contain zero.

Local ATM address. Specifies the local ATM network address associated with this line.
- *Element 1: Network prefix*: The network prefix of the ATM address of the remote server. This is a 26 digit hexadecimal value.
- *Element 2: End-system-identifier*: The end system identifier of the remote server. This is a 12 digit hexadecimal value.
- *Element 3: LAN emulation client (LEC) selector byte*: The LEC selector byte. This is a two digit hexadecimal value.

» **Note:** These fields are no longer supported as of V5R3M0. «

Local adapter address (ADPTADR). The address used by the adapter for this line to transmit from and answer to on the token-ring or LAN. (See the ADPTADR parameter in the Control Language (CL) information for the CRTLINDDI, CRTLINETH, CRTLINTRN, or CRTLINWLS command.)

Local manager mode (LCLMGRMODE). The local manager mode used with a distributed data interface (DDI) line. (See the LCLMGRMODE parameter in the Control Language (CL) information for the CRTLINDDI command.)

Local network address (NETADR). The network address of the system. (See the NETADR parameter in the Control Language (CL) information for the CRTLINX25 command.)

Log configuration changes (LOGCFGCHG). Whether the token-ring network manager for this line is to log configuration changes on the ring. (See the LOGCFGCHG parameter in the Control Language (CL) information for the CRTLINTRN command.)

Logging level (LOGLVL). The error logging level used with a distributed data interface (DDI) line. (See the LOGLVL parameter in the Control Language (CL) information for the CRTLINDDI command.)

Logical channel controller. Either an SVC or an attached PVC controller.

For a switched virtual circuit (SVC) logical channel, this is the controller description currently active on this logical channel.

For a permanent virtual circuit (PVC) logical channel, this is the controller description permanently attached to this logical channel.

Logical channel identifier. An identifier consisting of 3 hexadecimal characters that can range from hex 001 to hex FFF. The first character represents the logical channel group, as assigned by the network subscription. The last 2 characters are the network-assigned logical channel number.

Logical channel type. The type of logical channel.

Long retry (LONGRTY). The number of bursts of call retry attempts that the system makes when processing a connection request. (See the LONGRTY parameter in the Control Language (CL) information for the CRTLINSDLC command.)

Long timer (LONGTMR). The length of time that the system waits between connection retry attempts. (See the LONGTMR parameter in the Control Language (CL) information for the CRTLINSDLC command.)

Maximum ARP entries. Specifies the maximum number of address resolution protocol (ARP) table entries. This represents the maximum number of LAN emulation MAC addresses that can be resolved at any point in time.

Maximum buffer size (MAXBUFFER). The maximum size of the incoming and outgoing buffers. (See the MAXBUFFER parameter in the Control Language (CL) information for the CRTLINASC or CRTLINBSC command.)

Maximum controllers (MAXCTL). The maximum number of controllers this line can support. (See the MAXCTL parameter in the Control Language (CL) information for the CRTLINDDI, CRTLINETH, CRTLINFR, CRTLINSDLC, CRTLINTRN, or CRTLINWLS command.)

Maximum frame size (MAXFRAME). The maximum frame size or logical link control data unit that can be transmitted and received on this line. (See the MAXFRAME parameter in the Control Language (CL) information for the CRTLINDDI, CRTLINETH, CRTLINFR, CRTLINPPP, CRTLINSDLC, CRTLINTRN, or CRTLINX25 command.)

Maximum outstanding frames (MAXOUT). The maximum number of information frames that can be sent to a remote system and received from a remote system before allowing the receiving system to respond. (See the MAXOUT parameter in the Control Language (CL) information for the CRTLINSDLC command.)

Maximum packet size (MAXPKTSIZE). The maximum packet size that can be used by any controller associated with this line description. This information is returned in two separate fields:

- *Transmit*
- *Receive*

(See the MAXPKTSIZE parameter in the Control Language (CL) information for the CRTLINX25 command.)

Exceptions:

- Value of -10 means *TRANSMIT
- Value of -13 means *DFTPKTSIZE

Message queue (MSGQ). The message queue to which operational messages for this line should normally be sent. Note that this is the value entered on the MSGQ parameter of the CL command, but under certain error conditions it may not be the message queue currently in use. See the current message queue field to determine what message queue is actually being used at a given time. (See the MSGQ parameter in the Control Language (CL) information for the CRTLINDDI, CRTLINETH, CRTLINFR, CRTLINPPP, CRTLINTRN, or CRTLINX25 command.) This information is returned in two separate fields:

- *Name* of the queue
- *Library* in which the queue can be found

Modem data rate select (MODEMRATE). Whether this modem is being operated at its full rated speed, or at an alternate or half speed. (See the MODEMRATE parameter in the Control Language (CL) information for the CRTLINASC, CRTLINBSC, CRTLINSDLC, or CRTLINX25 command.)

Modem initialization command string (MDMINZCMD). The command string to send to set the modem. (See the MDMINZCMD parameter in the Control Language (CL) information for the CRTLINASC, CRTLINPPP, CRTLINSDLC, or CRTLINX25 command.)

Modem type supported (MODEM). The type of modem diagnostic tests to be used on the line. (See the MODEM parameter in the Control Language (CL) information for the CRTLINASC, CRTLINBSC, CRTLINSDLC, or CRTLINX25 command.)

Modulus (MODULUS). Whether extended sequence numbers are used (modulus 128) or not (modulus 8). (See the MODULUS parameter in the Control Language (CL) information for the CRTLINSDLC or CRTLINX25 command.)

Network controller (NETCTL). The name of an existing network controller description. (See the NETCTL parameter in the Control Language (CL) information for the CRTLINDDI, CRTLINETH, CRTLINFR, CRTLINPPP, CRTLINTDLC, CRTLINTRN, CRTLINWLS, or CRTLINX25 command.)

Network interface DLC identifier. The data link control (DLC) identifier used to connect to the network.

Network server description (NWS). The name of the network server to which the nonswitched line is attached. (See the NWS parameter in the Control Language (CL) information for the CRTLINETH or CRTLINTRN command.)

Network user identification facility (NETUSRID). Allows X.25 network subscribers to specify the network user identification (NUI) selection facility that is encoded in the facility field of all call request packets sent on this line. (See the NETUSRID parameter in the Control Language (CL) information for the CRTLINX25 command.)

Nonproductive receive timer (NPRDRCVTMR). The time that the system waits for either a final frame or an idle signal while the secondary station is continuously transmitting. (See the NPRDRCVTMR parameter in the Control Language (CL) information for the CRTLINSDLC command.)

NRZI data encoding (NRZI). Whether the system uses the non-return-to-zero inverted (NRZI) transmission coding method. (See the NRZI parameter in the Control Language (CL) information for the CRTLINPPP or CRTLINSDLC command.)

Number of active switched controllers. The number of elements in the list of active switched controllers returned with this format. A value of zero is returned if the list is empty.

Number of attached nonswitched controllers. The number of elements in the list of attached nonswitched controllers returned with this format. A value of zero is returned if the list is empty.

Number of call progress signal retry values. The number of elements in the list of call progress signal retry values returned with this format. A value of zero is returned if the list is empty.

Number of EOR characters. The number of elements in the list of end-of-record (EOR) characters returned with this format. A value of zero is returned if the list is empty.

Number of function addresses. The number of elements in the list of function addresses returned with this format. A value of zero is returned if the list is empty.

Number of group addresses. The number of elements in the list of group addresses returned with this format. A value of zero is returned if the list is empty.

Number of logical channel entries. The number of elements in the list of logical channel entries returned with this format. A value of zero is returned if the list is empty.

Number of PVC identifiers. The number of elements in the list of permanent virtual circuits returned with this format. A value of zero is returned if the list is empty.

» **Note:** This field is no longer supported as of V5R3M0. «

Number of resource names. The number of elements in the list of resource names returned with this format. A value of zero is returned if the list is empty.

Number of SSAPs. The number of elements in the list of source service access points (SSAPs) returned with this format. A value of zero is returned if the list is empty.

Number of switched controllers. The number of elements in the list of switched controllers returned with this format. A value of zero is returned if the list is empty.

Number of switched NWIs. The number of elements in the list of switched network interface (NWI) descriptions returned with this format. A value of zero is returned if the list is empty.

» **Note:** This field is no longer supported as of V5R3M0. «

Number of trailing characters. The value returned with each element in the list of EOR characters.

NWI channel number (NWICHLNBR). The network interface (NWI) channel to be used by this line description. (See the NWICHLNBR parameter in the Control Language (CL) information for the CRTLINPPP, or CRTLINX25 command.)

» **Note:** This field is no longer supported as of V5R3M0. «

NWI channel type (NWICHLTYPE). The type of network interface channels to be used by this line description. (See the NWICHLTYPE parameter in the Control Language (CL) information for the CRTLINX25 command.)

» **Note:** This field is no longer supported as of V5R3M0. «

NWI name. The name of the existing network interface description.

Offset to list of active switched controllers. The offset in bytes to the first element in the list of active switched controllers returned with this format. A value of zero is returned if the list is empty.

Offset to list of attached nonswitched controllers. The offset in bytes to the first element in the list of attached nonswitched controllers returned with this format. A value of zero is returned if the list is empty.

Offset to list of call progress signal retry values. The offset in bytes to the first element in the list of call progress signal retry values returned with this format. A value of zero is returned if the list is empty.

Offset to list of EOR characters. The offset in bytes to the first element in the list of EOR characters returned with this format. A value of zero is returned if the list is empty.

Offset to list of function addresses. The offset in bytes to the first element in the list of function addresses returned with this format. A value of zero is returned if the list is empty.

Offset to list of group addresses. The offset in bytes to the first element in the list of group addresses returned with this format. A value of zero is returned if the list is empty.

Offset to list of logical channel entries. The offset in bytes to the first element in the list of logical channel entries returned with this format. A value of zero is returned if the list is empty.

Offset to list of PVC identifiers. The offset in bytes to the first element in the list of permanent virtual circuits returned with this format. A value of zero is returned if the list is empty.

» **Note:** This field is no longer supported as of V5R3M0. «

Offset to list of resource names. The offset in bytes to the first element in the list of resource names returned with this format. A value of zero is returned if the list is empty.

Offset to list of SSAPs. The offset in bytes to the first element in the list of source service access points (SSAPs) returned with this format. A value of zero is returned if the list is empty.

Offset to list of switched controllers. The offset in bytes to the first element in the list of switched controllers returned with this format. A value of zero is returned if the list is empty.

Offset to list of switched NWIs. The offset in bytes to the first element in the list of switched network interface (NWI) descriptions returned with this format. A value of zero is returned if the list is empty.

» **Note:** This field is no longer supported as of V5R3M0. «

Online at IPL (ONLINE). Whether or not the line is varied on automatically when the system is turned on. (See the ONLINE parameter in the Control Language (CL) information for the CRTLINASC, CRTLINBSC, CRTLINDDI, CRTLINETH, CRTLINFAX, CRTLINFR, CRTLINPPP, CRTLINSDLC, CRTLINTDLC, CRTLINTRN, CRTLINWLS, or CRTLINX25 command.)

Outgoing connection list (CNNLSTOUT). For switched ISDN connections, the name of a connection list containing the network-assigned numbers used for outgoing calls on this controller. (See the CNNLSTOUT parameter in the Control Language (CL) information for the CRTLINPPP or CRTLINX25 command.)

» **Note:** This field is no longer supported as of V5R3M0. «

Outgoing connection list entry (CNNLSTOUTE). For switched ISDN connections, the name of the connection list entry containing the network-assigned numbers used for outgoing calls on this line. (See the CNNLSTOUTE parameter in the Control Language (CL) information for the CRTLINPPP or CRTLINX25 command.)

» **Note:** This field is no longer supported as of V5R3M0. «

Packet mode (PKTMODE). Allows the system to communicate directly with another system by using the B-channel X.25 virtual circuit service integrated within an ISDN. (See the PKTMODE parameter in the Control Language (CL) information for the CRTLINX25 command.)

» **Note:** This field is no longer supported as of V5R3M0. «

PVC identifiers (PVCID). Specifies the virtual path identifier and virtual circuit ID. (See the PVCID parameter in the Control Language (CL) information for the CRTLINETH or CRTLINTRN command.)

» **Note:** This field is no longer supported as of V5R3M0. «

Physical interface (INTERFACE). The type of physical communications line interface that this communications adapter port and cable will be attached to. (See the INTERFACE parameter in the Control Language (CL) information for the CRTLINASC, CRTLINBSC, CRTLINPPP, CRTLINSDLC, or CRTLINX25 command.)

Poll cycle pause (POLLPAUSE). The length of time that the system waits after the last remote system in the poll list is polled before beginning another pass through the poll list. (See the POLLPAUSE parameter in the Control Language (CL) information for the CRTLINSDLC command.)

Poll response delay (POLLRSPDLY). The minimum duration of time that the system waits before it responds to a data poll if there is no information frame to transmit. (See the POLLRSPDLY parameter in the Control Language (CL) information for the CRTLINSDLC command.)

Port number. The port number on the network server to which this line is physically attached.

Exceptions:

- Value of -28 means *INTERNAL
- Value of -36 means *VRTETHPTP
- Value of -40 means *VRTETH0
- Value of -41 means *VRTETH1
- Value of -42 means *VRTETH2
- Value of -43 means *VRTETH3
- Value of -44 means *VRTETH4
- Value of -45 means *VRTETH5
- Value of -46 means *VRTETH6
- Value of -47 means *VRTETH7
- Value of -48 means *VRTETH8
- Value of -49 means *VRTETH9

Predial delay (PREDIALDLY). The length of time to wait before dialing the number to establish a connection to the remote system or network. (See the PREDIALDLY parameter in the Control Language (CL) information for the CRTLINX25 command.)

Propagation delay (PRPDLY). The time required for a signal to travel from one end of a link to the other end. (See the PRPDLY parameter in the Control Language (CL) information for the CRTLINDDI, CRTLINETH, CRTLINFR, CRTLINSDLC, CRTLINTRN, CRTLINWLS, or CRTLINX25 command.)

Receive overrun (OVERRUN). The level of error threshold monitoring done by the system for receive overrun errors. (See the OVERRUN parameter in the Control Language (CL) information for the CRTLINIDLC command.)

Exceptions:

- Value of -4 means *OFF
- Value of -5 means *MIN
- Value of -6 means *MED

- Value of -7 means *MAX

» **Note:** This field is no longer supported as of V5R3M0. «

Receive timer (RCVTMR). The maximum amount of time the system waits for a response from the remote system before a time-out occurs. (See the RCVTMR parameter in the Control Language (CL) information for the CRTLINBSC command.)

Receive TTD or WACK retry (RCVRTY). The number of times that a temporary text delay (TTD) or wait-before-transmit-positive acknowledgement (WACK) is received before the session fails. (See the RCVRTY parameter in the Control Language (CL) information for the CRTLINBSC command.)

Exception:

- Value of -8 means *NOMAX

Recovery limits (CMNRCYLMT). The second-level communications recovery limit for each line description. These limits are returned in two separate fields:

- *Count limit*: The number of second-level recovery attempts to be automatically performed by the system.
- *Time interval*: The length of time (in minutes) in which the specified number of second-level recoveries can be attempted.

(See the CMNRCYLMT parameter in the Control Language (CL) information for the CRTLINASC, CRTLINBSC, CRTLINDDI, CRTLINETH, CRTLINFR, CRTLINPPP, CRTLINSDLC, CRTLINTRN, CRTLINWLS, or CRTLINX25 command.)

Exception:

- Value of -14 means *SYSVAL

Redial delay (REDIALDLY). The length of time to wait before redialing the number to establish a connection to the remote system or network if the previous attempt was unsuccessful. (See the REDIALDLY parameter in the Control Language (CL) information for the CRTLINX25 command.)

LES ATM address (LESATMADR). Specifies the ATM network address of the remote LAN emulation server. (See the LESATMADR parameter in the Control Language (CL) information for the CRTLINETH or CRTLINTRN command.) This address is returned in three separate fields:

- *Element 1: Network prefix*: The network prefix of the ATM address of the remote server. This is a 26 digit hexadecimal value.
- *Element 2: End system identifier*: Specify the end system identifier of the remote server. This is a 12 digit hexadecimal value.
- *Element 3: Selector byte*: The selector byte of the remote server. This is a two digit hexadecimal value.

» **Note:** This field is no longer supported as of V5R3M0. «

Remote answer timer (RMTANSTMR). The length of time that the system should wait for the modem (DCE) to raise Data Set Ready (DSR) after dialing before signaling an error. (See the RMTANSTMR parameter in the Control Language (CL) information for the CRTLINASC, CRTLINBSC, CRTLINPPP, CRTLINSDLC, or CRTLINX25 command.)

Reported emulated LAN name. The reported emulated LAN name.

» **Note:** This field is no longer supported as of V5R3M0. «

Reserved. Space included for alignment.

Response timer (IDLCRSPTMR). The length of time to wait before retransmitting a frame when an acknowledgement is not received. (See the IDLCRSPTMR parameter in the Control Language (CL) information for the CRTLINIDLC command.)

Exception:

- Value of -9 means *CNN

Note: This field is no longer supported as of V5R3M0.

Resource name (RSRCNAME). The unique name that is assigned by the system to the physical equipment (in this case, a communications port) attached to the system. (See the RSRCNAME parameter in the Control Language (CL) information for the CRTLINASC, CRTLINBSC, CRTLINDDI, CRTLINETH, CRTLINFAX, CRTLINPPP, CRTLINSDLC, CRTLINTRN, CRTLINWLS, or CRTLINX25 command.)

Retransmitted frames (RETRANSMIT). The level of error threshold monitoring done by the system for retransmitted frames. (See the RETRANSMIT parameter in the Control Language (CL) information for the CRTLINIDLC command.)

Exceptions:

- Value of -4 means *OFF
- Value of -5 means *MIN
- Value of -6 means *MED
- Value of -7 means *MAX

Note: This field is no longer supported as of V5R3M0.

Security for line (SECURITY). The types of security protection available on the line. (See the SECURITY parameter in the Control Language (CL) information for the CRTLINDDI, CRTLINETH, CRTLINFR, CRTLINSDLC, CRTLINTRN, CRTLINWLS, or CRTLINX25 command.)

Segment number. The unique number that identifies the LAN to which the network server is attached.

Set modem to ASYNC command (SETMDMASC). The V25BIS command that is used to set the modem to ASYNC mode. (See the SETMDMASC parameter in the Control Language (CL) information for the CRTLINASC or CRTLINPPP command.)

Short frame (SHORTFRAME). The level of error threshold monitoring done by the system for short frame errors. (See the SHORTFRAME parameter in the Control Language (CL) information for the CRTLINIDLC command.)

Exceptions:

- Value of -4 means *OFF
- Value of -5 means *MIN
- Value of -6 means *MED
- Value of -7 means *MAX

Note: This field is no longer supported as of V5R3M0.

SHM access code (SHMACC). The access code used by an X.21 short-hold mode (SHM) line when calling a system on another network. (See the SHMACC parameter in the Control Language (CL) information for the CRTLINSDLC command.)

SHM answer delay timer (SHMANSDLY). The length of time the system waits for controllers to call in before attempting to call out. (See the SHMANSDLY parameter in the Control Language (CL) information for the CRTLINSDLC command.)

Exception:

- Value of -8 means *NOMAX

SHM call format (SHMCALLFMT). The format of the network identifier used in the local system's connection number. (See the SHMCALLFMT parameter in the Control Language (CL) information for the CRTLINSDLC command.)

SHM call timer (SHMCALLTMR). The interval at which a connection is reestablished on an X.21 short-hold mode line to verify the state of the remote system if no normal data traffic occurs in the specified interval. (See the SHMCALLTMR parameter in the Control Language (CL) information for the CRTLINSDLC command.)

Exception:

- Value of -3 means *NONE

SHM maximum connect timer (SHMMAXCNN). The length of time the system allows connection to any one controller when there are more controllers than there are available ports. (See the SHMMAXCNN parameter in the Control Language (CL) information for the CRTLINSDLC command.)

Exception:

- Value of -8 means *NOMAX

SHM node type (SHMNODE). The physical unit type of the controllers using the X.21 short-hold mode line. (See the SHMNODE parameter in the Control Language (CL) information for the CRTLINSDLC command.)

Short retry (SHORTRTY). The number of retry attempts that the system makes during a burst of call retries. (See the SHORTRTY parameter in the Control Language (CL) information for the CRTLINSDLC command.)

Short timer (SHORTTMR). The length of time that the system waits between retry attempts when processing a connection request. (See the SHORTTMR parameter in the Control Language (CL) information for the CRTLINSDLC command.)

SSAP address. The hexadecimal logical channel address that is used to route data off the line to the proper user.

SSAP maximum frame. The largest frame size allowed on this source service access point (SSAP).

Exception:

- Value of -26 means *MAXFRAME

SSAP type. The type of communications used by the system on this SSAP.

Station address (STNADR). The address used by the remote control station to poll the system. (See the STNADR parameter in the Control Language (CL) information for the CRTLINBSC or CRTLINSDLC command.)

Stop bits (STOPBITS). The number of bits to be added to the end of each character to keep the local and remote ends of the line synchronized. (See the STOPBITS parameter in the Control Language (CL) information for the CRTLINASC command.)

Switched connection type (SWTCNN). Whether the line can be used for incoming and outgoing calls, incoming calls only, or outgoing calls only. (See the SWTCNN parameter in the Control Language (CL) information for the CRTLINASC, CRTLINBSC, CRTLINPPP, CRTLINSDLC, or CRTLINX25 command.)

Switched controller name. The name of a controller associated with this line.

Switched disconnect (SWTDSC). For switched lines (CNN(*SWTPP)), whether the line is to be dropped when no virtual circuits are active and the disconnection timers specified on the SWTDSCTMR parameter have expired. (See the SWTDSC parameter in the Control Language (CL) information for the CRTLINX25 command.)

Switched disconnect timers (SWTDSCTMR). The timers used for disconnecting switched lines from a network or remote system. The timer values are returned in two separate fields:

- *Minimum connection*: The minimum length of time the system keeps the connection active.
- *Disconnect delay*: The length of time the system waits before attempting to disconnect the switched connection when the line is idle and the minimum connection time has expired.

(See the SWTDSCTMR parameter in the Control Language (CL) information for the CRTLINX25 command.)

Switched network backup (SNBU). Whether or not you want the switched network backup capability. (See the SNBU parameter in the Control Language (CL) information for the CRTLINASC, CRTLINBSC or CRTLINSDLC command.)

Switched NWI selection (SWTNWISLCT). The method used to select network interface (NWI) descriptions from the switched NWI list. (See the SWTNWISLCT parameter in the Control Language (CL) information for the CRTLINPPP, or CRTLINX25 command.)

» **Note:** This field is no longer supported as of V5R3M0. «

SYN characters (SYNCCHARS). The number of SYN characters used to establish and maintain synchronization and as time-fill characters in the absence of any data or other control character. (See the SYNCCHARS parameter in the Control Language (CL) information for the CRTLINBSC command.)

Text description (TEXT). A brief description of the line and its location. (See the TEXT parameter in the Control Language (CL) information for the CRTLINASC, CRTLINBSC, CRTLINDDI, CRTLINETH, CRTLINFAX, CRTLINFR, CRTLINPPP, CRTLINSDLC, CRTLINTDLC, CRTLINTRN, CRTLINWLS, or CRTLINX25 command.)

Time information retrieved. The time that the information was provided by the API. It is returned as 6 characters in the form HHMMSS, where:

HH	Hour
MM	Minute
SS	Second

Token-ring inform of beacon (TRNINFBCN). Whether the token-ring network manager for this line is to provide notification of beaconing on the ring to the system operator. (See the TRNINFBCN parameter in the Control Language (CL) information for the CRTLINTRN command.)

Token rotation time. The token rotation time requested when the line was created. (See the TKNRTTTIME parameter in the Control Language (CL) information for the CRTLINDDI command.)

Exception:

- Value of -11 means *CALC

Transmit TTD or WACK retry (TMTRTY). The number of times that a temporary-text-delay (TTD) or wait-before-transmit-positive acknowledgement (WACK) control character is sent to hold up the line when the system is not ready to respond to the remote end. (See the TMTRTY parameter in the Control Language (CL) information for the CRTLINBSC command.)

Exception:

- Value of -8 means *NOMAX

Transmit underrun (UNDERRUN). The level of error threshold monitoring done by the system for transmit underrun errors. (See the UNDERRUN parameter in the Control Language (CL) information for the CRTLINIDLC command.)

Exceptions:

- Value of -4 means *OFF
- Value of -5 means *MIN
- Value of -6 means *MED
- Value of -7 means *MAX

» **Note:** This field is no longer supported as of V5R3M0. «

TRLAN manager logging level (TRNLOGLVL). The logging level to be used by the token-ring network manager. This information is returned in two separate fields:

- *Configured*
- *Current*

(See the TRNLOGLVL parameter in the Control Language (CL) information for the CRTLINTRN command.)

TRLAN manager mode (TRNMGRMODE). Whether the token-ring network manager for this line is operating in observing or controlling mode. (See the TRNMGRMODE parameter in the Control Language (CL) information for the CRTLINTRN command.)

Use LECS address (USELECSADR). Specifies whether the local system contacts the LAN emulation server (LES) address. (See the USELECSADR parameter in the Control Language (CL) information for the CRTLINETH or CRTLINTRN command.)

» **Note:** This field is no longer supported as of V5R3M0. «

Type of parity (PARITY). The type of parity for error checking. (See the PARITY parameter in the Control Language (CL) information for the CRTLINASC command.)

User-defined 1, 2, and 3 (USRDFN1, USRDFN2, USRDFN3). Used to describe any unique characteristics of the line that you want to control. (See the USRDFN1, USRDFN2, or USRDFN3 parameter in the Control Language (CL) information for the CRTLINDDI, CRTLINETH, CRTLINFR, CRTLINSDLC, CRTLINTRN, CRTLINWLS, or CRTLINX25 command.)

Vary on wait (VRYWAIT). Whether the line is varied on synchronously or asynchronously. (See the VRYWAIT parameter in the Control Language (CL) information for the CRTLINASC, CRTLINBSC, CRTLINDDI, CRTLINETH, CRTLINFAX, CRTLINFR, CRTLINPPP, CRTLINSDLC, CRTLINTRN, CRTLINWLS, or CRTLINX25 command.)

Exception:

- Value of -15 means *NOWAIT

Virtual hardware. Specifies whether a real Ethernet line or a virtual Ethernet LAN adapter is associated with the line description.

- A value of *NO means a real Ethernet line is used.
- A value of *YES means a virtual Ethernet LAN adapter is used.

X.25 DCE support (X25DCE). Allows the system to communicate directly with another system without going through an X.25 network. (See the X25DCE parameter in the Control Language (CL) information for the CRTLINX25 command.)

XOFF character (XOFFCHAR). The hexadecimal value used to tell your line to stop sending data. (See the XOFFCHAR parameter in the Control Language (CL) information for the CRTLINASC command.)

XON character (XONCHAR). The hexadecimal value used to tell your line to start sending data. (See the XONCHAR parameter in the Control Language (CL) information for the CRTLINASC command.)

Error Messages

Message ID	Error Message Text
CPF24B4 E	Severe error while addressing parameter list.
CPF2625 E	Not able to allocate object &1.
CPF2634 E	Not authorized to object &1.
CPF26A7 E	Category of object not compatible with API format.
CPF26B2 E	NetBIOS description &1 previously deleted.
CPF2703 E	Controller description &1 not found.
CPF2704 E	Line description &1 not found.
CPF3C19 E	Error occurred with receiver variable specified.
CPF3C21 E	Format name &1 is not valid.
CPF3C24 E	Length of the receiver variable is not valid.
CPF3CF1 E	Error code parameter not valid.
CPF3C90 E	Literal value cannot be changed.
CPF8104 E	Controller description &4 damaged.
CPF811D E	Network interface description &4 damaged.
CPF8125 E	Line description &4 damaged.
CPF9872 E	Program or service program &1 in library &2 ended. Reason code &3.

API introduced: V2R3

Top | "Configuration APIs," on page 1 | APIs by category

Retrieve Network Server Description (QDCRNWSD) API

Required Parameter Group:	
1	Receiver variable
Output	Char(*)
2	Length of receiver variable
Input	Binary(4)
3	Format name
Input	Char(8)
4	Network server name
Input	Char(10)
5	Error Code
I/O	Char(*)
Default Public Authority: *USE	
Threadsafe: Yes	

The Retrieve Network Server Description (QDCRNWSD) API retrieves information about a network server description.

Authorities and Locks

Line Description Authority
*USE

Network Server Description Authority
*USE

Line Description Lock
*EXCLRD

Network Server Description Lock
*EXCLRD

Required Parameter Group

Receiver variable
OUTPUT; CHAR(*)

The variable that is to receive the network server information.

Length of receiver variable
INPUT; BINARY(4)

The length of the area that is referred to by the receiver variable parameter. If the amount of information to be returned is greater than this value, the information will be truncated to this length.

Format name
INPUT; CHAR(8)

The content and format of the information that is returned for each network server. The possible format names are:

NWSD0100 Basic network server information
NWSD0200 Detailed information for network server category *LANSERVER
NWSD0300 Detailed information for network server category *NETWARE
NWSD0400 Detailed information for network server category *BASE
NWSD0500 Detailed information for network server category *AIX
NWSD0600 Detailed information for network server category *WINDOWSNT
NWSD0700 Detailed information for network server category *GUEST

See "Format of Network Server Information" for a description of these formats.

Note: Formats NWSD0200, NWSD0300, NWSD0400, and NWSD0500 are no longer supported.

Network server name
INPUT; CHAR(10)

The name of the network server description to be retrieved.

Error code
I/O; CHAR(*)

The structure in which to return error information. For the format of the structure, see Error Code Parameter.

Format of Network Server Information

When the network server category is unknown, specify NWSD0100 and the basic information (including network server category) will be returned. When the network server category is known, specify one of the other category-specific formats.

For detailed descriptions of the fields returned in these formats, see "Field Descriptions" on page 168.

NWSD0100 Format

Use this format to find out the network server category, plus some basic information about the network server. Then you may use the returned network server category to select one of the other (category-specific) formats to call the API again for detailed information about the network server description. This format also returns the number of lines that are currently attached to this network server.

Offset			
Dec	**Hex**	**Type**	**Field**
0	0	BINARY(4)	Bytes returned
4	4	BINARY(4)	Bytes available
8	8	BINARY(4)	Offset to higher-level format
12	C	CHAR(10)	Number of attached nonswitched lines
22	16	CHAR(7)	Date information retrieved
29	1D	CHAR(6)	Time information retrieved
35	23	CHAR(8)	Network server name
43	2B	CHAR(10)	Online at IPL
53	35	CHAR(50)	Text description
103	67	CHAR(1)	Network server type

NWSD0200 Format

This format returns detailed information about a network server of category *LANSERVER.

Note: Format NWSD0200 is no longer supported.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format NWSD0100
104	68	BINARY(4)	Offset to attached nonswitched lines
108	6C	BINARY(4)	Number of attached nonswitched lines
112	70	BINARY(4)	Entry length of attached nonswitched line
116	74	BINARY(4)	Offset to network storage spaces
120	78	BINARY(4)	Number of storage spaces
124	7C	BINARY(4)	Entry length of storage spaces
128	80	CHAR(10)	Vary on wait
138	8A	CHAR(4)	Language version
142	8E	CHAR(10)	Country or region code
152	98	CHAR(10)	Code page
162	A2	CHAR(10)	Resource name
172	AC	CHAR(10)	Reserved
182	B6	CHAR(10)	Domain role
192	C0	CHAR(10)	Group profile
202	CA	CHAR(10)	NetBIOS description
212	D4	CHAR(2)	Reserved
214	D6	CHAR(10)	Configuration file name
224	E0	CHAR(10)	Configuration file library name
234	EA	CHAR(10)	Start TCP/IP
244	F4	BINARY(4)	Offset to list of TCP/IP port configurations
248	F8	BINARY(4)	Length of TCP/IP port configuration entries
252	FC	BINARY(4)	Number of TCP/IP port configurations
256	100	BINARY(4)	Offset to list of TCP/IP route entries
260	104	BINARY(4)	Length of TCP/IP route entries
264	108	BINARY(4)	Number of TCP/IP route entries
268	10C	BINARY(4)	Offset to list of TCP/IP name server entries
272	110	BINARY(4)	Length of TCP/IP name server entries
276	114	BINARY(4)	Number of TCP/IP name server entries
280	118	CHAR(63)	TCP/IP host name
343	157	CHAR(1)	Reserved
344	158	CHAR(255)	TCP/IP domain name
599	257	CHAR(1)	Reserved

Offset		Type	Field
Dec	Hex		
These fields repeat for each nonswitched line		CHAR(10)	Attached nonswitched line
		CHAR(10)	Line category
		CHAR(10)	Port number
		CHAR(50)	Line text description
These fields repeat for each network storage list		CHAR(10)	Storage space size
		CHAR(10)	Storage space name
		CHAR(1)	Drive letter
		CHAR(50)	Storage space text description
These fields repeat for each TCP/IP port configuration		CHAR(10)	TCP/IP port number
		CHAR(15)	Internet address
		CHAR(1)	Reserved
		CHAR(15)	Subnet mask
		CHAR(1)	Reserved
		BINARY(4)	MTU for port
These fields repeat for each TCP/IP route entry		CHAR(15)	Route destination
		CHAR(1)	Reserved
		CHAR(15)	Route subnet mask
		CHAR(1)	Reserved
		CHAR(15)	Next hop
		CHAR(1)	Reserved
These fields repeat for each TCP/IP name server		CHAR(15)	TCP/IP name server
		CHAR(1)	Reserved

NWSD0300 Format

This format returns detailed information about a network server of category *NETWARE.

Note: Format NWSD0300 is no longer supported.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format NWSD0100
104	68	BINARY(4)	Offset to attached nonswitched lines
108	6C	BINARY(4)	Number of attached nonswitched lines
112	70	BINARY(4)	Entry length of attached nonswitched line
116	74	BINARY(4)	Offset to network storage spaces
120	78	BINARY(4)	Number of storage spaces
124	7C	BINARY(4)	Entry length of storage space
128	80	CHAR(10)	Vary on wait
138	8A	CHAR(4)	Language version

Offset		Type	Field
Dec	Hex		
142	8E	CHAR(10)	Country or region code
152	98	CHAR(10)	Code page
162	A2	CHAR(10)	Resource name
172	AC	CHAR(10)	IPX description
182	B6	CHAR(10)	Local IPX connection
192	C0	CHAR(10)	Configuration file name
202	CA	CHAR(10)	Configuration file library name
212	D4	CHAR(10)	Message queue name
222	DE	CHAR(10)	Message queue library name
232	E8	CHAR(10)	Synchronize date and time
242	F2	BINARY(4)	Offset to list of restricted device resources
246	F6	BINARY(4)	Length of restricted device resource
250	FA	BINARY(4)	Number of restricted device resource entries
These fields repeat for each nonswitched line		CHAR(10)	Attached nonswitched line
		CHAR(10)	Line category
		CHAR(10)	Port number
		CHAR(10)	Line text description
These fields repeat for each network storage list		CHAR(10)	Storage space size
		CHAR(10)	Storage space name
		CHAR(1)	Drive letter
		CHAR(50)	Storage space text description
This field repeats for each restricted device resource		CHAR(10)	Restricted device resource
		CHAR(2)	Reserved

NWSD0400 Format

This format returns detailed information about a network server of category *BASE.

Note: Format NWSD0400 is no longer supported.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format NWSD0100
104	68	BINARY(4)	Offset to attached nonswitched lines
108	6C	BINARY(4)	Number of attached nonswitched lines
112	70	BINARY(4)	Entry length of attached nonswitched lines
116	74	BINARY(4)	Offset to network storage spaces
120	78	BINARY(4)	Number of storage spaces
124	7C	BINARY(4)	Entry length of storage spaces
128	80	CHAR(10)	Vary on wait

Offset		Type	Field
Dec	Hex		
138	8A	CHAR(4)	Language version
142	8E	CHAR(10)	Country or region code
152	98	CHAR(10)	Code page
162	A2	CHAR(10)	Resource name
172	AC	CHAR(10)	NetBIOS description
182	B6	CHAR(10)	Configuration file name
192	C0	CHAR(10)	Configuration file library name
202	CA	CHAR(10)	Start NetBIOS
212	D4	CHAR(10)	Start TCP/IP
222	DE	CHAR(2)	Reserved
224	E0	BINARY(4)	Offset to list of TCP/IP port configurations
228	E4	BINARY(4)	Length of TCP/IP port configuration entries
232	E8	BINARY(4)	Number of TCP/IP port configurations
236	EC	BINARY(4)	Offset to list of TCP/IP route entries
240	F0	BINARY(4)	Length of TCP/IP route entries
244	F4	BINARY(4)	Number of TCP/IP route entries
248	F8	BINARY(4)	Offset to list of TCP/IP name server entries
252	FC	BINARY(4)	Length of TCP/IP name server entries
256	100	BINARY(4)	Number of TCP/IP name server entries
260	104	CHAR(63)	TCP/IP host name
323	143	CHAR(1)	Reserved
324	144	CHAR(255)	TCP/IP domain name
579	243	CHAR(1)	Reserved
580	244	CHAR(10)	Message queue name
590	24E	CHAR(10)	Message queue library name
600	258	CHAR(10)	Synchronize date and time
These fields repeat for each nonswitched line		CHAR(10)	Attached nonswitched line
		CHAR(10)	Line category
		CHAR(10)	Port number
		CHAR(10)	Line text description
These fields repeat for each network storage list		CHAR(10)	Storage space size
		CHAR(10)	Storage space name
		CHAR(1)	Drive letter
		CHAR(50)	Storage space text description
These fields repeat for each TCP/IP port configuration		CHAR(10)	TCP/IP port number
		CHAR(15)	Internet address
		CHAR(1)	Reserved
		CHAR(15)	Subnet mask
		CHAR(1)	Reserved
		BINARY(4)	MTU for port

Offset		Type	Field
Dec	Hex		
These fields repeat for each TCP/IP route entry		CHAR(15)	Route destination
		CHAR(1)	Reserved
		CHAR(15)	Route subnet mask
		CHAR(1)	Reserved
		CHAR(15)	Next hop
		CHAR(1)	Reserved
These fields repeat for each TCP/IP name server		CHAR(15)	TCP/IP name server
		CHAR(1)	Reserved

NWSD0500 Format

This format returns detailed information about a network server of category *AIX.

Note: Format NWSD0500 is no longer supported.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format NWSD0100
104	68	BINARY(4)	Offset to attached nonswitched lines
108	6C	BINARY(4)	Number of attached nonswitched lines
112	70	BINARY(4)	Entry length of attached nonswitched lines
116	74	BINARY(4)	Offset to network storage spaces
120	78	BINARY(4)	Number of storage spaces
124	7C	BINARY(4)	Entry length of storage spaces
128	80	CHAR(10)	Vary on wait
138	8A	CHAR(10)	Resource name
148	94	CHAR(10)	Console buffer size
158	9E	CHAR(10)	Delete server users
168	A8	CHAR(10)	Set password rules
178	B2	CHAR(10)	Synchronize date and time
188	BC	CHAR(4)	Reserved
192	C0	BINARY(4)	Offset to list of TCP/IP port configurations
196	C4	BINARY(4)	Length of TCP/IP port configuration entries
200	C8	BINARY(4)	Number of TCP/IP port configurations
204	CC	CHAR(63)	TCP/IP host name
267	10B	CHAR(1)	Reserved
268	10C	CHAR(10)	Message queue name
278	116	CHAR(10)	Message queue library name
288	120	BINARY(4)	Default CCSID
292	124	CHAR(15)	AIX version

Offset		Type	Field
Dec	Hex		
307	133	CHAR(5)	Default locale
These fields repeat for each nonswitched line		CHAR(10)	Attached nonswitched line
		CHAR(10)	Line category
		CHAR(10)	Port number
		CHAR(10)	Line text description
These fields repeat for each network storage list		CHAR(10)	Storage space size
		CHAR(10)	Storage space name
		CHAR(1)	Reserved
		CHAR(50)	Storage space text description
		CHAR(3)	Drive sequence number
		CHAR(8)	Physical volume name
		CHAR(15)	Volume group name
		CHAR(14)	Level identifier
		CHAR(1)	Remove link allowed
		CHAR(1)	Reserved
These fields repeat for each TCP/IP port configuration		CHAR(10)	TCP/IP port number
		CHAR(15)	Internet address
		CHAR(1)	Reserved
		CHAR(15)	Subnet mask
		CHAR(1)	Reserved
		BINARY(4)	MTU for port

NWSD0600 Format

This format returns detailed information about a network server of category *WINDOWSNT.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format NWSD0100
104	68	BINARY(4)	Offset to attached nonswitched lines
108	6C	BINARY(4)	Number of attached nonswitched lines
112	70	BINARY(4)	Entry length of attached nonswitched lines
116	74	BINARY(4)	Offset to network storage spaces
120	78	BINARY(4)	Number of storage spaces
124	7C	BINARY(4)	Entry length of storage spaces
128	80	CHAR(10)	Vary on wait
138	8A	CHAR(10)	Resource name
148	94	CHAR(10)	Domain role
158	9E	CHAR(4)	Language version
162	A2	CHAR(10)	Reserved

Offset		Type	Field
Dec	Hex		
172	AC	CHAR(10)	Code page
182	B6	CHAR(10)	Message queue name
192	C0	CHAR(10)	Message queue library name
202	CA	CHAR(10)	Synchronize date and time
212	D4	BINARY(4)	Offset to list of TCP/IP port configurations
216	D8	BINARY(4)	Length of TCP/IP port configuration entries
220	DC	BINARY(4)	Number of TCP/IP port configurations
224	E0	BINARY(4)	Offset to list of TCP/IP route entries
228	E4	BINARY(4)	Length of TCP/IP route entries
232	E8	BINARY(4)	Number of TCP/IP route entries
236	EC	BINARY(4)	Offset to list of TCP/IP name server entries
240	F0	BINARY(4)	Length of TCP/IP name server entries
244	F4	BINARY(4)	Number of TCP/IP name server entries
248	F8	CHAR(63)	TCP/IP host name
311	137	CHAR(1)	Reserved
312	138	CHAR(255)	TCP/IP domain name
567	237	CHAR(1)	Reserved
568	238	BINARY(4)	Offset to list of restricted device resources
572	23C	BINARY(4)	Length of restricted device resource
576	240	BINARY(4)	Number of restricted device resource entries
580	244	BINARY(4)	Offset to list of event logs
584	248	BINARY(4)	Length of event log
588	24C	BINARY(4)	Number of event log entries
592	250	CHAR(10)	Configuration file name
602	25A	CHAR(10)	Configuration file library name
612	264	CHAR(10)	Install source storage size
622	26E	CHAR(10)	Install source storage type
632	278	CHAR(2)	Install source storage ASP
634	27A	CHAR(10)	System storage size
644	284	CHAR(10)	System storage type
654	28E	CHAR(2)	System storage ASP
656	290	BINARY(4)	Offset to list of valid code pages for a language version
660	294	BINARY(4)	Entry length of valid code pages for a language version
664	298	BINARY(4)	Number of valid code pages for a language version
668	29C	CHAR(10)	Resource type-model
678	2A6	CHAR(10)	System storage ASP name
688	2B0	BINARY(4)	System storage pool ID full
692	2B4	BINARY(4)	Install source pool ID full
696	2B8	CHAR(10)	Install source storage ASP name
706	2C2	CHAR(10)	Propagate Domain Users

Offset		Type	Field
Dec	Hex		
716	2CC	BINARY(4)	Offset to list of cluster configuration
720	2D0	BINARY(4)	Entry length of cluster configuration
724	2D4	BINARY(4)	Number of cluster configurations
728	2D8	BINARY(4)	Offset to list of clustered servers
732	2DC	BINARY(4)	Entry length of clustered servers
736	2E0	BINARY(4)	Number of clustered servers
740	2E4	CHAR(10)	Windows version
» 750	2EE	CHAR(10)	Shutdown timeout «
These fields repeat for each nonswitched line		CHAR(10)	Attached nonswitched line
		CHAR(10)	Line category
		CHAR(10)	Port number
		CHAR(50)	Line text description
These fields repeat for each network storage list		CHAR(10)	Storage space size
		CHAR(10)	Storage space name
		CHAR(1)	Reserved
		CHAR(50)	Storage space text description
		CHAR(3)	Drive sequence number
		CHAR(38)	Reserved
		CHAR(2)	Auxiliary storage pool ID
		CHAR(10)	Access mode
		CHAR(10)	Storage link type
		CHAR(10)	Auxiliary storage pool name
		BINARY(4)	Auxiliary storage pool ID full
These fields repeat for each TCP/IP port configuration		CHAR(10)	TCP/IP port number
		CHAR(15)	Internet address
		CHAR(1)	Reserved
		CHAR(15)	Subnet mask
		CHAR(1)	Reserved
		BINARY(4)	MTU for port
		CHAR(15)	Gateway address
		» CHAR(*) «	Reserved
These fields repeat for each TCP/IP route entry		CHAR(15)	Route destination
		CHAR(1)	Reserved
		CHAR(15)	Route subnet mask
		CHAR(1)	Reserved
		CHAR(15)	Next hop
		CHAR(1)	Reserved
These fields repeats for each TCP/IP name server		CHAR(15)	TCP/IP name server
		CHAR(1)	Reserved

Offset		Type	Field
Dec	Hex		
These fields repeats for each restricted device resource		CHAR(10)	Restricted device resource
		CHAR(2)	Reserved
These fields repeats for each event log		CHAR(10)	Event log
		CHAR(2)	Reserved
These fields repeats for each code page valid for a language version		CHAR(10)	Code page
		CHAR(2)	Reserved
These fields repeat for each cluster configuration		CHAR(10)	Cluster name
		CHAR(15)	Cluster domain name
		CHAR(3)	Reserved
		BINARY(4)	Quorum resource ASP
		CHAR(10)	Cluster connection port
		CHAR(15)	Cluster internet address
		CHAR(15)	Cluster subnet mask
These fields repeat for each clustered server		CHAR(8)	Clustered server name
		CHAR(50)	Clustered server text description
		CHAR(2)	Reserved

NWSD0700 Format

This format returns detailed information about a network server of category *GUEST.

Offset		Type	Field
Dec	Hex		
0	0		Returns everything from format NWSD0100
104	68	BINARY(4)	Offset to network storage spaces
108	6C	BINARY(4)	Number of storage spaces
112	70	BINARY(4)	Entry length of storage spaces
116	74	CHAR(10)	Vary on wait
126	7E	CHAR(10)	Resource name
136	88	CHAR(10)	Code page
146	92	CHAR(10)	Message queue name
156	9C	CHAR(10)	Message queue library name
166	A6	CHAR(10)	Synchronize date and time
176	B0	BINARY(4)	Offset to list of restricted device resources
180	B4	BINARY(4)	Length of restricted device resource
184	B8	BINARY(4)	Number of restricted device resource entries
188	BC	CHAR(10)	Partition name
198	C6	CHAR(10)	IPL source
208	D0	BINARY(4)	Offset to IPL stream file
212	D4	BINARY(4)	Length of IPL stream file

Offset		Type	Field
Dec	Hex		
216	D8	BINARY(4)	Offset to IPL parameters
220	DC	BINARY(4)	Length of IPL parameters
224	E0	BINARY(4)	Offset to list of TCP/IP port configurations
228	E4	BINARY(4)	Length of TCP/IP port configuration entries
232	E8	BINARY(4)	Number of TCP/IP port configurations
236	EC	BINARY(4)	Offset to list of TCP/IP route entries
240	F0	BINARY(4)	Length of TCP/IP route entries
244	F4	BINARY(4)	Number of TCP/IP route entries
248	F8	BINARY(4)	Offset to list of TCP/IP name server entries
252	FC	BINARY(4)	Length of TCP/IP name server entries
256	100	BINARY(4)	Number of TCP/IP name server entries
260	104	CHAR(63)	TCP/IP host name
323	143	CHAR(1)	Reserved
324	144	CHAR(255)	TCP/IP domain name
579	243	CHAR(1)	Reserved
» 580	244	CHAR(10)	Shutdown timeout «
» 590	24E	CHAR(10)	Power control «
» 600	258	BINARY(4)	Partition number «
» 604	25C	CHAR(96)	Partition name long «
		CHAR(*)	IPL stream file
		CHAR(*)	IPL parameters
These fields repeat for each network storage list		CHAR(10)	Storage space size
		CHAR(10)	Storage space name
		CHAR(1)	Reserved
		CHAR(50)	Storage space text description
		CHAR(3)	Drive sequence number
		CHAR(38)	Reserved
		CHAR(2)	Auxiliary storage pool ID
		CHAR(10)	Access mode
		CHAR(10)	Storage link type
		CHAR(10)	Auxiliary storage pool name
		BINARY(4)	Auxiliary storage pool ID full
These fields repeat for each TCP/IP port configuration		CHAR(10)	TCP/IP port number
		CHAR(15)	Internet address
		CHAR(1)	Reserved
		CHAR(15)	Subnet mask
		CHAR(1)	Reserved
		BINARY(4)	MTU for port

Offset		Type	Field
Dec	Hex		
These fields repeat for each TCP/IP route entry		CHAR(15)	Route destination
		CHAR(1)	Reserved
		CHAR(15)	Route subnet mask
		CHAR(1)	Reserved
		CHAR(15)	Next hop
		CHAR(1)	Reserved
This field repeats for each TCP/IP name server		CHAR(15)	TCP/IP name server
		CHAR(1)	Reserved
This field repeats for each restricted device resource		CHAR(10)	Restricted device resource
		CHAR(2)	Reserved

Field Descriptions

Some of the fields in the various formats returned by this API are described in greater detail in the Control Language (CL) information for the CRTNWSD command that was used to create the network server description object. They also are described in the online help for the CRTNWSD command. For these fields, the CL parameter keyword is specified in parentheses following the field name. The CL command name is specified in the field description.

In certain cases, numeric values are assigned by this API to represent character values for some of the returned fields. Where a numeric value is assigned, the numeric value and the equivalent character value are listed as an *Exception* in the following field descriptions.

Access mode. The access mode specified when linking the storage space to the network server description. Access modes include:

**UPDATE*	The storage is linked with exclusive update access.
**READ*	The storage is linked with shareable read only access.
**SHRUPD*	The storage is linked to a clustered server with shared read/write access.

AIX version. The version of AIX that is installed on the storage space linked to the network server.

Attached nonswitched line. The name of a line that is associated with this network server.

Auxiliary storage pool ID. The auxiliary storage pool (ASP) identifier used to hold the network storage space. Possible values are:

-1	A special value of -1 is returned if the size of this field is exceeded. Use the Auxiliary storage pool ID full field instead.
1	System auxiliary storage pool
2-32	Basic auxiliary storage pools
33-99	Independent auxiliary storage pools

Auxiliary storage pool ID full. The auxiliary storage pool (ASP) identifier used to hold the network storage space. Possible values are:

1	System auxiliary storage pool

2-32	Basic auxiliary storage pools
33-255	Independent auxiliary storage pools

Auxiliary storage pool name. The name of the auxiliary storage pool (ASP) used to hold the network storage space. A value of *SYSBAS indicates the ASP is part of the system ASP (ASP number 1) or a basic ASP (ASP numbers 2-32).

Bytes available. The number of bytes of data available to be returned to the user.

Bytes returned. The number of bytes that were returned to the user. This is the lesser of the number of bytes available to be returned or the length of the receiver variable.

Cluster connection port. The name of the cluster connection port.

Cluster domain name. The domain name of the cluster.

Clustered server name. The name of the clustered network server.

Clustered server text description. The brief description of the clustered network server.

Code page (CODEPAGE). The ASCII code page that represents the character set to be used by this network server. (See the CODEPAGE parameter in the Control Language (CL) information for the CRTNWSD command.)

Configuration file name (CFGFILE). The name of the source file that contains configuration data to be used in activating or further defining the server. (See the CFGFILE parameter in the Control Language (CL) information for the CRTNWSD command.)

Configuration file library name. The name of the library that contains configuration data to be used in activating or further defining the server.

Console buffer size. The maximum number of bytes to use for the AIX console message buffer.

Country or region code (CNTRYCODE). The country or region code that represents the character set to be used by this network server. The country or region code controls the format of dates.

Date information retrieved. The date that the information was provided by the API. It is returned as 7 characters in the form CYYMMDD, as follows:

C	Century, where 0 indicates years 19*xx* and 1 indicates years 20*xx*.
YY	Year
MM	Month
DD	Day

Default CCSID. The default coded character set identifier (CCSID) of AIX that is installed in the storage space linked to the network server. This information is updated when the network server is varied off or when the AIX update400 command is run.

Default locale. The default locale of the network server. A locale is made up of the language, cultural data, and character sets used to identify a set of language conventions. This information is updated when the network server is varied off or when the AIX update400 command is run.

Delete server users. Whether the system will delete user identities on the network server that were created by using the network server interfaces.

Domain role (DMNROLE). The domain controller role that is performed by this network server. (See the DMNROLE parameter in the Control Language (CL) information for the CRTNWSD command.)

Drive letter. The drive that is associated with this storage space for the network server.

Drive sequence number. The sequencing number assigned to a network storage space in either the static storage area or the dynamic storage area. Since there are two distinct disk link arrays, it is possible for storage in the dynamic storage area to have the same drive sequence number as storage linked in the static storage area.

Entry length of attached nonswitched lines. The entry length in bytes of each element in the list of attached nonswitched lines returned with this format. A value of zero is returned if the list is empty.

Entry length of cluster configuration. The entry length in bytes of each element in the list of cluster configuration.

Entry length of clustered servers. The entry length in bytes of each element in the list of clustered servers.

Entry length of storage spaces. The entry length in bytes of each element in the list of storage spaces.

Entry length of valid code pages for a language version. The entry length in bytes of each element in the list of valid code pages for a language version returned with this format.

Event log (EVTLOG). The event log messages that are received from the server. This field contains the following values:

**SYS*	The system event log messages are received.
**SEC*	The security event log messages are received.
**APP*	The application event log messages are received.

(See the EVTLOG parameter in the Control Language (CL) information for the CRTNWSD command.)

Gateway address. The internet address of the gateway for the port.

Group profile. The iSeries users who are authorized to log on to this network server.

Install source storage ASP (SVRSTGASP). The auxiliary storage pool (ASP) identifier used to hold the install source storage space. Possible values are:

-1	A special value of -1 is returned if the size of this field is exceeded. Use the Install source storage ASP full field instead.
0	Auxiliary storage pool identifier unavailable. This occurs when the install source storage space is not found or is not linked to the network server.
1	System auxiliary storage pool
2-32	User auxiliary storage pools
33-99	Independent auxiliary storage pools

(See the SVRSTGASP parameter in the Control Language (CL) information for the CRTNWSD command.)

Install source pool ID full (SVRSTGASP). The auxiliary storage pool (ASP) identifier used to hold the install source storage space. Possible values are:

0	Auxiliary storage pool identifier unavailable. This occurs when the install source storage space is not found or is not linked to the network server.

1	System auxiliary storage pool
2-32	Basic auxiliary storage pools
33-255	Independent auxiliary storage pools

(See the SVRSTGASP parameter in the Control Language (CL) information for the CRTNWSD command.)

Install source storage ASP name. The name of the auxiliary storage pool (ASP) used to hold the install source storage space. A value of *SYSBAS indicates the ASP is part of the system ASP (ASP number 1) or a basic ASP (ASP numbers 2-32).

Install source storage size (SVRSTGSIZE). The size in megabytes of the drive that holds the files used to install the Windows server. A value of zero is returned if the storage space size is unknown. (See the SVRSTGSIZE parameter in the Control Language (CL) information for the CRTNWSD command.)

Install source storage type. The type of drive that holds the files used to install the server. Possible storage types are:

**SVRSTG*	Server storage space object
**NWSSTG*	Network server storage space
**UNKNOWN*	Server storage space type is unknown. This occurs when the install source storage space is not found or is not linked to the network server.

Internet address. The internet address assigned to each port.

IPL parameters (IPLPARM). A string of characters that will be passed to the load image at IPL time. It consists of commands or configuration information for the guest operating system. This field is specified in UCS-2 (CCSID 13488). The following special value also may be returned:

**NONE*	IPL parameters are not specified.

(See the IPLPARM parameter in the Control Language (CL) information for the CRTNWSD command.)

IPL source (IPLSRC). The source of the load image that the partition is started from. (See the IPLSRC parameter in the Control Language (CL) information for the CRTNWSD command.)

IPL stream file (IPLSTMF). The path of the stream file containing the load image. This field is specified in UCS-2 (CCSID 13488). The following special value may also be returned:

**NONE*	IPL stream file is not specified.

(See the IPLSTMF parameter in the Control Language (CL) information for the CRTNWSD command.)

IPX description. The name of the IPX description.

Language version (LNGVER). The language version of the network server product. (See the LNGVER parameter in the Control Language (CL) information for the CRTNWSD command.)

Length of event log. The length in bytes of each element in the list of event logs.

Length of IPL parameters. The length, in Unicode characters, of the IPL parameter element.

Length of IPL stream file. The length, in Unicode characters, of the IPL stream file element.

Length of restricted device resource. The length in bytes of each element in the list of restricted device resources.

Length of TCP/IP name server entries. The length in bytes of each element in the list of TCP/IP name servers.

Length of TCP/IP port configuration entries. The length in bytes of each element in the list of TCP/IP port configuration entries.

Length of TCP/IP route entries. The length in bytes of each element in the list of TCP/IP route entries. A value of zero is returned if the list is empty.

Level identifier. The identifier assigned by the system to every storage spaces within a particular AIX volume group.

Line category. This value will be one of the following:

**ETH*	Ethernet
**TRN*	Token Ring Network

The category value is derived from the command that is used to create the line description.

Line name. The name of the line description.

Line text description. A brief description of the line.

Local IPX connection. Whether a connection is to be made to local IPX at the time that this network server is varied on.

Message queue name (MSGQ). The name of the message queue to receive server messages. (See the MSGQ parameter in the Control Language (CL) information for the CRTNWSD command.)

Message queue library name. The name of the message queue library to receive server messages.

MTU for port. The maximum transmission unit (MTU) value specifies the maximum value in bytes that can be transmitted over the TCP/IP interface.

NetBIOS description. The name of the NetBIOS description.

Network server name (NWSD). The name of the network server description. (See the NWSD parameter in the Control Language (CL) information for the CRTNWSD command.)

Network server type (TYPE). The types of network server descriptions. Possible values follow:

5	*WINDOWSNT - used for Windows server
6	*GUEST - used for a guest operating system running in a logical partition

(See the TYPE parameter in the Control Language (CL) information for the CRTNWSD command.)

Next hop. The internet address of the next system (gateway) on the route.

Number of attached nonswitched lines. The number of elements in the list of attached nonswitched lines that are returned with this format. A value of zero is returned if the list is empty.

Number of cluster configuration. The number of elements in the list of cluster configuration.

Number of clustered servers. The number of elements in the list of clustered servers.

Number of event log entries. The number of elements in the list of event logs.

Number of restricted device resource entries. The number of elements in the list of restricted device resources.

Number of storage spaces. The number of elements in the list of storage spaces.

Number of TCP/IP name server entries. The number of elements in the list of TCP/IP name server entries.

Number of TCP/IP port configurations. The number of elements in the list of TCP/IP port configurations.

Number of TCP/IP route entries. The number of elements in the list of TCP/IP route entries. A value of zero is returned if the list is empty.

Number of valid code pages for a language version. The number of elements in the list of valid code pages for a language version.

Offset to list of cluster configuration. The offset in bytes to the first element in the list of cluster configuration.

Offset to list of clustered servers. The offset in bytes to the first element in the list of clustered servers.

Offset to list of event logs. The offset in bytes to the first element in the list of event logs.

Offset to higher-level format. The offset in bytes to the network server specific information.

Offset to attached nonswitched lines. The offset in bytes to the first element in the list of attached nonswitched lines that are returned with this format. A value of zero is returned if the list is empty.

Offset to IPL parameters. The offset in bytes to the IPL parameters element.

Offset to IPL stream file. The offset in bytes to the IPL stream file element.

Offset to list of restricted device resources. The offset in bytes to the first element in the list of restricted device resources.

Offset to network storage spaces. The offset in bytes to the first element in the list of network storage spaces.

Offset to list of TCP/IP name server entries. The offset in bytes to the first element in the list of TCP/IP name server entries.

Offset to list of TCP/IP port configurations. The offset in bytes to the first element in the list of TCP/IP port configurations.

Offset to list of TCP/IP route entries. The offset in bytes to the first element in the list of TCP/IP route entries. A value of zero is returned if the list is empty.

Offset to list of valid code pages for a language version. The offset in bytes to the first element in the list of valid code pages for a language version.

Online at IPL (ONLINE). Whether or not the line is varied on automatically when the system is turned on. (See the ONLINE parameter in the Control Language (CL) information for the CRTNWSD command.)

Partition name (PARTITION). The name of the logical partition to be used by this network server. » This field has been replaced by Partition name long. « (See the PARTITION parameter in the Control Language (CL) information for the CRTNWSD command.)

» **Partition name long(PARTITION).** The name of the logical partition to be used by this network server. The name can be up to 48 characters in length. This field is specified in UCS-2 (CCSID 13488).(See the PARTITION parameter in the Control Language (CL) information for the CRTNWSD command.) The following special value may also be returned:

**NONE*	Partition name is not specified.

«

» **Partition number (PTNNBR).** The number of the logical partition to be used by this network server. (See the PTNNBR parameter in the Control Language (CL) information for the CRTNWSD command.) Possible values are:

0	Partition number is not specified.
no wrap*1-254*	Partition number is specified.

«

Physical volume name. The physical volume name of the storage space as it is defined on the network server. The physical volume name is the name that the AIX operating system assigns to a network server storage space when it is defined to the system.

Port number (PORTS). The port number on the network server to which a line is physically attached.

Exception:

- Value of -28 implies *INTERNAL
- Value of -36 implies *VRTETHPTP
- Value of -40 implies *VRTETH0
- Value of -41 implies *VRTETH1
- Value of -42 implies *VRTETH2
- Value of -43 implies *VRTETH3
- Value of -44 implies *VRTETH4
- Value of -45 implies *VRTETH5
- Value of -46 implies *VRTETH6
- Value of -47 implies *VRTETH7
- Value of -48 implies *VRTETH8
- Value of -49 implies *VRTETH9

(See the PORTS parameter in the Control Language (CL) information for the CRTNWSD command.)

» **Power control (PWRCTL).** Specifies whether the partition associated with the network server description will be powered down when the network server description is varied offline.(See the PWRCTL parameter in the Control Language (CL) information for the CRTNWSD command.)

**YES*	IPL power down of the partition associated with the network server description will occur when the network server description is varied offline.

*NO IPL power down of the partition associated with the network server description will not occur when the network server description is varied offline.

Propagate domain users (PRPDMNUSR). Allows users to determine if domain user enrollment should be allowed on a particular NWSD.

*YES Allow propagation of domain user enrollment for this NWSD.
*NO Do not allow propagation of domain user enrollment for this NWSD.

(See the PRPDMNUSR parameter in the Control Language (CL) information for the CRTNWSD command.)

Quorum resource ASP. The Quorum resource ASP name.

Remove link allowed. Whether this storage space can be unlinked using the Remove Network Server Storage Link (RMVNWSSTGL) command while this network server description is varied on.

Reserved. An ignored field.

Resource name (RSRCNAME). The unique name that is assigned by the system to the physical equipment (in this case, a communications port) attached to the system. (See the RSRCNAME parameter in the Control Language (CL) information for the CRTNWSD command.)

Exception:

- Value of *NONE means a hardware resource is not associated with this network server.

Resource type-model. The hardware resource type for the file server used when the server was installed originally.

Exception:

- Value of *UNKNOWN means the file server hardware resource type is determined the first time the network server description is varied on.

Restricted device resource (RSTDDEVRSC). The restricted device resource name that cannot be used from the system by the network server. (See the RSTDDEVRSC parameter in the Control Language (CL) information for the CRTNWSD command.)

Route destination. The internet address of the remote system.

Route subnet mask. The subnet mask being used with the route. The mask is in the form, nnn.nnn.nnn.nnn, where nnn is a decimal number that ranges from 0 through 255.

Set password rules. Whether the default rules for passwords on the network server are set to the iSeries system value and defaults or are allowed to use the default rules for passwords of the network server.

Shutdown timeout (SHUTDTIMO). Time in minutes to wait for the servers operating system to shutdown before forcing the hardware offline. (See the SHUTDTIMO parameter in the Control Language (CL) information for the CRTNWSD command.)

Start NetBIOS. Whether the NetBIOS protocol is activated when the network server is varied on.

Start TCP/IP. Whether the TCP/IP protocol is activated when the network server is varied on.

Storage link type. The type of link that was specified when the storage space link was added to the network server description. The possible links are:

**NO*	The storage is linked as static storage.
**YES*	The storage is linked as dynamic storage.
**QR*	The storage is linked as a quorum resource for a clustered server.
**SHR*	The storage is linked as a shared disk for a clustered server.

Storage space name. The text that is entered to describe the storage space.

Storage space size. The size that is associated with this storage space for the network server.

Storage space text description. The names of existing client storage spaces.

Subnet mask. The subnet mask that is assigned to each internet address. The mask is in the form, nnn.nnn.nnn.nnn, where nnn is a decimal number that ranges from 0 through 255.

System storage ASP (SVRSTGASP). The auxiliary storage pool (ASP) identifier used to hold the system storage space. Possible values are:

-1	A special value of -1 is returned if the size of this field is exceeded. Use the system storage ASP full field instead.
0	Auxiliary storage pool identifier unavailable. This occurs when the system storage space is not found or is not linked to the network server.
1	System auxiliary storage pool
2-32	User auxiliary storage pools
33-99	Independent auxiliary storage pools

(See the SVRSTGASP parameter in the Control Language (CL) information for the CRTNWSD command.)

System storage ASP name. The name of the auxiliary storage pool (ASP) used to hold the system storage space. A value of *SYSBAS indicates the ASP is part of the system ASP (ASP number 1) or a basic ASP (ASP numbers 2-32).

System storage pool ID full (SVRSTGASP). The auxiliary storage pool (ASP) identifier used to hold the system storage space. Possible values are:

0	Auxiliary storage pool identifier unavailable. This occurs when the system storage space is not found or is not linked to the network server.
1	System auxiliary storage pool
2-32	Basic auxiliary storage pools
33-255	Independent auxiliary storage pools

(See the SVRSTGASP parameter in the Control Language (CL) information for the CRTNWSD command.)

System storage size (SVRSTGSIZE). The size in megabytes of the drive on which the Windows server is installed. A value of zero is returned if the storage space size is unknown. (See the SVRSTGSIZE parameter in the Control Language (CL) information for the CRTNWSD command.)

System storage type. The type of storage space on which the Windows server is installed. Possible storage types are:

**SVRSTG*	Server storage space
**NWSSTG*	Network server storage space

**UNKNOWN* Server storage space type is unknown. This occurs when the install source storage space is not found or is not linked to the network server.

Synchronize date and time (SYNCTIME). Whether the server has synchronized the network server date and time with the system date and time. (See the SYNCTIME parameter in the Control Language (CL) information for the CRTNWSD command.)

TCP/IP host name (TCPHOSTNAM). The short form of the host name to be associated with the network server. (See the TCPHOSTNAM parameter in the Control Language (CL) information for the CRTNWSD command.)

TCP/IP domain name (TCPDMNNAME). The local domain name that is associated with the network server. (See the TCPDMNNAME parameter in the Control Language (CL) information for the CRTNWSD command.)

TCP/IP name server (TCPNAMSVR). The internet address of the name server system that is used by the network server. (See the TCPNAMSVR parameter in the Control Language (CL) information for the CRTNWSD command.)

TCP/IP port configuration (TCPPORTCFG). The TCP/IP configuration values specific to a port on a network server. The information consists of four parts that include the network server port, the internet address assigned to the port, the subnet mask of the port, and the maximum transmission unit. (See the TCPPORTCFG parameter in the Control Language (CL) information for the CRTNWSD command.)

TCP/IP port number. The TCP/IP port number on the network server.

TCP/IP route (TCPRTE). The TCP/IP route identifies routes from the network server to remote systems. The route consists of three parts that include the route destination, the subnet mask, and the next hop interface. (See the TCPRTE parameter in the Control Language (CL) information for the CRTNWSD command.)

Text description (TEXT). A brief description of the network server and its location. (See the TEXT parameter in the Control Language (CL) information for the CRTNWSD command.)

Time information retrieved. The time that the information was provided by the API. It is returned as 6 characters in the form HHMMSS where:

HH Hour
MM Minute
SS Second

Vary on wait (VRYWAIT). Whether the line is varied on synchronously or asynchronously. (See the VRYWAIT parameter in the Control Language (CL) information for the CRTNWSD command.)

Exception:

- Value of -15 implies *NOWAIT

Volume group name. The volume group to which this network server storage space is assigned on the network server. A volume group is a collection of one or more physical volumes. Every physical volume must be assigned to a volume group before it can be used.

Windows version. The version of Windows that is installed.

Error Messages

Message ID	Error Message Text
CPF24B4 E	Severe error while addressing parameter list.
CPF2625 E	Not able to allocate object &1.
CPF2634 E	Not authorized to object &1.
CPF26AE E	Network server description &1 not found.
CPF2704 E	Line description &1 not found.
CPF3C19 E	Error occurred with receiver variable specified.
CPF3C21 E	Format name &1 is not valid.
CPF3C24 E	Length of the receiver variable is not valid.
CPF3C90 E	Literal value cannot be changed.
CPF3CF1 E	Error code parameter not valid.
CPF8125 E	Line description &4 damaged.
CPF814C E	Network server description &4 damaged.
CPF9872 E	Program or service program &1 in library &2 ended. Reason code &3.

API introduced: V4R2

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Retrieve Partition Information (dlpar_get_info) API

Syntax:

```
#include <qpmlpmgt.h>
int dlpar_get_info(void *receiver_variable, int format, int receiver_length);
```

Required Parameter Group:

Service Program Name: QPMLPMGT

Default Public Authority: *EXCLUDE

Threadsafe: Yes

Retrieve Partition Information (dlpar_get_info) API returns information about configuration and CPU utilization of the partition on which this API is called. This API can return information in one of two formats. Format is specified by means of Format of data to return parameter.

Format 1 contains information about partition attributes, which are more static in nature.

Format 2 groups information that can change at any time during partition operation, therefore it has to be sampled more frequently.

If some fields returned by this API are not supported by the installed version of the hypervisor, these fields will be set to zero.

Authorities and Locks

None.

Parameters

Receiver variable
OUTPUT; CHAR(*)

The variable that is to receive the information requested. You can specify the size of this area to be smaller than the length of the requested format as long as you specify the Length parameter correctly. The API will return in the receiver variable only the data that this variable can hold.

Format of the data to return
INPUT; BINARY(4)

The format of information to be returned. The supported formats are:

Value	Description
1	Partition information that is not likely to change very frequently
2	Partition information that may change during the time an operating system runs in a partition.

Length of the receiver variable
INPUT; BINARY(4)

Number of bytes provided by caller in the receiver variable. API will return as much information as fits in the receiver variable.

Format 1

The following information is returned for the Format 1. For detailed descriptions of the fields in the table, see "Field Descriptions" on page 180.

Offset			
Dec	**Hex**	**Type**	**Field**
0	0	BINARY(4)	Version
4	4	BINARY(4)	Reserved
8	8	BINARY(8)	Maximum memory
16	10	BINARY(8)	Minimum memory
24	18	BINARY(8)	Memory region
32	20	BINARY(8)	Dispatch wheel rotation time
40	28	BINARY(4)	LPAR number
44	2C	BINARY(4)	LPAR flags
48	30	BINARY(4)	Maximum physical processors in system
52	34	BINARY(4)	Minimum virtual processors
56	38	BINARY(4)	Maximum virtual processors
60	3C	BINARY(4)	Minimum partition capacity
64	40	BINARY(4)	Maximum partition capacity
68	44	BINARY(4)	Partition capacity increment
72	48	BINARY(4)	Minimum interactive capacity
76	4C	BINARY(4)	Maximum interactive capacity
80	50	BINARY(2)	SMT threads per processor
82	52	CHAR(6)	Reserved
88	58	CHAR(256)	Partition name

Field Descriptions

Dispatch wheel rotation time is the number of nanoseconds in the hypervisor's scheduling window. Each virtual processor will be given the opportunity to execute on a physical processor some time during this period. The amount of time each virtual processor is able to use on a physical processor is determined by partition capacity.

LPAR number is the identifier of this partition. It is unique within a physical machine.

LPAR flags indicate whether or not hardware threads are bound in the partition and whether or not the partition uses only dedicated physical processors. These indicators change very seldom.

This field is composed of several bit flags and contains one or more of the following values:

x'00000001'	Dedicated processors	Partition has dedicated processors.
x'00000002'	Bound hardware threads	Hardware threads are bound.

Use the following table:

Offset		Bit	Type	Field	Description
Dec	Hex				
44	2C		Binary(4)	lpar_flags	
44	2C	0	Bit(30)	Reserved	Reserved
44	2F	6	Bit(1)	lpar_smtbound	Bound hardware threads indicator. If on, hardware threads are bound.
44	2F	7	Bit(1)	lpar_dedicated	Dedicated processors indicator. If on, partition has dedicated processors.

Maximum interactive capacity is the maximum amount of processor capacity (in units of 1/100 of a physical processor) that can be used for OS/400 interactive processing.

Maximum memory is the maximum amount of main storage (in units of megabytes) that can be assigned to this partition.

Maximum partition capacity is the maximum amount of processor capacity (in units of 1/100 of a physical processor) that can be assigned to this partition.

Maximum physical processors in system is the maximum number of physical processors that can be active in this platform without physically installing additional processors. This field includes currently active processors and any standby (on demand) processors that are present in this physical system.

Maximum virtual processors is the maximum number of virtual processors that can be configured for this partition.

Memory region is the minimum amount of main storage (in units of megabytes) that can be added to or removed from this partition's memory.

Minimum interactive capacity is the minimum amount of processor capacity (in units of 1/100 of a physical processor) that can be used for interactive processes.

Minimum memory is the minimum amount of main storage (in units of megabytes) that can be assigned to this partition.

Minimum partition capacity is the minimum amount of processor capacity (in units of 1/100 of a physical processor) that can be configured for this partition.

Minimum virtual processors is the minimum number of virtual processors that can be configured for this partition.

Partition name is the name that has been assigned to this partition. This field is a null-terminated UTF-8 character string.

Partition capacity increment is the minimum capacity (in units of 1/100 of a physical processor) that can be added to or removed from this partition's processor capacity.

Reserved is a reserved field for alignment purposes.

SMT threads per processor is the number of hardware threads per processor when hardware multi-threading is enabled.

Version is the version of format 1 returned by the API.

Format 2

The following information is returned for Format2. For detailed descriptions of the fields in the table, see "Field Descriptions" on page 182.

Offset			
Dec	**Hex**	**Type**	**Field**
0	0	BINARY(4)	Version
4	4	BINARY(4)	Reserved
8	8	BINARY(8)	Online memory
16	10	BINARY(8)	Total dispatch time
24	18	BINARY(8)	Total interactive CPU time used
32	20	BINARY(8)	Total interactive CPU time above threshold
40	28	BINARY(8)	Idle CPU time in a shared pool
48	30	BINARY(8)	Dispatch latency
56	38	Binary(4)	LPAR flags
60	3C	Binary(4)	Physical processors in the system
64	40	Binary(4)	Online processors
68	44	Binary(4)	Physical CPUs in a shared pool
72	48	Binary(4)	Unallocated capacity in shared pool
76	4C	BINARY(4)	Entitled partition capacity
80	50	Binary(4)	Variable partition capacity weight
84	54	Binary(4)	Unallocated variable partition capacity weight
88	58	Binary(4)	Minimum required partition capacity
92	5C	Binary(2)	Current interactive capacity
96	60	BINARY(4)	Current software licensed capacity
100	64	BINARY(2)	Partition group ID

Offset		Type	Field
Dec	Hex		
102	66	BINARY(2)	Shared processor pool ID
104	68	BINARY(2)	Interactive threshold
106	6A	CHAR(6)	Reserved

Field Descriptions

Current interactive capacity is this partition's percentage of the total system's interactive capacity. For instance, if the system was allowed to do 2000 units of interactive work per second, and this field was 50, then this partition would be allowed to perform 1000 units of interactive work per second. (in units of percentages)

Current software licensed capacity is the current limit on processor capacity for this partition (in units of 1/100 of a physical processor), determined by the OS/400 license for this partition. This information helps to prevent the allocation of a greater processor capacity than that granted to OS/400.

Dispatch latency is the maximum time between dispatches of this partition on a physical processor (in nanoseconds).

Entitled partition capacity is the amount of processor capacity (in units of 1/100 of a physical processor) currently available to the partition.

Idle CPU time in a shared pool is the number of nanoseconds of CPU time that the processors in a shared processor pool have been idle since system IPL. This field is only returned if the partition was authorized to retrieve shared pool data (see LPAR flags field). Otherwise, this field is set to 0.

Interactive threshold is the maximum interactive CPU utilization (in units of 1/100 of a percent) which can be sustained in this partition, without causing a disproportionate increase in system overhead. For example, a value of 2379 means that the threshold is 23.79%. On a machine with no limit on interactive utilization, the value returned will be 10000 (100%).

LPAR flags indicate whether or not hardware multithreading is enabled, whether shared processor pool idle time since IPL was successfully materialized and whether this is a capped partition.

This field is composed of several bit flags and contains one or more of the following values:

x'00000001'	Shared pool idle time	Shared processor pool time since IPL was materialized
x'00000002'	Hardware multi-threading	Hardware multi-threading is enabled.
x'00000004'	Capped partition indicator	The partition is capped.

Use the following table:

Offset		Bit	Type	Field	Description
Dec	Hex				
56	38		Binary(4)	lpar_flags	
56	38	0	Bit(29)	Reserved	Reserved
59	3B	5	Bit(1)	lpar_capped	Capped partition indicator. If on, partition is capped.
59	3B	6	Bit(1)	lpar_smt	Hardware multi-threaded indicator. If on, hardware multi-threading is enabled.

Offset		Bit	Type	Field	Description
Dec	Hex				
59	3B	6	Bit(1)	lpar_auth_pic	Shared pool idle time indicator. If on, idle CPU time in a shared pool was returned.

Minimum required partition capacity is the amount of processor capacity (in units of 1/100 of a physical processor) that the operating system requires in this partition.

Online memory is the amount of main storage (in units of megabytes) currently allocated to this partition.

Online processors is the number of virtual processors currently configured for this partition. Partition group ID identifies the LPAR group that this partition is a member of.

Physical CPUs in a shared pool is the number of physical processors that are allocated to the shared processor pool in which this partition is executing.

Physical processors in the system is the number of physical processors in this platform that are available for customer use. This does not include temporary processors on demand that have not been turned on.

Reserved is a reserved field for alignment purposes.

Shared processor pool ID identifies the shared processor pool this partition is a member of. A shared processor pool is a set of physical processors on the platform that is used to run a set of shared processor partitions. This field should only be used when partition shares processors. For dedicated partitions which do not use shared pool by definition, this field is set to 0.

Total dispatch time is the number of nanoseconds of CPU time used by this partition since IPL.

Total Interactive CPU time above threshold is the amount of nanoseconds of CPU time used by interactive processes while exceeding the interactive threshold. This is a total since IPL.

Total interactive CPU time used is the number of nanoseconds of CPU time used by interactive processes in this partition since partition IPL. An interactive process is any process doing 5250 display device I/O. For additional information on interactive processes, see manual SC41-0607 iSeries Performance Capabilities Reference manual which is available in the iSeries Information Center.

Unallocated capacity in shared pool is the amount of processor capacity (in units of 1/100 of a physical processor) in this partition's shared processor pool, that are not allocated to any partition and available for allocation.

Unallocated variable partition capacity weight is the amount of capacity weight that is available for allocation to the variable partition capacity weight. This factor will be in the range of 0 - 255 .

Variable partition capacity weight is the weighting factor that is used to assign additional unused processor capacity (from the shared processor pool) to the partition. This factor will be in the range of 0 - 255. Variable weight is used for uncapped partitions when they compete for unused capacity in the shared pool. The larger the weight, the more the chance this partition will get additional CPU cycles from the pool. A value of 0 effectively caps this partition at its current configured processor capacity.

Version is the version of format 2 returned by the API.

Return Value

Positive value Partition information was successfully retrieved. Returned value indicates number of bytes returned in the receiver variable.

Negative value API cannot return data because of error. The return value will be a negative number describing the error, as follows:

-1 Specified format is not supported by the API.

-2 Length of the receiver variable is negative.

-3 Address of the receiver variable is not correct.

-4 API encountered an exception during execution. (See joblog for the details about the exception)

-5 Required parameter omitted.

«

API introduced: V5R3

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Disk Management APIs

The Disk Management APIs provide basic control of disk units in the system. These APIs can be used to perform a variety of actions, such as changing the storage threshold for an auxiliary storage pool (ASP), adding a disk unit to an ASP, resuming protection on a disk unit, and formatting a disk unit. In general, these actions represent the disk management options available through the Work with Disk Units menu options from the OS/400(R) command to Start a Service Tool (STRSST). The Start DASD Management Operation (QYASSDMO) API provides a complete list of DASD management configuration actions.

The Retrieve DASD Management Information (QYASRDI) API and Open List of ASPs (QYASPOL) API return general information. These APIs do not require a disk management session handle.

The remaining APIs use a configuration session between the system disk manager and the configuration application. This session handle must be reserved using the Start DASD Management Session (QYASSDMS) API. The system disk manager supports only one active session at a time. The Work with Disk Units options under Dedicated Service Tools (DST) and System Service Tools (SST), the iSeries(TM) Navigator disk management client, and all other applications performing disk operations require a session to perform their requests. Therefore, it is important that applications use End DASD management Session (QYASEDMS) to release that session when all operations are complete.

Most disk management operations require a handle to a previously reserved configuration session. The Start DASD Management Operation (QYASSDMO) API initiates an action. Most operations run to completion and return completion status on the start request. Some operations require a longer period of time in which to execute. These long-running operations return immediately, but must be checked for operation completion. The Retrieve DASD Management Status (QYASRDMS) API allows an application to check for status on a long-running operation. The End DASD Management Operation (QYASEDMO) provides a cancel mechanism. It is the responsibility of the application to know which operations return status immediately and which applications require additional status checking.

» For information regarding how to work with disk units, auxiliary storage pools, and storage protection, see the Disk management topic and the Backup and Recovery book. «

The Disk Management APIs are:

- “End DASD Management Operation (QYASEDMO) API” (QYASEDMO) ends an active operation.
- “End DASD Management Session (QYASEDMS) API” on page 186 (QYASEDMS) releases a client″s reservation.
- “Retrieve DASD Information (QYASRDI) API” on page 187 (QYASRDI) retrieves disk unit information.
- “Retrieve DASD Management Status (QYASRDMS) API” on page 190 (QYASRDMS) retrieves status information for an active operation.
- “Start DASD Management Operation (QYASSDMO) API” on page 194 (QYASSDMO) requests the disk manager to perform an operation.
- “Start DASD Management Session (QYASSDMS) API” on page 201 (QYASSDMS) reserves the disk manager for a specific client.

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End DASD Management Operation (QYASEDMO) API

Required Parameter Group:

1	Session handle
Input	Char(8)
2	Error code
I/O	Char(*)

Default Public Authority: *USE

Threadsafe: Yes

The End DASD Management Operation (QYASEDMO) API attempts to cancel an active operation of an active disk management session that was previously started using the Start DASD Management Operation (QYASSDMO) API.

Authorities and Locks

To use this API, you must have *SERVICE special authority or be authorized to the Service Disk Units function of Operating System/400 through iSeries Navigator’s Application Administration support. The Change Function Usage Information (QSYCHFUI) API, with a function ID of QIBM_QYAS_SERVICE_DISKMGMT, also can be used to change the list of users who are allowed to work with disk units.

Required Parameter Group

Session handle

INPUT; CHAR(8)

The 8-byte field containing a unique ID that was used on a preceding Start DASD Management Operation (QYASDMO) API for the operation that is to be ended. The session handle contains arbitrary binary data and should not be interpreted as character data.

Error code

I/O; CHAR(*)

The structure in which to return error information. For the format of the structure, see Error Code Parameter.

Error Messages

Message ID	Error Message Text
CPF2277 E	User &1 not allowed to use function &2.
CPFBA20 E	Session handle not valid.
CPFBA25 E	A general DASD management error has occurred.
CPFBA45 E	Cannot end operation.
CPFBA46 E	No operation in progress.
CPFBA47 E	Session not active.
CPFBA48 E	Operation failed with unrecognized return code, &1.
CPFBA53 E	Unexpected authority validation error has occurred.
CPF3C36 E	Number of parameters, &1, entered for this API was not valid.
CPF3CF1 E	Error code parameter not valid.

API introduced: V4R5

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End DASD Management Session (QYASEDMS) API

Required Parameter Group:

1	Session handle
Input	Char(8)
2	Error code
I/O	Char(*)

Default Public Authority: *USE

Threadsafe: Yes

The End DASD Management Session (QYASEDMS) API ends an active disk management session that was started previously using the Start DASD Management Session (QYASSDMS) API.

Authorities and Locks

To use this API you must have *SERVICE special authority or be authorized to the Service Disk Units function of Operating System/400 through iSeries Navigator's Application Administration support. The Change Function Usage Information (QSYCHFUI) API, with a function ID of QIBM_QYAS_SERVICE_DISKMGMT, also can be used to change the list of users who are allowed to work with disk units.

Required Parameter Group

Session handle
INPUT; CHAR(8)

The 8-byte field containing a unique ID that was returned on a preceding Start DASD Management Session (QYASSDMS) API. The session handle contains arbitrary binary data and should not be interpreted as character data.

Error code
I/O; CHAR(*)

The structure in which to return error information. For the format of the structure, see Error Code Parameter.

Error Messages

Message ID	Error Message Text
CPF2277 E	User &1 not allowed to use function &2.
CPFBA20 E	Session handle not valid.
CPFBA24 E	Operation in progress.
CPFBA25 E	A general DASD management error has occurred
CPFBA47 E	Session not active.
CPFBA48 E	Operation failed with unrecognized return code, &1.
CPFBA53 E	Unexpected authority validation error has occurred.
CPF3C36 E	Number of parameters, &1, entered for this API was not valid.
CPF3CF1 E	Error code parameter not valid.

API introduced: V4R5

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Retrieve DASD Information (QYASRDI) API

Required Parameter Group:

1	Receiver variable
Output	Char(*)
2	Length of receiver variable
Input	Binary(4)
3	Format name
Input	Char(8)
4	Disk unit resource name array
Input	Array of CHAR(10)
5	Number of disk unit resource names
Input	Binary(4)
6	Error code
I/O	Char(*)

Default Public Authority: *USE

Threadsafe: Yes

The Retrieve DASD Information (QYASRDI) API retrieves disk unit information. Information for specific disk units is requested by putting the disk unit resource names into the input parameter disk unit resource name array, along with putting the number of requested disk unit names into the input parameter number of disk unit resource names. Information about the requested disk units is returned in the receiver variable.

Authorities and Locks

None.

Required Parameter Group

Receiver variable
OUTPUT; CHAR(*)

The receiver variable to receive the disk unit information.

Length of receiver variable
INPUT; BINARY(4)

The length of the receiver variable, in bytes. The minimum length is 8 bytes. If the length of the receiver variable is not large enough to hold all repeating fields of the format name specified in the Format name parameter, then no repeating fields are returned.

Format name
INPUT; CHAR(8)

The format of the information returned from the Retrieve DASD Information (QYASRDI) API. The DMIN0100 format is used by this API for the receiver variable. For a detailed description of the format, see "Format Descriptions."

Disk unit resource name array
INPUT; ARRAY OF CHAR(10)

An array of one or more disk unit resource names. A disk unit resource name identifies a disk unit. The system resource manager assigns a resource name to every hardware device that is physically attached to the system. The following special values are allowed:

**ALL*	All disk units.
**UNCONFIG*	All unconfigured disk units.

Number of disk unit resource names
INPUT; BINARY(4)

The number of disk unit resource names specified in the disk unit resource names array. In the case where the special values *ALL or *UNCONFIG are specified in the disk unit resource name array, the number of disk unit resource names parameter must be set to 1.

Error code
I/O; CHAR(*)

The structure in which to return error information. For the format of the structure, see Error Code Parameter.

Format Descriptions

DMIN0100 Format

The following shows the information returned for the DMIN0100 format. For detailed descriptions of the fields in the table, see "Field Descriptions" on page 189.

Offset			
Dec	**Hex**	**Type**	**Field**
0	0	BINARY(4)	Bytes returned
4	4	BINARY(4)	Bytes available
8	8	BINARY(4)	Offset to disk unit data records
12	C	BINARY(4)	Number of disk unit data records
16	10	BINARY(4)	Length of disk unit data records
20	14	BINARY(4)	Reserved

Offset		Type	Field
Dec	Hex		
NOTE: The following fields repeat the number of time specified in the number of disk unit parity data records field.			
		CHAR(10)	Disk unit resource name
		CHAR(1)	Disk unit found flag
		CHAR(10)	Tower resource name associated with disk unit
		CHAR(4)	Tower number associated with disk unit
		CHAR(1)	Disk unit allowed in new device parity set flag
		CHAR(1)	Disk unit allowed in existing device parity set flag
		CHAR(5)	Reserved
		BINARY(4)	Device parity set number
		BINARY(4)	Capacity available after device parity started

Field Descriptions

Bytes available. The number of bytes of data available to be returned. All available data is returned if enough space is provided.

Bytes returned. The number of bytes of data returned.

Capacity available after device parity started. The number of bytes, in millions, of the capacity available of the disk unit after device parity has been started, if included in a device parity set.

Device parity set number. Device parity set number of disk unit if included in a device parity set. Valid range is 0 to 255.

Disk unit allowed in existing device parity set flag. A boolean flag used to indicate if the disk unit, in the associated record, can be added to an existing device parity set. Valid values are:

0 The disk unit cannot be added to an existing device parity set.
1 The disk unit can be added to an existing device parity set.

Disk unit allowed in new device parity set flag. A boolean flag used to indicate if the disk unit, in the associated record, can be added to a new device parity set. Valid values are:

0 The disk unit cannot be added to a new device parity set.
1 The disk unit can be added to a new device parity set.

Disk unit found flag. Whether the disk unit corresponding to the disk unit resource name was found on the system. Valid values are:

0 The disk unit was not found.
1 The disk unit was found.

Disk unit resource name. A disk unit. The system resource manager assigns a resource name to every hardware device that is physically attached to the system.

Length of disk unit data records. The number of bytes occupied by each disk unit data record.

Number of disk unit data records. The number of disk unit data records that are returned in the receiver variable. Each record has the same format and is repeated in the receiver variable.

Offset to disk unit data records. The offset in bytes from the start of the receiver variable to the first requested disk unit data record.

Tower number associated with disk unit The tower number to which the disk unit is attached. This field may be used to determine the physical location of the disk unit.

Tower resource name associated with disk unit The tower resource name to which the disk unit is attached. This field may be used to determine the physical location of the disk unit.

Error Messages

Message ID	Error Message Text
CPFBA49 E	Number of disk unit resource names not valid.
CPFBA50 E	Number of disk unit resource names is out of range.
CPF3C21 E	Format name &1 is not valid.
CPF3C24 E	Length of the receiver variable is not valid.
CPF3CF1 E	Error code parameter not valid.
CPF3C36 E	Number of parameters, &1, entered for this API was not valid.

API introduced: V4R5

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Retrieve DASD Management Status (QYASRDMS) API

Required Parameter Group:

1	Receiver variable
Output	Char(*)
2	Length of receiver variable
Input	Binary(4)
3	Format name
Input	Char(8)
4	Session handle
Input	Char(8)
5	Error code
I/O	Char(*)

Default Public Authority: *USE

Threadsafe: Yes

The Retrieve DASD Management Status (QYASRDMS) API retrieves status information for the currently active disk management session that was started using the Start DASD Management Session (QYASSDMS) API.

Authorities and Locks

None.

Required Parameter Group

Receiver variable
OUTPUT; CHAR(*)

The receiver variable that is to receive the disk management status information from the Retrieve DASD Management Status (QYASRDMS) API.

Length of receiver variable
INPUT; BINARY(4)

The length of the receiver variable, in bytes. The minimum length is 8 bytes. If the length of the receiver variable is not large enough to hold all repeating fields of the format name specified in the Format name parameter, then no repeating fields are returned. If the length of the receiver variable is not large enough to hold all non-repeating fields of the beginning portion of the format (format header), then only the first 8 bytes are returned.

Format name
INPUT; CHAR(8)

The format of the information that is returned from the Retrieve DASD Management Status (QYASRDMS) API. The DMST0100 format is used by this API for the receiver variable. For a detailed description of the format, see "Format Descriptions."

Session handle
INPUT; CHAR(8)

The unique ID that was returned to the caller on a preceding Start DASD Management Session (QYASSDMS) API. The session handle contains arbitrary binary data and should not be interpreted as character data.

Use binary zeroes to retrieve status information for the current or most recent disk management session when the caller has not started a disk management session using the Start DASD Management Session (QYASSDMS) API.

Use the session handle when the caller has successfully started a disk management session using the Start DASD Management (QYASSDMS) API.

If the session handle is not used to perform an operation using the QYASSDMO API or is not used to check the status of an operation using this API within 5 minutes after a session has been started or an operation has completed, the session of the associated handle will end and the associated handle will be invalidated if a call is made to start another disk management session.

Error code
I/O; CHAR(*)

The structure in which to return error information. For the format of the structure, see Error Code Parameter.

Format Descriptions

DMST0100 Format

The following shows the information returned for the DMST0100 format. For detailed descriptions of the fields in the table, see "Field Descriptions" on page 192.

Offset		Type	Field
Dec	Hex		
0	0	BINARY(4)	Bytes returned

Offset		Type	Field
Dec	Hex		
4	4	BINARY(4)	Bytes available
8	8	BINARY(4)	Session status
12	C	BINARY(4)	Operation identifier of the current or most recent operation performed
16	10	BINARY(4)	Percentage of operation complete
20	14	BINARY(4)	Offset to error data records
24	18	BINARY(4)	Number of error data records
28	1C	BINARY(4)	Length of an error data record
32	20	BINARY(4)	Reserved
NOTE: The following fields repeat the number of time specified in the number of error data records field in order of occurrence.			
		CHAR(7)	Error ID
		CHAR(30)	Error data

Field Descriptions

Bytes available. The number of bytes of data available to be returned. All available data is returned if enough space is provided.

Bytes returned. The number of bytes of data returned.

Error data. The data related to the error ID associated with the action identifier.

Error ID. The 7-character error code ID of the most recently completed action associated to the session handle. Possible error code IDs returned are:

CPFBA23 Operation failed.
CPFBA25 A general DASD management error has occurred.
CPFBA27 Could not restore mirrored data.
CPFBA31 Disk unit &1 has errors.
CPFBA3A Create new ASP failed.
CPFBA3F Cannot rebuild parity information.
CPFBA41 Device parity set not operational.
CPIBA20 Operation was ended.
CPIBA21 Parity set needs intervention.

Length of an error data record The total number of bytes of an individual error data record.

Number of error data records The number of error data records specified in the array of error data records.

Offset to error data records. The offset in bytes from the start of the receiver variable to the first error data record.

Operation identifier of current or most recent operation performed. If the session status is 'session is active and currently performing an operation,' then this field indicates the current operation being performed associated to the session handle. Otherwise, this field indicates the operation most recently completed associated to the session handle.

Valid operation key values are:

1	Change the storage threshold percentage of an ASP
2	Add disk units to an ASP
3	Suspend mirrored protection on a disk unit
4	Resume mirrored protection on a disk unit
5	Include disk unit in device parity protection
6	Rebuild data on a disk unit after a parity fault
7	Replace mirrored disk unit
8	Start device parity protection on a controller with no configured disk units
9	Enable remote load source mirroring
10	Disable remote load source mirroring
11	Power off a disk unit
12	Power on a disk unit
13	Format a disk unit
14	Clear a disk unit
15	Scan surface of a disk unit
5000	Active DST/Service Tools operations
5001	No operations have been performed
5002	Specified handle not performing an operation

Percentage operation complete. If the session status is 'session is active and currently performing an operation' of the session indicated by the session handle parameter, then this field indicates, on a scale of 0 to 100, the percentage of completion of the current operation being performed.

Session status. The status of the session indicated by the session handle parameter. Session status values are:

0	Session is active and not currently performing an operation
1	Session was ended
2	Session is in error
3	Session is in error

Error Messages

Message ID	Error Message Text
CPF3C21 E	Format name &1 is not valid.
CPF3C24 E	Length of the receiver variable is not valid.
CPF3CF1 E	Error code parameter not valid.
CPF3C36 E	Number of parameters, &1, entered for this API was not valid.

API introduced: V4R5

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Start DASD Management Operation (QYASSDMO) API

Required Parameter Group:	
1	Session handle
Input	Char(8)
2	Operation key
Input	Binary(4)
3	Operation variable
Input	Char(*)
4	Length of operation variable
Input	Binary(4)
5	Format name of operation variable
Input	Char(8)
6	Error code
I/O	Char(*)
Default Public Authority: *USE	
Threadsafe: Yes	

The Start DASD Management Operation (QYASSDMO) API performs various disk management operations as indicated by the Operation key input parameter.

A session handle must be obtained prior to using this API by starting a disk management session using the Start DASD Management Session (QYASSDMS) API. Subsequent QYASSDMS API calls pass this session handle as an input parameter.

Disk management operations that can be requested are:

- Change the storage threshold percentage of an ASP
- Add disk units to an ASP
- Suspend mirrored protection on a disk unit
- Resume mirrored protection on a disk unit
- Include a disk unit in device parity protection
- Rebuild data on a disk unit after a device parity fault
- Replace mirrored disk unit
- Start device parity protection on a new parity set
- Enable remote load source mirroring
- Disable remote load source mirroring
- Power off a disk unit
- Power on a disk unit
- Format a disk unit
- Clear a disk unit
- Scan surface of a disk unit

Most operations require that an operation variable be specified. There are various operation formats associated with the operation that need to be placed in the operation variable. When an operation variable is required, the input parameters Length of operation variable and Format name of operation variable also need to be specified. If the operation does not need an operation variable to be supplied, then enter a value of zero in the Length of operation variable parameter and enter a value of all blanks for Format name of operation variable. When the parameter Length of operation variable is set to zero and the parameter Format name of operation variable is all blanks, the parameter operation variable is ignored.

Authorities and Locks

To use this API you must have *SERVICE special authority or be authorized to the Service Disk Units function of Operating System/400 through iSeries Navigator's Application Administration support. The Change Function Usage Information (QSYCHFUI) API, with a function ID of QIBM_QYAS_SERVICE_DISKMGMT, also can be used to change the list of users who are allowed to work with disk units.

Required Parameter Group

Session handle

INPUT; CHAR(8)

The unique ID that was returned to the client on a preceding Start DASD Management Session (QYASSDMS) API. The session handle contains arbitrary binary data and should not be interpreted as character data.

If the session handle is not used to perform an operation using this API or is not used to check the status of an operation using the QYASRDMS API within 5 minutes after a session is started or an operation has completed, the session of the associated handle will be ended and the associated handle will be invalidated if a call is made to start another disk management session.

Operation key

INPUT; BINARY(4)

An integer value indicating which disk management operation is to be performed. Valid operation key values are:

1	Change the storage threshold percentage of an ASP
2	Add disk units to an ASP
3	Suspend mirrored protection on a disk unit
4	Resume mirrored protection on a disk unit
5	Include a disk unit in device parity protection
6	Rebuild data on a disk unit after a device parity fault
7	Replace mirrored disk unit
8	Start device parity protection on a new parity set
9	Enable remote load source mirroring
10	Disable remote load source mirroring
11	Power off a disk unit
12	Power on a disk unit
13	Format a disk unit
14	Clear a disk unit
15	Scan surface of a disk unit

The following is a description of each operation:

Change the storage threshold percentage of an ASP

The storage threshold for an ASP determines when the system warns you that the space allocated for the ASP is almost full. It specifies a percentage of used ASP storage space. This operation changes the storage threshold percentage.

Add disk units to an ASP

This operation allows you to add disk units to an ASP. If the ASP does not exist, it will be created. The ASP balancing function can be called optionally. The ASP balancing function improves disk performance by balancing disk utilization across all of the disk units in an ASP.

Suspend mirrored protection on a disk unit

When mirrored protection is configured for an ASP, this operation suspends mirrored protection on a disk unit in the ASP. This operation is required to replace a disk unit in an ASP that is mirrored protected.

Sometimes mirrored protection may be suspended automatically when a disk unit fails. In the situation where mirrored protection is already suspended and this operation is called, a successful completion code will still be returned.

Resume mirrored protection on a disk unit

This operation synchronizes data in a mirrored pair of disk units where mirrored protection has been suspended and then resumes mirrored protection.

If mirrored protection has already been resumed and this operation is called, a successful completion code will still be returned.

Include a disk unit in device parity protection

This operation includes an unconfigured disk unit in a device parity set. When attaching a new disk unit to an existing IOP that has device parity protection, the disk unit can be included in the device parity set.

Rebuild data on a disk unit after a device parity fault

After replacement of a failed disk unit in a device parity set, this operation rebuilds data that existed on the failed disk unit onto the new disk unit.

Replace a mirrored disk unit

When a disk unit in a mirrored pair has failed, it can be replaced using this operation.

A disk unit selected to replace the failed mirrored disk unit must satisfy all of the mirrored protection configuration rules and restrictions when it is paired with the remaining disk unit in the mirrored pair.

Start device parity protection on a new parity set

This operation starts device parity protection on a controller that has no configured disks.

Enable remote load source mirroring

This operation enables mirroring of the load source disk unit.

Disable remote load source mirroring

This operation disables mirroring of the load source disk unit.

Power off a disk unit

This operation powers off a disk unit. The bus, IOP, and controller also may be powered off, depending on the hardware configuration.

Power on a disk unit

This operation powers on a disk unit. The bus, IOP, and controller also may be powered on, depending on the hardware configuration.

Format a disk unit

This operation formats a disk unit.

Clear a disk unit

This operation clears a disk unit. The entire disk unit will have binary zeroes written to it.

Scan surface of a disk unit

This operation is used to check the disk surface for problems that could affect the data.

Operation variable
INPUT; CHAR(*)

The operation variable that is to be sent to the Start DASD Management Operation (QYASSDMO) API.

Length of operation variable
INPUT; BINARY(4)

The length of the operation variable, in bytes. The length of the operation variable must be equal to or greater than the length of the associated operation variable format.

Format name of operation variable
INPUT; CHAR(8)

The format of the information that is sent to the Start DASD Management Operation (QYASSDMO) API. The DMOP0100, DMOP0200, DMOP0300, DMOP0400, DMOP0500, and DMOP0600 formats are used by this API for the operation variable. For detailed descriptions of the formats, see "Format Descriptions" on page 198.

A value of all blanks indicates that no format is used. The Length of operation variable parameter must be set to 0.

The following indicates the operations that use each of the operation formats.

All blanks (no format used)
Enable remote load source mirroring
Disable remote load source mirroring

DMOP0100
Change the storage threshold percentage of an ASP

DMOP0200
Add disk units to an ASP

DMOP0300
Suspend mirrored protection on a disk unit
Resume mirrored protection on a disk unit
Rebuild data on a disk unit after a device parity fault

DMOP0400
Include a disk unit in device parity protection
Format a disk unit
Clear a disk unit
Scan surface of a disk unit
Start device parity protection on a new parity set

DMOP0500
Replace mirrored disk unit

DMOP0600
Power off a disk unit
Power on a disk unit

Error code
I/O; CHAR(*)

The structure in which to return error information. For the format of the structure, see Error Code Parameter.

Format Descriptions

DMOP0100 Format

The following shows the information sent for the DMOP0100 format. For detailed descriptions of the fields in the table, see "Field Descriptions" on page 199.

Offset			
Dec	**Hex**	**Type**	**Field**
0	0	BINARY(4)	ASP number
4	4	BINARY(4)	ASP storage threshold

DMOP0200 Format

The following shows the information sent for the DMOP0200 format. For detailed descriptions of the fields in the table, see "Field Descriptions" on page 199.

Offset			
Dec	**Hex**	**Type**	**Field**
0	0	BINARY(4)	ASP number
4	4	CHAR(1)	Balance disk units flag
5	5	CHAR(3)	Reserved
8	8	BINARY(4)	Offset to disk unit resource names
12	C	BINARY(4)	Number of disk unit resource names
16	10	BINARY(4)	Reserved (must be set to 0)
NOTE: The following fields repeat the number of time specified in the Number of disk unit resource name records field.			
		CHAR(10)	Disk unit resource name

DMOP0300 Format

The following shows the information sent for the DMOP0300 format. For detailed descriptions of the fields in the table, see "Field Descriptions" on page 199.

Offset			
Dec	**Hex**	**Type**	**Field**
0	0	CHAR(10)	Disk unit resource name

DMOP0400 Format

The following shows the information sent for the DMOP0400 format. For detailed descriptions of the fields in the table, see "Field Descriptions" on page 199.

Offset			
Dec	**Hex**	**Type**	**Field**
0	0	BINARY(4)	Offset to disk unit resource names
4	4	BINARY(4)	Number of disk unit resource names
8	8	BINARY(4)	Reserved (must be set to 0)

Offset		Type	Field
Dec	Hex		
NOTE: The following fields repeat the number of time specified in the number of disk unit resource name records field.			
		CHAR(10)	Disk unit resource name

DMOP0500 Format

The following shows the information sent for the DMOP0500 format. For detailed descriptions of the fields in the table, see "Field Descriptions."

Offset		Type	Field
Dec	Hex		
0	0	CHAR(10)	Resource name of disk unit to be replaced
10	A	CHAR(10)	Resource name of new disk unit

DMOP0600 Format

The following shows the information sent for the DMOP0600 format. For detailed descriptions of the fields in the table, see "Field Descriptions."

Offset		Type	Field
Dec	Hex		
0	0	CHAR(10)	Disk unit resource name
10	A	CHAR(4)	Tower number
14	E	CHAR(5)	Device position

Field Descriptions

ASP number. The number identifying the Auxiliary Storage Pool (ASP). Valid values range from 1 through 16. A value of 1 indicates the System ASP. Values 2 through 16 indicate any user-defined ASPs.

ASP storage threshold. A percentage of used ASP storage space that when reached will cause the system to issue a warning indicating the space allocated to an ASP is almost full. Valid values range from 1 to 100 percent.

Balance disk units flag. A boolean flag used to indicate if the ASP capacity balancing function is to be applied. Valid values are:

0 Do not apply the ASP capacity balancing function
1 Apply the ASP capacity balancing function

Device position. The physical location of a device within a tower. It is used with the Tower number field to identify the slot where a device resides. These two fields combined may be used as an alternative to the Disk unit resource name field for power on and power off operations. If these two fields are used as an alternative to the disk unit resource name, then the disk unit resource name field must be all blanks.

Disk unit resource name. A disk unit. The system resource manager assigns a resource name to every hardware device that is physically attached to the system. If the Tower number and the Device positions fields are to be used as an alternative to the disk unit resource name, then the Disk unit resource name field must be all blanks.

Number of disk unit resource names. The number of Disk unit resource names specified in the Disk unit resource name array.

Offset to disk unit resource names. The offset in bytes from the start of the operation variable to the first disk unit resource name.

Resource name of disk unit to be replaced. The disk unit resource name of the disk unit that is to be replaced with a nonconfigured disk unit.

Resource name of new disk unit. The disk unit resource name of the disk unit that is to replace a disk unit.

Tower number. Uniquely identifies a tower on the system. It is used with the Device position field to identify the slot in which a device resides. These two fields combined may be used as an alternative to the Disk unit resource name field for power on and power off operations. If these two fields are used as an alternative to the disk unit resource name, then the Disk unit resource name field must be all blanks.

Error Messages

Message ID	Error Message Text
CPF2277 E	User &1 not allowed to use function &2.
CPFBA20 E	Session handle not valid.
CPFBA22 E	A save storage operation is in progress.
CPFBA23 E	Operation failed.
CPFBA24 E	Operation in progress.
CPFBA25 E	A general DASD management error occurred.
CPFBA26 E	ASP event threshold out of range.
CPFBA27 E	Could not restore mirrored data.
CPFBA28 E	Could not resume mirroring on disk unit &1.
CPFBA29 E	Could not suspend mirroring on disk unit &1.
CPFBA2A E	Disk unit &1 not part of a mirrored set.
CPFBA2B E	Replacement disk unit &1 still active.
CPFBA2C E	Replacement disk unit &1 wrong type or model.
CPFBA2D E	Replacement disk unit &1 wrong capacity.
CPFBA2E E	Replacement disk unit &1 already configured.
CPFBA2F E	Disk unit &1 could not be powered off.
CPFBA30 E	Disk unit &1 could not be powered on.
CPFBA32 E	Disk unit &1 not found.
CPFBA33 E	Tower not found.
CPFBA34 E	Device position not found.
CPFBA35 E	Disk unit &1 configured.
CPFBA36 E	Add mirrored ASP failed - cannot pair units.
CPFBA37 E	Cannot add disk unit &1 - already configured.
CPFBA38 E	Cannot add unprotected disk unit &1 to protected ASP.
CPFBA39 E	Cannot add disk unit. This system has the maximum number of disk units allowed.
CPFBA3A E	Create new ASP failed.
CPFBA3B E	ASP number out of range.
CPFBA3C E	Cannot replace parity disk unit &1 - old disk unit &1 not in parity set.
CPFBA3D E	Cannot replace parity disk unit &1 - new disk unit in wrong position.
CPFBA3E E	Cannot replace parity disk unit &1 - new disk unit is wrong capacity.
CPFBA3F E	Cannot rebuild parity information.

Message ID	Error Message Text
CPFBA40 E	Disk unit &1 not part of parity set.
CPFBA41 E	Device parity set not operational.
CPFBA42 E	Disk unit &1 not eligible to be added to device parity protection.
CPFBA43 F	Required fields not provided.
CPFBA44 E	Operation key not valid.
CPFBA47 E	Session not active.
CPFBA48 E	Operation failed with unrecognized return code, &1.
CPFBA4A E	Format &1 for operation key &2 not valid.
CPFBA4B E	Length of operation variable not valid.
CPFBA4C E	Value for balance disk units flag not valid.
CPFBA4D E	ASP number not valid.
CPFBA4E E	ASP storage threshold value not valid.
CPFBA4F E	Offset to disk unit resource name array not valid.
CPFBA50 E	Number of disk unit resource names is out of range.
CPFBA51 E	Array of disk unit resource names was not provided.
CPFBA52 E	Wrong number of disk unit resource names.
CPFBA53 E	Unexpected authority validation error has occurred.
CPF3C21 E	Format name, &1, is not valid.
CPF3C36 E	Number of parameters, &1, entered for this API was not valid.
CPF3CF1 E	Error code parameter not valid.
CPF3CF2 E	Error(s) occurred during running of &1 API.

API introduced: V4R5

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Start DASD Management Session (QYASSDMS) API

Required Parameter Group:

1	Session handle
Output	Char(8)
2	Error code
I/O	Char(*)

Default Public Authority: *USE

Threadsafe: Yes

The Start DASD Management Session (QYASSDMS) API activates an exclusive session to the server. Only one session can be active at any time.

On successful completion of this API, a handle is returned. This handle is used on subsequent calls to the following APIs:

Start DASD Management Operation (QYASSDMO)

End DASD Management Operation (QYASEDMO)

End DASD Management Session (QYASEDMS)

Retrieve DASD Management Status (QYASRDMS)

Upon successfully starting a disk management session, the session remains active until either the session is explicitly ended using the End DASD Management Session (QYASEDMS) API or at least five minutes of no session activity has occurred and another request to either start a disk management session or to start DST has been made. If this second event occurs, the original session is ended automatically, its session handle is invalidated, and a new session is started for the requesting caller; also, a new session handle is generated.

Each time a subsequent disk management API call is made with either the QYASSDMO or QYASRDMS APIs using the handle returned from this API, a new timing cycle begins. This timeout cycle restarts only after an operation (QYASSDMO) has completed or a status check (QYASRDMS) has been requested using the associated session handle. The timeout cycle is suspended while an action is in progress that was called using the QYASSDMO API.

Authorities and Locks

To use this API, you must have *SERVICE special authority or be authorized to the Service Disk Units function of Operating System/400 through iSeries Navigator's Application Administration support. The Change Function Usage Information (QSYCHFUI) API, with a function ID of QIBM_QYAS_SERVICE_DISKMGMT, also can be used to change the list of users who are allowed to work with disk units.

Required Parameter Group

Session handle
OUTPUT; CHAR(8)

An 8-byte field containing a unique ID that will be used in subsequent disk management API calls for the duration of the active session. The session handle contains arbitrary binary data and should not be interpreted as character data.

Error code
I/O; CHAR(*)

The structure in which to return error information. For the format of the structure, see Error Code Parameter.

Error Messages

Message ID	Error Message Text
CPF2277 E	User &1 not allowed to use function &2.
CPFBA21 E	A session is active.
CPFBA22 E	A save storage operation is in progress.
CPFBA25 E	A general DASD management error has occurred.
CPFBA48 E	Operation failed with unrecognized return code, &1.
CPFBA53 E	Unexpected authority validation error has occurred.
CPF3C36 E	Number of parameters, &1, entered for this API was not valid.
CPF3CF1 E	Error code parameter not valid.

API introduced: V4R5

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Hardware Resource APIs

The hardware resource APIs allow you to work with hardware resources. A **hardware resource** is an addressable piece of hardware on the system. A hardware resource is known to the system by its **resource name**. A **resource entry** is the reference to the hardware resource in the hardware resource information, which can be thought of as a list of the hardware resources on the system.

Some of the hardware resource APIs use a first attempt and next attempts to work with a list of items. The first attempt performs the requested action and returns an indication of whether the action completed successfully or failed. The next attempt repeats the requested action, continuing from the point in which the previous attempt stopped. Through the use of attempts, an API that returns items from a list can progress down the list, returning the items one at a time.

The hardware resource APIs and their functions are:

- "Change Resource Entry Information (QRZCHGE) API" (QRZCHGE) allows you to change the name of the resource and to do resource mapping.
- "Create Handle (QRZCRTH) API" on page 205 (QRZCRTH) creates a handle that is used as a placeholder when accessing items in a list using the *next* option.
- "Delete Handle (QRZDLTH) API" on page 207 (QRZDLTH) deletes a handle that was created using the Create Handle (QRZCRTH) API.
- "Delete Resource Entry (QRZDLTE) API" on page 209 (QRZDLTE) deletes a resource entry.
- "Retrieve Hardware Resource Information (QGYRHRI, QgyRtvHdwRscInfo) API" on page 210 (QGYRHRI, QgyRtvHdwRscInfo) retrieves hardware resource information fields that provide a detailed description of the resource that is identified by the resource name parameter.
- "Retrieve Hardware Resource List (QGYRHRL, QgyRtvHdwRscList) API" on page 217 (QGYRHRL, QgyRtvHdwRscList) retrieves a list of hardware resource names and other hardware resource information fields.
- "Retrieve Hardware Resource Relative (QRZRTVR) API" on page 225 (QRZRTVR) retrieves the resource name of a family member that matches the request criteria. The resource name then can be used to obtain more information about a specific hardware resource.
- "Retrieve Resource Class Attributes (QRZRRCA) API" on page 229 (QRZRRCA) retrieves class-specific information or object type values for a logical resource.
- "Retrieve Resource Information (QRZRRSI) API" on page 242 (QRZRRSI) retrieves selected fields of a hardware resource from a known resource name.
- "Search Hardware Resource Entry (QRZSCHE) API" on page 255 (QRZSCHE) retrieves the resource name of a hardware resource that matches the request criteria. The resource name can be used with other hardware resource APIs to get more information about a specific hardware resource.

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Change Resource Entry Information (QRZCHGE) API

Required Parameter Group:

1	Resource variable
Input	Char(*)
2	Format name
Input	Char(8)
3	Error code
I/O	Char(*)

Default Public Authority: *EXCLUDE

Threadsafe: No

The Change Resource Entry Information (QRZCHGE) API changes resource information and maps one resource onto another.

Authorities and Locks

API Public Authority
*EXCLUDE

Required Parameter Group

Resource variable
INPUT; CHAR(*)

The structure that specifies which resource information is to be changed and what the resource information is to be changed to.

Format name
INPUT; CHAR(8)

The content and format of the resource information and resource change variables. The possible format names are as follows:

CHGE0100 A resource name is to be changed. See "CHGE0100 Format" for details of this format.
CHGE0200 A resource that is to be mapped. See "CHGE0200 Format" on page 205 for details of this format.

Error code
I/O; CHAR(*)

The structure in which to return error information. For the format of the structure, see Error code parameter.

CHGE0100 Format

Offset		Type	Field
Dec	Hex		
0	0	CHAR(32)	Resource name
32	20	CHAR(32)	Resource name change

Field Descriptions

Resource name. The resource name to be changed. The resource name must comply with the following rules:

- Be up to and including 10 characters in length
- Begin with one of the following characters: A-Z, 0-9, $, #, or @
- Can use, after the first character, any combination of A-Z, 0-9, $, @, #, period (.), and underscore (_) for the remaining characters

This name is left-justified and padded with trailing blanks.

Resource name change. The value that the resource name is to be changed to. This name is left-justified and padded with trailing blanks.

CHGE0200 Format

Offset		Type	Field
Dec	Hex		
0	0	CHAR(32)	Resource name
32	20	CHAR(32)	Resource name

Field Descriptions

Resource name. The name of the resource that is to have its resource information exchanged with another resource.

Error Messages

Message ID	Error Message Text
CPF0B3B E	Resource name not found.
CPF0B38 E	Resource information not valid.
CPF0B46 E	Materialize failed.
CPF24B4 E	Severe error while addressing parameter list.
CPF3CF1 E	Error code parameter not valid.
CPF3C21 E	Format name &1 is not valid.
CPF3C90 E	Literal value cannot be changed.
CPF9872 E	Program or service program &1 in library &2 ended. Reason code &3.

API introduced: V3R6

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Create Handle (QRZCRTH) API

Required Parameter Group:

1	Receiver variable
Output	Char(*)
2	Length of receiver variable
Input	Binary(4)
3	Format name
Input	Char(8)
4	Error code
I/O	Char(*)

Default Public Authority: *EXCLUDE

Threadsafe: No

The Create Handle (QRZCRTH) API creates a handle that is used as a placeholder when possible list items are involved. Use this API to create a handle before calling a hardware resource API that has a handle parameter defined.

- **Handle supplied to an API.** The handle allows repeated calls to obtain more than one list item. While retrieving possible list items, a handle should be supplied when a first call attempt is used that is followed by subsequent (next) call attempts.
- **Handle not supplied to an API.** While retrieving information, if an attempt is made only for the first call, a handle may be set to hexadecimal 0. If a subsequent (next) call is attempted by an API to retrieve information, the API is unable to determine if more information meets the supplied criteria unless the initial call is repeated through the use of a handle.

Note: The repeated API calls must have the same criteria and must involve the same API. Handles cannot be shared across different APIs or within the same API with different criteria.

You are required to delete any handles created by the Create Handle (QRZCRTH) API. See "Delete Handle (QRZDLTH) API" on page 207 for more information.

Authorities and Locks

API Public Authority
*EXCLUDE

Required Parameter Group

Receiver variable
OUTPUT; CHAR(*)

The receiver variable that receives the information requested. You can specify the size of the area to be smaller than the format requested as long as you specify the length parameter correctly. As a result, the API returns only the data that the area can hold.

Length of receiver variable
INPUT; BINARY(4)

The length of the receiver variable provided. The length of receiver variable parameter may be specified up to the size of the receiver variable specified in the user program. If the length of receiver variable parameter specified is larger than the allocated size of the receiver variable specified in the user program, the results are not predictable. The minimum length is 8 bytes.

Format name
INPUT; CHAR(8)

The content and format of the information returned. The possible format name is as follows:

HNDL0100 A handle that is 16 bytes in length is returned. See "HNDL0100 Format" for details of this format.

Error code
I/O; CHAR(*)

The structure in which to return error information. For the format of the structure, see Error code parameter.

HNDL0100 Format

Offset			
Dec	**Hex**	**Type**	**Field**
0	0	BINARY(4)	Bytes returned
4	4	BINARY(4)	Bytes available
8	8	CHAR(16)	Handle

Field Descriptions

Bytes available. The number of bytes of data available to be returned. All available data is returned if enough space is provided.

Bytes returned. The number of bytes of data returned.

Handle. The returned handle value to be used on subsequent API calls when a handle parameter is required.

Error Messages

Message ID	Error Message Text
CPF0B31 E	A handle failed to create.
CPF24B4 E	Severe error while addressing parameter list.
CPF3CF1 E	Error code parameter not valid.
CPF3C19 E	Error occurred with receiver variable specified.
CPF3C21 E	Format name &1 is not valid.
CPF3C24 E	Length of the receiver variable is not valid.
CPF3C90 E	Literal value cannot be changed.
CPF9872 E	Program or service program &1 in library &2 ended. Reason code &3.

API introduced: V3R6

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Delete Handle (QRZDLTH) API

Required Parameter Group:

1	Handle
Input	Char(*)
2	Format name
Input	Char(8)
3	Error code
I/O	Char(*)

Default Public Authority: *EXCLUDE

Threadsafe: No

The Delete Handle (QRZDLTH) API deletes a handle that was created using the Create Handle (QRZCRTH) API.

Authorities and Locks

API Public Authority
*EXCLUDE

Required Parameter Group

Handle
INPUT; CHAR(*)

The handle value to be deleted.

Format name
INPUT; CHAR(8)

The content and format of the information returned. The possible format name is as follows:

HNDL0100 A handle that is 8 bytes in length is to be deleted. See "HNDL0100 Format" for details of this format.

Error code
I/O; CHAR(*)

The structure in which to return error information. For the format of the structure, see Error code parameter.

HNDL0100 Format

Offset			
Dec	**Hex**	**Type**	**Field**
8	8	CHAR(16)	Handle

Field Descriptions

Handle. The handle to be deleted.

Error Messages

Message ID	Error Message Text
CPF0B32 E	A handle was not deleted.
CPF24B4 E	Severe error while addressing parameter list.
CPF3CF1 E	Error code parameter not valid.
CPF3C21 E	Format name &1 is not valid.
CPF3C90 E	Literal value cannot be changed.
CPF9872 E	Program or service program &1 in library &2 ended. Reason code &3.

API introduced: V3R6

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Delete Resource Entry (QRZDLTE) API

Required Parameter Group:	
1	Resource name
Input	Char(32)
2	Error code
I/O	Char(*)
Default Public Authority: *EXCLUDE	
Threadsafe: No	

The Delete Resource Entry (QRZDLTE) API deletes a resource entry.

Authorities and Locks

API Public Authority
*EXCLUDE

Required Parameter Group

Resource name
INPUT; CHAR(32)

The variable to specify which resource is to be deleted.

Error code
I/O; CHAR(*)

The structure in which to return error information. For the format of the structure, see Error code parameter.

Error Messages

Message ID	Error Message Text
CPF0B3B E	Resource name not found.
CPF0B38 E	Resource information not valid.
CPF0B46 E	Materialize failed.
CPF24B4 E	Severe error while addressing parameter list.
CPF3CF1 E	Error code parameter not valid.
CPF3C21 E	Format name &1 is not valid.
CPF3C90 E	Literal value cannot be changed.
CPF9872 E	Program or service program &1 in library &2 ended. Reason code &3.

API introduced: V3R6

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Retrieve Hardware Resource Information (QGYRHRI, QgyRtvHdwRscInfo) API

Required Parameter Group:	
1	Receiver variable
Output	Char(*)
2	Length of receiver variable
Input	Binary(4)
3	Format name
Input	Char(8)
4	Resource name
Input	Char(10)
5	Error code
I/O	Char(*)

Service Program Name: QGYRHR

Default Public Authority: *USE

Threadsafe: No

The Retrieve Hardware Resource Information (OPM, QGYRHRI; ILE, QgyRtvHdwRscInfo) API retrieves hardware resource information fields that, together with the output from the Retrieve Hardware Resource List (OPM, QGYRHRL; ILE, QgyRtvHdwRscList) API, provide a detailed description of the resource identified by the resource name parameter. This API is meant to be used after obtaining a list of resource names with the Retrieve Hardware Resource List API.

Authorities and Locks

API Public Authority
*USE

Required Parameter Group

Receiver variable
OUTPUT; CHAR(*)

The receiver variable that receives the information requested. You can specify the size of the area to be smaller than the format requested as long as you specify the length parameter correctly. As a result, the API returns only the data that the area can hold.

Length of receiver variable
INPUT; BINARY(4)

The length of the receiver variable provided. The length of receiver variable parameter may be specified up to the size of the receiver variable specified in the user program. If the length of receiver variable parameter specified is larger than the allocated size of the receiver variable specified in the user program, the results are not predictable. The minimum length is 8 bytes.

Format name
INPUT; CHAR(8)

The content and format of the information that is returned. The possible format names are as follows:

RHRI0100 Detailed information for communication hardware resources. For more information, see "RHRI0100 Format."

RHRI0200 Detailed information for coupled system adapter resources. For more information, see "RHRI0200 Format" on page 212.

RHRI0300 Detailed information for local workstation resources. For more information, see "RHRI0300 Format" on page 212.

RHRI0400 Detailed information for processor resources. For more information, see "RHRI0400 Format" on page 212.

RHRI0410 Detailed information for processor resources. Using this format allows information for the Processor Capacity Card and Interactive Card to be returned. For more information, see "RHRI0410 Format" on page 213.

RHRI0500 Detailed information for storage device resources, including tape and optical resources. For more information, see "RHRI0500 Format" on page 213.

RHRI0600 Detailed information for cryptographic resources. For more information, see "RHRI0600 Format" on page 214.

Resource name

INPUT; CHAR(10)

The name of the hardware resource for which information is to be returned.

Error code

I/O; CHAR(*)

The structure in which to return error information. For the format of the structure, see Error code parameter.

RHRI0100 Format

Offset		Type	Field
Dec	Hex		
0	0	BINARY(4)	Bytes returned
4	4	BINARY(4)	Bytes available
8	8	BINARY(4)	System bus number
12	C	BINARY(4)	System board number
16	10	BINARY(4)	System card number
20	14	BINARY(4)	I/O bus address
24	18	BINARY(4)	Adapter address
28	1C	BINARY(4)	Port number
32	20	CHAR(10)	Serial number
42	2A	CHAR(12)	Part number
54	36	CHAR(4)	Frame ID
58	3A	CHAR(5)	Card position
» 63	3F	CHAR(79)	Location code «

RHRI0200 Format

Offset		Type	Field
Dec	Hex		
0	0	BINARY(4)	Bytes returned
4	4	BINARY(4)	Bytes available
8	8	BINARY(4)	System bus number
12	C	BINARY(4)	System board number
16	10	BINARY(4)	System card number
20	14	CHAR(10)	Serial number
30	1E	CHAR(12)	Part number
42	2A	CHAR(4)	Frame ID
46	2E	CHAR(5)	Card position
» 51	33	CHAR(79)	Location code «

RHRI0300 Format

Offset		Type	Field
Dec	Hex		
0	0	BINARY(4)	Bytes returned
4	4	BINARY(4)	Bytes available
8	8	BINARY(4)	System bus number
12	C	BINARY(4)	System board number
16	10	BINARY(4)	System card number
20	14	BINARY(4)	I/O bus address
24	18	BINARY(4)	Adapter address
28	1C	BINARY(4)	Port number
32	20	BINARY(4)	Device address
36	24	BINARY(4)	Shared session number
40	28	CHAR(10)	Serial number
50	32	CHAR(12)	Part number
62	3E	CHAR(4)	Frame ID
66	42	CHAR(5)	Card position
» 71	47	CHAR(79)	Location code «

RHRI0400 Format

Offset		Type	Field
Dec	Hex		
0	0	BINARY(4)	Bytes returned
4	4	BINARY(4)	Bytes available

Offset		Type	Field
Dec	Hex		
8	8	BINARY(4)	System bus number
12	C	BINARY(4)	System board number
16	10	BINARY(4)	System card number
20	14	CHAR(10)	Serial number
30	1E	CHAR(12)	Part number
42	2A	CHAR(4)	Frame ID
46	2E	CHAR(5)	Card position
51	33	CHAR(4)	System processor feature code
» 55	37	CHAR(79)	Location code «

RHRI0410 Format

Offset		Type	Field
Dec	Hex		
0	0	BINARY(4)	Bytes returned
4	4	BINARY(4)	Bytes available
8	8	BINARY(4)	System bus number
12	C	BINARY(4)	System board number
16	10	BINARY(4)	System card number
20	14	CHAR(10)	Serial number
30	1E	CHAR(12)	Part number
42	2A	CHAR(4)	Frame ID
46	2E	CHAR(5)	Card position
51	33	CHAR(4)	System processor feature code
55	37	CHAR(4)	Processor feature code
59	3B	CHAR(4)	Interactive feature code
» 63	3F	CHAR(79)	Location code «

RHRI0500 Format

Offset		Type	Field
Dec	Hex		
0	0	BINARY(4)	Bytes returned
4	4	BINARY(4)	Bytes available
8	8	BINARY(4)	System bus number
12	C	BINARY(4)	System board number
16	10	BINARY(4)	System card number
20	14	BINARY(4)	I/O bus address
24	18	BINARY(4)	Controller address

Offset		Type	Field
Dec	Hex		
28	1C	BINARY(4)	Device address
32	20	CHAR(5)	Device position
37	25	CHAR(10)	Serial number
47	2F	CHAR(12)	Part number
59	3B	CHAR(4)	Frame ID
63	3F	CHAR(5)	Card position
68	44	CHAR(79)	Location code

RHRI0600 Format

Offset		Type	Field
Dec	Hex		
0	0	BINARY(4)	Bytes returned
4	4	BINARY(4)	Bytes available
8	8	BINARY(4)	System bus number
12	C	BINARY(4)	System board number
16	10	BINARY(4)	System card number
20	14	BINARY(4)	I/O bus address
24	18	BINARY(4)	Adapter address
28	1C	BINARY(4)	Device address
32	20	CHAR(10)	Serial number
42	2A	CHAR(12)	Part number
54	36	CHAR(4)	Frame ID
58	3A	CHAR(5)	Card position
63	3F	CHAR(79)	Location code

Field Descriptions

Adapter address. The adapter address of the resource. A value of -1 means that this field does not apply to the resource.

Bytes available. The number of bytes of data available to be returned. All available data is returned if enough space is provided.

Bytes returned. The number of bytes of data returned.

Card position. The physical location where the device or feature is plugged into the bus.

Controller address. The controller address of the resource. A value of -1 means that this field does not apply to the resource.

Device address. The device address of the resource. A value of -1 means that this field does not apply to the resource.

Device position. The relative device position of the resource.

Frame ID. The identifier of a frame resource.

Interactive feature code. The interactive feature of the system. This feature defines the portion of the processor that can be used to perform interactive work.

I/O bus address. The I/O bus address of the resource. A value of -1 means that this field does not apply to the resource.

Location code. The physical location of the hardware resource in the system. This field is available only if the system supports the location code format, otherwise will be set to blanks. The location code field is a sequence of 0 or more location labels that when followed in order, lead to the resource location. This is the place someone could go to view, remove, or replace the piece of hardware. Location labels are etched, silk screened, or marked in other ways on hardware. The following location labels might be shown in the location code field (n represents a numerical or alphabetical identifier):

Utttt.mmm.sssssss	Unit location
Pnn	Planar location
Cnn	Card location
Tnn	Port location
Dnn	Device location
Vnnn	Virtual planar
Wnnnnnnnnnnnnnnn	Worldwide port name
Lnn	Logical path location

Following are the descriptions of the location labels:

Unit location	Value of the unit enclosure identifier composed of uppercase alphabetic characters and digits. Commonly this value will be composed of the machine type (tttt), model (mmm) and serial number (sssssss).
Planar location	Decimal value of the planar identifier within the unit.
Card location	The decimal value of the position of the card within the hardware package. This can be followed by additional card location labels that would identify the decimal value of additional card positions of the resource on the card.
Port location	The decimal value of the port location within the resource.
Device location	The decimal value of the position of the device within the hardware package.
Virtual planar	The decimal value of the position of the virtual planar resource within the hardware package.
Worldwide port name	The hexadecimal value of the worldwide port name of the resource within the hardware package.
Logical path location	The decimal value of the logical path of the resource within the hardware package. This can be followed by additional logical path location labels that would identify the decimal value of additional logical path data of the resource on the hardware package.

Part number. A manufacturing identifier that represents similar types of hardware.

Port number. The port number of the resource. A value of -1 means that this field does not apply to the resource.

Processor feature code. The processor feature, which corresponds to the processor capacity of the system.

Serial number. The manufacturing sequence number of designation for the resource.

Shared session number. The shared session number of the resource. A value of -1 means that this field does not apply to the resource.

System board number. A numerical representation of a section of the bus into which the card is plugged. A value of -1 means that this field does not apply to the resource.

System bus number. A numerical representation of the path connection of the system processor to the card. A value of -1 means that this field does not apply to the resource.

System card number. A numerical representation of the location of the card on the bus. A value of -1 means that this field does not apply to the resource.

System processor feature code. The processor feature code level of the system. A value is returned for this field only if the Kind 3 value of the hardware resource indicates that the resource provides system information (X'0000000000080000'). The Kind 3 value is returned in the "Resource kind" field by the Retrieve Hardware Resource List API.

Error Messages

Message ID	Error Message Text
CPFA290 E	Resource name &1 is not valid.
CPF3C1E E	Required parameter &1 omitted.
CPF3C21 E	Format name &1 is not valid.
CPF3C24 E	Length of the receiver variable is not valid.
CPF3C90 E	Literal value cannot be changed.
CPF3CF1 E	Error code parameter not valid.
CPF9872 E	Program or service program &1 in library &2 ended. Reason code &3.

API introduced: V3R7

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Retrieve Hardware Resource List (QGYRHRL, QgyRtvHdwRscList) API

Required Parameter Group:	
1	Receiver variable
Output	Char(*)
2	Length of receiver variable
Input	Binary(4)
3	Format name
Input	Char(8)
4	Resource category
Input	Binary(4)
5	Error code
I/O	Char(*)
Service Program: QGYRHR	
Default Public Authority: *USE	
Threadsafe: No	

The Retrieve Hardware Resource List (OPM, QGYRHRL; ILE, QgyRtvHdwRscList) API retrieves a list of hardware resource names and other hardware resource information fields. The list provides a summary description for each resource in the specified resource category.

Authorities and Locks

API Public Authority
*USE

Required Parameter Group

Receiver variable
OUTPUT; CHAR(*)

The receiver variable that receives the information requested. You can specify the size of the area to be smaller than the format requested as long as you specify the length parameter correctly. As a result, the API returns only the data that the area can hold.

Length of receiver variable
INPUT; BINARY(4)

The length of the receiver variable provided. The length of receiver variable parameter may be specified up to the size of the receiver variable specified in the user program. If the length of receiver variable parameter specified is larger than the allocated size of the receiver variable specified in the user program, the results are not predictable. The minimum length is 16 bytes.

Format name
INPUT; CHAR(8)

The content and format of the information returned. The possible format names are as follows:

RHRL0100 Summary information for resources in each of the resource categories is returned in this format. For more information, see "RHRL0100 Format."

RHRL0110 Same as *RHRL0100* with the addition of a description text message ID field » a status extended field « and a reserved field. This format cannot be used with the Local area network resources resource category. For more information, see "RHRL0110 Format" on page 219.

Resource category

INPUT; BINARY(4)

The hardware resource category for which information is to be returned. Possible values are as follows:

1 All hardware resources (does not include local area network resources)
2 Communication resources
3 Local work station resources
4 Processor resources
5 Storage device resources
6 Coupled system adapter resources
7 Local area network resources
8 Cryptographic resources
9 Tape and optical resources
10 Tape resources
11 Optical resources

Note: When selecting Local area network resources, only information for token-ring resources can be obtained. Information for token-ring resources associated with a particular line description will be returned only if the Work with LAN Adapters (*WRKLANADPT*) command has been run with that line description specified. It is also necessary for the LAN Manager to have been activated for that line description. The LAN Manager is activated by running the Create Line Description Token-Ring Network (*CRTLINTRN*) or the Change Line Description Token-Ring Network (*CHGLINTRN*) command with keyword *ACTLANMGR* set to **YES*. *WRKLANADPT* must be run again after adding a new token-ring resource in order to be able to retrieve information for that resource.

Error code

I/O; CHAR(*)

The structure in which to return error information. For the format of the structure, see Error code parameter.

RHRL0100 Format

Offset		Type	Field
Dec	**Hex**		
0	0	BINARY(4)	Bytes returned
4	4	BINARY(4)	Bytes available
8	8	BINARY(4)	Number of resources returned
12	C	BINARY(4)	Length of resource entry
		CHAR(*)	Resource entries

Offset		Type	Field
Dec	Hex		
These fields repeat for each resource.		BINARY(4)	Resource category
		BINARY(4)	Family level
		BINARY(4)	Line type
		CHAR(10)	Resource name
		CHAR(4)	Type number
		CHAR(3)	Model number
		CHAR(1)	Status
		CHAR(8)	System to which adapter is connected
		CHAR(12)	Adapter address
		CHAR(50)	Description
		CHAR(24)	Resource kind

RHRL0110 Format

Offset		Type	Field
Dec	Hex		
0	0	BINARY(4)	Bytes returned
4	4	BINARY(4)	Bytes available
8	8	BINARY(4)	Number of resources returned
12	C	BINARY(4)	Length of resource entry
		CHAR(*)	Resource entries
These fields repeat for each resource.		BINARY(4)	Resource category
		BINARY(4)	Family level
		BINARY(4)	Line type
		CHAR(10)	Resource name
		CHAR(4)	Type number
		CHAR(3)	Model number
		CHAR(1)	Status
		CHAR(8)	System to which adapter is connected
		CHAR(12)	Adapter address
		CHAR(50)	Description
		CHAR(24)	Resource kind
		CHAR(7)	Description text message ID
		CHAR(1)	Reserved
		BINARY(4)	Status extended

Field Descriptions

Adapter address. The network address of the LAN adapter resource.

Bytes available. The length in bytes of all data available to return. All available data is returned if enough space is provided.

Bytes returned. The length in bytes of all data actually returned.

Description. The description of the resource.

Description text message ID. The message from which the text of the **Description** field is obtained. This message is contained in the **QCPFMSG** message file. The library in which it is found is determined by ***LIBL**.

Family level. The relationship between adjacent returned resources. Possible values are positive integers starting with 1, incrementing as needed to match the number of existing family levels. The first three values are as follows:

1	This resource is parent to the next resource if the next resource has a resource family level of 2.
2	This resource is child to the previous resource that has a resource family level of 1, and is parent to the next resource if the next resource has a resource family level of 3.
3	This resource is child to the previous resource that has a resource family level of 2, and is grandchild to the previous resource that has a resource family level of 1. It is parent to the next resource if the next resource has a resource family level of 4.

Length of resource entry. The length, in bytes, of each resource entry.

Line type. The line type of the LAN resource. Possible values are as follows:

-1	This field does not apply to this resource.
1	Token ring.
2	Fiber distributed data interface (FDDI).

Model number. The model number of the resource. For self-configuring tape devices, this represents the emulated device model number.

Number of resources returned. The total number of resources for which information is returned by the API.

Reserved. A reserved field.

Resource category. The hardware resource category of the resource for which information is returned. If the input parameter Resource category is set to the number 1 (All hardware resources), the format field value returned here is set to one of the other more specific values. Otherwise, the returned value matches the input value. Possible values are as follows:

2	Communication resources
3	Local workstation resources
4	Processor resources
5	Storage device resources
6	Coupled system adapter resources
7	Local area network resources
8	Cryptographic resources
9	Tape and optical resources
10	Tape resources
11	Optical resources

Resource entries. The sets of information fields that are retrieved for each resource.

Resource kind. The resource kind field consists of 24 bytes of hexadecimal numbers. It can be divided into three 8-byte fields called Kind 1, Kind 2, and Kind 3. The system uses Kind 1, Kind 2, and Kind 3 to categorize the resource. The contents of the three subfields are defined as follows:

Kind 1	Returned Value
Kind could not be determined	X'0000000000000000'
Not applicable	X'4000000000000000'
IOP	X'0000000000000001'
Controller	X'0000000000000002'
Device	X'0000000000000004'
Port	X'0000000000000008'
Channel	X'0000000000000010'
Library	X'0000000000000020'
Bus controller	X'0000000000000040'
IO node	X'0000000000000080'
Bus	X'0000000000000100'
Bus extension	X'0000000000000200'
Path information unit (PIU)	X'0000000000000400'
Picker (PCK)	X'0000000000000800'
» PCI Node	X'0000000000001000' «
Any kind	X'4FFFFFFFFFFFFFFF'

Kind 2	Returned Value
Kind could not be determined	X'0000000000000000'
Not applicable	X'4000000000000000'
Workstation	X'0000000000000001'
Storage	X'0000000000000002'
Workstation storage	X'0000000000000003'
Communications	X'0000000000000004'
Workstation communications	X'0000000000000005'
Storage communications	X'0000000000000006'
Storage communications workstation	X'0000000000000007'
Shared object clustering (SOC)	X'0000000000000008'
Cryptography	X'0000000000000010'
» Workstation cryptography	X'0000000000000011'
Storage cryptography	X'0000000000000012'
Storage workstation cryptography	X'0000000000000013'
Communication cryptography	X'0000000000000014'
Communication workstation cryptography	X'0000000000000015'
Storage communications cryptography	X'0000000000000016'

Kind 2	Returned Value
Storage communications workstation cryptography	X'0000000000000017'
Any kind	X'4FFFFFFFFFFFFFFF'

Kind 3	Returned Value
Kind could not be determined	X'0000000000000000'
Not applicable	X'4000000000000000'
Display	X'0000000000000001'
Printer	X'0000000000000002'
DASD	X'0000000000000004'
Diskette	X'0000000000000008'
DASD Diskette	X'000000000000000C'
Optical	X'0000000000000010'
Tape	X'0000000000000020'
DASD Tape	X'0000000000000024'
DASD Tape Diskette	X'000000000000002C'
Tape Optical	X'0000000000000030'
Removable media	X'0000000000000038'
DASD Tape Diskette Optical	X'000000000000003C'
ISDN	X'0000000000000040'
X25	X'0000000000000080'
Token ring	X'0000000000000100'
SDLC	X'0000000000000200'
Ethernet	X'0000000000000400'
Token ring/Ethernet	X'0000000000000500'
FDDI	X'0000000000000800'
Token ring FDDI	X'0000000000000900'
Frame relay	X'0000000000001000'
Frame relay SDLC	X'0000000000001200'
Cryptography	X'0000000000002000'
Facsimile	X'0000000000004000'
Memory	X'0000000000008000'
Service processor	X'0000000000010000'
Main processor	X'0000000000020000'
Bus contoller	X'0000000000040000'
CEC	X'0000000000080000'
Control panel	X'0000000000100000'
Bus adaptor	X'0000000000200000'
SPD bus	X'0000000000400000'
Bus extension	X'0000000000800000'

Kind 3	Returned Value
System bus adapter processor	X'0000000001000000'
Twin optical bus controller	X'0000000002000000'
ASCII	X'0000000004000000'
ASCII display	X'0000000004000001'
ASCII printer	X'0000000004000002'
Twinaxial	X'0000000008000000'
Twinaxial display	X'0000000008000001'
Twinaxial printer	X'0000000008000002'
Apple	X'0000000010000000'
Apple token-ring LAN	X'0000000010000100'
Apple Ethernet	X'0000000010000400'
Wireless	X'0000000020000000'
SOC host	X'0000000040000000'
SOC nonhost	X'0000000080000000'
Internetwork Packet Exchange (IPX)	X'0000000100000000'
File server	X'0000000200000000'
ATM	X'0000000400000000'
» ATM Ethernet	X'0000000400000400' «
Backplane	X'0000000800000000'
System clock	X'0000001000000000'
Optical library	X'0000002000000000'
PCI bus	X'0000004000000000'
PHB bus controller	X'0000008000000000'
RIO bus adapter	X'0000010000000000'
Large read cache	X'0000020000000000'
Virtual SOC IOP	X'0000040000000000'
» Virtual resource	X'0000080000000000'
Virtual Optical	X'0000080000000010'
Virtual Twin Optical bus controller	X'0000080002000000' «
Processor capacity	X'0000100000000000'
Interactive	X'0000200000000000'
Device services	X'0000400000000000'
» RIO controller Bus Control Chip (BuCC)	X'0000800000000000'
RIO bus	X'0001000000000000'
RIO SAN bus adapter	X'0002000000000000'
RIO SAN bus	X'0004000000000000'
RIO SAN BuCC	X'0008000000000000'
RIO SAN SOC IOP	X'0010000000000000'
Riser	X'0020000000000000'
L3 Cache	X'0040000000000000'
Backplane extender	X'0080000000000000'

Kind 3	Returned Value
Capacitor card	X'0100000000000000'
Any kind	X'4FFFFFFFFFFFFFFF'

Note: There are cases where the Kind 3 value is composed of more than one value (bit turned on), for example: the X'0000000000000400' value means ethernet and the X'0000080000000000' value means virtual resource, so a value of X'0000080000000400' means virtual ethernet.

Resource name. The name of the resource for which the information in the resource entry applies. The name can be used as input to the Retrieve Hardware Resource Information (QGYRHRI, QgyRtvHdwRscInfo) API.

Status. Whether the resource is operational or not. Possible values are as follows:

0 The status field does not apply to this resource or could not be determined.
1 Operational. Resource is operational.
2 Inoperative. Resource is not operational.
3 Not detected. Presence of resource could not be detected.

Status extended. The extended hardware status of the resource. Possible values are as follows:

0 Resource is powered off or no power is being supplied to it.
1 Resource has failed.
2 Resource is operational.
3 Resource is operational but errors have been detected.
4 Resource is not connected.
5 Resource is operational but performance is degraded.
6 Resource status is unknown currently.
7 Resource is currently disabled.
8 Resource is not installed.
10 Resource is not operational.
16 Resource is failed due to a system software error.

System to which adapter is connected. The system to which the coupled system adapter is connected.

Type number. An identifier that represents the object type of this resource. For self-configuring tape devices, this represents the emulated device type number. **Exceptions:** Value of *TAP implies that a self-configuring tape device is emulating a device type that contains characters outside the range of 0 to 9 and A to Z.

Error Messages

Message ID	Error Message Text
CPF3C1E E	Required parameter &1 omitted.
CPF3CF1 E	Error code parameter not valid.
CPF3C21 E	Format name &1 is not valid.
CPF3C24 E	Length of the receiver variable is not valid.
CPF3C90 E	Literal value cannot be changed.
CPF9872 E	Program or service program &1 in library &2 ended. Reason code &3.
CPFA280 E	Resource category &1 is not valid.

API introduced: V3R7

Retrieve Hardware Resource Relative (QRZRTVR) API

Required Parameter Group:	
1	Resource name
Output	Char(32)
2	Resource criteria
Input	Char(*)
3	Error code
I/O	Char(*)

Default Public Authority: *EXCLUDE

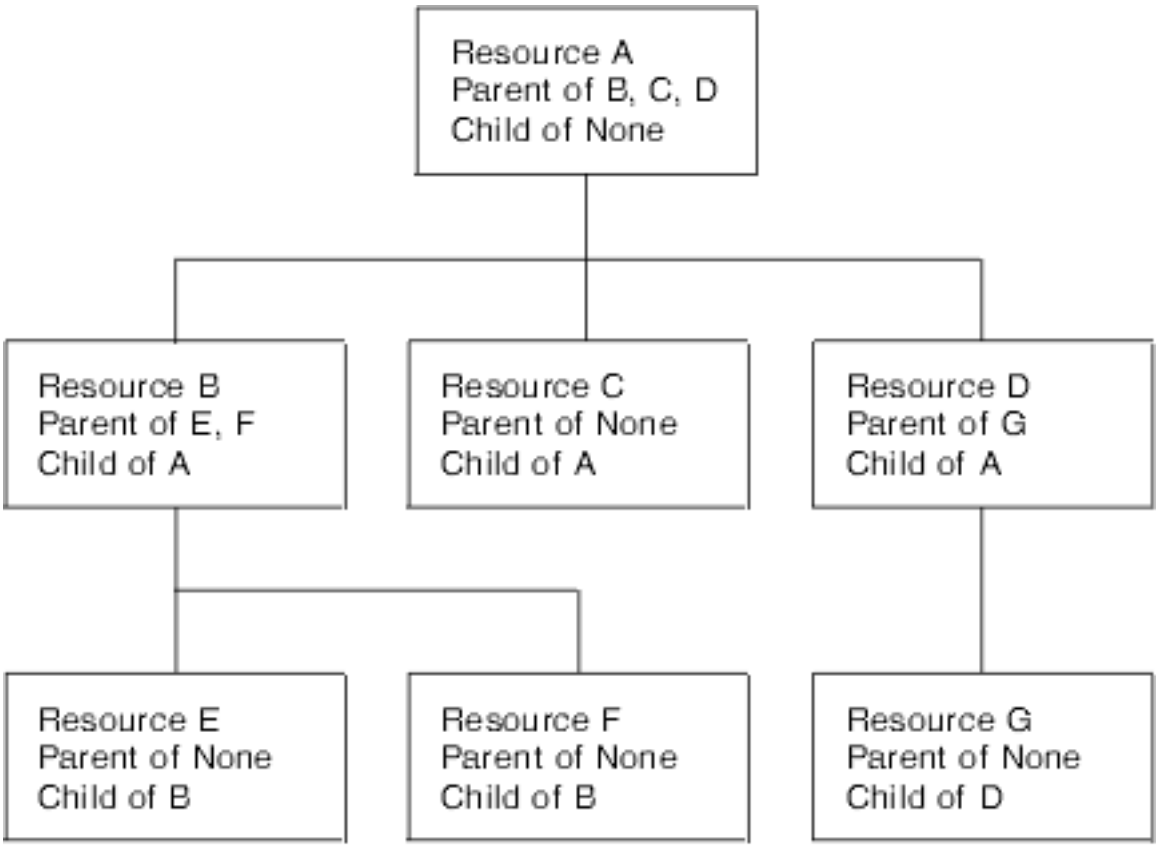
Threadsafe: No

The Retrieve Hardware Resource Relative (QRZRTVR) API retrieves the resource name of a family member that matches the resource criteria. The user of the API supplies the resource criteria, and the first or next resource name that matches the resource criteria is returned. The resource name can be used with other hardware resource APIs to get more information about a specific hardware resource.

You can use this API to do the following:

- Retrieve the resource name of the parent resource. You can move up the hierarchical path by using the attempt, FIRST.
- Retrieve a resource name of the child resource. You can move down or across the hierarchical path by using either the attempt, FIRST, or the attempt, NEXT.

Example of a Resource Hierarchy



In Example of a Resource Hierarchy (page 225), the attempt, FIRST, moves down the child resource hierarchy. For example, if in the resource criteria, Resource A is specified in the search resource name field, the search request of FIRST results in receiving Resource B.

Another search request of FIRST that still uses Resource A results in receiving Resource B. If the search resource name field in the resource criteria is changed to Resource B, the search request of FIRST results in receiving Resource E. If the search resource name field in the resource criteria is changed to Resource E, the search request of FIRST results in an error, CPF0B46 (Materialize failed).

The attempt NEXT travels across the sibling resource structure. If the search resource name field in the resource criteria is Resource A, the search request of FIRST results in receiving Resource B. Another search request of NEXT that still uses Resource A results in receiving Resource C. Another search request using NEXT results in receiving Resource D. Another search request using NEXT results in an error of no resource found.

Once the specified resource is found, the attempt FIRST, using the found resource, moves down to a different level of the child hierarchy, and the attempt NEXT travels across that resource sibling level, and so on.

Retrieve the resource name of the associated package resource. Hardware resources possibly contain both packaging resource data and logical resource data. For each type of data that exists, the resource names are unique. If the logical resource name is known, the package resource name can be obtained through the associated packaging resource hierarchical path.

Retrieve the resource name of the associated logical resource. Hardware resources possibly contain both logical resource data and packaging resource data. For each type of data that exists, the resource names are unique. If the packaging resource name is known, the logical resource name can be obtained through the associated logical resource hierarchical path.

Authorities and Locks

API Public Authority
*EXCLUDE

Required Parameter Group

Resource name
OUTPUT; CHAR(32)

A variable that receives the resource name.

Resource criteria
INPUT; CHAR(*)

The criteria for which the search will be processed. See "Format of the Resource Criteria" for details of this format.

Error code
I/O; CHAR(*)

The structure in which to return error information. For the format of the structure, see Error code parameter.

Format of the Resource Criteria

Offset		Type	Field
Dec	Hex		
0	0	CHAR(16)	Handle
16	10	BINARY(4)	Search request
20	14	BINARY(4)	Hierarchical path
24	18	CHAR(32)	Search resource name

Field Descriptions

Handle. The unique value that is obtained through the Create Handle (QRZCRTH) API. The handle allows repeated calls to obtain more than one resource name that meets the resource criteria. The handle is created through the Create Handle (QRZCRTH) API. The handle is required in conjunction with the first and next search request.

The handle must be set to hexadecimal zeros in conjunction with the first search request when a next search request is not needed. A handle can be used to move across a horizontal level of a hierarchy, but it cannot be used on more than one level.

For example, in Example of a Resource Hierarchy (page 225), handle 1, based on the search resource name of A, can be used on a FIRST attempt to receive resource B, and on a NEXT attempt to receive resource C and then resource D.

Handle 1, however, cannot be used on a FIRST attempt to receive resource B, and then on a FIRST attempt to receive resource E. Handle 1 cannot be used on two different levels of the hierarchy (B and E);

this results in error message CPF0B34 (the handle is in the wrong state for the operation) being issued. To correct this situation, either use a different handle, or do not use a handle by setting the field to hexadecimal zeros.

The user is responsible for deleting the handle when it is no longer needed. Use the Delete Handle (QRZDLTH) API to delete the handle.

Hierarchical path. Whether the path is for a parent, a child, an associated packaging resource, or an associated logical resource.

1	Search for a parent resource.
2	Search for a child resource.
3	Search for an associated packaging resource.
4	Search for an associated logical resource.

Search request. Whether the call is a first attempt or a next attempt to obtain more than one list item resource name that meets the resource criteria.

1	This is the first attempt to obtain a resource name from a possible hierarchy of resources. This retrieves the first resource at a subsequent level of the hierarchy.
2	This is the next attempt to obtain a resource name from a possible hierarchy of resources. This retrieves a subsequent resource at the same level in the hierarchy of the corresponding first attempt.

Search resource name. The resource name to be used as the focal point of a first attempt or any subsequent next attempts.

Error Messages

Message ID	Error Message Text
CPF0B3B E	Resource name not found.
CPF0B46 E	Materialize failed.
CPF0B3F E	The reserved area is not set to binary zeros.
CPF0B33 E	The handle is not valid.
CPF0B34 E	The handle is in wrong state for operation.
CPF0B47 E	Hierarchical path supplied is not valid.
CPF24B4 E	Severe error while addressing parameter list.
CPF3C19 E	Error occurred with receiver variable specified.
CPF3C90 E	Literal value cannot be changed.
CPF3CF1 E	Error code parameter not valid.
CPF9872 E	Program or service program &1 in library &2 ended. Reason code &3.

API introduced: V3R6

Top | "Configuration APIs," on page 1 | API by category

Retrieve Resource Class Attributes (QRZRRCA) API

Required Parameter Group:

1	Receiver variable
Output	Char(*)
2	Length of receiver variable
Input	Binary(4)
3	Format name
Input	Char(8)
4	Request criteria
Input	Char(*)
5	Error code
I/O	Char(*)

Default Public Authority: *EXCLUDE

Threadsafe: No

The Retrieve Resource Class Attributes (QRZRRCA) API retrieves class-specific information or object-type values for a logical resource. The caller of the API provides the class and subclass, or type and model, or resource name. The caller of the API also indicates what data is requested.

You can use this API to do the following:

- Obtain a valid type number based on the class and subclass specified.
- Determine the supported protocols based either on the resource name or on the type and model.
- Determine if a controller description is required based either on the resource name or on the type and model.
- Determine if a device supports the assign command based either on the resource name or on the type and model.
- Obtain a media format based either on the resource name or on the type and model.
- Obtain a media class based either on the resource name or on the type and model.
- Determine if a device is read-only based either on the resource name or on the type and model.
- Determine the kind of device based either on the resource name or on the type and model.
- Determine the LAN speed based either on the resource name or on the type and model.
- Determine if a device configuration object is applicable based either on the resource name or on the type and model.
- Determine if a device configuration network ID object is applicable based either on the resource name or on the type and model.
- Determine if the device has a bar code reader based either on the resource name or on the type and model.
- Determine if the device supports import and export based either on the resource name or on the type and model.
- Determine the library mode based either on the resource name or on the type and model.
- Determine if the library reports virtual product data (VPD) information based either on the resource name or on the type and model.

- Determine if the library reports an element address based either on the resource name or on the type and model.

Authorities and Locks

API Public Authority
*EXCLUDE

Required Parameter Group

Receiver variable
OUTPUT; CHAR(*)

The receiver variable that receives the information requested. You can specify the size of the area to be smaller than the format requested as long as you specify the length parameter correctly. As a result, the API returns only the data that the area can hold.

Length of receiver variable
INPUT; BINARY(4)

The length of the receiver variable provided. The length of receiver variable parameter may be specified up to the size of the receiver variable specified in the user program. If the length of receiver variable parameter specified is larger than the allocated size of the receiver variable specified in the user program, the results are not predictable. The minimum length is 8 bytes.

Format name
INPUT; CHAR(8)

The content and format of the information returned. The possible format names are as follows.
Note: If 2 (the next attempt to obtain an element from a possible list of elements) is specified for the search request criteria field, message CPF0B46 (Materialize failed) is issued if you try to read beyond the end of the list elements.

RRCA0100	Returns the type number of the object based on the request criteria. See "RRCA0100 Format" on page 233 for details about this format.
RRCA0200	Returns the protocol support based on the request criteria. See "RRCA0200 Format" on page 233 for details about this format.
RRCA0300	Returns a value that indicates whether a controller description is required for the device based on the request criteria. See "RRCA0300 Format" on page 233 for details about this format.
RRCA0400	Returns a value that indicates whether the device supports the assign command based on the request criteria. See "RRCA0400 Format" on page 234 for details about this format.
RRCA0500	Returns a value that indicates the media format based on the request criteria. See "RRCA0500 Format" on page 234 for details about this format.
RRCA0600	Returns a value that indicates the media class based on the request criteria. See "RRCA0600 Format" on page 234 for details about this format.
RRCA0700	Returns a value that indicates whether the device is read-only based on the request criteria. See "RRCA0700 Format" on page 234 for details about this format.
RRCA0800	Returns a value that indicates the kind of resource. The three fields can be used separately or together. See "RRCA0800 Format" on page 235 for details about this format.
RRCA0900	Returns a value that indicates the LAN speed. See "RRCA0900 Format" on page 235 for details about this format.
RRCA1000	Returns a value that indicates the value of the configurable flag. See "RRCA1000 Format" on page 235 for details about this format.
RRCA1100	Returns a value that indicates the network ID. See "RRCA1100 Format" on page 235 for details about this format.
RRCA1200	Returns a value that indicates that the device has a bar code reader. See "RRCA1200 Format" on page 236 for details about this format.
RRCA1300	Returns a value that indicates whether the device supports import and export operations. See "RRCA1300 Format" on page 236 for details about this format.

RRCA1400 Returns a value that indicates the library mode. See “RRCA1400 Format” on page 236 for details about this format.

RRCA1500 Returns a value that indicates whether the library reports vital product data (VPD). See “RRCA1500 Format” on page 236 for details about this format.

RRCA1600 Returns a value that indicates whether the library reports the address of the elements. See “RRCA1600 Format” on page 237 for details about this format.

Request criteria

INPUT; CHAR(*)

The criteria for which the retrieval will be processed.

Error code

I/O; CHAR(*)

The structure in which to return error information. For the format of the structure, see Error code parameter.

Format of the Request Criteria

Offset		Type	Field
Dec	**Hex**		
0	0	CHAR(16)	Handle
16	10	BINARY(4)	Search request
20	14	BINARY(4)	Key
24	18	BINARY(4)	Request indicator
28	1C	CHAR(32)	Request data

Field Descriptions

Handle. The value of the handle. The handle allows repeated calls to obtain more than one resource name that meets the request criteria. The handle is created through the Create Handle (QRZCRTH) API. The handle is required in conjunction with the first or next search request. The handle must be set to binary zeros in conjunction with the first search request when no next search request is needed. The user is responsible for deleting the handle when it is no longer needed. Use the Delete Handle (QRZDLTH) API to delete the handle.

Key. The key value indicating the type of data to be returned in the receiver variable. The format of these keys is described in the format descriptions “RRCA0100 Format” on page 233 through “RRCA1600 Format” on page 237. See “Field Descriptions” on page 237 for a description of these keys. Valid keys are:

1 Type
2 Protocol supported
3 Controller description required
4 Assign command supported flag
5 Media format
6 Media class
7 Read-only flag
8 Resource classification
9 LAN speed
10 Configurable flag
11 Network ID applicable flag
12 Bar code reader flag
13 Import and export supported flag

14 Library mode
15 Library reports VPD flag
16 Library reports elements flag

Request data. The field indicating which class and subclass, or type and model, or resource name to use in the search.

Following is the field structure to be used in the request data for class and subclass.

Offset			
Dec	**Hex**	**Type**	**Field**
0	0	BINARY(4)	Class
4	4	BINARY(4)	Subclass
8	8	CHAR(24)	Reserved

Following are the valid values to be used for the class field:

1 Tape drive class
2 Optical class
3 Workstation
4 Communications
5 Diskette

Following are the valid values to be used for the subclass field:

1 Subclass is for a device.
2 Subclass is for a controller.
3 Subclass is for a library.
4 Subclass is for a port.

The reserved field must be set to hexadecimal zeros.

Following is the field structure to be used in the request data for type and model.

Offset			
Dec	**Hex**	**Type**	**Field**
0	0	CHAR(10)	Type number
10	A	CHAR(10)	Model number
20	14	CHAR(12)	Reserved

Type number. An object type number that is left-justified and filled with trailing blanks.

Model number. An object model number that is left-justified and filled with trailing blanks.

Reserved. This must be set to hexadecimal zeros.

Following is the field structure to be used in the request data for resource name.

Offset		Type	Field
Dec	Hex		
0	0	CHAR(32)	Resource name

Resource name. A 32-character name that is left-justified and filled with trailing blanks.

Request indicator. Whether the retrieval of the resource information is by class and subclass, or type and model, or resource name.

1 Class and subclass
2 Type and model
3 Resource name

Search request. Whether the search request is a first attempt or a next attempt to obtain the elements from a list of elements.

1 The first attempt to obtain an element from a possible list of elements.
2 The next attempt to obtain an element from a possible list of elements.

RRCA0100 Format

This format name is valid only when the request indicator is for class and subclass. An error results if this format name is used with type and model or with resource name.

Offset		Type	Field
Dec	Hex		
0	0	BINARY(4)	Bytes returned
4	4	BINARY(4)	Bytes available
8	8	CHAR(10)	Type

RRCA0200 Format

This format name is valid only when the request indicator is for type and model or for resource name. An error results if this format name is used with class and subclass.

Offset		Type	Field
Dec	Hex		
0	0	BINARY(4)	Bytes returned
4	4	BINARY(4)	Bytes available
8	8	CHAR(8)	Protocol supported

RRCA0300 Format

This format name is valid only when the request indicator is for type and model or for resource name. An error results if this format name is used with class and subclass.

Offset		Type	Field
Dec	Hex		
0	0	BINARY(4)	Bytes returned
4	4	BINARY(4)	Bytes available
8	8	BINARY(4)	Controller description required

RRCA0400 Format

This format name is valid only when the request indicator is for type and model or for resource name. An error results if this format name is used with class and subclass.

Offset		Type	Field
Dec	Hex		
0	0	BINARY(4)	Bytes returned
4	4	BINARY(4)	Bytes available
8	8	BINARY(4)	Assign command supported flag

RRCA0500 Format

This format name is valid only when the request indicator is for type and model or for resource name. An error results if this format name is used with class and subclass.

Offset		Type	Field
Dec	Hex		
0	0	BINARY(4)	Bytes returned
4	4	BINARY(4)	Bytes available
8	8	CHAR(8)	Media format

RRCA0600 Format

This format name is valid only when the request indicator is for type and model or for resource name. An error results if this format name is used with class and subclass.

Offset		Type	Field
Dec	Hex		
0	0	BINARY(4)	Bytes returned
4	4	BINARY(4)	Bytes available
8	8	CHAR(8)	Media class

RRCA0700 Format

This format name is valid only when the request indicator is for type and model or for resource name. An error results if this format name is used with class and subclass.

Offset		Type	Field
Dec	Hex		
0	0	BINARY(4)	Bytes returned
4	4	BINARY(4)	Bytes available
8	8	BINARY(4)	Read-only flag

RRCA0800 Format

This format name is valid only when the request indicator is for type and model or for resource name. An error results if this format name is used with class and subclass.

Offset		Type	Field
Dec	Hex		
0	0	BINARY(4)	Bytes returned
4	4	BINARY(4)	Bytes available
8	8	CHAR(8)	Resource classification 1
16	10	CHAR(8)	Resource classification 2
24	18	CHAR(8)	Resource classification 3

RRCA0900 Format

This format name is only valid when the request indicator is for type and model or for resource name. An error results if this format name is used with class and subclass.

Offset		Type	Field
Dec	Hex		
0	0	BINARY(4)	Bytes returned
4	4	BINARY(4)	Bytes available
8	8	CHAR(8)	LAN speed

RRCA1000 Format

This format name is valid only when the request indicator is for type and model or for resource name. An error results if this format name is used with class and subclass.

Offset		Type	Field
Dec	Hex		
0	0	BINARY(4)	Bytes returned
4	4	BINARY(4)	Bytes available
8	8	BINARY(4)	Configurable flag

RRCA1100 Format

This format name is valid only when the request indicator is for type and model or for resource name. An error results if this format name is used with class and subclass.

Offset		Type	Field
Dec	Hex		
0	0	BINARY(4)	Bytes returned
4	4	BINARY(4)	Bytes available
8	8	BINARY(4)	Network ID applicable flag

RRCA1200 Format

This format name is valid only when the request indicator is for type and model or for resource name. An error results if this format name is used with class and subclass.

Offset		Type	Field
Dec	Hex		
0	0	BINARY(4)	Bytes returned
4	4	BINARY(4)	Bytes available
8	8	BINARY(4)	Bar code reader flag

RRCA1300 Format

This format name is valid only when the request indicator is for type and model or for resource name. An error results if this format name is used with class and subclass.

Offset		Type	Field
Dec	Hex		
0	0	BINARY(4)	Bytes returned
4	4	BINARY(4)	Bytes available
8	8	BINARY(4)	Import and export supported flag

RRCA1400 Format

This format name is valid only when the request indicator is for type and model or for resource name. An error results if this format name is used with class and subclass.

Offset		Type	Field
Dec	Hex		
0	0	BINARY(4)	Bytes returned
4	4	BINARY(4)	Bytes available
8	8	CHAR(1)	Library mode

RRCA1500 Format

This format name is valid only when the request indicator is for type and model or for resource name. An error results if this format name is used with class and subclass.

Offset		Type	Field
Dec	Hex		
0	0	BINARY(4)	Bytes returned
4	4	BINARY(4)	Bytes available
8	8	BINARY(4)	Library reports VPD flag

RRCA1600 Format

This format name is valid only when the request indicator is for type and model or for resource name. An error results if this format name is used with class and subclass.

Offset		Type	Field
Dec	Hex		
0	0	BINARY(4)	Bytes returned
4	4	BINARY(4)	Bytes available
8	8	BINARY(4)	Library reports elements flag

Field Descriptions

Assign command supported flag. Whether the assign command is supported. Valid values for this field are 0 (No) and 1 (Yes).

Bar code reader flag. Whether the device has a bar code reader. Valid values for this field are 0 (No) and 1 (Yes).

Bytes available. The number of bytes of data available to be returned. All available data is returned if enough space is provided.

Bytes returned. The number of bytes of data returned.

Configurable flag. Whether the resource can be configured. Valid values for this field are 0 (No) and 1 (Yes).

Controller description required. Whether a controller description is required. Valid values for this field are 0 (No) and 1 (Yes).

Import and export supported flag. Whether import and export operations are supported. Valid values for this field are 0 (No) and 1 (Yes).

LAN speed. A value that represents the speed of the local area network (LAN).

Speed	Returned value
4MB	X'0000000000000000'
16MG	X'0000000000000001'
4MB and 16MB	X'0000000000000002'
Not applicable	X'0000000000000003'

Library mode. A value that represents how the media mover is accessed through a library. Valid values are:

0 Not in a library

1 In a library where the media mover is on a different resource on this input/output processor (IOP).

2 In a library where the media mover is accessed through a communications line.

3 In a library where the device and the media mover are combined in the same resource.

Library reports elements flag. Whether the library reports the address of the elements. Valid values for this field are 0 (No) and 1 (Yes).

Library reports VPD flag. Whether the library reports vital product data (VPD). Valid values for this field are 0 (No) and 1 (Yes).

Media class. The format of the data on the media.

Format	Returned value
Unknown format	X'0000000000000000'
1600 bpi format	X'0000000000000001'
3200 bpi format	X'0000000000000002'
6250 bpi format	X'000000000000003'
38000 bpi format	X'0000000000000004'
76000 bpi format	X'0000000000000005'
Qic24 format	X'0000000000000006'
Qic120 format	X'0000000000000007'
Qic150 format	X'0000000000000008'
Qic320 format	X'0000000000000009'
Qic1000 format	X'000000000000000A'
Qic2GB format	X'000000000000000B'
2pt3GB format	X'000000000000000C'
2pt5GB format	X'000000000000000D'
3480 format	X'000000000000000E'
3490 format	X'000000000000000F'
2 GB format	X'0000000000000010'
5 GB format	X'0000000000000011'
7 GB format	X'0000000000000012'
QIC 525 format	X'0000000000000013'
QIC 3040 format	X'0000000000000014'
ISO9660 format	X'0000000000000015'
HPOFS format	X'0000000000000016'
3590 format	X'0000000000000017'
77 tracks per side; 96 tracks per inch	X'0000000000000018'
77 tracks per side; 48 tracks per inch	X'0000000000000019'
FMT3570	X'000000000000001A'
QIC5010	X'000000000000001B'

Media format. The type of media on which the data is stored.

Media type	Returned value
Unknown class	X'0000000000000000'
1/2 in. reel tape	X'0000000000000001'
1/2 in. cartridge	X'0000000000000002'
1/4 in. cartridge	X'0000000000000003'
8 mm cartridge	X'0000000000000004'
5-1/4 in. diskette	X'0000000000000005'
8 in. diskette	X'0000000000000006'
WORM optical	X'0000000000000007'
CD-ROM optical	X'0000000000000008'
Magnet-optical	X'0000000000000009'
Mini	X'000000000000000A'

Network ID applicable flag. Whether the resource uses a network ID. Valid values for this field are 0 (No) and 1 (Yes).

Protocol supported. The value for the protocol to be supported.

Protocol	Value
None	X'0000000000000000'
SDLC	X'0000000000000001'
Bisynchronous	X'0000000000000002'
Asynchronous	X'0000000000000003'
X.25	X'0000000000000004'
Token ring	X'0000000000000005'
X.25 compact disc (CD)	X'0000000000000006'
Twinaxial DLC	X'0000000000000007'
Open in CD	X'0000000000000008'
Ethernet	X'0000000000000009'
Lap E	X'000000000000000A'
Lap D	X'000000000000000B'
Network node	X'000000000000000C'
FDDI	X'000000000000000D'
Frame relay direct	X'000000000000000E'
Fax	X'000000000000000F'
SDLC short hold mode	X'0000000000000011'

Read-only flag. Whether the device is read only. Valid values for this field are 0 (No) and 1 (Yes).

Resource classification 1. The type of hardware that the resource is.

Hardware type	Returned value
Not available	X'4000000000000000'
Any classification 1	X'4FFFFFFFFFFFFFFF'

Hardware type	Returned value
IOP	X'0000000000000001'
Controller	X'0000000000000002'
Device	X'0000000000000004'
Port	X'0000000000000008'
Channel	X'0000000000000010'
Library	X'0000000000000020'
Bus controller	X'0000000000000040'
IO node	X'0000000000000080'
Bus	X'0000000000000100'
Bus extension	X'0000000000000200'
Path information unit (PIU)	X'0000000000000400'
Picker (PCK)	X'0000000000000800'

Resource classification 2. The type of controller that the resource is.

Controller type	Returned value
Not available	X'4000000000000000'
Any classification 2	X'4FFFFFFFFFFFFFFF'
Workstation	X'0000000000000001'
Storage	X'0000000000000002'
Communications	X'0000000000000003'
Workstation storage	X'0000000000000004'
Workstation communications	X'0000000000000005'
Storage communications	X'0000000000000006'
Storage communications workstation	X'0000000000000007'
Shared object clustering (SOC)	X'0000000000000008'

Resource classification 3. The type of device that the resource is.

Device type	Returned value
Not available	X'4000000000000000'
Any classification 3	X'4FFFFFFFFFFFFFFF'
Display	X'0000000000000001'
Printer	X'0000000000000002'
DASD	X'0000000000000004'
Diskette	X'0000000000000008'
Optical	X'0000000000000010'
Tape	X'0000000000000020'
Removable media	X'0000000000000038'
ISDN	X'0000000000000040'
X.25	X'0000000000000080'
Token ring	X'0000000000000100'

Device type	Returned value
SDLC	X'0000000000000200'
Ethernet	X'0000000000000400'
FDDI	X'0000000000000800'
Token-ring FDDI	X'0000000000000900'
Frame relay	X'0000000000001000'
Frame relay SDLC	X'0000000000001200'
Cryptographic	X'0000000000002000'
Fax	X'0000000000004000'
Memory	X'0000000000008000'
Service processor	X'0000000000010000'
Main processor	X'0000000000020000'
Bus controller	X'0000000000040000'
System information	X'0000000000080000'
Control panel	X'0000000000100000'
Bus adapter	X'0000000000200000'
SPD bus	X'0000000000400000'
Bus extension	X'0000000000800000'
System bus adapter processor interface unit (Sba PIU)	X'0000000001000000'
Twin optical bus controller	X'0000000002000000'
ASCII	X'0000000004000000'
ASCII display	X'0000000004000001'
ASCII printer	X'0000000004000002'
Twinaxial	X'0000000008000000'
Twinaxial display	X'0000000008000001'
Twinaxial printer	X'0000000008000002'
Apple	X'0000000010000000'
Apple token-ring LAN	X'0000000010000100'
Apple Ethernet	X'0000000010000400'
Wireless	X'0000000020000000'
SOC host	X'0000000040000000'
SOC nonhost	X'0000000080000000'
Internetwork Packet Exchange (IPX)	X'0000000100000000'

Type. The object type number.

Error Messages

Message ID	Error Message Text
CPF0B3B E	Resource name not found.
CPF0B3D E	Format &1 is not valid with request indicator &2.
CPF0B33 E	The handle is not valid.
CPF0B34 E	The handle is in wrong state for operation.
CPF0B35 E	Invalid class.

Message ID	Error Message Text
CPF0B36 E	Invalid subclass.
CPF0B37 E	Invalid type.
CPF0B46 E	Materialize failed.
CPF24B4 E	Severe error while addressing parameter list.
CPF3C19 E	Error occurred with receiver variable specified.
CPF3C21 E	Format name &1 is not valid.
CPF3C24 E	Length of the receiver variable is not valid.
CPF3C90 E	Literal value cannot be changed.
CPF3CF1 E	Error code parameter not valid.
CPF9872 E	Program or service program &1 in library &2 ended. Reason code &3.

API introduced: V3R6

Top | "Configuration APIs," on page 1 | API by category

Retrieve Resource Information (QRZRRSI) API

Required Parameter Group:

1	Receiver variable
Output	Char(*)
2	Length of receiver variable
Input	Binary(4)
3	Format name
Input	Char(8)
4	Request criteria
Input	Char(*)
5	Error code
I/O	Char(*)

Default Public Authority: *EXCLUDE

Threadsafe: No

The Retrieve Resource Information (QRZRRSI) API retrieves selected fields of a hardware resource from a known resource name. The user of the API supplies the resource name along with the request criteria by using key values. The first or next information data that matches the request criteria from the resource name supplied is returned.

Key values are used as a singular search criterion rather than as part of a more complex search. The singular search criterion, by its nature, has very concise results.

Authorities and Locks

API Public Authority
*EXCLUDE

Required Parameter Group

Receiver variable
OUTPUT; CHAR(*)

The receiver variable that receives the information requested. You can specify the size of the area to be smaller than the format requested as long as you specify the length parameter correctly. As a result, the API returns only the data that the area can hold.

Length of receiver variable
INPUT; BINARY(4)

The length of the receiver variable provided. The length of receiver variable parameter may be specified up to the size of the receiver variable specified in the user program. If the length of receiver variable parameter specified is larger than the allocated size of the receiver variable specified in the user program, the results are not predictable. The minimum length is 8 bytes.

Format name
INPUT; CHAR(8)

The content and format of the information returned. The possible format name is as follows:

RTVI0100 Returns the resource information from the hardware resource name supplied and that matches the request criteria. See "RTVI0100 Format" on page 246 for details about the format.

Request criteria
INPUT; CHAR(*)

The criteria for which the retrieve will be processed.

Error code
I/O; CHAR(*)

The structure in which to return error information. For the format of the structure, see Error code parameter.

Format of the Request Criteria

Offset		Type	Field
Dec	Hex		
0	0	CHAR(32)	Resource name
32	20	CHAR(16)	Handle
48	30	BINARY(4)	Search request
52	34	BINARY(4)	Offset to first key
56	38	BINARY(4)	Number of keys
		CHAR(*)	Keys

Field Descriptions

Handle. The unique value that is obtained through the Create Handle (QRZCRTH) API. The handle allows repeated calls to obtain more than one resource name that meets the request criteria. The handle is created through the Create Handle (QRZCRTH) API. The handle is required in conjunction with the first or next search request. The handle must be set to binary zeros in conjunction with the first search request when no next search request is needed. The user is responsible for deleting the handle when it is no longer needed. Use the Delete Handle (QRZDLTH) API to delete the handle.

Keys. Following are the key values to be used in the request criteria. For a description of the key and the values that are valid for the key, see "Key Field Descriptions" on page 247.

Key	Field	Type
2	rvxCommunication flag	CHAR(1)
3	Type number	CHAR(4)
4	Serial number	CHAR(10)
5	Model number	CHAR(3)
9	Reported this IPL flag	CHAR(1)
10	LAN flag	CHAR(1)
11	Vary-on wait time	BINARY(4)
12	Bus number	CHAR(*)
14	Plant of manufacture number	CHAR(2)
15	Part number	CHAR(12)
16	Emulating type	CHAR(4)
17	Emulating model	CHAR(3)
19	Memory size	BINARY(4)
20	Powered-on flag	CHAR(1)
21	Resource classification	CHAR(8)
22	Operational flag	CHAR(1)
23	IOP has DASD flag	CHAR(1)
24	Normal mode flag	CHAR(1)
25	Supplied data at IPL flag	CHAR(1)
26	DASD candidate flag	CHAR(1)
30	Number of resources	BINARY(2)
31	Card number	CHAR(*)
32	Board number	CHAR(*)
33	RCTT level	CHAR(1)
34	Card position	CHAR(5)
35	EIA (Electronics Industries Association)	CHAR(2)
36	User location text	CHAR(40)
37	Frame ID	CHAR(4)
38	Device position	CHAR(5)
44	Frame resource name	CHAR(4)
45	Auxiliary processor	CHAR(*)
46	Device address	CHAR(*)
47	Keyboard type	CHAR(1)
48	Color flag	CHAR(1)
51	Supported on system flag	CHAR(1)
52	Controller description needed flag	CHAR(1)
53	Supports assign command flag	CHAR(1)
54	Wide screen flag	CHAR(1)
55	Programmable flag	CHAR(1)

Key	Field	Type
56	Keyboard type extended	CHAR(1)
57	Console usage	CHAR(8)
58	ASCII flag	CHAR(1)
59	High-speed digital flag	CHAR(1)
60	LAN speed	CHAR(1)
62	V.24 interface flag	CHAR(1)
63	X.21 interface flag	CHAR(1)
64	V.35 interface flag	CHAR(1)
65	V.36 interface flag	CHAR(1)
67	Maximum lines attached	CHAR(1)
68	Interface adapter card flag	CHAR(1)
69	DCE adapter card flag	CHAR(1)
70	Maximum ports attached	CHAR(1)
71	Maximum frame size	BINARY(2)
72	FAX communications flag	CHAR(1)
74	File server I/O processor flag	CHAR(1)
75	User configurable flag	CHAR(1)
76	Can backspace flag	CHAR(1)
77	Can overwrite flag	CHAR(1)
78	Supports tape write error recovery procedure (TWERP) flag	CHAR(1)
79	Library address	CHAR(*)
81	Transport type	CHAR(*)
82	UA type	CHAR(*)
83	Is daughter card flag	CHAR(1)
84	Contact data	CHAR(136)
86	Remote type	CHAR(4)
87	Remote model	CHAR(3)
88	Remote serial	CHAR(10)
89	Remote name	CHAR(8)
90	Is an OEM	CHAR(1)
91	Is shared	CHAR(1)
119	Resource ID	CHAR(4)
120	Write format	CHAR(2)
121	Read format	CHAR(2)
122	Media type	CHAR(1)
123	In library	CHAR(1)
124	Installed memory	BINARY(4)
125	Usable memory	BINARY(4)
126	Host type	CHAR(4)
127	Host model	CHAR(3)
128	Host serial	CHAR(10)

Key	Field	Type
129	Host name	CHAR(8)
130	Host this system	CHAR(1)
146	I/O adapter address	CHAR(*)
150	Processor feature	CHAR(4)
151	Interactive feature	CHAR(4)
» 152	Location Code Format	CHAR(1)
153	Location Code	CHAR(79) «

Number of keys. The number of keys supplied in the keys variable. One key per call is supported; multiple keys on one call are not supported.

Offset to first key. The offset from the start of the structure to the first key.

Resource name. The name of the resource from which the retrieval is to be made. The resource name either is known or was obtained by using another hardware resource API. **Note:** This field must specify the CEC resource name when requesting resource information data for either the Processor feature (key value 150) », the Interactive feature (key value 151) or the Location code format (key value 152). «

Search request. Whether the search request is a first attempt or a next attempt.

1 The first attempt to obtain resource information from a possible list of resource information. This obtains the first list entry.

2 The next attempt to obtain resource information from a possible list of resource information. This obtains a subsequent list entry if it exists.

RTVI0100 Format

Offset		Type	Field
Dec	Hex		
0	0	BINARY(4)	Bytes returned
4	4	BINARY(4)	Bytes available
8	8	BINARY(4)	Number of entries returned
12	C	BINARY(4)	Length of variable record
16	10	BINARY(4)	Key
20	14	BINARY(4)	Length of data
24	18	CHAR(*)	Data

Field Descriptions

Bytes available. The number of bytes of data available to be returned. All available data is returned if enough space is provided.

Bytes returned. The number of bytes of data returned.

Data. The data that is returned for the key.

Key. The key for the data in this variable length record. For a list of keys that can be returned in this field, see the Keys (page 244) field description.

Length of data. The length of the data portion of this variable length record.

Length of variable record. The length of the current variable length record.

Number of entries returned. The number of values returned by the API.

Key Field Descriptions

ASCII flag. Whether the resource is an American National Standard Code for Information Exchange (ASCII) type. Valid values for this field are 0 (No) and 1 (Yes).

Auxiliary processor. The address of the auxiliary processor. The value for this field is returned as BINARY(2) and CHAR(4). Both variables, BINARY(2) and CHAR(4), are the same. BINARY(2) is the binary representation of the requested value, and CHAR(4) is the character representation of the requested value. The order that the variables are put into storage is binary first and then character.

Board number. A numerical representation of a section of the bus that the card is plugged into. The value for this field is returned as BINARY(2) and CHAR(4). Both variables, BINARY(2) and CHAR(4), are the same. BINARY(2) is the binary representation of the requested value, and CHAR(4) is the character representation of the requested value. The order that the variables are put into storage is binary first and then character.

Bus number. A numerical representation of the path connection of the system processor to the card. The value for this field is returned as BINARY(4) and CHAR(2). Both variables, BINARY(4) and CHAR(2), are the same. BINARY(4) is the binary representation of the requested value, and CHAR(2) is the character representation of the requested value. The order that the variables are put into storage is binary first and then character.

Can backspace flag. Whether the resource supports the backspace operation. Valid values for this field are 0 (No) and 1 (Yes).

Can overwrite flag. Whether the resource supports the overwrite operation. Valid values for this field are 0 (No) and 1 (Yes).

Card number. A numerical representation of the location of the card on the bus. The value for this field is returned as BINARY(2) and CHAR(4). Both variables, BINARY(2) and CHAR(4), are the same. BINARY(2) is the binary representation of the requested value, and CHAR(4) is the character representation of the requested value. The order that the variables are put into storage is binary first and then character.

Card position. The physical location where the device or feature is plugged into the bus.

Color flag. Whether the resource supports a color attribute. Valid values for this field are 0 (No) and 1 (Yes).

Console usage. A value that indicates whether this resource is the primary console, the secondary console, or not used as a console of the system.

Resource	Returned value
Not used as console	X'4000000000000000'
Used as primary console	X'4FFFFFFFFFFFFFFF'
Used as secondary console	X'0000000000000001'

Contact data. The data that is received by the resource when it is contacted.

Controller description needed flag. Whether the controller description is needed with this resource. Valid values for this field are 0 (No) and 1 (Yes).

DASD candidate flag. Whether a storage device is a direct access storage device (DASD). Valid values for this field are 0 (No) and 1 (Yes).

DCE adapter card flag. Whether the resource is a data circuit-terminating equipment (DCE) card adapter. Valid values for this field are 0 (No) and 1 (Yes).

Device address. A unique identifier for each device, so that the device is recognized by the system. The value for this field is returned as BINARY(2) and CHAR(4). Both variables, BINARY(2) and CHAR(4), are the same. BINARY(2) is the binary representation of the requested value, and CHAR(4) is the character representation of the requested value. The order that the variables are put into storage is binary first and then character.

Device position. A unique identifier for each device within its containing frame.

EIA. A value that represents the physical position of the resource in its containing frame.

Emulating model. A model number for which this resource is emulating.

Emulating type. The object type number that this resource is emulating.

FAX communications flag. Whether this communications resource is a FAX-type communication. Valid values for this field are 0 (No) and 1 (Yes).

Frame ID. The identifier of a supplied frame resource.

Frame resource name. The resource name of the frame that a known resource resides in.

File server I/O processor flag. Whether the resource is an Integrated PC Server (also known as file server I/O processor and FSIOP). Valid values for this field are 0 (No) and 1 (Yes).

High-speed digital flag. Whether the resource is a high-speed digital communications line. Valid values for this field are 0 (No) and 1 (Yes).

Host model. The model of the host resource.

Host name. The name of the host resource.

Host serial. The serial number of the host resource.

Host this system. Whether the resource is the host of this system. Valid values for this field are 0 (No) and 1 (Yes).

Host type. The type of the host resource.

In library. Whether the resource is in a library. Valid values for this field are 0 (No) and 1 (Yes).

Installed memory. The amount of memory, in megabytes, installed in the resource.

Interactive feature. The interactive feature of the system. This feature defines the portion of the processor that can be used to perform interactive work.

Interface adapter card flag. Whether the resource is an interface adapter card. Valid values for this field are 0 (No) and 1 (Yes).

I/O adapter address. The address of the I/O adapter where the resource is plugged into. The value for this field is returned as BINARY(2) and CHAR(4). Both variables, BINARY(2) and CHAR(4), are the same. BINARY(2) is the binary representation of the requested value, and CHAR(4) is the character representation of the requested value. The order that the variables are put into storage is binary first and then character.

IOP has DASD flag. Whether the resource (IOP) has a direct access storage device (DASD) attached. Valid values for this field are 0 (No) and 1 (Yes).

Is an OEM. Whether the resource is an original equipment manufacturer (OEM) resource. Valid values for this field are 0 (No) and 1 (Yes).

Is daughter card flag. Whether the resource is a daughter card. Valid values for this field are 0 (No) and 1 (Yes).

Is shared. Whether the resource is shared. Valid values for this field are 0 (No) and 1 (Yes).

Keyboard type. The physical key arrangement and assignments for the keyboard shipped from the factory.

Keyboard type extended. Additional information about the keyboard type.

LAN flag. Whether the resource is a local area network (LAN). Valid values for this field are 0 (No) and 1 (Yes).

LAN speed. A value that returns the line speed of a LAN.

Library address. The address of the library where the resource is plugged into. The value for this field is returned as BINARY(2) and CHAR(2). Both variables, BINARY(2) and CHAR(2), are the same. BINARY(2) is the binary representation of the requested value, and CHAR(2) is the character representation of the requested value. The order that the variables are put into storage is binary first and then character.

Location Code Format. Whether the location code is supported on the system. Valid values for this field are 0 (No) and 1 (Yes).

Location Code. The physical location of the hardware resource in the system. This field is be available only if the system supports the location code format. The location code field is a sequence of 0 or more location labels that when followed in order, lead to the resource location. This is the place someone could go to view, remove, or replace the piece of hardware. Location labels are etched, silk screened, or marked in other ways on hardware. The following location labels might be shown in the location code field (n represents a numerical or alphabetical identifier):

- Utttt.mmm.sssssss = Unit location
  Pnn = Planar location
  Cnn = Card location
  Tnn = Port location
  Dnn = Device location
  Vnnn = Virtual planar
  Wnnnnnnnnnnnnnnn = Worldwide port name
  Lnn = Logical path location

Following are the descriptions of the location labels:

Unit location. Value of the unit enclosure identifier composed of uppercase alphabetic characters and digits. Commonly this value will be composed of the machine type (tttt), model (mmm) and serial number (sssssss).
Planar location. Decimal value of the planar identfier within the unit.
Card location. The decimal value of the position of the card within the hardware package. This can be followed by additional card location labels that would identify the decimal value of additional card positions of the resource on the card.
Port location. The decimal value of the port location within the resource.
Device location. The decimal value of the position of the device within the hardware package.
Virtual planar. The decimal value of the position of the virtual planar resource within the hardware package.
Worldwide port name. The hexadecimal value of the worldwide port name of the resource within the hardware package.
Logical path location. The decimal value of the logical path of the resource within the hardware package. This can be followed by additional logical path location labels that would identify the decimal value of additional logical path data of the resource on the hardware package. «

Maximum frame size. The maximum path information unit (PIU) size that the controller can send or receive.

Maximum lines attached. A value that indicates the maximum number of lines that can be attached to a resource.

Maximum ports attached. A value that indicates the maximum number of ports associated with a resource.

Media type. The media type identifier of the resource.

Memory size. The amount of memory associated with this resource.

Model number. The model number of the resource.

Normal mode flag. Whether the resource is in normal mode. Valid values for this field are 0 (No) and 1 (Yes).

Number of resources. The number of resources connected to a known resource.

Operational flag. Whether the resource is designated as operational. Valid values for this field are 0 (No) and 1 (Yes).

Part number. A manufacturing identifier that represents similar types of hardware.

Plant of manufacture number. An identifier that represents the manufacturing plant of this resource.

Powered-on flag. Whether the resource is powered on. Valid values for this field are 0 (No) and 1 (Yes).

Processor feature. The processor feature, corresponding to the processor capacity of the system.

Programmable flag. Whether the resource supports the programmable attribute. Valid values for this field are 0 (No) and 1 (Yes).

RCTT level. The Reference Code Translation Table (RCTT) identifier.

Read format. The type of read format used by the resource.

Remote model. The model of the remote resource.

Remote name. The name of the remote resource.

Remote serial. The serial number of the remote resource.

Remote type. The type of the remote resource.

Reported this IPL flag. Whether the resource reported this initial program load (IPL). Valid values for this field are 0 (No) and 1 (Yes).

Resource classification 1. The type of hardware that the resource is.

Hardware type	Returned value
Not available	X'4000000000000000'
Any classification 1	X'4FFFFFFFFFFFFFFF'
IOP	X'0000000000000001'
Controller	X'0000000000000002'
Device	X'0000000000000004'
Port	X'0000000000000008'
Channel	X'0000000000000010'
Library	X'0000000000000020'
Bus controller	X'0000000000000040'
IO node	X'0000000000000080'
Bus	X'0000000000000100'
Bus extension	X'0000000000000200'
PIU	X'0000000000000400'
PCK	X'0000000000000800'
PCI node	X'0000000000001000'

Resource classification 2. The type of controller that the resource is.

Controller type	Returned value
Not available	X'4000000000000000'
Any classification 2	X'4FFFFFFFFFFFFFFF'
Workstation	X'0000000000000001'
Storage	X'0000000000000002'
Workstation storage	X'0000000000000003'
Communications	X'0000000000000004'
Workstation communications	X'0000000000000005'
Storage communications	X'0000000000000006'
Storage communications workstation	X'0000000000000007'
Shared object clustering (SOC)	X'0000000000000008'
Cryptographic	X'0000000000000010'
Workstation cryptography	X'0000000000000011'
Storage cryptography	X'0000000000000012'
Storage workstation cryptography	X'0000000000000013'

Controller type	Returned value
Communication cryptography	X'0000000000000014'
Communication workstation cryptography	X'0000000000000015'
Storage communications cryptography	X'0000000000000016'
Storage communications workstation cryptography	X'0000000000000017'

Resource classification 3. The type of device that the resource is.

Device type	Returned value
Not available	X'4000000000000000'
Any classification 3	X'4FFFFFFFFFFFFFFF'
Display	X'0000000000000001'
Printer	X'0000000000000002'
DASD	X'0000000000000004'
Diskette	X'0000000000000008'
Dasd Diskette	X'000000000000000C'
Optical	X'0000000000000010'
Tape	X'0000000000000020'
Dasd Tape	X'0000000000000024'
Dasd Tape Diskette	X'000000000000002C'
Tape Optical	X'0000000000000030'
Removable media	X'0000000000000038'
Dasd Tape Diskette Optical	X'000000000000003C'
ISDN	X'0000000000000040'
X.25	X'0000000000000080'
Token ring	X'0000000000000100'
SDLC	X'0000000000000200'
Ethernet	X'0000000000000400'
Token ring/Ethernet	X'0000000000000500'
FDDI	X'0000000000000800'
Token ring FDDI	X'0000000000000900'
Frame relay	X'0000000000001000'
Frame relay SDLC	X'0000000000001200'
Cryptographic	X'0000000000002000'
Fax	X'0000000000004000'
Memory	X'0000000000008000'
Service processor	X'0000000000010000'
Main processor	X'0000000000020000'
Bus controller	X'0000000000040000'
System information	X'0000000000080000'
Control panel	X'0000000000100000'
Bus adapter	X'0000000000200000'

Device type	Returned value
SPD bus	X'0000000000400000'
Bus extension	X'0000000000800000'
Sba PIU	X'0000000001000000'
Twin optical bus controller	X'0000000002000000'
ASCII	X'0000000004000000'
ASCII display	X'0000000004000001'
ASCII printer	X'0000000004000002'
Twinaxial	X'0000000008000000'
Twinaxial display	X'0000000008000001'
Twinaxial printer	X'0000000008000002'
Apple	X'0000000010000000'
Apple token ring LAN	X'0000000010000100'
Apple Ethernet	X'0000000010000400'
Wireless	X'0000000020000000'
SOC host	X'0000000040000000'
SOC nonhost	X'0000000080000000'
Internetwork Packet Exchange (IPX)	X'0000000100000000'
File server	X'0000000200000000'
ATM	X'0000000400000000'
ATM Ethernet	X'0000000400000400'
Backplane	X'0000000800000000'
System clock	X'0000001000000000'
Optical library	X'0000002000000000'
PCI Bus	X'0000004000000000'
PHB Bus controller	X'0000008000000000'
RIO Bus adapter	X'0000010000000000'
Cache	X'0000020000000000'
Virtual SOC IOP	X'0000040000000000'
Virtual resource	X'0000080000000000'
Virtual Optical	X'0000080000000010'
Virtual Twin Optical Bus controller	X'0000080002000000'
Processor capacity card	X'0000100000000000'
Interactive card	X'0000200000000000'
Storage Enclosure Services (SES) device	X'0000400000000000'
RIO controller Bus Control Chip (BuCC)	X'0000800000000000'
RIO bus	X'0001000000000000'
RIO SAN bus adapter	X'0002000000000000'
RIO SAN bus	X'0004000000000000'
RIO SAN BuCC	X'0008000000000000'
RIO SAN SOC IOP	X'0010000000000000'
Riser	X'0020000000000000'

Device type	Returned value
L3 Cache	X'0040000000000000'
Backplane extender	X'0080000000000000'
Capacitor card	X'0100000000000000'

Resource ID. The identification (ID) of the resource.

rvxCommunication. Whether the resource is an RS232 connecting device. Valid values for this field are 0 (No) and 1 (Yes).

Serial number. The manufacturing sequence number of designation of the resource.

Supplied data at IPL flag. Whether the resource supplied data at IPL. Valid values for this field are 0 (No) and 1 (Yes).

Supported on system flag. Whether the resource is supported on the system. Valid values for this field are 0 (No) and 1 (Yes).

Supports assign command flag. Whether the resource supports the assign command. Valid values for this field are 0 (No) and 1 (Yes).

Supports TWERP flag. Whether the resource supports TWERP. Valid values for this field are 0 (No) and 1 (Yes).

Transport type. The transport type identification that is returned. The value for this field is returned as BINARY(2) and CHAR(4). Both variables, BINARY(2) and CHAR(4), are the same. BINARY(2) is the binary representation of the requested value, and CHAR(4) is the character representation of the requested value. The order that the variables are put into storage is binary first and then character. Valid values are:

1 SPD bus
2 PCI bus

Type number. An identifier that represents the object type of this resource.

UA type. The type of unit address that is returned. The value for this field is returned as BINARY(2) and CHAR(2). Both variables, BINARY(2) and CHAR(2), are the same. BINARY(2) is the binary representation of the requested value, and CHAR(2) is the character representation of the requested value. The order that the variables are put into storage is binary first and then character.

Usable memory. The amount of memory, in megabytes, that is available for the resource to use.

User configurable flag. Whether the resource can be configured by the user. Valid values for this field are 0 (No) and 1 (Yes).

User location text. A text string that identifies where this resource is physically located.

Wide screen flag. Whether the resource supports the wide-screen attribute. Valid values for this field are 0 (No) and 1 (Yes).

Write format. The type of write format used by the resource.

X.21 interface. Whether the communications resource is of type X.21. Valid values for this field are 0 (No) and 1 (Yes).

Vary-on wait time. The number of seconds needed for this resource to typically vary on.

V.24 interface. Whether the communications resource is of type V.24. Valid values for this field are 0 (No) and 1 (Yes).

V.35 interface. Whether the communications resource is of type V.35. Valid values for this field are 0 (No) and 1 (Yes).

V.36 interface. Whether the communications resource is of type V.36. Valid values for this field are 0 (No) and 1 (Yes).

Error Messages

Message ID	Error Message Text
CPF0B3B E	Resource name not found.
CPF0B3F E	The reserved area is not set to binary zeros.
CPF0B33 E	The handle is not valid.
CPF0B34 E	The handle is in wrong state for operation.
CPF0B38 E	Resource information not valid.
CPF0B39 E	Data requested by key &1 is not applicable.
CPF0B46 E	Materialize failed.
CPF0B48 E	Number of keys &1 is more than number of keys allowed.
CPF0B3A E	Resource name & is not valid.
CPF24B4 E	Severe error while addressing parameter list.
CPF3C19 E	Error occurred with receiver variable specified.
CPF3C21 E	Format name &1 is not valid.
CPF3C24 E	Length of the receiver variable is not valid.
CPF3C90 E	Literal value cannot be changed.
CPF3CF1 E	Error code parameter not valid.
CPF9872 E	Program or service program &1 in library &2 ended. Reason code &3.

API introduced: V3R6

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Search Hardware Resource Entry (QRZSCHE) API

Required Parameter Group:

1	Resource name
Output	Char(32)
2	Resource criteria
Input	Char(*)
2	Error code
I/O	Char(*)

Default Public Authority: *EXCLUDE

Threadsafe: No

The Search Hardware Resource Entry (QRZSCHE) API retrieves the resource name of a hardware resource that matches the request criteria. The user of the API supplies the request criteria with key values. The first or next resource name that matches the request criteria is returned. Each call of this API returns only one resource name. Multiple calls may be necessary to obtain all resource names from a possible list of resource names. Each resource name can be used with other hardware resource APIs to get more information about the specific hardware resource.

Note: Some key values are used as a singular search criterion rather than as part of a more complex search. Searches that use singular search criterion have very concise results; for example, a search for *console controller* can return a maximum of one possible resource name.

Some key values can be used in conjunction with other key values to make a search more precise.

You can use this API to do the following:

- Search for a hardware resource by type number
- Search for a hardware resource by model number
- Search for a hardware resource by serial number
- Search for all hardware resources. No special order or hierarchy is used when the resource names are returned.
- Search for the system data
- Search for a hardware resource by bus number
- Search for a controller storage resource
- Search for a controller workstation resource
- Search for a controller communications resource
- Search for an IOP storage resource
- Search for an IOP workstation resource
- Search for an IOP communications resource
- Search for the control panel
- Search for the service processor
- Search for the bus controller
- Search for the memory cards
- Search for the console controller
- Search for the console device
- Search for the main processor
- Search for system hardware
- Search for an input/output processor (IOP) shared object clustering (SOC) resource
- Search for the electronic-customer-support communications resource.
- Search for an IOP cryptographic resource
- Search for a cryptographic adapter
- Search for a cryptographic device
- Search for the processor capacity card
- Search for the interactive card

Note: Some of the search criteria can be used only by themselves.

Authorities and Locks

API Public Authority
*EXCLUDE

Required Parameter Group

Resource name
OUTPUT; CHAR(32)

The receiver variable that receives the resource name based on the request criteria. The resource name is a 32-character field that is left-justified and padded with trailing blanks.

Resource criteria
INPUT; CHAR(*)

The criteria for which the search is processed. See "Format of the Resource Criteria" for details about this format.

Error code
I/O; CHAR(*)

The structure in which to return error information. For the format of the structure, see Error code parameter.

Format of the Resource Criteria

Offset		Type	Field
Dec	**Hex**		
0	0	BINARY(4)	Length of structure
4	4	BINARY(4)	Offset to first variable length record
8	8	BINARY(4)	Number of variable length records
12	C	CHAR(16)	Handle
28	1C	BINARY(4)	Search resource
32	20	BINARY(4)	Search request
		CHAR(*)	Variable length records
These fields repeat for each variable length record.		BINARY(4)	Size of variable length record
		BINARY(4)	Key
		BINARY(4)	Length of data
		CHAR(*)	Data

Field Descriptions

Data. The following table identifies the data field and the data type for the specified key.

Key	Field	Type
-1	All records[1]	CHAR(1)
1	Type (object type)[2]	CHAR(10)
2	Model number[2]	CHAR(10)
4	Serial number[2]	CHAR(10)
6	System information[1]	CHAR(1)
7	Bus number[2]	BINARY(4)
8	Controller storage[1]	CHAR(1)
9	Controller workstation[1]	CHAR(1)
10	Controller communication[1]	CHAR(1)

Key	Field	Type
11	IOP storage[1]	CHAR(1)
12	IOP workstation[1]	CHAR(1)
13	IOP communication[1]	CHAR(1)
14	Control panel[1]	CHAR(1)
15	Service processor[1]	CHAR(1)
16	Bus controller[1]	CHAR(1)
17	Memory cards[1]	CHAR(1)
18	Console controller[1]	CHAR(1)
19	Console device[1]	CHAR(1)
20	Main processor[1]	CHAR(1)
21	System hardware[1]	CHAR(1)
24	IOP SOC[1]	CHAR(1)
25	Electronic-customer-support communications resource[3]	CHAR(1)
26	Primary-console-controller[1]	CHAR(1)
27	Cryptographic IOP[1]	CHAR(1)
28	Cryptographic IOA[1]	CHAR(1)
29	Cryptographic device[1]	CHAR(1)
30	Processor capacity card[1]	CHAR(1)
31	Interactive card[1]	CHAR(1)

Notes:

1. The field is ignored. Field ignored indicates that data does not have to be supplied. However, the length of data field in the corresponding variable length record needs to be set to the correct length.
2. The field is a required search value.
3. The resource name that is returned is for the first port on the I/O adapter in card position B of the first multifunction IOP on the bus.

Handle. The value of the handle. The handle allows repeated calls to obtain more than one resource name that meets the request criteria. The handle is created through the Create Handle (QRZCRTH) API. The handle is required in conjunction with the first/next search request. The handle must be set to binary zeros in conjunction with the first search request when no next search request is needed. The user is responsible for deleting the handle when it is no longer needed. Use the Delete Handle (QRZDLTH) API to delete the handle.

Key. The key identifies the search criteria. Following are the key values that can be used:

-1 Search on all hardware resources. This key must not be used with any other key or an error will result.

1 Type number of a hardware resource.

2 Model number of a hardware resource.

4 Serial number of a hardware resource. The serial number must be in the form of *xx-nnnnnnn*, where *xx* is the plant of manufacture, dash (required), and *nnnnnnn* can be a 5-character serial number that is padded on the right with 2 blanks or a fully qualified 7-character serial number.

6 Resource name of the system. This key must not be used with any other key or an error will result.

7 Bus number of a hardware resource.

8 Controller storage hardware resource.

9 Controller workstation hardware resource.
10 Controller communications hardware resource.
11 IOP storage hardware resource.
12 IOP workstation hardware resource.
13 IOP communications hardware resource.
14 Control panel hardware resource. This key must not be used with any other key or an error will result.
15 Service processor hardware resource. This key must not be used with any other key or an error will result.
16 Bus controller hardware resource. This key must not be used with any other key or an error will result.
17 Memory card hardware resource. This key must not be used with any other key or an error will result.
18 Console controller hardware resource. This key must not be used with any other key or an error will result.
19 Console device hardware resource. This key must not be used with any other key or an error will result.
20 Main processor hardware resource. This key must not be used with any other key or an error will result.
21 System hardware resource.
24 IOP SOC hardware resource.
25 Electronic-customer-support communications resource.
26 Primary-console-controller hardware resource. This key must not be used with any other key or an error will result.
27 IOP cryptographic hardware resource.
28 IOA cryptographic hardware resource.
29 Cryptographic device hardware resource. This key must not be used with any other key or an error will result.
30 Processor capacity card. This key must not be used with any other key or an error will result.
31 Interactive card. This key must not be used with any other key or an error will result.

Length of data. The number of bytes for the corresponding data field. For each field length, see the *Type* column of the table in "Format of the Resource Criteria" on page 257.

Length of structure. The total length (in bytes) of the structure provided, which includes this field through the end of the last variable length record.

Number of variable length records. The number of variable length records supplied.

Offset to first variable length record. The value (in bytes) from the beginning of the structure to the offset field of the first variable length record.

Search request. Whether the search request is a first attempt or a next attempt.

1 The first attempt to obtain a resource name from a possible list of resource names. Search for the first list entry.
2 The next attempt to obtain a resource name from a possible list of resource names. Search for any subsequent list entry if it exists.

Search resource. Whether to search for the resource name from the logical resource information or the packaging resource information.

1 The logical resource information is searched. The logical resource information is the vital product data (VPD).

2	The packaging resource information is searched. The packaging resource information is the location data. This value is only valid with key -1, search all hardware resources.

Size of variable length record. The displacement from the current record to the next variable length record.

Variable length records. Each possible variable length record consists of the size of the variable length record, a key value, the length of the data, and the data.

Error Messages

Message ID	Error Message Text
CPF0B3B E	Resource name not found.
CPF0B3C E	Search resource &1 is not valid with key &2.
CPF0B3F E	The reserved area is not set to binary zeros.
CPF0B33 E	The handle is not valid.
CPF0B34 E	The handle is in wrong state for operation.
CPF0B38 E	Resource information not valid.
CPF0B45 E	Materialize request is not applicable to resource &1.
CPF0B46 E	Materialize failed.
CPF24B4 E	Severe error while addressing parameter list.
CPF3C19 E	Error occurred with receiver variable specified.
CPF3C82 E	Key &1 not valid for API &2.
CPF3C90 E	Literal value cannot be changed.
CPF3CF1 E	Error code parameter not valid.
CPF9872 E	Program or service program &1 in library &2 ended. Reason code &3.

API introduced: V3R6

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Perform Hardware Configuration Operation (QYHCHCOP) API

Required Parameter Group:	
1	Hardware configuration request
Input	Char(*)
2	Hardware configuration request length
Input	Binary(4) Unsigned
3	Request type
Input	Binary(4) Unsigned
4	Receiver variable
Output	Char(*)
5	Length of receiver variable
Input	Binary(4) Unsigned
6	Bytes of return data available
Output	Binary(4) Unsigned
7	Error code
I/O	Char(*)
Default Public Authority: *EXCLUDE	
Threadsafe: Yes	

The Perform Hardware Configuration Operation (QYHCHCOP) API allows for viewing, changing, and checking the status of certain parts of the system's hardware configuration. This API allows the following activities:

- view the logical partition configuration
- change the logical partition configuration
- check the status of a logical partition configuration change
- view the disk unit and ASP configuration
- change the disk unit and ASP configuration
- check the status of disk unit and ASP configuration change

Authorities and Locks

This API is shipped with *EXCLUDE public authority.

To use this API you must:

- be explicitly authorized to the API, or call the API from a program that adopts enough authority to call the API and have *IOSYSCFG and *SERVICE special authority.
- have set the password level of the Dedicated Service Tools (DST). This is done through the service tools security data option, followed by the password level option. When this option has been activated, service tools user ID passwords are case sensitive.
- have a service tools user ID and password that has been authorized to perform the task you are requesting. Service tools user IDs are configured using Dedicated Service Tools (DST).

- have a service tools user ID and password that match the OS/400 user profile and password of the user that is calling this API. Care must be taken to make sure the password cases match between the OS/400 user profile and the service tools user ID.

The port name ″as-sts″ must be unblocked and enabled for this API to process successfully. If the port name is not unblocked, this this API will return a CPFBA03 message.

The service authority required to perform an operation depends on the operation you are trying to perform. To see what authority a specific operation requires, consult the logical partition configuration markup language document or the disk management configuration markup language document. The following table summarizes the authority required for various operations.

Operation Type	Authority Required
View LPAR configuration	LPAR operator
Check LPAR operation status	LPAR operator
Perform LPAR operator operation	LPAR operator
Perform LPAR administrator operation	LPAR administrator
View disk configuration	None
Check disk operation status	None
Perform disk operator operation	Disk operator
Perform disk administration operation	Disk administrator

Required Parameter Group

Hardware Configuration Request
INPUT; CHAR(*)

The information for the request. The type of information provided is described in the request type parameter.

Hardware Configuration Request Length
INPUT; BINARY(4) Unsigned

The length of the hardware configuration request buffer.

Request type
INPUT; BINARY(4) Unsigned

The type of request being made. The following constants are defined for the request type.

LPARRequest = 1 Change, view, or check the status of the logical partition configuration using the Logical Partition Markup Language. For the format of the markup language, see LPAR markup language and the LPAR Configuration Script DTD

DiskRequest = 2 Change, view, or check the status of the disk and ASP configuration using the Disk Management Markup Language. For the format of the markup language, see » DMConfigurationScript Specification, Version 20. «

Receiver variable
OUTPUT; CHAR(*)

The receiver variable that is to receive the response from the hardware configuration request. The format of this variable is determined by the type of hardware configuration request submitted.

Length of receiver variable
INPUT; BINARY(4) Unsigned

The length of the receiver variable, in bytes.

Bytes of return data available
OUTPUT; BINARY(4) Unsigned

The number of bytes that is available for return. If this value is larger than the receiver variable, some of the return data was lost.

Error code
I/O; CHAR(*)

The structure in which to return error information. For the format of the structure, see Error Code Parameter.

Error Messages

Message ID	Error Message Text
CPF2203 E	User profile &1 not correct.
CPF2204 E	User profile &1 not found.
CPF22E2 E	Password not correct for user profile &1.
CPF22E3 E	User profile &1 is disabled.
CPF22E4 E	Password for user profile &1 has expired.
CPF22E5 E	No password associated with user profile &1.
CPF24B4 E	Severe error while addressing parameter list.
CPF3C24 E	Length of the receiver variable is not valid.
CPF3C36 E	Number of parameters, &1 entered for this API was not valid.
CPF3C4B E	Value not valid for field &1.
CPF3CF1 E	Error code parameter not valid.
CPF3CF2 E	Error(s) occurred during running of &1 API.
CPF9872 E	Program or service program &1 in library &2 ended. Reason code &3.
CPFB0CE E	&1 special authority is required.
CPFBA01 E	Incorrect authorization to perform operation.
CPFBA02 E	Request typeout of range.
CPFBA03 E	Error connecting to service.
CPFBA04 E	Error sending request to service.
CPFBA05 E	Error retrieving data from service.

API introduced: V5R1

Top | "Configuration APIs," on page 1 | APIs by category

Exit Programs

These are the Exit Programs for this category.

Vary Configuration exit programs

Required Parameter Group:

1 Vary information

Input Char(*)

2 Return code

Input BIN(4)

```
Exit Point Name:  QIBM_QDC_VRYEXIT

Exit Point Format Name:  PRON0100
Exit Point Format Name:  PROF0100

QSYSINC Member Name: EDCVARY
```

Required Parameter Group:

1 Vary information

Input Char(*)

```
Exit Point Name:  QIBM_QDC_VRYEXIT

Exit Point Format Name:  PSON0200
Exit Point Format Name:  PSOF0200

QSYSINC Member Name: EDCVARY
```

The QIBM_QDC_VRYEXIT exit point is defined to run all exit programs for which the program data indicates the object type and configuration type match the object being varied on. This exit point supports an unlimited number of exit programs.

Notes:

1. The vary configuration exit points ignore any error messages that are sent from the user exit program.
2. It is strongly recommended that the exit program reside within the system base or a user ASP.
3. When a forced vary off has been issued the exit program's ability to reject the vary off processing is revoked and all user exit programs will be executed.
4. When a vary request is made for a Windows NT NWSD configuration the ability to reject the vary request is revoked and all user exit programs will be executed.
5. When an Auxiliary Storage Pool (ASP) device that is part of a group is passed to the vary configuration (VRYCFG) command all ASP devices that are part of the group are varied, but the exit programs registered for an ASP device will be called only once for all ASPs in the group. The name of the object passed to the exit program in the object name field of the format will be the name of the object passed to the vary configuration command.
6. If a preprocesing exit program rejects a vary on/off process any subsequent preprocessing programs will not be invoked, unless the forced vary off option is selected.
7. If a preprocessing exit program rejects a vary on/off process all post processing exit programs will be invoked.

8. Exit program processing is not supported for IPL online processing.
9. Exit program processing is not supported for the console controller.
10. Exit program processing is not supported for the console device.
11. Exit program processing is not supported for auto configuration processing.
12. Exit program processing is not supported for Power Down System (PWRDWNSYS).
13. Exit program processing is not supported for vary requests made under system profiles.
14. Exit program processing is not supported for vary request made from system jobs.

Authorities and Locks

The user must have *ALLOBJ to add or remove exit programs to the registration facility.

Required Parameter Group

Vary information
Input; CHAR(*)

The vary information associated with the current vary request. The format of the vary information is defined by the format name.

Return code
Output; BINARY(4)

The return value from the user exit program. If an undefined return code is returned, then the exit point will treat the return code as if it were 0.

0	Continue vary processing.
1	Reject vary processing.

Vary Information formats

PRON0100 and PROF0100 Formats

Offset		Type	Field
Dec	**Hex**		
0	0	CHAR(10)	Object name
10	A	CHAR(10)	Object type
20	14	CHAR(8)	Format name
28	1C	BINARY(4)	Forced vary

PSON0200 and PSOF0200 Formats

Offset		Type	Field
Dec	**Hex**		
0	0	CHAR(10)	Object name
10	A	CHAR(10)	Object type
20	14	CHAR(8)	Format name
28	1C	BINARY(4)	Status

Field Descriptons

Format name. The user exit format name being used. For QIBM_QDC_VRYEXIT, the format name is one of the following:

PRON0100	The exit point programs are called prior to the object being varied on. This format can issue a return code value with the ability to reject the vary processing.
PSON0200	The exit point programs are called after the object vary on has started.
PROF0100	The exit point programs are called prior to the object being varied off. This format can issue a return code value with the ability to reject the vary processing.
PSOF0200	The exit point programs are called after the object vary off has started.

Forced vary. The field to indicate to the user exit program that a forced vary off is occurring.

0	Not forced vary off processing.
1	Forced vary off processing.

Object name. The name of the object being processed by the vary configuration command (VRYCFG).

Object type. The type of object the exit program should be executed against. The following values are supported:

**DEVD*	The object type is a device description
**CTLD*	The object type is a controller description
**LIND*	The object type is a line description
**NWSD*	The object type is a network server description

Status. The field value indicating if a preprocessing exit program rejected the vary request or the vary request was not successful.

0	Vary request was successful.
1	Vary request was not successful.
2	Vary request was rejected by a preprocessing exit program.
3	Status of vary request is unknown.

Program Data. When registering the exit program 8 characters of program data must be passed. The first 4 characters are the object type and the remaining 4 characters should be the object configuration type.

Characters	Value	Description
Characters 1 through 4	Object type	The object type the exit program should be executed for: **Note:** The object type value specified must be in all uppercase. *DEVD* The object type is a device description *CTLD* The object type is a controller description *LIND* The object type is a line description *NWSD* The object type is a network server description
Characters 5 through 8	Configuration type	See tables below for valid values

Note: The configuration type value is dependent on the value specified for the object type.

Supported configuration types for object type DEVD	
Configuration type	**Description**
DSKT	Diskette unit (DKT) device description
TAPE	Tape (TAP) device description
DSPL	Local display (DSP) description
DSPR	Remote display (DSP) description
PRTL	Local printer (PRT) description
PRTR	Remote printer (PRT) description
FINC	Finance (FNC) device description
APPC	Advanced program-to-program communications (APPC) device description
ASYN	Asynchronous (ASYNC) device description
BISC	Binary synchronous communications (BSC) device description
HOST	Systems network architecture (SNA) host device description
SNUF	Systems network architecture upline facility (SNUF) device description
DSPV	Virtual display (DSP) device description
PRTV	Virtual printer (PRT) device description
INTR	Intrasystem (INTRA) device description
RETL	Retail (RTL) device description
NTWK	Network (NET) device description
SNPU	Upstream SNA pass-through (SNPT) device description
SNPD	Downstream SNA pass-through (SNPT) device description

DSPS	SNA pass-through display (DSP) device description
PRTS	SNA pass-through printer (PRT) device description
FNCS	SNA pass-through finance (FNC) device description
RTLS	SNA pass-through retail (RTL) device description
PRTN	Local area network printer (PRT) device description
OMLB	Optical media libray (MLB) device description
OPTD	Optical (OPT) device description
TMLB	Tape media libray (MLB) device description
CRPD	Crypto (CRP) device description
ASPD	Auxilliary storage pool (ASP) device description

Supported configuration types for object type CTLD	
Configuration type	**Description**
LCLW	Local workstation (LWS) controller description
VRTW	Virtual workstation (VWS) controller description
RMTW	Remote workstation (RWS) controller description
FINC	Finance (FNC) controller description
APPC	Advanced program-to-program communications (APPC) controller description
HOST	Systems network architecture (SNA) host controller description
BISC	Binary synchronous communications (BSC) controller description
ASYN	Asynchronous (ASYNC) controller description
TAPE	Tape (TAP) controller description
RETL	Retail (RTL) controller description
NTWK	Network (NET) controller description

Supported configuration types for object type LIND	
Configuration type	**Description**
SDLC	Synchronous data link control (SDLC) line description
BISC	Binary synchronous communications (BSC) line description
ASYN	Asynchronous (ASYNC) line description
X25L	X.25 (X25) line description
TKRN	Token ring network (TRN) line description
TDLC	Twinaxial data link control (TDLC) line description
ETHN	Ethernet (ETH) line description
WLSL	Wireless local area network (WLS) line description
PPPL	Point-to-Point Protocol (PPP) line description
DDIL	Data-description interface (DDI) line description
FRNW	Frame-relay network (FR) line description
FAXL	Facsimile (FAX) line description

Supported configuration types for object type NWSD	
Configuration type	**Description**
WDNT	Windows network server description
GTOS	Guest operating system network server description

« Exit program introduced: V5R3

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