Communications Server for Windows, Version 6.4
Personal Communications for Windows, Version 6.0

Configuration File Reference

SC31-8655-10

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Note

Before using this information and the product it supports, read the information in Appendix I, "Notices," on page 267.

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This edition applies to Version 6.4 of IBM Communications Server for Windows, Version 6.0 of IBM Personal Communications for Windows (program number: 5639–I70), and to all subsequent releases and modifications until otherwise indicated in new editions.

Contents

About This Book

IBM® Communications Server for Windows® (referred to in this book as *Communications Server*) is a communications services platform. This platform provides a wide range of services for Windows 2000, Windows 2003, Windows XP, Windows Vista and Windows Server 2008 workstations that communicate with host computers and with other workstations. Communications Server users can choose from among a variety of remote connectivity options.

IBM Personal Communications for Windows (referred to in this book as *Personal Communications*) is a full-function emulator. In addition to host terminal emulation, it provides these useful features:

- File transfer
- Dynamic configuration
- An easy-to-use graphical interface
- APIs for SNA-based client applications
- An API allowing TCP/IP-based applications to communicate over an SNA-based network.

Configuration File Reference contains information about creating configuration files and using them to configure Communications Server or Personal Communications. It lists configuration file keywords and shows sample keyword definitions. Each keyword parameter and the values that can be specified for the parameter are explained.

The format of an ASCII configuration file is governed by the OCDNTS50.DAT file. This file is stored in the installation directory of the product. Not all of the keywords and parameters in the OCDNTS50.DAT file are documented in this manual, because they are not configured by the user.

The keywords and parameters described in this manual were complete at the time of publication. However, changes to the product after publication of this manual may have added or changed keywords, parameters, or values. The OCDNTS50.DAT file contains the most accurate listing of the keywords, parameters, and values.

For Communications Server and Personal Communications, it is assumed that you are using Windows 2000, Windows Server 2003, Windows XP, or Windows Vista as your base operating system.

For Communications Server and Personal Communications using SNA connectivity, only 32-bit operating systems are supported.

Who Should Use This Book

This book is a reference for network administrators who install, reinstall, or upgrade Communications Server or Personal Communications on a group of remote workstations from a central site.

How to Use This Book

The *Configuration File Reference* book helps you manage the configuration of ASCII configuration files for Personal Communications and Communications Server products.

This book contains the following:
- An introduction to ASCII configuration files
- Instructions for creating or editing a configuration file
- Instructions for verifying a configuration file
- The kinds and types of keywords used in a configuration file
- Descriptions of keywords, parameters, and values used in configuration files.

Icons

In this book, when it is necessary to communicate special information, the following icons appear:

This icon appears when the information applies only to the Communications Server program.

This icon appears when the information applies only to the Personal Communications program.

Number Conventions

Binary numbers	Represented as B'xxxx xxxx' or B'x' except in certain instances where they are represented with text (“A value of binary xxxx xxxx is...”).
Bit positions	Start with 0 at the rightmost position (least significant bit).
Decimal numbers	Decimal numbers over 4 digits are represented in metric style. A space is used rather than a comma to separate groups of 3 digits. For example, the number sixteen thousand, one hundred forty-seven is written 16 147.
Hexadecimal numbers	Represented in text as hex xxxx or X'xxxx' (“The address of the adjacent node is hex 5D, which is specified as X'5D'.”)

Where to Find More Information

For more information, refer to *Quick Beginnings*, which contains a complete description of both the Communications Server library and related publications.

To view a specific book after Communications Server has been installed, use the following path from your desktop:

1. Programs
2. IBM Communications Server
3. Documentation
4. Choose from the list of books:
   - *Quick Beginnings*
   - *Configuration File Reference* (this book)
   - *Network Administration Guide*
   - *SNA Formats*

The Communications Server books are in Portable Document Format (PDF), which is viewable with the Adobe® Acrobat Reader. If you do not have a copy of this program on your machine, you can install it from the Documentation list.

The programming details are installed only with the SDK toolkit:

- *Client/Server Communications Programming*
- *CPI-C Reference*
- *SNA Formats*
- *SNA Management Services Formats*
- *System Management Programming*

The Problem Determination Guide is under **Problem Determination Utilities**.

The Communications Server home page on the Internet has general product information as well as service information about APARs and fixes. To get to the home page using an Internet browser, go to the following Web site:

http://www.ibm.com/software/network/commserver/

For more information, refer to *Quick Beginnings*, which contains a complete description of both the Personal Communications library and related publications.

The Personal Communications books are included on the CD-ROM in portable document format (pdf). Books can be accessed directly from the publications directory of the Personal Communications CD-ROM or from the Install Manager welcome panel.

To view the Personal Communications documentation using Install Manager, select **View Documentation** from the main panel of the Install Manager on the CD-ROM. Clicking **View Documentation** invokes Adobe Acrobat Reader from your system to view the books. If Acrobat Reader is not detected on your system, you are given the opportunity to install it at this time. After installation of Acrobat Reader is complete, a window opens displaying the books available on the CD-ROM.

Notes:

1. You can copy the book files from the CD-ROM to a local or network drive to view at a later time.
2. *Quick Beginnings* in HTML format is installed during installation of Personal Communications.

The Personal Communications home page on the Internet has general product information as well as service information about APARs and fixes. To get the home page, using an Internet browser such as IBM Web Explorer, go to the following Web site:

http://www.ibm.com/software/network/pcomm/

The complete ***IBM Dictionary of Computing*** is available on the World Wide Web at http://www.ibm.com/networking/nsg/nsgmain.htm.

1 Introduction to ASCII Configuration

This chapter describes the ASCII configuration provided by Communications Server and Personal Communications. The ASCII configuration provides a method of creating, storing, and accessing configuration information. This method uses ASCII files instead of binary files to store configuration records. This enables users to create and modify a configuration file without using the SNA Node Configuration application.

The format of an ASCII configuration file, whether it is created by the SNA Node Configuration application or by an ASCII editor, is governed by the OCDNTS50.DAT file. This file is stored in the installation directory of the product. Not all of the keywords and parameters in the OCDNTS50.DAT file are documented in this manual, because they should not be configured by the user.

ASCII Configuration File Structure

The ASCII configuration (.ACG) file is a standard ASCII file containing assignment statements that are generally in the form of *keyword = value*. The *keyword* is always placed on the left side of the statement and identifies the configuration parameter. The *value* is placed on the right side of the statement and is either a string of characters or a list of one or more *keyword = value* lines.

For example:

```
keyword = value

keyword = (
            keyword = value
            keyword = value
            ...
          )
```

Kinds and Types of Keywords

To help understand how to read and interpret the data in the ASCII configuration file, the kinds and types of keywords are described in this section.

Kinds of Keywords

There are two kinds of keywords:

Simple keyword
A keyword that does not contain other keywords; that is, it has no embedded keywords. It is of the form keywordname = value; where value is not a left parenthesis. In the following example, FQ_CP_NAME and NODE_TYPE are simple keywords, but NODE is not.

```
NODE=(
     FQ_CP_NAME=USIBMNM.NT265
     NODE_TYPE=END_NODE
)
```

Complex keyword
Contains embedded simple or complex keywords. In the following example, PORT and PORT_LAN_SPECIFIC_DATA are complex keywords.

```
PORT=(
     PORT_NAME=LAN1_04
     DLC_NAME=LAN
     PORT_LAN_SPECIFIC_DATA=(
          ADAPTER_ID=LAN1
          ADAPTER_NAME=0001
     )
)
```

Types of Simple Keywords

There are seven types of simple keywords:

Boolean	A keyword that can only have a Boolean (0 or 1) value.
Enumerated	A keyword that has several values to choose from. Valid values are listed in the description of the keyword.
Hexadecimal number	A keyword that has a hexadecimal number value.
Hexadecimal string	A keyword that has a string of hexadecimal characters as its value.
Signed number	A keyword that has a signed number value.
String	A keyword that has a string of characters as its value.
Unsigned number	A keyword that has an unsigned number value.

Labels Used in Keyword Descriptions

Default	Specifies the default value for a given keyword. If the keyword is not specified in the configuration file, the default value is used for the configuration.
Key name	Specifies the key name parameter for the keyword. The key name parameter uniquely identifies it from other keywords of the same type.
Length	Specifies the valid length for a string or hexadecimal string keyword.
Multiples allowed	Specifies whether the keyword or parameter can be defined in the configuration file more than once, and subsequent definitions do not override the previous definitions.
Range	Specifies the minimum and maximum valid values for a number or hexadecimal number keyword.
Required	Specifies whether a given keyword is required in a definition. However, if a default value is specified, it is automatically added.
String characters	Specifies the valid characters for a string keyword. SNA Type A characters are required. The SNA Type A character set includes: • Uppercase A–Z (lowercase is accepted and translated to uppercase) • Numbers 0–9 • Special characters $, #, and @

An SNA type A character string can not begin with a digit (0–9).

The SNA Type AE character set includes:
- Lowercase a–z
- Uppercase A–Z
- Numbers 0–9
- Special characters $, #, @, and the period (.)

Template File and Response File Keywords

When creating configurations for a large number of servers to implement, you can create a template configuration file that represents the common configuration elements for all servers. Using a response file with only those changes necessary for each server, you can distribute the template and response file and merge the two to create the target configuration. Template files and response files can specify the following keywords:

DELETE The DELETE keyword causes all information associated with a keyword to be removed. When the DELETE keyword is encountered in a list, all other keywords in the list are ignored.

INCLUDE A response file is merged into a template file by specifying the INCLUDE keyword at the end of the template file. The original template configuration file is left unchanged, if a new target file name is specified during verification.

For detailed information on how to use template files and response files for configuration and installation, refer to *Network Administration Guide* for Communications Server or *Quick Beginnings* for Personal Communications.

ASCII Configuration File Syntax Rules

The syntax rules for ASCII configuration (.ACG) files are:

- An opening parenthesis, used to begin a list of values, must follow the *keyword* = on the same line.
- A closing parenthesis, used to delimit a list, must be on its own line.
- Because an opening parenthesis begins a list, you can not assign a single opening parenthesis as a value to a keyword.
- ASCII configuration (.ACG) files are not column dependent.

  You can use indentation or blank lines to make the files more readable. An ASCII configuration (.ACG) file does not have any column-specific or indentation restrictions.
- You can include a comment in an ASCII configuration (.ACG) file by using an asterisk (*) or semicolon (;) as the first nonblank character in a line. However, within a value list only the semicolon (;) can be used because the asterisk (*) can be a valid value within the list.
- Comments must always appear as separate lines within a ASCII configuration (.ACG) file.
- Keywords are not case sensitive.
- Each keyword must appear on a separate line.
- If a keyword or parameter is specified multiple times in a configuration file, but multiple definitions of that keyword is not allowed, the last specification of the keyword is used in the configuration.
- You should verify an ASCII configuration file (.ACG) before you use it.

Syntax Examples

If you need to assign a list of values to a keyword, you can use a nested list form. The data inside the nested list is referred to as a *value list*. A value list can have more than one value per line and can be separated by either a space or a comma. The following example shows several ways to format value lists.

```
keyword = (
           keyword = value
           keyword = (
                      subvalue1
                      subvalue2
                      subvalue3
                      subvalue4
                      subvalue5
                     )
           keyword = (
                      subvalue1, subvalue2, subvalue3,
                      subvalue4, subvalue6, subvalue7
                     )
           keyword = (
                      subvalue1 subvalue2 subvalue3
                      subvalue4 subvalue6 subvalue7
                     )
         )
```

Assigning Values to ASCII Configuration File Keywords

A *value* is a string of characters that is placed on the right side of an ASCII configuration (.ACG) file assignment statement. A value can be a list of one or more *keyword* = *value* lines:

```
keyword = (
             keyword = value
             keyword = value
             keyword = value
             keyword = value
             keyword = value
             keyword = value
          )
```

The type of value you can specify for a keyword uses one of the following forms:

- Boolean value

  ```
  0  n or N = No
  1  y or Y = Yes
  ```

  You can not specify NO or YES.

- Characters

  ```
  1 through 12 characters
  ```

  Be sure you assign the specified number of alphabetic, numeric, or special characters.

- Numbers (integers)

  ```
  Integer (1–3)
   1=Secondary
   2=Primary
   3=Negotiable
  ```

  Assign the integer that represents the value you want.

- The value description can specify a specific string such as BLANK or an asterisk (*) that represents a special value. These values are explicitly defined in the description of the keywords where they are used.
- In some cases, the *value* or the = *value* portion of a line is optional.

These cases are explicitly defined in the descriptions of the keywords where they are used. For example, the DELETE keyword does not use the equal sign (=) or the *value*. In cases where a value is required but not specified, the keyword is ignored.

2 Verifying and Editing an ASCII Configuration File

You can create an ASCII configuration file with the SNA Node Configuration application. The ASCII configuration file is an ASCII representation of your configuration, with a file extension of .ACG.

You can edit the ASCII configuration file to match your configuration needs. You can use any editor that creates an ASCII file to edit an ASCII configuration file.

ASCII Configuration Verify Utility

The ASCII configuration verify utility checks your configuration file to ensure that there are no errors. If there are errors, you must edit the file without going through the SNA Node Configuration application.

Verifying a Configuration File

Communications Server and Personal Communications provide two utilities for verifying a configuration file:

- Console verification (command line) utility
- Configuration Verification application

Console Verification

The console verification utility runs as a Windows DOS application. You can start this by issuing the following command line syntax from a DOS prompt:

```
vacgcon <filename> <target_file_name>
```

where <*filename*> is the name of the .ACG file and <*target_file_name*> is the name you want the file to have. The <*target_file_name*> is optional. If you specify a <*target_file_name*>, the original file is left unchanged.

The verification is performed and a message is generated indicating if the verification was successful. Messages and errors are written to the DOS console screen. The output from the command line utility can be redirected to a file.

Configuration Verification Application

The Configuration Verification application runs as a Windows application. You can start this application by either selecting the Verification icon located within the product folder, or by issuing the following command line syntax:

```
vacgwin <filename>
```

where <*filename*> is the .ACG file.

If you use the command option, the file is automatically opened and verified. If you select the icon, use the Windows menu or toolbar functions to verify the file. Do the following:

1. Select and open a configuration file.
2. Verify the file.
3. View any errors and messages.

Editing a Configuration File

If either verification utility (console or the Configuration Verification application) generated errors, edit the .ACG file using any ASCII text editor. To edit a configuration file:

- From the menu bar:
  1. Select **File**.
  2. Select **Edit**.
  3. Launch an ASCII editor with the configuration file name selected.
  4. Edit the file as needed.
  5. **Save** the file.
  6. **Re-verify** the file.
- From the icon toolbar:
  1. Select the **Edit** icon (pencil).
  2. Launch an ASCII editor with the configuration file name selected.
  3. Edit the file as needed.
  4. **Save** the file.
  5. **Re-verify** the file.

See the online help for specific details on how to use the selections on the menu bar or toolbar for the Configuration Verification application.

3 ADJACENT_NODE

This chapter describes the parameter keywords and values you can specify for the ADJACENT_NODE keyword.

Keyword Definition

Required?	No
Keyword Type	Complex
Key Name	FQ_CP_NAME
Multiples Allowed?	Yes, but each ADJACENT_NODE keyword must have a unique FQ_CP_NAME parameter

ADJACENT_NODE Sample

The following is a sample of the ADJACENT_NODE keyword:

```
ADJACENT_NODE=(
     FQ_CP_NAME=USIBMNM.PARTNER
     LU_ENTRY = (
         FQ_LU_NAME=USIBMNM.PARTLU
     )
)
```

ADJACENT_NODE Parameter Keywords

FQ_CP_NAME

Required?	Yes
Keyword Type	String
Field Length	3–17
Multiples Allowed?	No, only one for each ADJACENT_NODE keyword

The FQ_CP_NAME parameter specifies the fully qualified name of the control point in the adjacent end node. This should match the name the node sends on its XIDs (if supported), and the adjacent control point name (FQ_ADJACENT_CP_NAME) specified on the LINK_STATION keyword for the node link.

The fully qualified CP name is a 17-byte character string. The fully qualified CP name consists of two parts: the network name and the CP name, concatenated with a period. The network name is a 1- to 8-byte SNA Type A character string. The CP name is a 1- to 8-byte SNA Type A character string. The fully qualified CP name is also known as the network qualified CP name.

This parameter is required.

FQ_LU_NAME

Required?	Yes
Keyword Type	String
Field Length	1–17
Multiples Allowed?	No, only one for each LU_ENTRY parameter

The FQ_LU_NAME parameter specifies the LU name to be defined. If this name is not fully qualified, the network ID of the CP name is assumed.

The fully qualified LU name is a 17-byte character string. The fully qualified name consists of two parts: the network name and the LU name, concatenated with a period. The network name is a 1- to 8-byte SNA Type A character string. The LU name is a 1- to 8-byte SNA Type A character string.

This parameter is required.

LU_ENTRY

Required?	No
Keyword Type	Complex
Multiples Allowed?	Yes

The LU_ENTRY parameter is a complex keyword comprised of the following parameter keywords:

- FQ_LU_NAME
- WILDCARD_LU

See the descriptions of the parameter keywords to define the LU_ENTRY parameter.

WILDCARD_LU

The WILDCARD_LU parameter keyword applies to Communications Server only.

Required?	Yes
Keyword Type	Boolean
Default	0
Multiples Allowed?	No, only one for each LU_ENTRY parameter

The WILDCARD_LU parameter indicates whether the LU name specified on the LU_ENTRY parameter is to be considered a wildcard name. Valid values are:

0 The LU name is not a wildcard name.

1 The LU name is a wildcard name.

This parameter is required. The default is 0; the LU name is not a wildcard name.

Wildcard LU names are used to identify the location of all LUs whose names match the wildcard. A wildcard character (asterisk) is appended to the name. Wildcards can not be made out of a full LU name (the LU name portion of the fully qualified name is 8 characters long). Only one full wildcard is allowed (where only the wildcard (asterisk) is specified). If WILDCARD_LU is set to 1, the only other valid option is the fully qualified CP name, and it is required.

4 AS400_COMMON

This chapter describes the parameter keywords and values you can specify for the AS400_COMMON keyword.

Keyword Definition

Required?	No
Keyword Type	Complex
Multiples Allowed?	No

AS400_COMMON Sample

The following is a sample of the AS400_COMMON keyword:

```
AS400_COMMON=(
      LU_NAME=LABREC4
      MODE_NAME=QPCSUPP
      PASSWORD=BF84DC3CAC50B856748B
      USER_ID=REDOPR
)
```

AS400_COMMON Parameter Keywords

LU_NAME

Required?	No
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No

The LU_NAME parameter specifies the logical unit (LU) name used for all sessions with iSeries®, eServer™ i5, or System i5®. If you do not specify this parameter, the name of the CP LU is used.

LU_NAME is a 1- to 8-byte SNA Type A character string. Valid values are:

- The first character must be an uppercase alphabetic character (A–Z) or a special character (@, #, $).
- The remaining characters can be alphanumeric characters (A–Z, 0–9) or special characters (@, #, $).

This parameter is optional.

MODE_NAME

Required?	No
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No

The MODE_NAME parameter specifies the name of the default mode used for all iSeries, eServer i5, or System i5 sessions.

This parameter is optional.

MODE_NAME is a 1- to 8-byte SNA Type A character string. You can specify one of the following:

- BLANK
- #BATCH
- #BATCHSC
- #INTER
- #INTERSC
- QPCSUPP
- SNASVCMG
- A unique mode name for each mode you define. If you define your own mode name, valid characters are:
  - All blanks
  - The first character must be an uppercase alphabetic character (A–Z) or a special character (@, #, $).
  - The remaining characters can be alphanumeric characters (A–Z, 0–9) or special characters (@, #, $).

The mode name is used by the session initiator to designate the allocated session characteristics for the conversation. The mode defines a set of characteristics that can apply to one or more sessions. These characteristics include: traffic-pacing values, message-length limits, synchronization point and cryptography options, and the class of service within the transport network.

PASSWORD

Required?	No
Keyword Type	Hexadecimal string
Field Length	1–20
Multiples Allowed?	No

The PASSWORD parameter specifies the default password used with the USER_ID parameter for accessing all iSeries, eServer i5, or System i5 sessions. This password is supplied by an application, such as a TN5250 application, attempting to access the iSeries, eServer i5, or System i5. The password supplied by the application is converted to a 20-character hexadecimal string by the encryption process. To

override this value for a specific iSeries, eServer i5, or System i5, specify the password for that iSeries, eServer i5, or System i5 in the definition of the iSeries, eServer i5, or System i5.

Note: Since this value is encrypted, you should not attempt to enter this value directly into the ACG file. The value should only be entered using the SNA Node Configuration application.

This parameter is optional.

USER_ID

Required?	No
Keyword Type	String
Field Length	1–10
Multiples Allowed?	No

The USER_ID parameter specifies the default user ID for all iSeries, eServer i5, or System i5 sessions. The user ID is supplied by an application, such as a TN5250 application, attempting to access the iSeries, eServer i5, or System i5. To override this value for a specific iSeries, eServer i5, or System i5, specify the user ID for that iSeries, eServer i5, or System i5 in the definition of the iSeries, eServer i5, or System i5.

This parameter is optional.

USER_ID is a 1- to 10-byte character string. Valid characters are:

- Alphanumeric:
  - A–Z
  - a–z
  - 0–9
- Special characters:
  - blank (space)
  - ((left parenthesis)
  -) (right parenthesis)
  - . (period)
  - , (comma)
  - ; (semicolon)
  - : (colon)
  - - (dash)
  - / (slash)
  - % (percent)
  - ? (question mark)
  - ′ (apostrophe)
  - ″ (quotation mark)
  - = (equal sign)
  - > (greater than)
  - < (less than)
  - _ (underline)

5 AS400_SERVER

This chapter describes the parameter keywords and values you can specify for the AS400_SERVER keyword.

Keyword Definition

Required?	No
Keyword Type	Complex
Key Name	SERVER_NAME
Multiples Allowed?	Yes, but each AS400_SERVER keyword must have a unique SERVER_NAME parameter

AS400_SERVER Sample

The following is a sample of the AS400_SERVER keyword:

```
AS400_SERVER=(
     SERVER_NAME=USIBMNM.RTP02EN
     DEFAULT_SERVER=0
```

AS400_SERVER Parameter Keywords

DEFAULT_SERVER

Required?	No
Keyword Type	Boolean
Default	0
Multiples Allowed?	No, only one for each AS400_SERVER keyword

The DEFAULT_SERVER parameter specifies whether this iSeries, eServer i5, or System i5 is the default iSeries, eServer i5, or System i5.

Valid values are:

0 This iSeries, eServer i5, or System i5 is not the default iSeries, eServer i5, or System i5.

1 This iSeries, eServer i5, or System i5 is the default iSeries, eServer i5, or System i5.

This parameter is optional. The default is 0; this iSeries, eServer i5, or System i5 is not the default iSeries, eServer i5, or System i5.

DEVICE

Required?	No
Keyword Type	String
Field Length	1
Multiples Allowed?	No, only one for each SHARED_FOLDER parameter

The DEVICE parameter specifies the name of an available local server disk device to associate with the iSeries, eServer i5, or System i5 folder. The server shares the disk device to enable clients to access it using a NET USE command. By sharing a disk device, a client can connect to the iSeries, eServer i5, or System i5 folder as if it were a disk on their workstation.

The value for DEVICE must be a valid drive letter between D and Z (uppercase or lowercase). The values A, B, and C (both uppercase and lowercase) are reserved by the system and cannot be used.

This parameter is optional.

PASSWORD

Required?	No
Keyword Type	Hexadecimal string
Field Length	1–20
Multiples Allowed?	Yes, one for each AS400_SERVER keyword or SHARED_FOLDER parameter

The PASSWORD parameter specified outside of the SHARED_FOLDER parameter is used with the USER_ID parameter to validate iSeries, eServer i5, or System i5 access. This password is supplied by an application, such as a TN5250 application, attempting to access the iSeries, eServer i5, or System i5. The password supplied by the application is converted to a 20-character hexadecimal string by the encryption process.

Note: Since this value is encrypted, you should not attempt to enter this value directly into the ACG file. The value should only be entered using the SNA Node Configuration application.

The PASSWORD parameter specified for the SHARED_FOLDER parameter validates iSeries, eServer i5, or System i5 folder access, and overrides the PASSWORD parameter supplied by an application. You can further restrict access to iSeries, eServer i5, or System i5 resources or grant users the same access rights as they already have on the iSeries, eServer i5, or System i5.

This parameter is optional.

PATH

Required?	No
Keyword Type	String
Field Length	1–256
Multiples Allowed?	No, only one for each SHARED_FOLDER parameter

The PATH parameter specifies the path to a folder in the iSeries Integrated File System (IFS). For example, if you specify QSYSLIB, the user has access to all resources available under QSYSLIB.

The value is a 1–256 character string.

This parameter is optional.

SERVER_NAME

Required?	Yes
Keyword Type	String
Field Length	3–17
Multiples Allowed?	No, only one for each AS400_SERVER keyword

The SERVER_NAME parameter specifies the fully qualified CP name of the iSeries, eServer i5, or System i5.

The fully qualified server name is a 17-byte character string. The fully qualified server name consists of two parts: the network name and the CP name, concatenated with a period. The network name is a 1- to 8-byte SNA Type A character string. The CP name is a 1- to 8-byte SNA Type A character string. The fully qualified CP name is also known as the network qualified CP name.

This parameter is required.

SHARED_FOLDER

Required?	No
Keyword Type	Complex
Key Name	N/A
Multiples Allowed?	Yes

The SHARED_FOLDER parameter is a complex keyword comprised of the following parameter keywords:

- DEVICE
- PASSWORD
- PATH
- USER_ID

See the descriptions of the parameter keywords to define the SHARED_FOLDER parameter.

USER_ID

Required?	No
Keyword Type	String
Field Length	1–10
Multiples Allowed?	Yes, one for each AS400_SERVER keyword or SHARED_FOLDER parameter

The USER_ID parameter specified outside of the SHARED_FOLDER parameter validates iSeries, eServer i5, or System i5 access. The user ID is supplied by an application, such as a TN5250 application, attempting to access the iSeries, eServer i5, or System i5.

The USER_ID parameter specified for the SHARED_FOLDER parameter validates iSeries, eServer i5, or System i5 folder access and overrides the USER_ID parameter supplied by a TN5250 application. You can further restrict access to iSeries, eServer i5, or System i5 resources or grant users the same access rights as they already have on the iSeries, eServer i5, or System i5.

This parameter is optional.

USER_ID is a 1- to 10-byte character string. Valid characters are:

- Alphanumeric:
  - A–Z
  - a–z
  - 0–9
- Special characters:
  - blank (space)
  - ((left parenthesis)
  -) (right parenthesis)
  - . (period)
  - , (comma)
  - ; (semicolon)
  - : (colon)
  - - (dash)
  - / (slash)
  - % (percent
  - ? (question mark)
  - ’ (apostrophe)
  - ″ (quotation mark)
  - = (equal sign)
  - > (greater than)
  - < (less than)
  - _ (underline)

6 CONNECTION_NETWORK

This chapter describes the parameter keywords and values you can specify for the CONNECTION_NETWORK keyword.

Keyword Definition

Required?	No
Keyword Type	Complex
Key Name	FQCN_NAME
Multiples Allowed?	Yes, but each CONNECTION_NETWORK keyword must have a unique FQCN_NAME parameter

CONNECTION_NETWORK Sample

The following are samples of the CONNECTION_NETWORK keyword:

```
CONNECTION_NETWORK=(
FQCN_NAME=USIBMNR.CONNET
PORT_NAME=LAN0_04
INHERIT_PORT_LIMITED_RESOURCE=NO
)
CONNECTION_NETWORK=(
FQCN_NAME=USIBMNR.EE4CNET
PORT_NAME=IBMEEDLC
INHERIT_PORT_LIMITED_RESOURCE=YES
)
```

CONNECTION_NETWORK Parameter Keywords

FQCN_NAME

Required?	Yes
Keyword Type	String
Field Length	3–17
Multiples Allowed?	No, only one for each CONNECTION_NETWORK keyword

The FQCN_NAME parameter specifies the name of the virtual network node through which sessions appear to be routed between two nodes in the same connection network. Two nodes participating in the same connection network must specify the same connection network name.

This parameter is required.

The fully qualified connection network name is a 17-byte character string. The fully qualified connection network name consists of two parts: the network name and the virtual CP name, concatenated with a period. The network name is a 1- to

8-byte SNA Type A character string. The virtual CP name is a 1- to 8-byte SNA Type A character string. The fully qualified CP name is also known as the network qualified CP name.

Valid characters are:

- The first character must be an uppercase alphabetic character (A–Z) or a special character (@, #, $).
- The remaining characters can be alphanumeric characters (A–Z, 0–9) or special characters (@, #, $).

PORT_NAME

Required?	No
Keyword Type	String
Field Length	1–8
Multiples Allowed?	Yes

The PORT_NAME parameter specifies the name of the physical connection to the link hardware. A port is sometimes referred to as an *adapter*. One or more ports can be controlled by a single data link control (DLC) process. However, IBMEEDLC (IPv4) and IBMEE006 (IPv6) cannot be on the same connection network.

This parameter is optional.

PORT_NAME is a 1- to 8-byte character string.

INHERIT_PORT_LIMITED_RESOURCE

Required?	No
Keyword Type	Enumerated
Default	No
Multiples Allowed?	No, only one for each CONNECTION_NETWORK keyword

The INHERIT_PORT_LIMITED_RESOURCE parameter controls whether the values specified on the IMPLICIT_LIMITED_RESOURCE keyword of PORT are used for the connection networks.

Valid values are:

NO The values specified on the IMPLICIT_LIMITED_RESOURCE parameter of the PORT keyword are not used. The connection networks are defined as limited resource.

YES The values specified on the IMPLICIT_LIMITED_RESOURCE of the PORT keyword are used. In this case, the connection networks are defined as either limited resource or non-limited resource, based on the values specified on the IMPLICIT_LIMITED_RESOURCE of the PORT keyword. See “IMPLICIT_LIMITED_RESOURCE” on page 131.

This parameter is optional.

7 CPIC_SIDE_INFO

This chapter describes the parameter keywords and values you can specify for the CPIC_SIDE_INFO keyword.

Keyword Definition

Required?	No
Keyword Type	Complex
Key Name	SYM_DEST_NAME
Multiples Allowed?	Yes, but each CPIC_SIDE_INFO keyword must have a unique SYM_DEST_NAME parameter

CPIC_SIDE_INFO Sample

The following is a sample of the CPIC_SIDE_INFO keyword:

```
CPIC_SIDE_INFO=(
     SYM_DEST_NAME=APINGD
     CONVERSATION_SECURITY_TYPE=NONE
     MODE_NAME=#INTER
     PARTNER_LU_NAME=USIBMNM.PARTNER1
     TP_NAME=APINGD
     TP_NAME_TYPE=APPLICATION_TP
)
```

CPIC_SIDE_INFO Parameter Keywords

CONVERSATION_SECURITY_TYPE

Required?	No
Keyword Type	Enumerated
Default	NONE
Multiples Allowed?	No, only one for each CPIC_SIDE_INFO keyword

The CONVERSATION_SECURITY_TYPE parameter specifies the type of conversation security to be used. Valid values are:

NONE Attach manager sends the partner LU an allocation request that includes no security information.

SAME Attach manager sends the partner LU an allocation request that includes the same level of access security information as that in the request received from the partner LU.

PROGRAM Attach manager sends the partner LU an allocation request that includes a security user ID and security password that you define.

STRONG Attach manager sends the partner LU an allocation request that includes a password substitution created by using the password

you defined. This enables a more secure conversation. The password substitution must be supported on both ends.

This parameter is optional. The default is NONE.

MODE_NAME

Required?	No
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No, only one for each CPIC_SIDE_INFO keyword

The MODE_NAME parameter specifies the name of the mode to be used for the session.

This parameter is optional.

MODE_NAME is a 1- to 8-byte SNA Type A character string. You can specify one of the following:

- BLANK
- #BATCH
- #BATCHSC
- #INTER
- #INTERSC
- QPCSUPP
- SNASVCMG
- A unique mode name for each mode you define. If you define your own mode name, valid characters are:
  - All blanks
  - The first character must be an uppercase alphabetic character (A–Z) or a special character (@, #, $).
  - The remaining characters can be alphanumeric characters (A–Z, 0–9) or special characters (@, #, $).

The mode name is used by the session initiator to designate the allocated session characteristics for the conversation. The mode defines a set of characteristics that can apply to one or more sessions. These characteristics include: traffic-pacing values, message-length limits, synchronization point and cryptography options, and the class of service within the transport network.

PARTNER_LU_NAME

Required?	Yes
Keyword Type	String
Field Length	1–17
Multiples Allowed?	No, only one for each CPIC_SIDE_INFO keyword

The PARTNER_LU_NAME parameter specifies the fully qualified name of the partner LU.

The fully qualified name is a 17-byte character string. The fully qualified name consists of two parts: the network name and the LU name, concatenated with a period. The network name is a 1- to 8-byte SNA Type A character string. The LU name is a 1- to 8-byte SNA Type A character string.

This parameter is required.

SECURITY_PASSWORD

Required?	No
Keyword Type	Hexadecimal string
Field Length	1–20
Multiples Allowed?	No, only one for each CPIC_SIDE_INFO keyword

The SECURITY_PASSWORD parameter specifies the 1–20 character password used to enforce conversation-level security. The security password is used with the SECURITY_USER_ID parameter for access validation to the remote program by the partner logical unit (LU). The password is converted to a 20-character hexadecimal string by the encryption process.

Note: Since this value is encrypted, you should not attempt to enter this value directly into the ACG file. The value should only be entered using the SNA Node Configuration application.

This parameter is optional.

SECURITY_USER_ID

Required?	No
Keyword Type	String
Field Length	1–10
Multiples Allowed?	No, only one for each CPIC_SIDE_INFO keyword

The SECURITY_USER_ID parameter specifies the 1–10 character user ID used to enforce conversation-level security.

This parameter is optional.

The security user identifier is used for access validation to the remote program by the partner logical unit (LU).

SYM_DEST_NAME

Required?	Yes
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No, only one for each CPIC_SIDE_INFO keyword

The SYM_DEST_NAME parameter specifies the 1–8 character symbolic destination name that identifies the side information entry.

This parameter is required.

The symbolic destination name is the name used by common programming interface for communications (CPI-C) applications to identify the side information definition and to access the network resources.

TP_NAME

Required?	No
Keyword Type	String
Field Length	1–64
Multiples Allowed?	No, only one for each CPIC_SIDE_INFO keyword

The TP_NAME parameter specifies the 1–64 character transaction program name that provides information about accepting incoming Attaches and optionally starting workstation programs. Valid characters are any locally displayable characters using the native encoding of the local system. The TP name may also refer to a service transaction program.

This parameter is optional.

A transaction program (TP) uses the advanced program-to-program communications (APPC) system to communicate with a partner application program at the partner node.

TP_NAME_TYPE

Required?	Yes
Keyword Type	Enumerated
Default	APPLICATION_TP
Multiples Allowed?	No, only one for each CPIC_SIDE_INFO keyword

The TP_NAME_TYPE parameter specifies the type of transaction program used. Valid values are:

APPLICATION_TP The transaction program name supplied is not a service transaction program. All characters

	specified in the transaction program name must be valid characters in the locally displayable character set.
SNA_SERVICE	The transaction program name supplied is a service transaction program. All characters, except the first, specified in the transaction program name must be valid characters in the locally displayable character set. The first character must be a hexadecimal digit in the range X'01'–X'3F', excluding X'0E' and X'0F'.

This parameter is required. The default is APPLICATION_TP.

USER_DATA

Required?	No
Keyword Type	String
Field Length	1–32
Multiples Allowed?	No, only one for each CPIC_SIDE_INFO keyword

The USER_DATA parameter specifies the 1–32 character data string returned on the QUERY_CPIC_SIDE_INFO command.

The USER_DATA field can be used to store a LOCAL_LU_ALIAS name for use with this CPIC_SIDE_INFO definition. For example:

```
USER_DATA= LLU_ALIAS=myalias
```

All CPI-C applications using this CPIC_SIDE_INFO definition will use the local LU designated by *myalias* when establishing the session. The local LU alias *myalias* must be configured in a Local LU 6.2 LU definition.

The USER_DATA string must contain the keyword LLU_ALIAS in all uppercase characters, followed by the equal sign, then the LU alias. There can be no spaces or tabs between LLU_ALIAS, the equal sign, or the LU alias. The LU alias does not have to be padded with spaces. This string may appear anywhere in the USER_DATA field (for example, it may be preceded by other strings), but the total length of the entire USER_DATA string may not exceed 32 characters.

8 CRL_SUPPORT

This chapter describes the parameter keywords and values you can specify for the CRL_SUPPORT keyword.

Keyword Definition

Required?	No
Keyword Type	Complex
Multiples Allowed?	No

CRL_SUPPORT Sample

The following is a sample of the CRL_SUPPORT keyword:

```
CRL_SUPPORT=(
     CRL_SUPPORT_ENABLE=1
     LDAP_ID=vpn131
     LDAP_ID_TYPE=HOST_NAME
     PORT=389
     )
```

CRL_SUPPORT Parameter Keywords

CRL_SUPPORT_ENABLE

Required?	Yes
Keyword Type	Boolean
Default	0
Multiples Allowed?	No

The CRL_SUPPORT_ENABLE parameter specifies whether certificate revocation list (CRL) support is enabled. Valid values are:

0 CRL support is disabled.

1 CRL support is enabled.

This parameter is required. The default is 0.

LDAP_ID

Required?	Yes
Keyword Type	String
Field Length	1–257
Multiples Allowed?	No

The LDAP_ID parameter specifies one of the following:

- The host name of the LDAP server containing the certificate revocation list.
- The IP address of the LDAP server containing the certificate revocation list.

Whether the value you specify is a host name or IP address is determined by the LDAP_ID_TYPE parameter.

The value is a 1- to 257-character string.

This parameter is required.

LDAP_ID_TYPE

Required?	No
Keyword Type	Enumerated
Default	IP_ADDRESS
Multiples Allowed?	No

The LDAP_ID_TYPE parameter indicates the type of address the value of the LDAP_ID parameter specifies. Valid values are:

HOST_NAME The value of the LDAP_ID parameter specifies a host name.

IP_ADDRESS The value of the LDAP_ID parameter specifies the IP address of a TCP/IP workstation. Valid IP addresses are:

- An IPv4 dotted-decimal address (such as 193.1.11.100)
- An IPv6 colon-hexadecimal address (such as 2001:0db8:0000:0000:0000:0000:1428:57ab or 2001:db8::1428:57ab)
- A name (such as server1.mycompany.com)
- An alias (such as server1)

This parameter is optional. The default is IP_ADDRESS.

PASSWORD

Required?	No
Keyword Type	Hexadecimal string
Field Length	1–102
Multiples Allowed?	No

The PASSWORD parameter specifies the password used with the USER_ID parameter for accessing the LDAP server. The password is converted to a hexadecimal string by an encryption process.

Note: Since this value is encrypted, you should not attempt to enter this value directly into the ACG file. The value should only be entered using the Node Configuration application.

This parameter is optional.

PORT

Required?	Yes
Keyword Type	Unsigned number
Default	389
Range	1–65 535
Multiples Allowed?	No

The PORT parameter specifies the port number of the LDAP server.

The value is an integer in the range 1–65 535.

This parameter is required. The default is 389.

Normally, the LDAP server uses port 389.

Note: If you change the port number from 389, the port number defined on TN5250 clients must be changed to the number specified here.

USER_ID

Required?	No
Keyword Type	Hexadecimal string
Field Length	1–1002
Multiples Allowed?	No

The USER_ID parameter specifies the user ID used with the PASSWORD parameter for accessing the LDAP server. The user ID is converted to a hexadecimal string by an encryption process.

Note: Since this value is encrypted, you should not attempt to enter this value directly into the ACG file. The value should only be entered using the Node Configuration application.

This parameter is optional.

9 DLUR_DEFAULTS

This chapter describes the parameter keywords and values you can specify for the DLUR_DEFAULTS keyword.

Keyword Definition

Required?	No
Keyword Type	Complex
Multiples Allowed?	No

DLUR_DEFAULTS Sample

The following is a sample of the DLUR_DEFAULTS keyword:

```
DLUR_DEFAULTS=(
     BKUP_DLUS_NAME=USIBMNR.DLURBACK
     DEFAULT_PU_NAME=NT265
     DLUS_RETRY_LIMIT=3
     DLUS_RETRY_TIMEOUT=5
     FQ_DLUS_NAME=USIBMNM.DLURSRV
)
```

DLUR_DEFAULTS Parameter Keywords

BKUP_DLUS_NAME

Required?	No
Keyword Type	String
Field Length	3–17
Multiples Allowed?	No

The BKUP_DLUS_NAME parameter specifies the backup dependent logical unit server name with which Communications Server or Personal Communications automatically tries to establish a connection, if the primary DLUS connection fails.

The fully qualified backup DLUS name consists of two parts: the network name and the LU name, concatenated with a period. The network name is a 1- to 8-byte SNA Type A character string. The LU name is a 1- to 8-byte SNA Type A character string.

This parameter is optional. If you do not specify this parameter, the current backup default DLUS is revoked.

When AnyNet® is configured, the routing preference assigned for the DLUS is the node default routing preference. If you want to override the routing preference for the DLUS, use **Configure Devices for the AnyNet SNA/IP DLC**.

DEFAULT_PU_NAME

Required?	No
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No

The DEFAULT_PU_NAME parameter specifies the default DLUS PU name. The name is a 1- to 8-byte SNA Type A character string.

This parameter is optional.

DLUS_RETRY_LIMIT

Required?	Yes
Keyword Type	Unsigned Number
Default	3
Range	1–65 535
Multiples Allowed?	No

The DLUS_RETRY_LIMIT parameter specifies the maximum number of attempts to reconnect a DLUS without receiving an acknowledgment in the time set by the DLUS_RETRY_TIMEOUT parameter.

The value for the retry limit is an integer in the range 1–65 535.

This parameter is required. The default is 65 535. If zero is specified, the default value is used. If 65 535 is specified, the product retries indefinitely.

DLUS_RETRY_TIMEOUT

Required?	Yes
Keyword Type	Unsigned number
Default	5
Range	1–65 535
Multiples Allowed?	No

The DLUS_RETRY_TIMEOUT parameter specifies the interval, in seconds, between second and subsequent attempts to contact a DLUS. The interval between the initial attempt and the first retry is always one second.

The value for the timeout is an integer in the range 1–65 535 seconds.

This parameter is required. The default is 5 seconds. If zero is specified, the default value is used.

FQ_DLUS_NAME

Required?	No
Keyword Type	String
Field Length	3–17
Multiples Allowed?	No

The FQ_DLUS_NAME parameter specifies the fully qualified DLUS name of the primary dependent logical unit server a connection is to be established with.

The fully qualified DLUS name is a 17-byte character string. The fully qualified DLUS name consists of two parts: the network name and the CP name, concatenated with a period. The network name is a 1- to 8-byte SNA Type A character string. The CP name is a 1- to 8-byte SNA Type A character string.

This parameter is optional.

10 DOWNSTREAM_LU

This chapter describes the parameter keywords and values you can specify for the DOWNSTREAM_LU keyword.

Keyword Definition

Required?	No
Keyword Type	Complex
Key Name	DSLU_NAME
Multiples Allowed?	Yes, but each DOWNSTREAM_LU keyword must have a unique DSLU_NAME parameter

DOWNSTREAM_LU Sample

The following is a sample of the DOWNSTREAM_LU keyword:

```
DOWNSTREAM_LU=(
     DSLU_NAME=GR08005
     DSPU_NAME=GR08
     HOST_LU_NAME=PUBLIC
     NAU_ADDRESS=5
)
```

DOWNSTREAM_LU Parameter Keywords

DSLU_NAME

Required?	Yes
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No, only one for each DOWNSTREAM_LU keyword

The DSLU_NAME parameter specifies the downstream LU name. The name is a 1- to 8-byte SNA Type A character string. Valid values are:

- The first character must be an uppercase alphabetic character (A–Z) or a special character (@, #, $).
- The remaining characters can be alphanumeric characters (A–Z, 0–9) or special characters (@, #, $).

This parameter is required.

DSPU_NAME

Required?	Yes
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No, only one for each DOWNSTREAM_LU keyword

The DSPU_NAME parameter specifies the component name that manages and monitors the resources (such as attached links and adjacent link station) associated with a downstream node. The name is a 1- to 8-byte SNA Type A character string. Valid values are:

- The first character must be an uppercase alphabetic character (A–Z) or a special character (@, #, $).
- The remaining characters can be alphanumeric characters (A–Z, 0–9) or special characters (@, #, $).

This parameter is required.

HOST_LU_NAME

Required?	Yes
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No, only one for each DOWNSTREAM_LU keyword

The HOST_LU_NAME parameter is the host LU name or host LU pool name to which the downstream LU is being mapped. The name is a 1- to 8-byte SNA Type A character string.

This parameter is required.

NAU_ADDRESS

Required?	Yes
Keyword Type	Unsigned number
Range	1–255
Multiples Allowed?	No, only one for each DOWNSTREAM_LU keyword

The NAU_ADDRESS parameter specifies the network addressable unit address of the downstream LU. The value is an integer in the range 1–255.

This parameter is required.

A network addressable unit (NAU) address is the address of a logical unit (LU), physical unit (PU), control point (CP), or system services control point (SSCP). It is the address of the origin or destination of information transmitted by the path control network.

11 DSPU_TEMPLATE

This chapter describes the parameter keywords and values you can specify for the DSPU_TEMPLATE keyword.

Keyword Definition

Required?	No
Keyword Type	Complex
Key Name	TEMPLATE_NAME
Multiples Allowed?	Yes, but each DSPU_TEMPLATE keyword must have a unique TEMPLATE_NAME parameter

DSPU_TEMPLATE Sample

The following is a sample of the DSPU_TEMPLATE keyword:

```
DSPU_TEMPLATE=(
     TEMPLATE_NAME=DOWN
     MAX_INSTANCE=0
     NUMBER_OF_DSLU_TEMPLATES=1
     DSLU_TEMPLATE=(
          HOST_LU=PUBLIC
          MAX_NAU=5
          MIN_NAU=1
     )
)
```

DSPU_TEMPLATE Parameter Keywords

DSLU_TEMPLATE

Required?	No
Keyword Type	Complex
Multiples Allowed?	Yes

The DSLU_TEMPLATE parameter is a complex keyword comprised of the following parameter keywords:

- HOST_LU
- MAX_NAU
- MIN_NAU

See the descriptions of the parameter keywords to define the DSLU_TEMPLATE parameter.

HOST_LU

Required?	No
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No, only one for each DSLU_TEMPLATE parameter

The HOST_LU parameter specifies the host LU name or host LU pool name to which all downstream LUs are being mapped.

The name is a 1- to 8-byte SNA Type A character string.

This parameter is optional.

MAX_INSTANCE

Required?	No
Keyword Type	Unsigned number
Range	0–65 535
Multiples Allowed?	No, only one for each DSPU_TEMPLATE keyword

The MAX_INSTANCE parameter specifies the maximum number of instances of the template concurrently active. While the number of instances is equal to the value specified, no new instances can be created.

The range for this value is 0–65535. If zero is specified, there is no limit to the number of concurrent instances of the template.

This parameter is optional.

MAX_NAU

Required?	No
Keyword Type	Unsigned number
Range	1–255
Multiples Allowed?	No, only one for each DSLU_TEMPLATE parameter

The MAX_NAU parameter specifies the maximum network addressable unit address in the range.

The range for this value is 1–255.

This parameter is optional.

MIN_NAU

Required?	No
Keyword Type	Unsigned number
Range	1–255
Multiples Allowed?	No, only one for each DSLU_TEMPLATE parameter

The MIN_NAU parameter specifies the minimum network addressable unit address in the range.

The range for this value is 1–255.

This parameter is optional.

NUMBER_OF_DSLU_TEMPLATES

Required?	No
Keyword Type	Unsigned number
Range	0–255
Multiples Allowed?	No, only one for each DSPU_TEMPLATE keyword

The NUMBER_OF_DSLU_TEMPLATES parameter specifies the number of DSLU template overlays which follow the DSPU template.

The range for this value is 0–255.

This parameter is optional.

TEMPLATE_NAME

Required?	No
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No, only one for each DSPU_TEMPLATE keyword

The TEMPLATE_NAME parameter specifies the eight character name of the DSPU template. This corresponds to the IMPLICIT_DSPU_TEMPLATE parameter on the PORT keyword.

All eight characters must be specified. Valid characters are any locally displayable characters.

This parameter is optional.

12 FOCAL_POINT

This chapter describes the parameter keywords and values you can specify for the FOCAL_POINT keyword.

Keyword Definition

Required?	No
Keyword Type	Complex
Key Name	MS_CATEGORY
Multiples Allowed?	Yes, but each FOCAL_POINT keyword must have a unique MS_CATEGORY parameter

FOCAL_POINT Sample

The following is a sample of the FOCAL_POINT keyword:

```
FOCAL_POINT=(
     BKUP_FP_FQCP_NAME=USIBMNR.BACKUP
     BKUP_MS_APPL_NAME=23F0F1F6
     FP_FQCP_NAME=USIBMNR.FOCAL
     MS_APPL_NAME=23F0F1F6
     MS_CATEGORY=23F0F1F7
)
```

FOCAL_POINT Parameter Keywords

BKUP_FP_FQCP_NAME

Required?	No
Keyword Type	String
Field Length	3–17
Multiples Allowed?	No, only one for each FOCAL_POINT keyword

The BKUP_FP_FQCP_NAME parameter specifies the backup focal point fully qualified control point name.

The fully qualified control point name is a 17-byte character string. The fully qualified name consists of two parts: the network name and the CP name, concatenated with a period. The network name is a 1- to 8-byte SNA Type A character string. The CP name is a 1- to 8-byte SNA Type A character string.

This parameter is optional.

The backup focal point control point (CP) specifies the node in the APPN network to which management services data is forwarded for processing, if the primary focal point is unavailable. If the backup focal point is being revoked, do not specify this parameter.

BKUP_MS_APPL_NAME

Required?	No
Keyword Type	Hexadecimal string
Field Length	1–16
Multiples Allowed?	No, only one for each FOCAL_POINT keyword

The BKUP_MS_APPL_NAME parameter specifies the backup focal point application name.

The application name can either be one of the 4-byte architecturally defined values for management services applications, or an 8-byte type 1134 EBCDIC installation-defined name.

This parameter is optional.

If the backup focal point is being revoked, do not specify this parameter.

If you are defining a focal point for forwarding alerts, the values are:

23F0F3F1 Alert/Network Operations for the management services category

23F0F3F0 Entry Point Alert for the application name

Valid application names are:

23F0F1F4 Entry Point Common Operations

23F0F1F5 Common Operations/Network Operations

23F0F1F6 Entry Point Operations

23F0F1F7 Operations Management

23F0F3F0 Entry Point Alert

23F0F3F1 Alert/Network Operations

FP_FQCP_NAME

Required?	Yes
Keyword Type	String
Field Length	3–17
Multiples Allowed?	No, only one for each FOCAL_POINT keyword

The FP_FQCP_NAME parameter specifies the focal point fully qualified control point name. The primary focal point control point (CP) specifies the node in the APPN network to which management services data is forwarded for processing.

The fully qualified CP name is a 17-byte character string. The fully qualified CP name consists of two parts: the network name and the CP name, concatenated with a period. The network name is a 1- to 8-byte SNA Type A character string. The CP name is a 1- to 8-byte SNA Type A character string. The fully qualified CP name is also known as the network qualified CP name.

This parameter is required.

MS_APPL_NAME

Required?	Yes
Keyword Type	Hexadecimal string
Field Length	1–16
Multiples Allowed?	No, only one for each FOCAL_POINT keyword

The MS_APPL_NAME parameter specifies the primary focal point application name.

The application name can either be one of the 4-byte architecturally defined values for management services applications, or an 8-byte type 1134 EBCDIC installation-defined name.

If the focal point is being revoked, do not specify this parameter.

If you are defining a focal point for forwarding alerts, the values are:

23F0F3F1 Alert/Network Operations for the management services category

23F0F3F0 Entry Point Alert for the application name

Valid application names are:

23F0F1F4 Entry Point Common Operations

23F0F1F5 Common Operations/Network Operations

23F0F1F6 Entry Point Operations

23F0F1F7 Operations Management

23F0F3F0 Entry Point Alert

23F0F3F1 Alert/Network Operations

MS_CATEGORY

Required?	Yes
Keyword Type	Hexadecimal string
Field Length	1–16
Multiples Allowed?	No, only one for each FOCAL_POINT keyword

The MS_CATEGORY parameter specifies the management services category, an identifier that associates related management services data for network management.

The application name can either be one of the 4-byte architecturally defined values for management services applications, or an 8-byte type 1134 EBCDIC installation-defined name.

This parameter is required.

If you are defining a focal point for forwarding alerts, the values are:

23F0F3F1 Alert/Network Operations for the management services category

23F0F3F0 Entry Point Alert for the application name

Valid application names are:

23F0F1F4 Entry Point Common Operations

23F0F1F5 Common Operations/Network Operations

23F0F1F6 Entry Point Operations

23F0F1F7 Operations Management

23F0F3F0 Entry Point Alert

23F0F3F1 Alert/Network Operations

13 HS_CRITICAL_SERVER

This chapter describes the parameter keywords and values you can specify for the HS_CRITICAL_SERVER keyword.

Keyword Definition

Required?	No
Keyword Type	Complex
Key Name	SERVER_NAME
Multiples Allowed?	Yes, but each HS_CRITICAL_SERVER keyword must have a unique SERVER_NAME parameter

HS_CRITICAL_SERVER Sample

The following is a sample of the HS_CRITICAL_SERVER keyword:

```
HS_CRITICAL_SERVER=(
     SERVER_NAME=SERVER1
     HOST_LINK_NAME=LINK0000
     HOST_LINK_NAME=LINK0001
     HOST_LINK_NAME=LINK0002
     HOST_LINK_NAME=LINK0003
)
```

HS_CRITICAL_SERVER Parameter Keywords

HOST_LINK_NAME

Required?	Yes, minimum of one
Keyword Type	String
Field Length	1–8
Multiples Allowed?	Yes

The HOST_LINK_NAME parameter specifies the connection definition activated when a failure is detected with the server specified by the SERVER_NAME parameter.

HOST_LINK_NAME is a 1- to 8-byte character string.

A minimum of one specification of this parameter is required.

SERVER_NAME

Required?	Yes
Keyword Type	String
Field Length	1–15
Multiples Allowed?	No, only one for each HS_CRITICAL_SERVER keyword

The SERVER_NAME parameter specifies the critical server TCP/IP host name. The critical server is the server being backed up by the local node. When connection to the server is lost, the connection specified by the HOST_LINK_NAME parameter is activated and provides the functions of the critical server.

SERVER_NAME is a 1- to 15-byte character string.

This parameter is required.

14 INTERNAL_PU

This chapter describes the parameter keywords and values you can specify for the INTERNAL_PU keyword.

Keyword Definition

Required?	No
Keyword Type	Complex
Key Name	PU_NAME
Multiples Allowed?	Yes, but each INTERNAL_PU keyword must have a unique PU_NAME parameter

INTERNAL_PU Sample

The following is a sample of the INTERNAL_PU keyword:

```
INTERNAL_PU=(
     PU_NAME=NT265
     FQ_DLUS_NAME=NETA.DLUS1
     BKUP_DLUS_NAME=NETA.DLUS2
     NODE_ID=05D00000
     STARTUP=1
)
```

INTERNAL_PU Parameter Keywords

BKUP_DLUS_NAME

Required?	No
Keyword Type	String
Field Length	3–17
Multiples Allowed?	No, only one for each INTERNAL_PU keyword

The BKUP_DLUS_NAME parameter specifies the fully qualified name of the DLUS node that serves as the backup DLUS for this PU. Communications Server or Personal Communications automatically tries to establish a connection with the backup DLUS server if the primary DLUS connection fails.

The fully qualified backup DLUS name is a 17-byte character string. The fully qualified CP name consists of two parts: the network name and the LU name, concatenated with a period. The network name is a 1- to 8-byte SNA Type A character string. The LU name is a 1- to 8-byte SNA Type A character string. The fully qualified LU name is also known as the network qualified LU name.

If you do not specify this parameter, the value specified for the BKUP_DLUS_NAME on the DLUR_DEFAULTS keyword is used (if it has been defined).

This parameter is optional.

DEPENDENT_LU_COMPRESSION

The DEPENDENT_LU_COMPRESSION parameter keyword applies to Communications Server only.

Required?	No
Keyword Type	Boolean
Default	0
Multiples Allowed?	No, only one for each INTERNAL_PU keyword

The DEPENDENT_LU_COMPRESSION parameter specifies whether data compression is used for conventional LU (LU 0 to 3) sessions dependent on this PU. Valid values are:

0 Data compression is not used.

1 Data compression is used if the host requests compression. DEPENDENT_LU_COMPRESSION=1 is ignored if the node does not support compression.

This parameter is optional. The default is 0.

DEPENDENT_LU_ENCRYPTION

Required?	Yes
Keyword Type	Enumerated
Default	OPTIONAL
Multiples Allowed?	No, only one for each INTERNAL_PU keyword

The DEPENDENT_LU_ENCRYPTION parameter specifies whether session level encryption is required for conventional LU (LU 0 to 3) sessions dependent on this PU. Valid values are:

MANDATORY Session level encryption is performed if an import key is available to the LU. If an import key is not available, encryption must be performed by the application using the LU.

Note: If the DSPU_SERVICES parameter is specified as PU_CONCENTRATION, encryption is performed by a downstream LU.

NONE Session level encryption is not performed.

OPTIONAL Session level encryption is performed by request from the adjacent node.

For Communications Server, the default is OPTIONAL.

For Personal Communications, the default is NONE. Personal Communications only supports the MANDATORY and NONE values.

FQ_DLUS_NAME

Required?	No
Keyword Type	String
Field Length	3–17
Multiples Allowed?	Only one for each INTERNAL_PU keyword

The FQ_DLUS_NAME parameter specifies the fully qualified DLUS name.

The fully qualified DLUS name is a 17-byte character string. The fully qualified name consists of two parts: the network name and the CP name, concatenated with a period. The network name is a 1- to 8-byte SNA Type A character string. The CP name is a 1- to 8-byte SNA Type A character string.

This parameter is optional. If FQ_DLUS_NAME is not specified, then the DLUR_DEFAULTS name is used.

NODE_ID

Required?	Yes
Keyword Type	Hexadecimal string
Field Length	1–8
Multiples Allowed?	No, only one for each INTERNAL_PU keyword

The NODE_ID parameter specifies the node ID. This ID consists of a block ID of 3 hexadecimal characters and a PU ID of 5 hexadecimal characters. This value must match the PU ID configured at the host.

This parameter is required.

PU_NAME

Required?	Yes
Keyword Type	String
Default	N/A
Field Length	1–8
Multiples Allowed?	No, only one for each INTERNAL_PU keyword

The PU_NAME parameter specifies the name of the internal PU that manages and monitors the resources (such as attached links and adjacent link station) associated with a node.

PU_NAME is a 1- to 8-byte SNA Type A character string. Valid values are:

- The first character must be an uppercase alphabetic character (A–Z) or a special character (@, #, $).

- The remaining characters can be alphanumeric characters (A–Z, 0–9) or special characters (@, #, $).

This parameter is required.

STARTUP

Required?	Yes
Keyword Type	Boolean
Default	1
Multiples Allowed?	No, only one for each INTERNAL_PU keyword

The STARTUP parameter specifies whether this PU is started when Communications Server or Personal Communications is started.

Valid values are:

0 This PU is not started when the product is started.

1 This PU is started when the product is started.

This parameter is required. The default is to automatically start the PU.

15 LINK_STATION

This chapter describes the parameter keywords and values you can specify for the LINK_STATION keyword.

The LINK_STATION keyword should contain one of the LINK_STATION_*_SPECIFIC DATA keywords. Which LINK_STATION_*_SPECIFIC DATA keyword to use is dependent on the value of PORT_NAME. For example, if the value of PORT_NAME refers to a LAN port, a LINK_STATION_LAN_SPECIFIC_DATA keyword should be included.

Keyword Definition

Required?	No
Keyword Type	Complex
Key Name	LS_NAME
Multiples Allowed?	Yes, but each LINK_STATION keyword must have a unique LS_NAME parameter

LINK_STATION Samples

The following are samples of the LINK_STATION keyword:

```
LINK_STATION=(
     LS_NAME=LINK0000
     ACTIVATE_AT_STARTUP=0
     ADJACENT_NODE_TYPE=LEARN
     AUTO_ACTIVATE_SUPPORT=1
     CP_CP_SESS_SUPPORT=1
     DEFAULT_NN_SERVER=0
     DEST_ADDRESS=40000000000004
     DISABLE_REMOTE_ACT=0
     DSPU_SERVICES=NONE
     HPR_LINK_LVL_ERROR=0
     HPR_SUPPORT=0
     LIMITED_RESOURCE=NO
     LINK_DEACT_TIMER=0
     LINK_STATION_ROLE=USE_ADAPTER_DEFAULTS
     MAX_IFRM_RCVD=0
     MAX_SEND_BTU_SIZE=65535
     NODE_ID=05D00000
     PORT_NAME=LAN0_04
     SOLICIT_SSCP_SESSION=0
     SUPPRESS_CP_NAME=NO
     TG_NUMBER=0
     USE_DEFAULT_TG_CHARS=1
     LINK_STATION_LAN_SPECIFIC_DATA=(
          TEST_RETRY_INTERVAL=8
          TEST_RETRY_LIMIT=5
          XID_RETRY_INTERVAL=8
          XID_RETRY_LIMIT=5
     )
)
LINK_STATION=(
     LS_NAME=LINK0001
     ACTIVATE_AT_STARTUP=0
     ADJACENT_NODE_TYPE=DSPU_XID
```

```
          AUTO_ACTIVATE_SUPPORT=0
          CP_CP_SESS_SUPPORT=1
          DEFAULT_NN_SERVER=0
          DEST_ADDRESS=40000000000104
          DISABLE_REMOTE_ACT=0
          DSPU_NAME=LINK0001
          DSPU_SERVICES=PU_CONCENTRATION
          HPR_LINK_LVL_ERROR=0
          HPR_SUPPORT=0
          LIMITED_RESOURCE=NO
          LINK_DEACT_TIMER=0
          LINK_STATION_ROLE=USE_ADAPTER_DEFAULTS
          MAX_IFRM_RCVD=0
          MAX_SEND_BTU_SIZE=65535
          NODE_ID=05D00000
          PORT_NAME=LAN0_04
          SOLICIT_SSCP_SESSION=0
          STARTUP=1
          SUPPRESS_CP_NAME=NO
          TG_NUMBER=0
          USE_DEFAULT_TG_CHARS=1
          LINK_STATION_LAN_SPECIFIC_DATA=(
               TEST_RETRY_INTERVAL=8
               TEST_RETRY_LIMIT=5
               XID_RETRY_INTERVAL=8
               XID_RETRY_LIMIT=5
          )
     )
     LINK_STATION=(
          LS_NAME=PATVTAM
          ACTIVATE_AT_STARTUP=0
          ACTIVATION_DELAY_TIMER=0
          ADJACENT_BRANCH_EXTENDER_NODE=PROHIBITED
          ADJACENT_NODE_TYPE=LEARN
          AUTO_ACTIVATE_SUPPORT=0
          BRANCH_EXTENDER_LINK=1
          CP_CP_SESS_SUPPORT=1
          DEFAULT_NN_SERVER=0
          DELAY_APPLICATION_RETRIES=0
          DEPENDENT_LU_COMPRESSION=0
          DEPENDENT_LU_ENCRYPTION=OPTIONAL
          DEST_ADDRESS=6822A09
          DISABLE_REMOTE_ACT=0
          DSPU_SERVICES=NONE
          HPR_LINK_LVL_ERROR=0
          HPR_SUPPORT=1
          INHERIT_PORT_RETRY_PARMS=0
          LIMITED_RESOURCE=NO
          LINK_DEACT_TIMER=600
          LINK_STATION_ROLE=NEGOTIABLE
          MAX_ACTIVATION_ATTEMPTS=0
          MAX_IFRM_RCVD=7
          MAX_SEND_BTU_SIZE=1500
          NODE_ID=-05D00000
          NULL_ADDRESS_MEANING=USE_WILDCARD
          PORT_NAME=IBMEEDLC
          PU_NAME=PATVTAM
          RETRY_LINK_ON_DISCONNECT=0
          RETRY_LINK_ON_FAILED_START=0
          RETRY_LINK_ON_FAILURE=0
          REVERSE_ADDRESS_BYTES=0
          SOLICIT_SSCP_SESSION=0
          TG_NUMBER=0
          USE_DEFAULT_TG_CHARS=1
          USE_PU_NAME_IN_XID=0
          LINK_STATION_OEM_SPECIFIC_DATA=(
               OEM_LINK_DATA=(
```

```
                OEM_DATA=0100000004000000040000000300000000F00000001000000
                OEM_DATA=0A00000064822A09
            )
        )
        TG_CHARS=(
             COST_PER_BYTE=0
             COST_PER_CONNECT_TIME=0
             EFFECTIVE_CAPACITY=160
             PROPAGATION_DELAY=MINIMUM
             SECURITY=
             USER_DEFINED_1=0
             USER_DEFINED_2=0
             USER_DEFINED_3=0
        )
)
LINK_STATION=(
     LS_NAME=WA20DN
     ACTIVATE_AT_STARTUP=0
     ACTIVATION_DELAY_TIMER=0
     ADJACENT_BRANCH_EXTENDER_NODE=PROHIBITED
     ADJACENT_NODE_TYPE=LEARN
     AUTO_ACTIVATE_SUPPORT=0
     BRANCH_EXTENDER_LINK=1
     CP_CP_SESS_SUPPORT=1
     DEFAULT_NN_SERVER=0
     DELAY_APPLICATION_RETRIES=0
     DEPENDENT_LU_COMPRESSION=0
     DEPENDENT_LU_ENCRYPTION=OPTIONAL
     DEST_ADDRESS=044004
     DISABLE_REMOTE_ACT=0
     DSPU_SERVICES=NONE
     HPR_LINK_LVL_ERROR=0
     HPR_SUPPORT=1
     INHERIT_PORT_RETRY_PARMS=0
     LIMITED_RESOURCE=NO
     LINK_DEACT_TIMER=600
     LINK_STATION_ROLE=NEGOTIABLE
     MAX_ACTIVATION_ATTEMPTS=0
     MAX_IFRM_RCVD=7
     MAX_SEND_BTU_SIZE=1500
     NODE_ID=-05D00000
     NULL_ADDRESS_MEANING=USE_WILDCARD
     PORT_NAME=IBMEEDLC
     PU_NAME=WA20DN
     RETRY_LINK_ON_DISCONNECT=0
     RETRY_LINK_ON_FAILED_START=0
     RETRY_LINK_ON_FAILURE=0
     REVERSE_ADDRESS_BYTES=0
     SOLICIT_SSCP_SESSION=0
     TG_NUMBER=0
     USE_DEFAULT_TG_CHARS=1
     USE_PU_NAME_IN_XID=0
     LINK_STATION_OEM_SPECIFIC_DATA=(
          OEM_LINK_DATA=(
               OEM_DATA=0100000004000000040000000300000000F00000001000000
               OEM_DATA=0A0000001900000077613230642E7274702E72616C656967
               OEM_DATA=682E69626D2E636F6D00
          )
     )
     TG_CHARS=(
          COST_PER_BYTE=0
          COST_PER_CONNECT_TIME=0
          EFFECTIVE_CAPACITY=160
          PROPAGATION_DELAY=MINIMUM
          SECURITY=
          USER_DEFINED_1=0
```

```
            USER_DEFINED_2=0
            USER_DEFINED_3=0
        )
)
```

LINK_STATION Parameter Keywords

ACTIVATE_AT_STARTUP

Required?	Yes
Keyword Type	Boolean
Default	1
Multiples Allowed?	No, only one for each LINK_STATION keyword

The ACTIVATE_AT_STARTUP parameter specifies whether the link is activated when the product is started.

Valid values are:

0 The link is not activated when the product is started.

1 The link is activated when the product is started.

This parameter is required. The default is to activate the link.

ACTIVATION_DELAY_TIMER

Required?	Yes
Keyword Type	Signed number
Default	-1
Range	-1–3600
Multiples Allowed?	No, only one for each LINK_STATION keyword

The ACTIVATION_DELAY_TIMER parameter specifies the number of seconds between automatic retry attempts, and between application-driven activation attempts if the DELAY_APPLICATION_RETRIES parameter is specified.

The value is an integer in the range of -1–3 600.

- If -1 is specified, the value specified on the ACTIVATION_DELAY_TIMER parameter of the PORT keyword is used.
- If 0 is specified, a default value of 30 seconds is used.

This parameter is required. The default is -1.

ADJACENT_BRANCH_EXTENDER_NODE

The ADJACENT_BRANCH_EXTENDER_NODE parameter keyword applies to Communications Server only.

Required?	Yes
Keyword Type	Enumerated
Default	PROHIBITED
Multiples Allowed?	No, only one for each LINK_STATION keyword

The ADJACENT_BRANCH_EXTENDER_NODE parameter specifies whether the node adjacent to a local branch extender node can also be a branch extender node. This parameter is only valid if the NODETYPE parameter on the NODE keyword is specified as BRANCH_EXTENDER_NODE and the ADJACENT_NODE_TYPE parameter on the LINK_STATION keyword is specified as LEARN or NETWORK_NODE. Valid values are:

OPTIONAL The definition of the adjacent node as a branch extender node in optional.

PROHIBITED The adjacent node must not be a branch extender node, or the link activation fails.

REQUIRED The adjacent node must be a branch extender node, or the link activation fails.

Note: If ADJACENT_NODE_TYPE=NETWORK_NODE and AUTO_ACTIVATE_SUPPORT=1 on the LINK_STATION keyword, this parameter must be specified as either REQUIRED or PROHIBITED.

This parameter is required. The default is PROHIBITED.

ADJACENT_NODE_ID

Required?	No
Keyword Type	Hexadecimal string
Field Length	1–8
Multiples Allowed?	No, only one for each LINK_STATION keyword

The ADJACENT_NODE_ID parameter specifies the node ID of the adjacent node. An adjacent node is directly connected to this node via this link definition.

Specify a block ID of 3 hexadecimal characters and a PU ID of 5 hexadecimal characters.

This parameter is optional.

Notes:

1. If ADJACENT_NODE_TYPE indicates that the adjacent node is a T2.1 node (END_NODE, LEARN, NETWORK_NODE, or SUBAREA_LEN), this parameter is ignored unless it is nonzero, and either ADJACENT_NODE_TYPE is set to SUBAREA_LEN or the adjacent node does not send a network name control vector in its XID3.
2. If ADJACENT_NODE_TYPE is specified as HOST_DEP_LU_ONLY or HOST_XID0, this parameter is ignored.
3. If ADJACENT_NODE_TYPE is specified as DSPU_XID and this parameter is specified as nonzero, it is used to check the identity of the downstream PU.
4. If ADJACENT_NODE_TYPE is specified as DSPU_NO_XID and DSPU_SERVICES is specified as PU_CONCENTRATION, this parameter is ignored.
5. If ADJACENT_NODE_TYPE is specified as DSPU_NO_XID and DSPU_SERVICES is specified as DLUR, this parameter is used to identify the downstream PU to the DLUS.

Notes:

1. If ADJACENT_NODE_TYPE indicates that the adjacent node is a T2.1 node (END_NODE, LEARN, NETWORK_NODE, or SUBAREA_LEN), this parameter is ignored unless it is nonzero, and either ADJACENT_NODE_TYPE is set to SUBAREA_LEN or the adjacent node does not send a network name control vector in its XID3.
2. If ADJACENT_NODE_TYPE is specified as HOST_DEP_LU_ONLY, this parameter is ignored.

ADJACENT_NODE_TYPE

Required?	Yes
Keyword Type	Enumerated
Default	LEARN
Multiples Allowed?	No, only one for each LINK_STATION keyword

The ADJACENT_NODE_TYPE parameter identifies the SNA node type of the adjacent CP. Valid values are:

DSPU_NO_XID The adjacent node is a downstream PU and the product does not include XID exchange in link activation.

DSPU_XID	The adjacent node is a downstream PU and the product includes XID exchange in link activation.
END_NODE	The adjacent node is an APPN end node or an up-level node.
HOST_DEP_LU_ONLY	The adjacent node is a host and the product responds to a polling XID from the node with a format 3 XID.
HOST_XID0	The adjacent node is a host and the product responds to a polling XID from the node with a format 0 XID. For a link using the AnyNet DLC supporting dependent LU sessions, you must specify this value.
LEARN	The adjacent node is an APPN network node, an APPN end node, or an up-level node. The node type is learned during XID exchange.
NETWORK_NODE	The adjacent node is an APPN network node.
SUBAREA_LEN	The adjacent node does not send the control point name in the XID. For a link using the AnyNet DLC supporting independent LU sessions, you must specify this value.

Note: Independent LU 6.2 (APPC) traffic is only allowed over links with the ADJACENT_NODE_TYPE parameter specified as END_NODE, LEARN, NETWORK_NODE, or SUBAREA_LEN.

For the Enterprise Extender (EE) DLC and multipath channel (MPC) DLC, ADJACENT_NODE_TYPE must be specified as END_NODE, LEARN, or NETWORK_NODE.

For the Enterprise Extender (EE) DLC, ADJACENT_NODE_TYPE must be specified as END_NODE, LEARN, or NETWORK_NODE.

This parameter is required. The default is LEARN.

AUTO_ACTIVATE_SUPPORT

Required?	No
Keyword Type	Boolean
Multiples Allowed?	No, only one for each LINK_STATION keyword

The AUTO_ACTIVATE_SUPPORT parameter specifies whether the link is activated automatically when required by a session. Valid values are:

0 The link is not activated automatically.

1 The link is activated automatically when required by a session.

This parameter is optional.

If the link is not to an APPN node, this parameter can always be specified as 1.

If the link is to an APPN node, this parameter can not be specified as 1 if the link also supports CP-CP sessions. The parameter can be set to 1 if TG_NUMBER is defined for the link, and the specified value of TG_NUMBER is between 1 and 20. This allows an inactive link configured with AUTO_ACTIVATE_SUPPORT to be used when determining the best route for a session, then activating the link when it is needed. TG numbers are normally assigned only to active links (TGs).

BKUP_DLUS_NAME

Required?	No
Keyword Type	String
Field Length	3–17
Multiples Allowed?	No, only one for each LINK_STATION keyword

The BKUP_DLUS_NAME parameter specifies the fully qualified backup DLUS name for the downstream PU, with which Communications Server or Personal Communications automatically tries to establish a connection if the primary DLUS connection fails.

The fully qualified backup DLUS name is a 17-byte character string. The fully qualified CP name consists of two parts: the network name and the LU name, concatenated with a period. The network name is a 1- to 8-byte SNA Type A character string. The LU name is a 1- to 8-byte SNA Type A character string. The fully qualified LU name is also known as the network qualified LU name.

If you do not specify this parameter, the value specified for the BKUP_DLUS_NAME on the DLUR_DEFAULTS keyword is used (if defined.) This parameter is ignored if DSPU_SERVICES is not set to DLUR.

This parameter is optional.

BRANCH_EXTENDER_LINK

The BRANCH_EXTENDER_LINK parameter keyword applies to Communications Server only.

Required?	No
Keyword Type	Boolean
Default	0
Multiples Allowed?	No, only one for each LINK_STATION keyword

The BRANCH_EXTENDER_LINK parameter specifies whether this connection is designated as a branch extender link. This parameter is only valid if the NODETYPE parameter on the NODE keyword is specified as BRANCH_EXTENDER_NODE and the ADJACENT_NODE_TYPE parameter on

the LINK_STATION keyword is specified as END_NODE, LEARN, NETWORK_NODE, or SUBAREA_LEN. Valid values are:

0 This connection is not designated as a branch extender link.

1 This connection is designated as a branch extender link. The link connects to another network from the local branch network. This value is only valid if the ADJACENT_NODE_TYPE parameter on the LINK_STATION keyword is specified as NETWORK_NODE.

This parameter is optional. The default is 0.

COST_PER_BYTE

Required?	No
Keyword Type	Unsigned number
Range	0–255
Multiples Allowed?	No, only one for each LINK_STATION keyword

The COST_PER_BYTE parameter specifies the cost per byte for this link station.

The value is an integer in the range 0–255.

This parameter is optional.

COST_PER_CONNECT_TIME

Required?	No
Keyword Type	Unsigned number
Range	0–255
Multiples Allowed?	No, only one for each LINK_STATION keyword

The COST_PER_CONNECT_TIME parameter specifies the cost per connect time for this link station.

The value is an integer in the range 0–255.

This parameter is optional.

CP_CP_SESS_SUPPORT

Required?	No
Keyword Type	Boolean
Multiples Allowed?	No, only one for each LINK_STATION keyword

The CP_CP_SESS_SUPPORT parameter specifies whether CP-CP sessions are supported on this connection. This parameter is only relevant if the link is to an APPN node.

If you specify ADJACENT_NODE_TYPE as HOST_XID0, HOST_DEP_LU_ONLY, or SUBAREA_LEN, or if you specify LIMITED_RESOURCE is specified as YES, this parameter is ignored and is assumed to be 0.

Valid values are:

0 CP-CP sessions are not supported.

1 CP-CP sessions are supported.

For a multipath channel (MPC) DLC, CP_CP_SESS_SUPPORT must be specified as 1.

This parameter is optional.

DEFAULT_NN_SERVER

Required?	No
Keyword Type	Boolean
Multiples Allowed?	No, only one for each LINK_STATION keyword

The DEFAULT_NN_SERVER parameter specifies whether a link can be automatically activated by an end node to support CP-CP sessions to a network node server. The link must be defined to support CP-CP sessions for this parameter to effective. Valid values are:

0 CP-CP sessions are not supported.

1 CP-CP sessions are supported.

This parameter is optional.

DELAY_APPLICATION_RETRIES

Required?	No
Keyword Type	Boolean
Default	0
Multiples Allowed?	No, only one for each LINK_STATION keyword

The DELAY_APPLICATION_RETRIES parameter specifies whether link activation retries initiated by applications are delayed by the value specified for the ACTIVATION_DELAY_TIMER parameter. Valid values are:

0 Use PORT settings (defaults to 30 seconds).

1 Use LINK_STATION setting of ACTIVATION_DELAY_TIMER.

This parameter is optional.

DEPENDENT_LU_COMPRESSION

The DEPENDENT_LU_COMPRESSION parameter keyword applies to Communications Server only.

Required?	No
Keyword Type	Boolean
Default	0
Multiples Allowed?	No, only one for each LINK_STATION keyword

The DEPENDENT_LU_COMPRESSION parameter specifies whether data compression is used for conventional LU (LU 0 to 3) sessions on this connection. This parameter is only valid for connections supporting conventional LU sessions. Valid values are:

0 Data compression is not used.

1 Data compression is used if the host requests compression. DEPENDENT_LU_COMPRESSION=1 is ignored if the node does not support compression.

This parameter is optional. The default is 0.

DEPENDENT_LU_ENCRYPTION

Required?	Yes
Keyword Type	Enumerated
Default	OPTIONAL
Multiples Allowed?	No, only one for each LINK_STATION keyword

The DEPENDENT_LU_ENCRYPTION parameter specifies whether session level encryption is required for conventional LU (LU 0 to 3) sessions on this connection. This parameter is only valid for connections supporting conventional LU sessions. Valid values are:

MANDATORY Session level encryption is performed if an import key is available to the LU. If an import key is not available, encryption must be performed by the application that uses the LU.

Note: If the DSPU_SERVICES parameter is specified as PU_CONCENTRATION, encryption is performed by a downstream LU.

NONE Session level encryption is not performed.

OPTIONAL Session level encryption is performed by request from the adjacent node.

For Communications Server, the default is OPTIONAL.

For Personal Communications, the default is NONE. Personal Communications only supports the MANDATORY and NONE values.

DEST_ADDRESS

The DEST_ADDRESS parameter specifies information specific to the DLC you are using.

For information on defining the DEST_ADDRESS parameter for the DLC, refer to the following sections:

- Appendix A, "AnyNet-Specific Data," on page 185
- Appendix C, "LAN-Specific Data," on page 197
- Appendix D, "OEM-Specific Data," on page 207
- Appendix E, "SDLC-Specific Data," on page 217
- Appendix F, "Twinaxial-Specific Data," on page 233

DISABLE_REMOTE_ACT

Required?	Yes
Keyword Type	Boolean
Default	0
Multiples Allowed?	No, only one for each LINK_STATION keyword

The DISABLE_REMOTE_ACT parameter specifies whether remote activation of this link is supported. Valid values are:

0 Remote activation is supported.

1 Remote activation is not supported.

This parameter is required. The default is 0; remote link activation is supported.

DLUS_NAME

Required?	No
Keyword Type	String
Field Length	3–17
Multiples Allowed?	No, only one for each LINK_STATION keyword

The DLUS_NAME parameter is the name of the primary dependent logical unit server with which a connection is to be established.

This parameter is optional.

The fully qualified DLUS name is a 17-byte character string. The fully qualified CP name consists of two parts: the network name and the LU name, concatenated with a period. The network name is a 1- to 8-byte SNA Type A character string. The LU name is a 1- to 8-byte SNA Type A character string. The fully qualified LU name is also known as the network qualified LU name.

If you do not specify this parameter, the value specified for the BKUP_DLUS_NAME on the DLUR_DEFAULTS keyword is used (if defined.) If BKUP_DLUS_NAME on the DLUR_DEFAULTS keyword has not been defined, the DLUR does not initiate SSCP contact when the link is activated. This parameter is ignored if DSPU_SERVICES is not specified as DLUR.

DSPU_NAME

Required?	No
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No, only one for each LINK_STATION keyword

The DSPU_NAME parameter specifies the downstream PU name.

The downstream physical unit (PU) manages and monitors the resources (such as attached links and adjacent link station) associated with a downstream node.

DSPU_NAME is a 1- to 8-byte character string. Valid values are:

- The first character must be an uppercase alphabetic character (A–Z) or a special character (@, #, $).
- The remaining characters can be alphanumeric characters (A–Z, 0–9) or special characters (@, #, $).

This parameter must be specified if DSPU_SERVICES is specified as PU_CONCENTRATION or DLUR. Otherwise, the parameter is ignored.

DSPU_SERVICES

Required?	Yes
Keyword Type	Enumerated
Default	NONE
Multiples Allowed?	No, only one for each LINK_STATION keyword

The DSPU_SERVICES parameter specifies the local node services provided to the downstream PU across this link. Valid values are:

NONE	Local node provides no services for this downstream PU.
DLUR	Local node provides DLUR services for the downstream PU.
PU_CONCENTRATION	Local node provides PU concentration for the downstream PU.

This parameter is required. The default is NONE.

Notes:

1. The DSPU_NAME parameter must also be specified if this parameter is specified as PU_CONCENTRATION or DLUR.

2. This parameter must be specified as PU_CONCENTRATION or DLUR if the adjacent node is defined as a downstream PU (that is, NODE_TYPE is specified as DSPU_XID or DSPU_NO_XID).
3. This parameter can be specified as PU_CONCENTRATION or DLUR on a link to an APPN node if SOLICIT_SSCP_SESSION is specified as 0.
4. This field is ignored if the adjacent node is defined as a host.

EFFECTIVE_CAPACITY

Required?	No
Keyword Type	Unsigned number
Default	Use PORT setting of EFFECTIVE_CAPACITY.
Multiples Allowed?	No, only one for each LINK_STATION keyword

The EFFECTIVE_CAPACITY parameter specifies the units of effective capacity for this link station. The value is encoded as a 1-byte floating-point number, represented by the following formula:

```
0.1 mmm * 2 eeeee
```

where the bit representation of the byte is ***eeeeemmm***. Each unit of effective capacity is equal to 300 bits per second.

This parameter is optional.

ETHERNET_FORMAT

The ETHERNET_FORMAT parameter keyword applies to Personal Communications only.

Required?	Yes
Keyword Type	Boolean
Default	0
Multiples Allowed?	No, only one for each LINK_STATION keyword

The ETHERNET_FORMAT parameter specifies whether the LAN destination address is transmitted in token-ring format (unmodified) or Ethernet format (byte-reversal).

Note: The Ethernet format may not be appropriate for some Ethernet connections.

Valid values are:

0 The LAN destination address is transmitted in token-ring format.

1 The LAN destination address is transmitted in Ethernet format.

This parameter is required. The default is 0; transmit the LAN destination address in token-ring format.

FQ_ADJACENT_CP_NAME

Required?	No
Keyword Type	String
Field Length	3–17
Multiples Allowed?	No, only one for each LINK_STATION keyword

The FQ_ADJACENT_CP_NAME parameter specifies the fully qualified control point (CP) name that is directly connected to your workstation across this link.

The fully qualified CP name is a 17-byte character string. The fully qualified CP name consists of two parts: the network name and the CP name, concatenated with a period. The network name is a 1- to 8-byte SNA Type A character string. The CP name is a 1- to 8-byte SNA Type A character string. The fully qualified CP name is also known as the network qualified CP name.

This parameter is optional.

Notes:

1. This field is only relevant for links to APPN nodes and is otherwise ignored.
2. For links to APPN nodes, do not specify this parameter unless you specify the TG_NUMBER parameter as a number in the range 1–20 or you specify the ADJACENT_NODE_TYPE parameter as SUBAREA_LEN.

   If you specify this parameter, it is checked against the name received from the adjacent node during XID exchange, unless the ADJACENT_NODE_TYPE parameter is specified as SUBAREA_LEN, in which case it is used to identify the adjacent node.

HPR_LINK_LVL_ERROR

Required?	No
Keyword Type	Boolean
Multiples Allowed?	No, only one for each LINK_STATION keyword

The HPR_LINK_LVL_ERROR parameter specifies whether HPR traffic should be sent on this link using link-level error recovery. This parameter is ignored if HPR_SUPPORT is specified as 0. Valid values are:

0 HPR traffic should not be sent on this link using link-level error recovery.

1 HPR traffic should be sent on this link using link-level error recovery.

This parameter is optional.

HPR_SUPPORT

Required?	No
Keyword Type	Boolean
Default	0
Multiples Allowed?	No, only one for each LINK_STATION keyword

The HPR_SUPPORT parameter specifies whether HPR is supported on this link. This field is only relevant if the link is to an APPN node and is otherwise ignored. Valid values are:

0 HPR is not supported on this link.

1 HPR is supported on this link.

For the Enterprise Extender (EE) DLC and multipath channel (MPC) DLC, HPR_SUPPORT must be specified as 1.

For the Enterprise Extender (EE) DLC, HPR_SUPPORT must be specified as 1.

This parameter is optional. The default is not to support HPR.

INHERIT_PORT_RETRY_PARMS

Required?	No
Keyword Type	Boolean
Default	0
Multiples Allowed?	No, only one for each LINK_STATION keyword

The INHERIT_PORT_RETRY_PARMS parameter specifies whether the values specified on the PORT keyword are used for the following parameters (if they are not specified for the LINK_STATION keyword):

- DELAY_APPLICATION_RETRIES
- RETRY_LINK_ON_DISCONNECT
- RETRY_LINK_ON_FAILED_START
- RETRY_LINK_ON_FAILURE

Valid values are:

0 The values specified on the PORT keyword are not used.

1 The values specified on the PORT keyword are used.

This parameter is optional.

LIMITED_RESOURCE

Required?	Yes
Keyword Type	Enumerated
Multiples Allowed?	No, only one for each LINK_STATION keyword

The LIMITED_RESOURCE parameter specifies whether this link station is deactivated when there are no active sessions. Valid values are:

NO The link is not a limited resource and is not be deactivated automatically.

YES The link is a limited resource and is deactivated automatically when there are no active sessions. A limited resource link station can be configured for CP-CP session support. (This is done by setting this field to YES and CP_CP_SESS_SUPPORT to 1.) In this case, if CP-CP sessions are brought up over the link, Communications Server or Personal Communications does not treat the link as a limited resource (and does not bring the link down).

INACTIVITY The link is a limited resource and is deactivated automatically when there are no active sessions, or when no data has flowed on the link for the time period specified by the LINK_DEACT_TIMER parameter. Note that link stations on a nonswitched port can not be configured as limited resources.

For a multipath channel (MPC) DLC, LIMITED_RESOURCE must be specified as NO.

This parameter is required.

LINK_DEACT_TIMER

Required?	No
Keyword Type	Unsigned number
Default	10 
Default	600 
Range	0–60000
Multiples Allowed?	No, only one for each LINK_STATION keyword

The LINK_DEACT_TIMER parameter specifies the time, in seconds, that this link can be idle before it automatically deactivates. The link deactivation timer is only used when the LIMITED_RESOURCE parameter is specified as INACTIVITY.

The value is an integer in the range of 0–60000 seconds.

The default is 10 seconds.

The default is 600 seconds.

This parameter is optional.

Note: If zero is specified, the default value is used. Otherwise, the minimum value is 5. (If it is set any lower, the specified value is ignored and 5 is used.)

LINK_STATION_ROLE

Required?	No
Keyword Type	Enumerated
Default	NEGOTIABLE
Multiples Allowed?	No, only one for each LINK_STATION keyword

The LINK_STATION_ROLE parameter defines the responsibility that the link station has for controlling the communication with its adjacent link stations. Valid values are:

NEGOTIABLE	When the connection is established, the local link station becomes either a primary or secondary link station.
PRIMARY	The primary link station controls the conversation on the link.
SECONDARY	The secondary link station must wait to be polled by the primary link station before data is sent.
USE_ADAPTER_DEFAULTS	Use the value specified on the PORT keyword.

The default is NEGOTIABLE.

This parameter is optional.

Notes:

1. If DLC_NAME on the PORT keyword is specified as TWINAX, only SECONDARY is valid.
2. If DLC_NAME on the PORT keyword is specified as ANYNET, and LS_NAME is $ANYNET$, PRIMARY is not valid.

LS_NAME

Required?	Yes
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No, only one for each LINK_STATION keyword

The LS_NAME parameter specifies the 1- to 8-byte name used to identify a connection.

All eight characters must be specified. Valid characters are any locally displayable characters using the native encoding of the local system.

This parameter is required.

Note: During device configuration, the link station name $ANYNET$ is automatically defined when the AnyNet SNA over TCP/IP device is configured. This has the effect of informing the SNA Node Operations application that this is the link station to which independent LU session traffic that is to be routed by the AnyNet DLC should be sent. A link station of this name must be defined on a port over the AnyNet DLC if AnyNet routing is required. This definition can not be changed or deleted.

MAX_ACTIVATION_ATTEMPTS

Required?	Yes
Keyword Type	Signed number
Default	-1
Range	-1–127
Multiples Allowed?	No, only one for each LINK_STATION keyword

The MAX_ACTIVATION_ATTEMPTS parameter specifies the number of retry attempts allowed when the remote node does not respond, or the port is inactive. The attempts include both automatic retries and application-driven activation attempts. When this limit is reached, no further activation retries are attempted. The number of retries attempted is reset by a successful activation, or when a link station, port, or DLC is deactivated.

The value is an integer in the range of -1–127.

- If -1 is specified, the value specified on the MAX_ACTIVATION_ATTEMPTS parameter of the PORT keyword is used.
- If 0 is specified, there is no limit.

This parameter is required. The default is -1.

This parameter is ignored unless one of the following parameters is specified:

- DELAY_APPLICATION_RETRIES
- INHERIT_PORT_RETRY_PARMS
- RETRY_LINK_ON_DISCONNECT

- RETRY_LINK_ON_FAILED_START
- RETRY_LINK_ON_FAILURE

MAX_IFRM_RCVD

Required?	No
Keyword Type	Unsigned number
Range	0–127
Multiples Allowed?	No, only one for each LINK_STATION keyword

The MAX_IFRM_RCVD parameter determines the maximum number of I-frames that can be received by the local link stations before an acknowledgment is sent.

The value is an integer in the range of 0–127 frames.

If MAX_IFRM_RCVD is set to zero, the default value from the PORT keyword is used.

For a multipath channel (MPC) DLC, MAX_IFRM_RCVD must be specified as 0.

This parameter is optional.

MAX_SEND_BTU_SIZE

Required?	No
Keyword Type	Unsigned number
Multiples Allowed?	No, only one for each LINK_STATION keyword

The MAX_SEND_BTU_SIZE parameter specifies the maximum BTU size that can be sent from this link station. This value is used to negotiate the maximum BTU size that can be transmitted between a link station pair.

This parameter is optional.

Notes:

1. If the link is not HPR-capable, this value must be set to a value greater than or equal to 99.
2. If the link is HPR-capable, this value must be set to a value greater than or equal to 768.

For a multipath channel (MPC) DLC, MAX_SEND_BTU_SIZE should be specified as 32 768 to allow the DLC to determine the size.

NODE_ID

Required?	No
Keyword Type	Hexadecimal string
Field Length	1–8
Multiples Allowed?	No, only one for each LINK_STATION keyword

The NODE_ID parameter specifies the node ID sent in XIDs on this link station. This ID consists of a block ID of 3 hexadecimal characters and a PU ID of 5 hexadecimal characters.

This parameter is optional.

Notes:

1. If this field is set to zero, the NODE_ID parameter value specified on the NODE keyword is used in XID exchanges (see 22, "NODE," on page 111).
2. If this field is nonzero, the link definition replaces the value from the NODE definition for XID exchanges on this link station.

NULL_ADDRESS_MEANING

The NULL_ADDRESS_MEANING parameter keyword applies to Communications Server only.

Required?	Yes
Keyword Type	Enumerated
Default	USE_WILDCARD
Multiples Allowed?	No, only one for each LINK_STATION keyword

The NULL_ADDRESS_MEANING parameter specifies how a null destination address for an incoming LAN connection is matched to this link station. Valid values are:

USE_CPNAME_NODEID The destination address for the incoming LAN connection is matched to this link station using the adjacent CP name or adjacent node ID.

USE_WILDCARD The destination address for the incoming LAN connection is matched to this link station as a wildcard. This link station is matched to any incoming connection request that is not matched by another defined link station.

This parameter is required. The default is USE_WILDCARD.

PORT_NAME

Required?	Yes
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No, only one for each LINK_STATION keyword

The PORT_NAME parameter specifies the 1- to 8-byte name of the port associated with this link station.

All eight characters must be specified. Valid characters are any locally displayable characters.

For the Enterprise Extender (EE) DLC, PORT_NAME should be specified as **IBMEEDLC**.

This parameter is required.

Note: The PORT_NAME specified on the LINK_STATION keyword must match the PORT_NAME defined by the PORT keyword.

PROPAGATION_DELAY

Required?	No
Keyword Type	Enumerated
Multiples Allowed?	No, only one for each LINK_STATION keyword

The PROPAGATION_DELAY parameter specifies the time it takes for a signal to travel the length of the link, in microseconds, for this link station. The value is encoded as a 1-byte floating-point number, represented by the following formula:

```
0.1 mmm * 2 eeeee
```

where the bit representation of the byte is ***eeeeemmm***.

Valid values are:

LAN	Less than 480 microseconds delay.
MAXIMUM	Maximum propagation delay.
MINIMUM	No propagation delay.
PKT_SWITCHED_NET	Between 49 512 and 245 760 microseconds delay.
SATELLITE	Longer than 245 760 microseconds delay.
TELEPHONE	Between 480 and 49 512 microseconds delay.

This parameter is optional.

PU_NAME

Required?	No
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No, only one for each LINK_STATION keyword

The PU_NAME parameter specifies the name of the local PU that uses this link if the adjacent node is defined to be a host or if the SOLICIT_SSCP_SESSIONS is specified as 1 on a link to an APPN node. If the adjacent node is not defined to be a host, and is not defined as an APPN node with SOLICIT_SSCP_SESSIONS=1, this field is ignored.

PU_NAME is a 1- to 8-byte SNA Type A character string. Valid values are:

- The first character must be an uppercase alphabetic character (A–Z) or a special character (@, #, $).
- The remaining characters can be alphanumeric characters (A–Z, 0–9) or special characters (@, #, $).

This parameter is optional.

RETRY_LINK_ON_DISCONNECT

Required?	No
Keyword Type	Boolean
Multiples Allowed?	No, only one for each LINK_STATION keyword

The RETRY_LINK_ON_DISCONNECT parameter specifies whether link activation is retried when the link is stopped normally by the remote node. Valid values are:

0 Link activation is not retried.

1 Link activation is retried.

This parameter is optional.

RETRY_LINK_ON_FAILED_START

Required?	No
Keyword Type	Boolean
Multiples Allowed?	No, only for each LINK_STATION keyword

The RETRY_LINK_ON_FAILED_START parameter specifies whether link activation is retried if no response is received from the remote node when activation is attempted. If the port is inactive when activation is attempted, an attempt is made to activate it. Valid values are:

0 Link activation is not retried.

1 Link activation is retried.

This parameter is optional.

RETRY_LINK_ON_FAILURE

Required?	No
Keyword Type	Boolean
Multiples Allowed?	No, only one for each LINK_STATION keyword

The RETRY_LINK_ON_FAILURE parameter specifies whether link activation is retried if the link fails while in an active or pending active state. If the port fails, an attempt is made to activate it. Valid values are:

0 Link activation is not retried.

1 Link activation is retried.

This parameter is optional.

REVERSE_ADDRESS_BYTES

The REVERSE_ADDRESS_BYTES parameter keyword applies to Communications Server only.

Required?	No
Keyword Type	Boolean
Multiples Allowed?	No, only one for each LINK_STATION keyword

The REVERSE_ADDRESS_BYTES parameter specifies whether the bytes of the destination address are swapped at runtime. Many SNA devices, such as Ethernet routers, require that the destination address be byte-swapped before use. The destination address displayed remains the same regardless of the value of this field. Valid values are:

0 Do not byte-swap the address.

1 Byte-swap the address at runtime.

This parameter is optional.

SECURITY

Required?	No
Keyword Type	Enumerated
Multiples Allowed?	No, only one for each LINK_STATION keyword

The SECURITY parameter specifies the type of security used for transmission of data over the connection for this link station. Valid values are:

ENCRYPTED
There is encryption over the line.

GUARDED_CONDUIT
The conduit is protected against physical tapping.

GUARDED_RADIATION
The line is protected against physical and radiation tapping.

NONSECURE
No security exists.

PUBLIC_SWITCHED_NETWORK
Data is transmitted over a public switched network.

SECURE_CONDUIT
The line is a secure conduit that is not guarded.

UNDERGROUND_CABLE
Data is transmitted over a secure underground cable.

This parameter is optional.

SOLICIT_SSCP_SESSION

Required?	No
Keyword Type	Boolean
Multiples Allowed?	No, only one for each LINK_STATION keyword

The SOLICIT_SSCP_SESSION parameter specifies whether SSCP sessions are initiated on this link. Valid values are:

0 Requests no sessions with the SSCP on this link.

1 Requests the adjacent node to initiate sessions between the SSCP and the local control point and dependent LUs. If this value is specified, the PU_NAME parameter must be specified.

This parameter is optional.

Notes:

1. The SOLICIT_SSCP_SESSION parameter is only valid if the link is to an APPN node and is otherwise ignored.
2. If the adjacent node is defined to be a host (ADJACENT_NODE_TYPE is specified as HOST_DEP_LU_ONLY (Communications Server), HOST_XID3 (Personal Communications), or HOST_XID0), the product always requests the host to initiate sessions between the SSCP and the local control point and dependent LUs. The PU_NAME parameter must be specified.

For a multipath channel (MPC) DLC, SOLICIT_SSCP_SESSION must be specified as 0.

TG_CHARS

Required?	No
Keyword Type	Complex
Multiples Allowed?	No, only one for each LINK_STATION keyword

The TG_CHARS parameter is a complex keyword comprised of the following parameter keywords:

- COST_PER_BYTE
- COST_PER_CONNECT_TIME
- EFFECTIVE_CAPACITY
- PROPAGATION_DELAY
- SECURITY
- USER_DEFINED_1
- USER_DEFINED_2
- USER_DEFINED_3

See the descriptions of the parameter keywords to define the TG_CHARS parameter.

TG_NUMBER

Required?	No
Keyword Type	Unsigned number
Default	0
Range	0–20
Multiples Allowed?	No, only one for each LINK_STATION keyword

The TG_NUMBER parameter specifies a preassigned TG number. This field is only relevant if the link is to an adjacent APPN node and is otherwise ignored.

This parameter is optional. The default is 0.

Notes:

1. If ADJACENT_NODE_TYPE is specified as SUBAREA_LEN, TG_NUMBER is ignored and assumed to be specified as 1.
2. For links to adjacent APPN nodes, TG_NUMBER must be set in the range 1–20. This number is used to represent the link when the link is activated. Communications Server does not accept any other number from the adjacent node during activation of this link.
3. To avoid link-activation failure because of a mismatch of preassigned TG numbers, the same TG number must be defined by the adjacent node on the adjacent link station (if using preassigned TG numbers).
4. If a preassigned TG number is specified, the FQ_ADJACENT_CP_NAME must also be defined (and can not be set to all zeros) and the ADJACENT_NODE_TYPE must be specified as NETWORK_NODE or END_NODE.
5. If zero is entered, the TG number is not preassigned and is negotiated when the link is activated.

USE_DEFAULT_TG_CHARS

Required?	No
Keyword Type	Boolean
Multiples Allowed?	No, only one for each LINK_STATION keyword

The USE_DEFAULT_TG_CHARS parameter specifies whether the default TG characteristics specified on the PORT keyword should be used. USE_DEFAULT_TG_CHARS is only valid if the link is to an APPN node and is otherwise ignored. Valid values are:

0 Do not use the default TG characteristics specified on the PORT keyword.

1 Use the default TG characteristics specified on the PORT keyword. The values defined on the LINK_STATION TG_CHARS parameters are ignored.

This parameter is optional.

USE_PU_NAME_IN_XID

The USE_PU_NAME_IN_XID parameter keyword applies to Communications Server only.

Required?	No
Keyword Type	Boolean
Default	0
Multiples Allowed?	No, only one for each LINK_STATION keyword

The USE_PU_NAME_IN_XID parameter specifies whether the PU_NAME value in this LINK_STATION keyword should be used instead of the FQ_CP_NAME value from the NODE keyword during XID3 negotiation at link startup. Valid values are:

0 Use the CP name in XID3 negotiation

1 Use the PU name instead of the CP name in XID3 negotiation

This field is ignored unless ADJACENT_NODE_TYPE is specified as HOST_DEP_LU_ONLY or SUBAREA_LEN (Communications Server), or BACK_LEVEL_LEN_NODE or HOST_XID3 (Personal Communications).

This parameter is optional. The default is 0; use the node CP name during XID3 negotiation.

USER_DEFINED_1

Required?	No
Keyword Type	Unsigned number
Multiples Allowed?	No, only one for each LINK_STATION keyword

The USER_DEFINED_1 parameter specifies the maximum limit for a user defined parameter for this link station.

This parameter is optional.

USER_DEFINED_2

Required?	No
Keyword Type	Unsigned number
Multiples Allowed?	No, only one for each LINK_STATION keyword

The USER_DEFINED_2 parameter specifies the maximum limit for a user defined parameter for this link station.

This parameter is optional.

USER_DEFINED_3

Required?	No
Keyword Type	Unsigned number
Multiples Allowed?	No, only one for each LINK_STATION keyword

The USER_DEFINED_3 parameter specifies the maximum limit for a user defined parameter for this link station.

This parameter is optional.

LINK_STATION_ANYNET_SPECIFIC_DATA

For information on defining the parameters for the LINK_STATION_ANYNET_SPECIFIC_DATA parameter, refer to Appendix A, "AnyNet-Specific Data," on page 185.

LINK_STATION_LAN_SPECIFIC_DATA

For information on defining the parameters for the LINK_STATION_LAN_SPECIFIC_DATA parameter, refer to Appendix C, "LAN-Specific Data," on page 197.

LINK_STATION_OEM_SPECIFIC_DATA

For information on defining the parameters for the LINK_STATION_OEM_SPECIFIC_DATA parameter for the Enterprise Extender (EE) DLC or an OEM DLC, refer to the following sections:

- Appendix B, "EE-Specific Data," on page 187
- Appendix D, "OEM-Specific Data," on page 207.

LINK_STATION_SDLC_SPECIFIC_DATA

For information on defining the parameters for the LINK_STATION_SDLC_SPECIFIC_DATA parameter, refer to Appendix E, "SDLC-Specific Data," on page 217.

LINK_STATION_X25_SPECIFIC_DATA

For information on defining the parameters for the LINK_STATION_X25_SPECIFIC_DATA parameter, refer to Appendix G, "X.25-Specific Data," on page 237.

16 LOAD_BALANCING

This chapter describes the parameter keywords and values you can specify for the LOAD_BALANCING keyword.

Keyword Definition

Required?	No
Keyword Type	Complex
Multiples Allowed?	No

LOAD_BALANCING Sample

The following is a sample of the LOAD_BALANCING keyword:

```
LOAD_BALANCING=(
     ADVERTISE_FREQUENCY=1
     APPC_LU_LOAD_FACTOR=0
     ENABLE_LOAD_BALANCING=1
     HOST_LU_LOAD_FACTOR=0
     LOAD_VARIANCE=3
     SCOPE_NAME=SCOPE1
)
```

LOAD_BALANCING Parameter Keywords

ADVERTISE_FREQUENCY

Required?	No
Keyword Type	Unsigned number
Default	1
Range	1–60
Multiples Allowed?	No

The ADVERTISE_FREQUENCY parameter specifies how often, in minutes, the server checks the APPC and host session loads to determine if the threshold value specified on the LOAD_VARIANCE parameter has been reached.

The value is an integer in the range of 1–60 minutes.

This parameter is optional. The default is one minute.

APPC_LU_LOAD_FACTOR

Required?	No
Keyword Type	Signed number
Default	0
Range	-100–100
Multiples Allowed?	No

The APPC_LU_LOAD_FACTOR parameter specifies the factor used when the APPC session load for the server is calculated. Specifying a negative number decreases the calculated session load, and specifying a positive number increases the calculated session load. For example, if this server has a relatively fast CPU, you can decrease the load factor to increase the number of sessions the server manages.

The value is an integer in the range of -100–100.

This parameter is optional. The default is 0.

DEFAULT_MAX_LU62_SESSIONS

Required?	Yes
Keyword Type	Unsigned number
Default	512
Range	0–65 535
Multiples Allowed?	No

The DEFAULT_MAX_LU62_SESSIONS parameter specifies the default maximum number of independent LU 6.2 sessions allowed per LU. This value is used when a maximum is not specified in the LU definition itself.

DEFAULT_MAX_LU62_SESSIONS is used to determine the congestion in a node during load balancing calculations. As the number of active independent sessions per LU nears this value, the congestion in the node increases.

The value is an integer in the range of 0–65 535.

This parameter is required. The default is 512.

ENABLE_LOAD_BALANCING

Required?	No
Keyword Type	Boolean
Default	0
Multiples Allowed?	No

The ENABLE_LOAD_BALANCING parameter specifies whether this server participates in load balancing.

If you specify ENABLE_LOAD_BALANCING=1 and you do not specify a value on the SCOPE_NAME parameter, the server participates in load balancing but it is *unscoped*.

This parameter is optional. The default is that the server does not participate in load balancing.

HOST_LU_LOAD_FACTOR

Required?	No
Keyword Type	Signed number
Default	0
Range	-100–100
Multiples Allowed?	No

The HOST_LU_LOAD_FACTOR parameter specifies the factor used when the host session load for the server is calculated. Specifying a negative number decreases the calculated session load, and specifying a positive number increases the calculated session load. For example, if this server has a relatively slow CPU, you can increase the load factor to limit the number of sessions the server manages.

The value is an integer in the range of -100–100.

This parameter is optional. The default is 0.

LOAD_VARIANCE

Required?	No
Keyword Type	Unsigned number
Default	3
Range	0–100
Multiples Allowed?	No

The LOAD_VARIANCE parameter specifies a percentage threshold that changes in APPC and host session loads reach before load information is updated.

The value is an integer in the range of 0–100.

This parameter is optional. The default is 3.

SCOPE_NAME

Required?	No
Keyword Type	String
Field Length	1–128
Multiples Allowed?	Yes

The SCOPE_NAME parameter specifies the name of a group to which the server belongs, enabling the server to participate in load balancing. A server can participate in a maximum of 10 scopes, or it can be *unscoped*.

The value is a 1- to 128-byte character string.

This parameter is optional.

Clients reach the SNA network through servers that are configured with the same scope or that are unscoped; clients must be configured to participate in load balancing through a single scope or through unscoped servers.

17 LOCAL_LU

This chapter describes the parameter keywords and values you can specify for the LOCAL_LU keyword.

Keyword Definition

Required?	No
Keyword Type	Complex
Multiples Allowed?	Yes, but each LOCAL_LU keyword must have a unique LU_NAME parameter

LOCAL_LU Sample

The following is a sample of the LOCAL_LU keyword:

```
LOCAL_LU=(
     LU_NAME=LOCLU62
     LU_ALIAS=LOCALIAS
     LU_SESSION_LIMIT=0
     NAU_ADDRESS=0
     ROUTE_TO_CLIENT=0
)
```

LOCAL_LU Parameter Keywords

DEFAULT_POOL

Required?	No
Keyword Type	Boolean
Default	0
Multiples Allowed?	No, only one for each LOCAL_LU keyword

The DEFAULT_POOL parameter specifies whether the LU is a member of the dependent LU 6.2 default pool. Only one LU 6.2 LU may be specified as a member of this pool. If more than one is specified, the last one is used. The LU may be either dependent or independent. The LU specified overrides the Control Point LU as the default. Valid values are:

0 The LU is not a member of the dependent LU 6.2 pool.

1 The LU is a member of the dependent LU 6.2 pool.

This parameter is optional. The default is 0.

LU_ALIAS

Required?	Yes
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No, only one for each LOCAL_LU keyword

The LU_ALIAS parameter specifies an alternate 1- to 8-byte name for the local LU. Local applications can use this name, instead of the fully qualified LU name, to refer to the local LU.

All eight characters must be specified. Valid characters are any locally displayable characters using the native encoding of the local system.

This parameter is required.

Alias names are used for convenience of writing applications, such as transaction programs and management services programs. Local programs can use alias names instead of network names to refer to network resources, such as the local CP, a local LU, and a partner LU. Changes can be made to the network names of these resources without affecting the alias names. A network administrator can change the fully qualified name of a CP or LU without affecting the local applications that use the alias names for these resources.

LU_NAME

Required?	Yes
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No, only one for each LOCAL_LU keyword

The LU_NAME parameter specifies the name of a type of network accessible unit (NAU) that enables end users to communicate with each other and gain access to network resources.

LU_NAME is a 1- to 8-byte SNA Type A character string. Valid values are:

- The first character must be an uppercase alphabetic character (A–Z) or a special character (@, #, $).
- The remaining characters can be alphanumeric characters (A–Z, 0–9) or special characters (@, #, $).

This parameter is required.

LU_SESSION_LIMIT

Required?	No
Keyword Type	Unsigned number
Default	0
Range	0–65 535
Multiples Allowed?	No, only one for each LOCAL_LU keyword

The LU_SESSION_LIMIT parameter specifies the maximum number of sessions supported by the LU.

The value for the session limit is an integer in the range 0–65 535. Zero means no limit.

This parameter is optional. The default is 0.

Notes:

1. If the LU is independent, LU_SESSION_LIMIT can be set to any value in the range.
2. If the LU is dependent, LU_SESSION_LIMIT must be set to 1.

MODEL_NAME

Required?	No
Keyword Type	String
Field Length	1–7
Multiples Allowed?	No, only one for each LOCAL_LU keyword

The MODEL_NAME parameter identifies a string used to search for a match with the LU entry in the VTAM® LUGROUP definition. The LUGROUP used is selected by the LUGROUP parameter coded on the VTAM PU. This LUGROUP parameter refers to a separate VTAM major node (VBUILD TYPE=LUGROUP), which maps the various terminal MODEL_NAME parameters with LU characteristics (for example, DLOGMOD).

VTAM dynamically creates an LUNAME based on the content of the LUSEED parameter, which is also coded on the VTAM PU statement. For each LU coded with MODEL_NAME in the Communications Server configuration (.ACG) file, VTAM matches the name with the contents of the LUGROUP definitions. When a match is found, the host creates an LUNAME based on the LUSEED parameter, replacing the ## with the hexadecimal NAU address or replacing ### with the decimal value of the NAU address received in the NMVT.

Wildcard entries can be configured in the LUGROUP definition, using the `@` character. The wildcards can match any MODEL_NAME entry received. If there is only one type of LU to be defined, LUGROUP can be configured with a single wildcard, using the `@` character.

MODEL_NAME is a 1- to 7-byte SNA Type A character string. Valid characters can be alphanumeric characters (A–Z, 0–9) or special characters (@, #, $).

This parameter is optional. This parameter only applies to dependent LUs.

Note: If a value other than all zeros (0) is specified and the host system supports SDDLU (self-defining dependent LU), the node generates an unsolicited PSID NMVT reply. If the specified string matches a VTAM LUGROUP entry, a dynamic LU is created at the host.

NAU_ADDRESS

Required?	No
Keyword Type	Unsigned number
Range	0–255
Multiples Allowed?	No, only one for each LOCAL_LU keyword

The NAU_ADDRESS parameter specifies the network addressable unit address of the LU. The value is an integer in the range 0–255.

This parameter is optional.

Notes:

1. Zero implies the LU is an independent LU.
2. A nonzero value implies the LU is a dependent LU.

PU_NAME

Required?	No
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No, only one for each LOCAL_LU keyword

The PU_NAME parameter specifies the PU name this LU uses.

This field is only used by dependent LUs, and should be set to all binary zeros for independent LUs.

PU_NAME is a 1- to 8-byte SNA Type A character string. Valid values are:

- The first character must be an uppercase alphabetic character (A–Z) or a special character (@, #, $).
- The remaining characters can be alphanumeric characters (A–Z, 0–9) or special characters (@, #, $).

This parameter is optional.

ROUTE_TO_CLIENT

Required?	No
Keyword Type	Boolean
Multiples Allowed?	No, only one for each LOCAL_LU keyword

The ROUTE_TO_CLIENT parameter specifies whether all incoming application requests over sessions with this LU are routed to the client. Valid values are:

0 This LU is meant to be used by a server-based TP.

1 Application requests are handled by SNA Client Services and forwarded to any SNA API client that has logged into Communications Server or Personal Communications and has registered its transaction programs with this LU.

This parameter is optional.

SYNCPT_SUPPORT

The SYNCPT_SUPPORT parameter keyword applies to Communications Server only.

Required?	Yes
Keyword Type	Boolean
Default	0
Multiples Allowed?	No, only one for each LOCAL_LU keyword

The SYNCPT_SUPPORT parameter specifies whether a sync point manager is available for this LU. Valid values are:

0 A sync point manager is not available.

1 A sync point manager is available.

This parameter is required. The default is that a sync point manager is not available.

This value should always be specified as 0, unless a sync point manager is available for this LU.

USER_ID

The USER_ID parameter keyword applies to Personal Communications only.

Required?	No
Keyword Type	String
Field Length	1–20
Default	none
Multiples Allowed?	No, only one for each LOCAL_LU keyword

The USER_ID parameter specifies the user ID name that this LU uses.

When this keyword is used, incoming Transaction Programs for this Local LU are routed to the desktop of the specified user ID.

18 LU_0_TO_3

This chapter describes the parameter keywords and values you can specify for the LU_0_TO_3 keyword.

Keyword Definition

Required?	No
Keyword Type	Complex
Key Name	LU_NAME
Multiples Allowed?	Yes, but each LU_0_TO_3 keyword must have a unique LU_NAME parameter

LU_0_TO_3 Sample

The following is a sample of the LU_0_TO_3 keyword:

```
LU_0_TO_3=(
     LU_NAME=LUA2

     LU_MODEL=3270_DISPLAY_MODEL_2
     NAU_ADDRESS=2
     PRIORITY=MEDIUM
     PU_NAME=NT265
)
```

LU_0_TO_3 Parameter Keywords

APPLICATION_TYPE

Required?	No
Keyword Type	Enumerated
Default	UNASSIGNED
Multiples Allowed?	No, only one for each LU_0_TO_3 keyword

The APPLICATION_TYPE parameter specifies which LU 0 to 3 LUs are enabled for TN3270 clients. The TN3270E Server may make use of an LU 0 to 3 LU definition to allow nonnative (TCP/IP) clients to communicate with a host. Valid values are:

TN3270E
This LU is enabled for TN3270E or TN3270 client use.

UNASSIGNED
Only normal SNA 3270 clients may use this LU.

Note: LUs with an application type of TN3270E may also be used for normal SNA 3270 client traffic as long as the LU is not already in use by a TN3270E or TN3270 client.

This parameter is optional.

The default is UNASSIGNED.

ASSOC_PRINTER

Required?	No
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No, only one for each LU_0_TO_3 keyword

The ASSOC_PRINTER parameter identifies the printer associated with an explicit workstation or an LU in a pool of implicit workstations. This list contains the LU names for all printer LUs that are unassigned and, if previously defined, the name of the printer currently assigned to this workstation LU.

ASSOC_PRINTER is a 1- to 8-byte SNA Type A character string. Valid values are:

- The first character must be an uppercase alphabetic character (A–Z) or a special character (@, #, $).
- The remaining characters can be alphanumeric characters (A–Z, 0–9) or special characters (@, #, $).

This parameter is optional.

CLASS_TYPE

Required?	No
Keyword Type	Enumerated
Multiples Allowed?	No, only one for each LU_0_TO_3 keyword

The CLASS_TYPE parameter indicates how this LU or pool is used. Valid values are:

TN_ASSOC_PRINTER
Use for connections that require a printer associated with an explicit workstation or an LU in a pool of implicit workstations.

TN_EXPLICIT_PRINTER
Use for connections that require a specific printer device name.

TN_EXPLICIT_WORKSTATION
Use for connections that require a specific workstation device name.

TN_IMPLICIT_PRINTER
Use for connections that do not require a specific printer device name.

TN_IMPLICIT_WORKSTATION
Use for connections that do not require a specific workstation device name.

TN_UNASSIGNED
Use to delete the TN3270E definition for the selected LU or pool.

This parameter is optional.

LU_MODEL

Required?	Yes
Keyword Type	Enumerated
Default	3270_DISPLAY_MODEL_2
Multiples Allowed?	No, only one for each LU_0_TO_3 keyword

The LU_MODEL parameter specifies the display model type to use with this LU. Valid values are:

3270_DISPLAY_MODEL_2	3270 Display 2 - 24 x 80
3270_DISPLAY_MODEL_2	3270 Display 3 - 32 x 80
3270_DISPLAY_MODEL_4	3270 Display 4 - 43 x 80
3270_DISPLAY_MODEL_5	3270 Display 5 - 27 x 132
RJE_WKSTN	Remote job entry workstation
PRINTER	Printer
UNKNOWN	Dependent LU type, such as LU6.2

This parameter is required. The default is 3270_DISPLAY_MODEL_2.

Note: If a value other than UNKNOWN is specified and the host system supports SDDLU (self-defining dependent LU), the node generates an unsolicited PSID NMVT reply and dynamically defines the local LU at the host.

If the MODEL_NAME parameter is specified, the LU_MODEL parameter is ignored.

LU_NAME

Required?	Yes
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No, only one for each LU_0_TO_3 keyword

The LU_NAME parameter specifies the name of a type of network accessible unit (NAU) that enables end users to communicate with each other and gain access to network resources.

LU_NAME is a 1- to 8-byte SNA Type A character string. Valid values are:

- The first character must be an uppercase alphabetic character (A–Z) or a special character (@, #, $).
- The remaining characters can be alphanumeric characters (A–Z, 0–9) or special characters (@, #, $).

This parameter is required.

MODEL_NAME

Required?	No
Keyword Type	String
Field Length	1–7
Multiples Allowed?	No, only one for each LU_0_TO_3 keyword

The MODEL_NAME parameter identifies a string used to search for a match with the LU entry in the VTAM LUGROUP definition. The LUGROUP used is selected by the LUGROUP parameter coded on the VTAM PU. This LUGROUP parameter refers to a separate VTAM major node (VBUILD TYPE=LUGROUP), which maps the various terminal MODEL_NAME parameters with LU characteristics (for example, DLOGMOD).

VTAM dynamically creates an LUNAME based on the content of the LUSEED parameter, which is also coded on the VTAM PU statement. For each LU coded with MODEL_NAME in the Communications Server configuration (.ACG) file, VTAM matches the name with the contents of the LUGROUP definitions. When a match is found, the host creates an LUNAME based on the LUSEED parameter, replacing the ## with the hexadecimal NAU address or replacing ### with the decimal value of the NAU address received in the NMVT.

Wildcard entries can be configured in the LUGROUP definition, using the `@` character. The wildcards can match any MODEL_NAME entry received. If there is only one type of LU to be defined, LUGROUP can be configured with a single wildcard, using the `@` character.

MODEL_NAME is a 1- to 7-byte SNA Type A character string. Valid characters can be alphanumeric characters (A–Z, 0–9) or special characters (@, #, $).

This parameter is optional.

Note: If a value other than all zeros (0) is specified and the host system supports SDDLU (self-defining dependent LU), the node generates an unsolicited PSID NMVT reply. If the specified string matches a VTAM LUGROUP entry, a dynamic LU is created at the host.

NAU_ADDRESS

Required?	Yes
Keyword Type	Unsigned number
Range	1–255
Multiples Allowed?	No, only one for each LU_0_TO_3 keyword

The NAU_ADDRESS parameter specifies the network addressable unit address of the LU. The value is an integer in the range 1–255.

This parameter is required.

POOL_NAME

Required?	No
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No, only one for each LU_0_TO_3 keyword

The POOL_NAME parameter specifies the name of LU pool to which this LU belongs. The name of the pool is a 1- to 8-byte SNA Type A character string. Valid values are:

- The first character must be an uppercase alphabetic character (A–Z) or a special character (@, #, $).
- The remaining characters can be alphanumeric characters (A–Z, 0–9) or special characters (@, #, $).

This parameter is optional.

PRIORITY

Required?	Yes
Keyword Type	Enumerated
Default	MEDIUM
Multiples Allowed?	No, only one for each LU_0_TO_3 keyword

The PRIORITY parameter specifies the data priority for the LU when sending to the host. Valid values are:

LOW Used for #BATCH, #BATCHSC, and other class of service definitions typically used when throughput is preferred but not at the expense of interactive traffic.

MEDIUM Used for #CONNECT and other class of service definitions typically used when connectivity is preferred over response time and throughput

HIGH Used for #INTER, #INTERSC, and other class of service definitions typically used for interactive traffic where good response time is preferred

NETWORK Reserved for CPSVCMG, SNASVCMG, RSETUP, and other class of service definitions used for connections that carry SNA network control messages

This parameter is required. The default is MEDIUM.

PU_NAME

Required?	Yes
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No, only one for each LU_0_TO_3 keyword

The PU_NAME parameter specifies the name of the internal PU that manages and monitors the resources (such as attached links and adjacent link station) associated with a node.

PU_NAME is a 1- to 8-byte SNA Type A character string. Valid values are:

- The first character must be an uppercase alphabetic character (A–Z) or a special character (@, #, $).
- The remaining characters can be alphanumeric characters (A–Z, 0–9) or special characters (@, #, $).

This parameter is required.

19 LU62_TIMEOUT

This chapter describes the parameter keywords and values you can specify for the LU62_TIMEOUT keyword.

Keyword Definition

Required?	No
Keyword Type	Complex
Key Name	LU62_TIMEOUT_RESOURCE_TYPE
Multiples Allowed?	No

LU62_TIMEOUT Sample

The following is a sample of the LU62_TIMEOUT keyword:

```
LU62_TIMEOUT=(
     LU62_TIMEOUT_RESOURCE_TYPE=GLOBAL_TIMEOUT
     LU62_TIMEOUT_VALUE=20
)
```

LU62_TIMEOUT Parameter Keywords

LU62_TIMEOUT_RESOURCE_NAME

Required?	No, if LU62_TIMEOUT_RESOURCE_TYPE is set to GLOBAL_TIMEOUT Yes, if LU62_TIMEOUT_RESOURCE_TYPE is set to LOCAL_LU_TIMEOUT, PARTNER_LU_TIMEOUT, or MODE_TIMEOUT
Keyword Type	String
Field Length	1–17
Multiples Allowed?	No, only one for each LU62_TIMEOUT

The LU62_TIMEOUT_RESOURCE_NAME parameter specifies the name of the resource that is being defined. See the description of the LU62_TIMEOUT_RESOURCE_TYPE parameter for the format of this field.

LU62_TIMEOUT_RESOURCE_TYPE

Required?	No
Keyword Type	Enumerated
Default	GLOBAL_TIMEOUT
Multiples Allowed?	No, only one for each LU62_TIMEOUT

The LU62_TIMEOUT_RESOURCE_TYPE parameter specifies the type of the timeout being defined. Valid values are:

GLOBAL_TIMEOUT
Timeout applies to all LU6.2 sessions for the local node. The resource name should be set to all zeros.

LOCAL_LU_TIMEOUT
Timeout applies to all LU 6.2 sessions for the local LU specified in the LU62_TIMEOUT_RESOURCE_NAME parameter. Only the first 8 bytes of the LU62_TIMEOUT_RESOURCE_NAME parameter are valid and should be set to the name of the local LU.

PARTNER_LU_TIMEOUT
Timeout applies to all LU 6.2 sessions to the partner LU specified in the LU62_TIMEOUT_RESOURCE_NAME parameter. All 17 bytes of the LU62_TIMEOUT_RESOURCE_NAME parameter are valid and should be set to the fully qualified name of the partner LU.

MODE_TIMEOUT
Timeout applies to all LU 6.2 sessions on the mode specified in the LU62_TIMEOUT_RESOURCE_NAME parameter. Only the first 8 bytes of the LU62_TIMEOUT_RESOURCE_NAME parameter are valid and should be set to the name of the mode.

This parameter is optional.

LU62_TIMEOUT_VALUE

Required?	No
Keyword Type	Unsigned number
Default	20
Range	0–60000
Multiples Allowed?	No, only one for each LU62_TIMEOUT

The LU62_TIMEOUT_VALUE parameter specifies the interval in seconds for unused LU6.2 sessions. LU 6.2 sessions are terminated when the session remains unused for the configured timeout value.

The value for the timeout is an integer from 0–60000 seconds. If zero is specified, the session immediately becomes free.

This parameter is optional.

20 LU_LU_PASSWORD

This chapter describes the parameter keywords and values you can specify for the LU_LU_PASSWORD keyword.

Keyword Definition

Required?	No
Keyword Type	Complex
Key Name	LU_PAIR
Multiples Allowed?	Yes, but each LU_LU_PASSWORD keyword must have a unique LU_PAIR parameter

LU_LU_PASSWORD Sample

The following is a sample of the LU_LU_PASSWORD keyword:

```
LU_LU_PASSWORD=(
     LU_PAIR=NT265,USIBMNM.PARTLU
     PASSWORD=460C7761C854E0E6
)
```

LU_LU_PASSWORD Parameter Keywords

LU_PAIR

Required?	Yes
Keyword Type	String
Field Length	4–26
Multiples Allowed?	No, only one for each LU_LU_PASSWORD keyword

The LU_PAIR parameter is comprised of the local LU name and the fully qualified partner LU name separated by a comma.

The local logical unit (LU) name is the name that identifies your workstation and gives transaction programs access to the network. Valid values are:

- The first character must be an uppercase alphabetic character (A–Z) or a special character (@, #, $).
- The remaining characters can be alphanumeric characters (A–Z, 0–9) or special characters (@, #, $).

The partner logical unit (LU) name is the name of the LU where the partner program is located. This LU name is the name of the remote LU recognized by the local LU for the purpose of allocating a conversation.

The fully qualified partner LU name is a 17-byte character string. The fully qualified partner LU name consists of two parts: the network name and the LU name, concatenated with a period. The network name is a 1- to 8-byte SNA Type A

character string. The LU name is a 1- to 8-byte SNA Type A character string. The fully qualified LU name is also known as the network qualified LU name.

This parameter is required.

PASSWORD

Required?	Yes
Keyword Type	Hexadecimal string
Field Length	1–16
Multiples Allowed?	No, only one for each LU_LU_PASSWORD keyword

The PASSWORD parameter is the password defined for a partner logical unit (LU) and used on a partner LU basis. One LU-LU password is established between each LU pair. The password is converted to a 16-character hexadecimal string by the encryption process.

Note: Since this value is encrypted, you should not attempt to enter this value directly into the ACG file. The value should only be entered using the **SNA Node Configuration** application.

This parameter is required.

LU-LU passwords are kept secure by the workstation. They are not sent outside the workstation, nor can a program or user obtain them from the workstation.

21 MODE

This chapter describes the parameter keywords and values you can specify for the MODE keyword.

Keyword Definition

Required?	No
Keyword Type	Complex
Key Name	MODE_NAME
Multiples Allowed?	Yes, but each MODE keyword must have a unique MODE_NAME parameter

MODE Sample

The following are samples of the MODE keyword:

```
MODE=(
     MODE_NAME=BLANK
     AUTO_ACT=0
     COS_NAME=#CONNECT
     ENCRYPTION_SUPPORT=NONE
     DEFAULT_RU_SIZE=1
     MAX_NEGOTIABLE_SESSION_LIMIT=8
     MAX_RU_SIZE_UPPER_BOUND=1024
     MIN_CONWINNERS_SOURCE=4
     PLU_MODE_SESSION_LIMIT=8
     RECEIVE_PACING_WINDOW=3
)
MODE=(
     MODE_NAME=#INTER
     AUTO_ACT=0
     COS_NAME=#INTER
     ENCRYPTION_SUPPORT=NONE
     DEFAULT_RU_SIZE=1
     MAX_NEGOTIABLE_SESSION_LIMIT=8
     MAX_RU_SIZE_UPPER_BOUND=4096
     MIN_CONWINNERS_SOURCE=4
     PLU_MODE_SESSION_LIMIT=8
     RECEIVE_PACING_WINDOW=20
)
```

MODE Parameter Keywords

AUTO_ACT

Required?	Yes
Keyword Type	Unsigned number
Default	0
Range	0–32 767
Multiples Allowed?	No, only one for each MODE keyword

The AUTO_ACT parameter specifies how many sessions are auto-activated for this mode. This value is used when change number of sessions (CNOS) exchange is initiated implicitly. The value is an integer in the range 0–32 767.

This parameter is required. The default is 0.

COMPRESSION

Required?	Yes
Keyword Type	Enumerated
Default	PROHIBITED
Multiples Allowed?	No, only one for each MODE keyword

The COMPRESSION parameter specifies whether data compression is enabled for sessions that use this mode. Valid values are:

PROHIBITED Data compression is prohibited for sessions using this mode.

REQUESTED Data compression is requested for sessions using this mode.

This parameter is required. The default is PROHIBITED.

COS_NAME

Required?	Yes
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No, only one for each MODE keyword

The COS_NAME parameter specifies the name of the class of service to request when activating sessions on this mode. The name is a 1- to 8-byte SNA Type A character string.

This parameter is required.

DEFAULT_RU_SIZE

Required?	Yes
Keyword Type	Boolean
Default	1
Multiples Allowed?	No, only one for each MODE keyword

The DEFAULT_RU_SIZE parameter specifies whether a default upper bound for the maximum RU size is used. Valid values are:

0 The value for the MAX_RU_SIZE_UPPER_BOUND parameter is used.

1 The value for the MAX_RU_SIZE_UPPER_BOUND parameter is ignored. The upper bound for the maximum RU size is set to the link basic transmission unit (BTU) size, minus the size of the transmission header (TH) and the request/response unit header (RH).

This parameter is required. The default is 1.

ENCRYPTION_SUPPORT

Required?	No
Keyword Type	Enumerated
Default	NONE
Multiples Allowed?	No, only one for each MODE keyword

The ENCRYPTION_SUPPORT parameter specifies whether session-level cryptography is used. Valid values are:

MANDATORY Session-level cryptography is mandatory.

NONE No session-level cryptography is used.

This parameter is optional. The default is NONE.

MAX_INCOMING_COMPRESSION_LEVEL

The MAX_INCOMING_COMPRESSION_LEVEL parameter keyword applies to Communications Server only.

Required?	Yes
Keyword Type	Enumerated
Default	NONE
Multiples Allowed?	No, only one for each MODE keyword

The MAX_INCOMING_COMPRESSION_LEVEL parameter specifies the maximum level of decompression supported for data coming into this node. The level of decompression specified must be less than or equal to the value specified on the MAX_COMPRESSION_LEVEL parameter on the NODE keyword. Valid values are:

NONE This node does not support decompression.

RLE This node supports RLE decompression.

LZ9 This node supports RLE and LZ9 decompression.

LZ10 This node supports RLE, LZ9, and LZ10 decompression.

Note: If compression is negotiated using a non-extended BIND, the decompression level used is LZ9.

This parameter is required. The default is NONE.

MAX_NEGOTIABLE_SESSION_LIMIT

Required?	Yes
Keyword Type	Unsigned number
Default	128
Range	0–32 767
Multiples Allowed?	No, only one for each MODE keyword

The MAX_NEGOTIABLE_SESSION_LIMIT parameter specifies the maximum number of sessions allowed in this mode between any local logical unit (LU) and partner LU. This value is used when change number of sessions (CNOS) exchange is initiated implicitly. The value is an integer in the range 0–32 767.

A value of zero (0) means no implicit CNOS exchange.

This parameter is required. The default is 128.

MAX_OUTGOING_COMPRESSION_LEVEL

The MAX_OUTGOING_COMPRESSION_LEVEL parameter keyword applies to Communications Server only.

Required?	Yes
Keyword Type	Enumerated
Default	NONE
Multiples Allowed?	No, only one for each MODE keyword

The MAX_OUTGOING_COMPRESSION_LEVEL parameter specifies the maximum compression level supported for data being sent from this node. The level of decompression specified must be less than or equal to the value specified on the MAX_COMPRESSION_LEVEL parameter on the NODE keyword. Valid values are:

NONE This node does not support compression.

RLE This node supports RLE compression.

LZ9 This node supports RLE and LZ9 compression.

LZ10 This node supports RLE, LZ9, and LZ10 compression.

Note: If compression is negotiated using a non-extended BIND, the compression level used is RLE.

This parameter is required. The default is NONE.

MAX_RU_SIZE_UPPER_BOUND

Required?	Yes
Keyword Type	Unsigned number
Default	4 096
Range	256–61 440
Multiples Allowed?	No, only one for each MODE keyword

The MAX_RU_SIZE_UPPER_BOUND parameter specifies the maximum size of the request/response units (RUs) sent and received on the sessions in this mode and is negotiated during session activation.

The value is an integer in the range 256–61 440.

This parameter is required. The default is 4 096.

MAX_RU_SIZE_UPPER_BOUND is ignored if the DEFAULT_RU_SIZE parameter is specified as 1.

MIN_CONWINNERS_SOURCE

Required?	Yes
Keyword Type	Unsigned number
Default	16
Range	0–32 767
Multiples Allowed?	No, only one for each MODE keyword

The MIN_CONWINNERS_SOURCE parameter specifies the minimum number of sessions that can be activated by a local logical unit (LU) using this mode to win a contention with a partner. When your workstation is the contention winner, it can allocate a conversation on that session without requesting permission from the partner LU to use the session. The number you enter must be less than or equal to the PLU_MODE_SESSION_LIMIT. The value is an integer in the range 0–32 767.

This parameter is required. The default is 16.

A value of zero (0) means no implicit change number of sessions (CNOS) exchange.

MODE_NAME

Required?	Yes
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No, only one for each MODE keyword

The MODE_NAME parameter specifies the name of the mode to be used for the session.

This parameter is required.

MODE_NAME is a 1- to 8-byte SNA Type A character string. You can specify one of the following:

- BLANK
- #BATCH
- #BATCHSC
- #INTER
- #INTERSC
- QPCSUPP
- SNASVCMG
- A unique mode name for each mode you define. If you define your own mode name, valid characters are:
  - All blanks
  - The first character must be an uppercase alphabetic character (A–Z) or a special character (@, #, $).
  - The remaining characters can be alphanumeric characters (A–Z, 0–9) or special characters (@, #, $).

The mode name is used by the initiator of the session to designate the characteristics for the session allocated for the conversation. The mode defines a set of characteristics that can apply to one or more sessions. These characteristics include traffic-pacing values, message-length limits, synchronization point and cryptography options, and the class of service within the transport network.

PLU_MODE_SESSION_LIMIT

Required?	Yes
Keyword Type	Unsigned number
Default	32
Range	0–32 767
Multiples Allowed?	No, only one for each MODE keyword

The PLU_MODE_SESSION_LIMIT specifies the maximum number of concurrently active LU-LU sessions that a particular LU can support. The value is an integer in the range 0–32767.

This parameter is required. The default is 32.

A value of zero (0) means no implicit change number of sessions (CNOS) exchange.

Notes:

1. Increase the number if your most important application programs are coming up too slowly.
2. Decrease the number to improve overall system response time.

RECEIVE_PACING_WINDOW

Required?	Yes
Keyword Type	Unsigned number
Default	1
Range	1–63
Multiples Allowed?	No, only one for each MODE keyword

The RECEIVE_PACING_WINDOW parameter indicates to the partner logical unit (LU) how many request units (RUs) it can send before receiving a pacing response. The value is an integer in the range 1–63. The value zero is not allowed.

This parameter is required. The default is 1.

Session pacing helps to prevent local buffers from overrunning. The receive pacing window size is the session pacing limit for sessions in this mode. The actual value used may be negotiated between the nodes when the session is started.

For fixed pacing, this value specifies the receive pacing window. For adaptive pacing, this value is used as an initial receive window size. Communications Server and Personal Communications always use adaptive pacing unless the adjacent node specifies that it does not support it.

MAX_RECEIVE_PACING_WINDOW

Required?	No
Keyword Type	Unsigned number
Default	0 (no limit)
Range	0–63
Multiples Allowed?	No, only one for each MODE keyword

The PACING_WINDOW parameter indicates to the partner logical unit (LU) how many request units (RUs) it can send before receiving a pacing response. The value is an integer in the range 0–63 for MAX_RECEIVE_PACING_WINDOW.

MAX_RECEIVE_PACING_WINDOW is used with adaptive pacing to limit the maximum pacing window, in order to prevent remote local buffers from overrunning.

This parameter is not required, and it is used only for adaptive pacing. However, Communications Server and Personal Communications always use adaptive pacing, unless the adjacent node specifies that it does not support it.

The default is 0, which means that there is no adaptive pacing limit. Note that a nonzero value cannot be less than the RECEIVE_PACING_WINDOW.

22 NODE

This chapter describes the parameter keywords and values you can specify for the NODE keyword.

Keyword Definition

Required?	No
Keyword Type	Complex
Multiples Allowed?	No

NODE Sample

The following is a sample of the NODE keyword:

```
NODE=(
     ANYNET_SUPPORT=ACCESS_NODE
     CP_ALIAS=NT265
     DEFAULT_PREFERENCE=NATIVE
     DISCOVERY_GROUP_NAME=<NONE>
     DISCOVERY_SUPPORT=DISCOVERY_CLIENT
     DLUR_SUPPORT=MULTI_SUBNET
     FQ_CP_NAME=USIBMNM.NT265
     NODE_ID=05D00000
     NODE_TYPE=END_NODE
     REGISTER_WITH_CDS=1
     REGISTER_WITH_NN=1
     SEND_TERM_SELF=0
     GVRN_SUPPORT=0
     SUPPRESS_LUWID=0
     NO_PUNAME_TO_HOST=0

     ARB_SUPPORT=ANY
)
```

NODE Parameter Keywords

ANYNET_SUPPORT

Required?	Yes
Keyword Type	Enumerated
Default	NONE
Multiples Allowed?	No

The ANYNET_SUPPORT parameter specifies the level of support for ANYNET provided by the node. Valid values are:

ACCESS_NODE	This node supports AnyNet access node functions
NONE	No AnyNet function supported. The DEFAULT_PREFERENCE parameter must be specified as NATIVE.
ANYNET_SUPPORTED	No AnyNet function is supported. The DEFAULT_PREFERENCE parameter must be specified as NATIVE.
GATEWAY	This node supports AnyNet Gateway functions. This value is only valid if the NODE_TYPE parameter is specified as NETWORK_NODE.

This parameter is required.

The default is NONE.

Note: The ANYNET_SUPPORT parameter cannot be set using the **SNA Node Configuration** application.

CP_ALIAS

Required?	No
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No

The CP_ALIAS parameter specifies an alternate 1- to 8-byte name for the local CP. Local applications can use this name, instead of the fully qualified CP name, to refer to the local CP.

All eight characters must be specified. Valid characters are any locally displayable characters using the native encoding of the local system.

This parameter is optional.

Alias names are used for convenience of writing applications, such as transaction programs and management services programs. Local programs can use alias names instead of network names to refer to network resources, such as the local CP, a local LU, and a partner LU. Changes can be made to the network names of these resources without affecting the alias names. A network administrator can change the fully qualified name of a CP or LU, without affecting the local applications that use the alias names for these resources.

DEFAULT_PREFERENCE

Required?	Yes
Keyword Type	Enumerated
Default	NATIVE
Multiples Allowed?	No

The DEFAULT_PREFERENCE parameter specifies the type of routing that you want the node to use by default when initiating sessions to partner LUs for which DEFAULT_PREFERENCE is specified. Valid values are:

NATIVE
Use native (APPN) routing protocols only.

NONNATIVE
Use nonnative (AnyNet) protocols only.

Note: This value is only meaningful when an AnyNet DLC is available to the Node Operator Facility, and there is an AnyNet link station defined. (See 15, "LINK_STATION," on page 53).

NATIVE_THEN_NONNATIVE
Try native (APPN) protocols, and if the partner LU can not be located, retry session activation using nonnative (AnyNet) protocols.

Note: This value is only meaningful when an AnyNet DLC is available to the Node Operator Facility, and there is an AnyNet link station defined. (See 15, "LINK_STATION," on page 53).

NONNATIVE_THEN_NATIVE
Try nonnative (AnyNet) protocols, and if the partner LU can not be located, retry session activation using native (APPN) protocols.

Note: This value is only meaningful when an AnyNet DLC is available to the Node Operator Facility, and there is an AnyNet link station defined. (See 15, "LINK_STATION," on page 53).

This parameter is required. The default is NATIVE.

Note: The DEFAULT_PREFERENCE parameter cannot be set using the SNA Node Configuration application.

DISCOVERY_GROUP_NAME

Required?	No
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No

The DISCOVERY_GROUP_NAME parameter specifies the group name to be used on discovery functions utilized by the node. DISCOVERY_GROUP_NAME is a 1- to 8-byte character string.

If you do not specify this parameter, the default group name is used.

This parameter is optional.

DISCOVERY_SUPPORT

Required?	Yes
Keyword Type	Enumerated
Default	DISCOVERY_CLIENT
Multiples Allowed?	No

The DISCOVERY_SUPPORT parameter specifies whether discovery functions are to be utilized by this node. Valid values are:

NO No discovery functions are to be used by this node.

DISCOVERY_CLIENT Discovery client function is used to try to dynamically configure and activate a link to a network node server when necessary. This value is only valid if the NODE_TYPE parameter is specified as END_NODE.

DISCOVERY_SERVER Discovery server function is used to respond to searches from clients. This value is only valid if the NODE_TYPE parameter is specified as NETWORK_NODE.

This parameter is required. The default is DISCOVERY_CLIENT.

DLUR_SUPPORT

Required?	Yes
Keyword Type	Enumerated
Default	MULTI_SUBNET
Multiples Allowed?	No

The DLUR_SUPPORT parameter specifies the level of support for DLUR provided by the node. This field is ignored for LEN links. Valid values are:

MULTI_SUBNET
DLUR full multi-subnet is supported. Broadcast searches are not received. This value is valid only if the NODE_TYPE parameter is specified as END_NODE.

For end node or branch network node: DLUR is supported, but is not used to connect to a DLUS in another subnet. If multi-subnet operation is not required, you should use the MULTI_SUBNET value instead of NORMAL to reduce network traffic and congestion at the network node.

NORMAL
DLUR full multi-subnet is supported. Broadcast searches are received.

LIMITED (same as MULTI_SUBNET)
DLUR limited multi-subnet is supported.

This parameter is required.

If the REGISTER_WITH_CDS value is 1, then the DLUR_SUPPORT value is MULTI_SUBNET. Otherwise, set the DLUR_SUPPORT keyword to NORMAL. The default settings are REGISTER_WITH_CDS=1, REGISTER_WITH_NN=1, and

DLUR_SUPPORT=MULTI_SUBNET. These settings result in better performance by reducing network locate traffic and congestion at the network node.

Note: The DLUR_SUPPORT parameter cannot be set using the **SNA Node Configuration** application.

FQ_CP_NAME

Required?	Yes
Keyword Type	String
Field Length	3–17
Multiples Allowed?	No

The FQ_CP_NAME parameter specifies the fully qualified node name of the control point.

The fully qualified CP name is a 17-byte character string. The fully qualified CP name consists of two parts: the network name and the CP name, concatenated with a period. The network name is a 1- to 8-byte SNA Type A character string. The CP name is a 1- to 8-byte SNA Type A character string. The fully qualified CP name is also known as the network qualified CP name.

This parameter is required.

GVRN_SUPPORT

Required?	No	
Required?	Yes	
Keyword Type	Boolean	
Default	0	
Default	1	
Multiples Allowed?	No	

The GVRN_SUPPORT parameter specifies whether Connection Networks can be used across different networks. Valid values are:

0 Connection Networks can be used across networks.

1 Connection Networks cannot be used across networks.

This parameter is required for Personal Communications but is not required for Communications Server.

MAX_LOCATES

The MAX_LOCATES parameter keyword applies to Communications Server only.

Required?	No
Keyword Type	Unsigned number
Multiples Allowed?	No

The MAX_LOCATES parameter specifies the maximum number of locates that the node can process simultaneously.

This parameter is optional.

MAX_LS_EXCEPTION_EVENTS

The MAX_LS_EXCEPTION_EVENTS parameter keyword applies to Communications Server only.

Required?	Yes
Keyword Type	Unsigned number
Default	200
Range	0–200
Multiples Allowed?	No

The MAX_LS_EXCEPTION_EVENTS parameter specifies the maximum number of LS_EXCEPTION entries recorded by the node.

The value is an integer in the range 0–200.

This parameter is required. The default is 200.

NODE_ID

Required?	Yes
Keyword Type	Hexadecimal string
Default	X'05D00000'
Field Length	1–8
Multiples Allowed?	No

The NODE_ID parameter specifies the ID of the node. This ID consists of a block ID of 3 hexadecimal characters and a PU ID of 5 hexadecimal characters.

This parameter is required. The default is X'05D00000'.

NODE_TYPE

Required?	Yes
Keyword Type	Enumerated
Default	END_NODE
Multiples Allowed?	No

The NODE_TYPE specifies the APPN node type of this node. Valid values are:

BRANCH_EXTENDER_NODE Defines this node as a branch extender node.

END_NODE Defines this node as an end node.

NETWORK_NODE Defines this node as a network node.

END_NODE is the required value for Personal Communications.

This parameter is required. The default is END_NODE.

REGISTER_WITH_CDS

Required?	Yes
Keyword Type	Boolean
Default	1
Multiples Allowed?	No

The REGISTER_WITH_CDS parameter specifies whether resources are registered with a central directory server.

If NODE_TYPE is specified as an END_NODE, valid values are:

0 The network node server is not allowed to register end node resources with a central directory server.

1 The network node server is allowed to register end node resources with a central directory server.

Note: The REGISTER_WITH_CDS parameter is ignored if REGISTER_WITH _NN is set to 0.

If NODE_TYPE is specified as a NETWORK_NODE, valid values are:

0 Local and domain resources can not be registered with a central directory server.

1 Local and domain resources can optionally be registered with a central directory server.

This parameter is required. The default is 1.

REGISTER_WITH_NN

Required?	Yes
Keyword Type	Enumerated
Keyword Type	Boolean
Default	ALL
Default	1
Multiples Allowed?	No

The REGISTER_WITH_NN parameter specifies whether resources are registered with the network node server.

REGISTER_WITH_NN is only valid if NODE_TYPE is specified as END_NODE or BRANCH_EXTENDER_NODE.

Valid values are:

ALL

- If NODE_TYPE=END_NODE, the network node server only forwards directed locates to the end node.
- If NODE_TYPE=BRANCH_EXTENDER_NODE, local LUs and LUs within the branch domain are registered with the network node server.
  Note: LUs registered to a branch extender node from end nodes consider the local branch extender node to be the network node server.

LOCAL_ONLY

Only LUs resident on the local node are registered with the network node server. This value is only valid if NODE_TYPE is specified as BRANCH_EXTENDER_NODE.

NONE

- If NODE_TYPE=END_NODE, the network node server forwards all broadcast searches to the end node.
- If NODE_TYPE=BRANCH_EXTENDER_NODE, no LU resources are registered with the network node server.

0 Resources are not registered with the network node server.

1 Resources are registered with the network node server.

The default is ALL.

The default is 1.

This parameter is required.

SEND_TERM_SELF

Required?	Yes
Keyword Type	Boolean
Default	0
Multiples Allowed?	No

The SEND_TERM_SELF parameter specifies how host LU sessions for LUs configured as displays or printers are terminated after a connection disconnect.

0 Host LU sessions are terminated by sending an UNBIND to the host.

Sending an UNBIND to the host terminates the session without cleaning up all host resources. Depending on the host application, UNBIND enables the user to recover at the point of termination. A subsequent logon to the host might recover the host application data. This enables host applications to handle unsolicited disconnections without losing session data, but uses additional host resources to save the status.

1 Host LU sessions are terminated by sending an TERM-SELF to the host.

Sending a TERM-SELF to the host cleans up host resources before the host sends an UNBIND to the workstation. This frees host resources such that a user cannot recover from the termination point. Host resources are freed and can be reused. This termination type should be used when host applications are to be stopped completely and recovery from a termination point is not possible.

This parameter is required. The default is 0.

TP_SECURITY_BEHAVIOR

Required?	No
Keyword Type	Enumerated
Default	VERIFY_EVEN_IF_NOT_DEFINED
Multiples Allowed?	No

The TP_SECURITY_BEHAVIOR parameter enables you to determine how the node is to handle security information present in the ATTACH if the TP is not configured for security.

IGNORE_IF_NOT_DEFINED
If security parameters are present in the ATTACH, ignore them if the TP is not configured for security.

VERIFY_EVEN_IF_NOT_DEFINED
If security parameters are present in the ATTACH, verify them even if the TP is not configured for security. This is the default.

SUPPRESS_LUWID

Required?	No
Keyword Type	Boolean
Default	0
Multiples Allowed?	No

Communications Server for Windows normally includes the LUWID in the FMH-5 Attach message that it sends to start an APPC conversation. To suppress the LUWID so that Communications Server does not include it on FMH-5, set SUPPRESS_LUWID to 1 in the configuration file under NODE section. You can also set it from the configuration GUI under node definition in Advanced panel.

NO_PUNAME_TO_HOST

Required?	No
Keyword Type	Boolean
Default	0
Multiples Allowed?	No

Communications Server for Windows identifies the PU name in the REQACTPU message when activating DLUR PUs. Set this flag to suppress sending this identification.

ARB support

RTP options for HPR

To use normal RTP processing, so that Communications Server for Windows will use the best available RTP mechanism according to the capability of the remote system, set this parameter to ANY.

To customize RTP operation, specify one of the following values:

FORCE_STANDARD_ARB

If this value is set, Communications Server for Windows will only advertise support for the standard ARB algorithm, and not the responsive mode or progressive mode algorithm.

NO_PROGRESSIVE_ARB

If this value is set, Communications Server for Windows will advertise support for the standard and responsive mode ARB algorithms but not for the progressive mode algorithm.

23 PARTNER_LU

This chapter describes the parameter keywords and values you can specify for the PARTNER_LU keyword.

Keyword Definition

Required?	No
Keyword Type	Complex
Key Name	FQ_PLU_NAME
Multiples Allowed?	Yes, but each PARTNER_LU keyword must have a unique FQ_PLU_NAME parameter

PARTNER_LU Sample

The following is a sample of the PARTNER_LU keyword:

```
PARTNER_LU=(
     FQ_PLU_NAME=USIBMNM.DLURSRV
     CONV_SECURITY_VERIFICATION=1
     MAX_MC_LL_SEND_SIZE=32767
     PARALLEL_SESSION_SUPPORT=1
     PARTNER_LU_ALIAS=DLURSRV
     PREFERENCE=USE_DEFAULT_PREFERENCE
)
```

PARTNER_LU Parameter Keywords

ADJACENT_CP_NAME

Required?	No
Keyword Type	String
Field Length	3–17
Multiples Allowed?	No, only one for each PARTNER_LU keyword

The ADJACENT_CP_NAME parameter is the name of the CP directly connected to your workstation across this link.

The fully qualified adjacent CP name is a 17-byte character string. The fully qualified adjacent CP name consists of two parts: the network name and the CP name, concatenated with a period. The network name is a 1- to 8-byte SNA Type A character string. The CP name is a 1- to 8-byte SNA Type A character string. The fully qualified CP name is also known as the network qualified CP name.

This parameter is optional.

CONV_SECURITY_VERIFICATION

Required?	No
Keyword Type	Boolean
Default	1
Multiples Allowed?	No, only one for each PARTNER_LU keyword

The CONV_SECURITY_VERIFICATION parameter specifies whether the partner LU is authorized to validate user IDs on behalf of local LUs; that is, whether the partner LU can set the already verified indicator in an Attach request. Valid values are:

0 The partner LU is not authorized to validate user IDs on behalf of local LUs.

1 The partner LU is authorized to validate user IDs on behalf of local LUs.

This parameter is optional. The default is 1.

FQ_PLU_NAME

Required?	Yes
Keyword Type	String
Field Length	3–17
Multiples Allowed?	No, only one for each PARTNER_LU keyword

The FQ_PLU_NAME parameter specifies the fully qualified name of the partner LU.

The fully qualified partner LU name is a 17-byte character string. The fully qualified partner LU name consists of two parts: the network name and the LU name, concatenated with a period. The network name is a 1- to 8-byte SNA Type A character string. The LU name is a 1- to 8-byte SNA Type A character string. The fully qualified LU name is also known as the network qualified LU name.

This parameter is required.

MAX_MC_LL_SEND_SIZE

Required?	No
Keyword Type	Unsigned number
Default	32 767
Range	1–32 767
Multiples Allowed?	No, only one for each PARTNER_LU keyword

The MAX_MC_LL_SEND_SIZE parameter specifies the maximum size of line length (LL) records sent by and received by mapped conversation services at the partner LU.

The value is an integer in the range of 1–32 767.

This parameter is optional. The default is 32 767.

The maximum line length (LL) record size is the maximum size of the logical record in the data stream for basic conversations. Basic conversations allow programs to exchange data in a standardized format. This format is a stream of data containing 2-byte length fields (referred to as LLs) that specify the amount of data to follow before the next length field.

PARALLEL_SESSION_SUPPORT

Required?	No
Keyword Type	Boolean
Default	1
Multiples Allowed?	No, only one for each PARTNER_LU keyword

The PARALLEL_SESSION_SUPPORT parameter specifies whether the partner LU supports parallel sessions. Valid values are:

0 The partner LU does not support parallel sessions.

1 The partner LU does support parallel sessions.

This parameter is optional. The default is 1.

The parallel session support specifies whether the partner LU supports two or more currently active sessions between the same two LUs using different pairs of network addresses or session identifiers.

PARTNER_LU_ALIAS

Required?	No
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No, only one for each PARTNER_LU keyword

The PARTNER_LU_ALIAS parameter specifies an alternate 1- to 8-byte name for the partner LU. Local applications can use this name, instead of the fully qualified LU name, to refer to the partner LU.

All eight characters must be specified. Valid characters are any locally displayable characters using the native encoding of the local system.

Do not specify this parameter for a partner LU that has no alias associated with it.

This parameter is optional.

Alias names are used for convenience of writing applications, such as transaction programs and management services programs. Local programs can use alias names instead of network names to refer to network resources, such as the local CP, a

local LU, and a partner LU. Changes can be made to the network names of these resources without affecting the alias names. A network administrator can change the fully qualified name of a CP or LU without affecting the local applications that use the alias names for these resources.

PREFERENCE

Required?	Yes
Keyword Type	Enumerated
Default	USE_DEFAULT_PREFERENCE
Multiples Allowed?	No, only one for each PARTNER_LU keyword

The PREFERENCE parameter specifies the type of routing that you want the node to use by default. Valid values are:

NATIVE
Use native (APPN) routing protocols only.

NONNATIVE
Use nonnative (AnyNet) protocols only.

Note: This value is only meaningful when an AnyNet DLC is available to the Node Operator Facility, and there is an AnyNet link station defined. (See 15, “LINK_STATION,” on page 53).

NATIVE_THEN_NONNATIVE
Try native (APPN) protocols, and if the partner LU can not be located, retry session activation using nonnative (AnyNet) protocols.

Note: This value is only meaningful when an AnyNet DLC is available to the Node Operator Facility, and there is an AnyNet link station defined. (See 15, “LINK_STATION,” on page 53).

NONNATIVE_THEN_NATIVE
Try nonnative (AnyNet) protocols, and if the partner LU can not be located, retry session activation using native (APPN) protocols.

Note: This value is only meaningful when an AnyNet DLC is available to the Node Operator Facility, and there is an AnyNet link station defined. (See 15, “LINK_STATION,” on page 53).

USE_DEFAULT_PREFERENCE
Use the default preference defined when the node was started. (This can be recalled by QUERY_NODE.)

This parameter is required. The default is USE_DEFAULT_PREFERENCE.

Note: The PREFERENCE parameter cannot be set using the SNA Node Configuration application.

24 PORT

This chapter describes the parameter keywords and values you can specify for the PORT keyword.

The PORT keyword should contain one of the PORT_*_SPECIFIC_DATA_ keywords. Which PORT_*_SPECIFIC_DATA keyword to use is dependent on the value of DLC_NAME. For example, a PORT keyword with DLC_NAME=LAN should include a PORT_LAN_SPECIFIC_DATA keyword.

OEM port specific data for an OEM communications device is not configurable through the ASCII configuration.

Keyword Definition

Required?	No
Keyword Type	Complex
Key Name	PORT_NAME
Multiples Allowed?	Yes, but each PORT keyword must have a unique PORT_NAME parameter

PORT Samples

The following are samples of the PORT keyword:

```
PORT=(
     PORT_NAME=ANYNET
     DLC_NAME=ANYNET
     IMPLICIT_DEACT_TIMER=0
     IMPLICIT_DSPU_SERVICES=NONE
     IMPLICIT_HPR_SUPPORT=0
     IMPLICIT_LIMITED_RESOURCE=NO
     MAX_IFRM_RCVD=127
     MAX_RCV_BTU_SIZE=9216

     PORT_TYPE=SATF
)
PORT=(
     PORT_NAME=LAN0_04
     DLC_DATA=000000000004
     DLC_NAME=LAN
     IMPLICIT_DEACT_TIMER=0
     IMPLICIT_DSPU_SERVICES=NONE
     IMPLICIT_HPR_SUPPORT=1
     IMPLICIT_LIMITED_RESOURCE=NO
     MAX_IFRM_RCVD=8
     MAX_RCV_BTU_SIZE=65535

     PORT_TYPE=SATF
     PORT_LAN_SPECIFIC_DATA=(
          ACK_DELAY=100
          ACK_TIMEOUT=1000
          ADAPTER_ID=LAN0
          ADAPTER_NAME=0000
          BUSY_STATE_TIMEOUT=15
          IDLE_STATE_TIMEOUT=30
          OUTSTANDING_TRANSMITS=16
```

```
            POLL_TIMEOUT=3000
            REJECT_RESPONSE_TIMEOUT=10
            TEST_RETRY_INTERVAL=8
            TEST_RETRY_LIMIT=5
            XID_RETRY_INTERVAL=8
            XID_RETRY_LIMIT=5
        )
)
```

PORT Parameter Keywords

ACTIVATION_DELAY_TIMER

Required?	No
Keyword Type	Unsigned number
Default Value	30
Range	0–3 600
Multiples Allowed?	No, only one for each PORT keyword

The ACTIVATION_DELAY_TIMER parameter specifies the seconds between automatic retry attempts, and between application-driven activation attempts if the DELAY_APPLICATION_RETRIES parameter is specified.

The value is an integer in the range of 0–3 600. If 0 is specified, a default value of 30 seconds is used.

This parameter is optional.

COST_PER_BYTE

Required?	No
Keyword Type	Unsigned number
Range	0–255
Multiples Allowed?	No, only one for each PORT keyword

The COST_PER_BYTE parameter specifies the default cost per byte for this port.

The value is an integer in the range 0–255.

This parameter is optional.

Note: The COST_PER_BYTE parameter cannot be set using the SNA Node Configuration application.

COST_PER_CONNECT_TIME

Required?	No
Keyword Type	Unsigned number
Range	0–255
Multiples Allowed?	No, only one for each PORT keyword

The COST_PER_CONNECT_TIME parameter specifies the default cost per connect time for this port.

The value is an integer in the range 0–255.

This parameter is optional.

Note: The COST_PER_CONNECT_TIME parameter cannot be set using the SNA Node Configuration application.

DEFAULT_TG_CHARS

Required?	No
Keyword Type	Complex
Multiples Allowed?	No, only one for each PORT keyword

The DEFAULT_TG_CHARS parameter is a complex keyword comprised of the following parameter keywords:

- COST_PER_BYTE
- COST_PER_CONNECT_TIME
- EFFECTIVE_CAPACITY
- PROPAGATION_DELAY
- SECURITY
- USER_DEFINED_1
- USER_DEFINED_2
- USER_DEFINED_3

See the descriptions of the parameter keywords to define the DEFAULT_TG_CHARS parameter.

Note: The DEFAULT_TG_CHARS parameter cannot be set using the SNA Node Configuration application.

DELAY_APPLICATION_RETRIES

Required?	No
Keyword Type	Boolean
Multiples Allowed?	No, only one for each PORT keyword

The DELAY_APPLICATION_RETRIES parameter specifies whether link activation retries initiated by applications are delayed by the value specified for the ACTIVATION_DELAY_TIMER parameter. Valid values are:

0 Link activation retries initiated by applications are not delayed.

1 Link activation retries initiated by applications are delayed.

This parameter is optional.

DLC_DATA

The DLC_DATA parameter specifies information specific to the DLC you are using.

For information on defining the DLC_DATA parameter for the DLC, see the following sections:

- Appendix C, “LAN-Specific Data,” on page 197
- Appendix D, “OEM-Specific Data,” on page 207
- Appendix E, “SDLC-Specific Data,” on page 217
- Appendix G, “X.25-Specific Data,” on page 237

DLC_NAME

The DLC_NAME parameter specifies the communication adapter or protocol you are using.

For information on defining the DLC_NAME parameter, see the following sections:

- Appendix A, “AnyNet-Specific Data,” on page 185
- Appendix B, “EE-Specific Data,” on page 187
- Appendix C, “LAN-Specific Data,” on page 197
- Appendix D, “OEM-Specific Data,” on page 207
- Appendix E, “SDLC-Specific Data,” on page 217
- Appendix G, “X.25-Specific Data,” on page 237

EFFECTIVE_CAPACITY

Required?	No
Keyword Type	Unsigned number
Multiples Allowed?	No, only one for each PORT keyword

The EFFECTIVE_CAPACITY parameter specifies the default units of effective capacity for this port. The value is encoded as a 1-byte floating-point number, represented by the following formula:

```
0.1 mmm * 2 eeeee
```

where the bit representation of the byte is ***eeeeemmm***. Each unit of effective capacity is equal to 300 bits per second.

This parameter is optional.

Note: The EFFECTIVE_CAPACITY parameter cannot be set using the SNA Node Configuration application.

IMPLICIT_BRANCH_EXTENDER_LINK

The IMPLICIT_BRANCH_EXTENDER_LINK parameter keyword applies to Communications Server only.

Required?	No
Keyword Type	Boolean
Default	0
Multiples Allowed?	No, only one for each PORT keyword

The IMPLICIT_BRANCH_EXTENDER_LINK parameter specifies whether incoming calls are designated as branch extender links. Valid values are:

0 The incoming calls are treated as normal links.

1 The incoming call is treated as a branch extender link. The link connects to another network from this local branch network. This value is only valid if the incoming call is from an end node.

Note: Incoming calls from network nodes are always treated as branch extender links, if NODETYPE=BRANCH_EXTENDER_NODE is specified for the local node.

This parameter is optional. The default is 0.

Note: The IMPLICIT_BRANCH_EXTENDER_LINK parameter cannot be set using the SNA Node Configuration application.

IMPLICIT_CP_CP_SESS_SUPPORT

Required?	No
Keyword Type	Boolean
Multiples Allowed?	No, only one for each PORT keyword

The IMPLICIT_CP_CP_SESS_SUPPORT parameter specifies whether CP-CP sessions are permitted for implicit link stations off this port. Valid values are:

0 CP-CP sessions are not permitted.

1 CP-CP sessions are permitted.

For a multipath channel (MPC) DLC, IMPLICIT_CP_CP_SESS_SUPPORT must be specified as 1.

This parameter is optional.

Note: The IMPLICIT_CP_CP_SESS_SUPPORT parameter cannot be set using the SNA Node Configuration application.

IMPLICIT_DEACT_TIMER

Required?	No	
Keyword Type	Unsigned number	
Default	600	
Range	0–1000	
Range	0–60000	
Multiples Allowed?	No, only one for each PORT keyword	

The IMPLICIT_DEACT_TIMER parameter specifies the time, in seconds, that this link can be idle before it automatically deactivates.

The implicit link deactivation timer is only used when IMPLICIT_LIMITED_RESOURCE is specified as INACTIVITY or YES.

The value is an integer in the range of 0–1000 seconds. The default is 600 seconds.

The value is an integer in the range of 0–60000 seconds. The default is 600 seconds.

This parameter is optional.

IMPLICIT_DSPU_SERVICES

Required?	Yes
Keyword Type	Enumerated
Default	NONE
Multiples Allowed?	No, only one for each PORT keyword

The IMPLICIT_DSPU_SERVICES parameter specifies the services the local node provides to the downstream PU across implicit links activated on this port. Valid values are:

DLUR The local node provides DLUR services for the downstream PU (using the default DLUS specified on the DLUR_DEFAULTS keyword).

NONE The local node provides no services for the downstream PU.

PU_CONCENTRATION The local node provides PU concentration for the downstream PU (and puts definitions in place as specified by the DSPU template named on the IMPLICIT_DSPU_TEMPLATE keyword.

This parameter is required. The default is NONE.

Note: The IMPLICIT_DSPU_SERVICES parameter cannot be set using the SNA Node Configuration application.

IMPLICIT_DSPU_TEMPLATE

Required?	No
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No, only one for each PORT keyword

The IMPLICIT_DSPU_TEMPLATE parameter specifies the 1- to 8-byte name of the DSPU template, defined on the DSPU_TEMPLATE keyword, which is used for definitions if the local node is to provide PU concentration for an implicit link

activated on this port. If the specified template does not exist (or is already at its instance limit) when the link is activated, activation fails.

If the IMPLICIT_DSPU_SERVICES parameter is not set to PU_CONCENTRATION, this field is ignored.

All eight characters must be specified. Valid characters are any locally displayable characters using the native encoding of the local system.

This parameter is optional.

Note: The IMPLICIT_DSPU_TEMPLATE parameter cannot be set using the SNA Node Configuration application.

IMPLICIT_HPR_SUPPORT

Required?	No
Keyword Type	Boolean
Multiples Allowed?	No, only one for each PORT keyword

The IMPLICIT_HPR_SUPPORT parameter specifies whether HPR should be supported on implicit links. Valid values are:

0 HPR should not be supported on implicit links.

1 HPR should be supported on implicit links.

For the Enterprise Extender (EE) DLC or a multipath channel (MPC) DLC, IMPLICIT_HPR_SUPPORT must be specified as 1.

For the Enterprise Extender (EE) DLC, IMPLICIT_HPR_SUPPORT must be specified as 1.

IMPLICIT_LIMITED_RESOURCE

Required?	No
Keyword Type	Enumerated
Multiples Allowed?	No, only one for each PORT keyword

The IMPLICIT_LIMITED_RESOURCE parameter specifies whether implicit link stations off this port should be deactivated when there are no sessions using the link. Valid values are:

INACTIVITY Implicit links are a limited resource and are deactivated automatically when no active sessions are using them, or when no data has followed on the link for the time period specified by the IMPLICIT_DEACT_TIMER parameter.

NO Implicit links are not limited resources and are not deactivated automatically.

YES Implicit links are a limited resource and are deactivated automatically when no active sessions are using them, or when no

data has followed on the link for the time period specified by the IMPLICIT_DEACT_TIMER parameter.

For a multipath channel (MPC) DLC, IMPLICIT_LIMITED_RESOURCE must be specified as NO.

This parameter is optional.

IMPLICIT_LINK_LVL_ERROR

Required?	No
Keyword Type	Boolean
Multiples Allowed?	No, only one for each PORT keyword

The IMPLICIT_LINK_LVL_ERROR parameter specifies whether HPR traffic should be sent on implicit links using link-level error recovery.

Note: The IMPLICIT_LINK_LVL_ERROR parameter is ignored if IMPLICIT_HPR_SUPPORT is set to 0.

Valid values are:

0 Do not route HPR traffic on implicit links using link-level error recovery.

1 Route HPR traffic on implicit links using link-level error recovery.

Note: The IMPLICIT_LINK_LVL_ERROR parameter cannot be set using the SNA Node Configuration application.

LINK_STATION_ROLE

Required?	No
Keyword Type	Enumerated
Default	NEGOTIABLE
Multiples Allowed?	No, only one for each PORT keyword

The LINK_STATION_ROLE parameter defines the responsibility that the link station has for controlling the communication with its adjacent link stations. Valid values are:

NEGOTIABLE When the connection is established, the local link station becomes either a primary or secondary link station.

PRIMARY The primary link station controls the conversation on the link.

SECONDARY The secondary link station must wait to be polled by the primary link station before data is sent.

This parameter is optional.

The default is NEGOTIABLE.

Notes:

1. If DLC_NAME is specified as TWINAX, only SECONDARY is valid.
2. If DLC_NAME is specified as ANYNET, and LS_NAME on the LINK_STATION keyword is $ANYNET$, PRIMARY is not valid.

MAX_ACTIVATION_ATTEMPTS

Required?	No
Keyword Type	Unsigned number
Default Value	0
Range	0–127
Multiples Allowed?	No, only one for each PORT keyword

The MAX_ACTIVATION_ATTEMPTS parameter specifies the number of retry attempts allowed when the remote node is not responding or the port is inactive. The attempts include both automatic retries and application-driven activation attempts. When this limit is reached, no further activation retries are attempted. The number of retries attempted is reset by a successful activation, or when a link station, port, or DLC is deactivated.

The value is an integer in the range of 0–127. A zero means no limit.

This parameter is optional.

This parameter is ignored unless the LINK_STATION keyword referencing this port specifies MAX_ACTIVATION_ATTEMPTS=-1 and one of the following parameters on the LINK_STATION keyword is specified:

- DELAY_APPLICATION_RETRIES
- INHERIT_PORT_RETRY_PARMS
- RETRY_LINK_ON_DISCONNECT
- RETRY_LINK_ON_FAILED_START
- RETRY_LINK_ON_FAILURE

MAX_IFRM_RCVD

Required?	No
Keyword Type	Unsigned number
Range	0–127
Multiples Allowed?	No, only one for each PORT keyword

The MAX_IFRM_RCVD parameter determines the maximum number of I-frames that can be received by the local link stations before an acknowledgment is sent.

The value is an integer in the range of 0–127 frames.

This parameter is optional.

Note: The MAX_IFRM_RCVD parameter cannot be set using the SNA Node Configuration application.

MAX_RCV_BTU_SIZE

Required?	No
Keyword Type	Unsigned number
Range	No defined range. 
Range	99–32 767 
Multiples Allowed?	No, only one for each PORT keyword

The MAX_RCV_BTU_SIZE parameter specifies the maximum BTU size that can be received. If implicit HPR-capable links are not supported on the port, this must be set to a value greater than or equal to 99. If implicit HPR-capable links are supported on the port, this must be set to a value greater than or equal to 768. If this port is for the AnyNet DLC, you must use **9 216**.

For a multipath channel (MPC) DLC, MAX_RCV_BTU_SIZE should be specified as 32 768 to allow the DLC to determine the size.

There is no defined range.

The value is an integer in the range of 99–32 767.

This parameter is optional.

Note: The MAX_RCV_BTU_SIZE parameter cannot be set using the SNA Node Configuration application.

PORT_NAME

Required?	Yes
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No, only one for each PORT keyword

The PORT_NAME parameter specifies the 1- to 8-byte name of the port associated with the link station.

All eight characters must be specified. Valid characters are any locally displayable characters.

For the Enterprise Extender (EE) DLC, PORT_NAME should be ***IBMEEDLC*** (IPv4) or ***IBMEE006*** (IPv6).

This parameter is required.

Note: The PORT_NAME specified on the PORT keyword must match the PORT_NAME defined by the LINK_STATION keyword.

PORT_TYPE

Required?	No
Keyword Type	Enumerated
Multiples Allowed?	No, only one for each PORT keyword

The PORT_TYPE parameter specifies the type of line used by the port. Valid values are:

NONSWITCHED Connections are using leased, direct point-to-point connections. Nonswitched routes are statically defined by the direct line between the two end nodes of the connection.

SATF Connections are using shared access transport facility (SATF). SATF describes a network transport with shared contention-based or token-based access, such as Ethernet or token-ring. Typically, SATF networks are called local area networks (LAN).

SWITCHED Connections are using dial-up services, requiring the use of a modem, a packet switched network (such as a long distance telephone network), and remote dial-up addressing (such as a telephone number). Switched routes are dynamically determined at runtime through the packet switched network.

This parameter is optional.

Notes:

1. If this parameter is specified as SATF, the LS_ROLE parameter must be specified as NEGOTIABLE.
2. The PORT_TYPE parameter cannot be set using the SNA Node Configuration application.

PROPAGATION_DELAY

Required?	No
Keyword Type	Enumerated
Multiples Allowed?	No, only one for each PORT keyword

The PROPAGATION_DELAY parameter specifies the default time it takes for a signal to travel the length of the link, in microseconds, for this port. The value is encoded as a 1-byte floating-point number, represented by the following formula:

```
0.1 mmm * 2 eeeee
```

where the bit representation of the byte is ***eeeeemmm***.

Valid values are:

LAN	Less than 480 microseconds delay.
MAXIMUM	Maximum propagation delay.
MINIMUM	No propagation delay.
PKT_SWITCHED_NET	Between 49 512 and 245 760 microseconds delay.
SATELLITE	Longer than 245 760 microseconds delay.
TELEPHONE	Between 480 and 49 512 microseconds delay.

This parameter is optional.

Note: The PROPAGATION_DELAY parameter cannot be set using the SNA Node Configuration application.

RETRY_LINK_ON_DISCONNECT

Required?	No
Keyword Type	Boolean
Multiples Allowed?	No, only one for each PORT keyword

The RETRY_LINK_ON_DISCONNECT parameter specifies whether link activation is retried when the link is stopped normally by the remote node. Valid values are:

0 Link activation is not retried.

1 Link activation is retried.

This parameter is optional.

RETRY_LINK_ON_FAILED_START

Required?	No
Keyword Type	Boolean
Multiples Allowed?	No, only one for each PORT keyword

The RETRY_LINK_ON_FAILED_START parameter specifies whether link activation is retried if no response is received from the remote node when activation is attempted. If the port is inactive when activation is attempted, an attempt is made to activate it. Valid values are:

0 Link activation is not retried.

1 Link activation is retried.

This parameter is optional.

RETRY_LINK_ON_FAILURE

Required?	No
Keyword Type	Boolean
Multiples Allowed?	No, only one for each PORT keyword

The RETRY_LINK_ON_FAILURE parameter specifies whether link activation is retried if the link fails while in an active or pending active state. If the port fails, an attempt is made to activate it. Valid values are:

0 Link activation is not retried.

1 Link activation is retried.

This parameter is optional.

PORT_LAN_SPECIFIC_DATA

For information on defining the parameters for the PORT_LAN_SPECIFIC_DATA parameter, see Appendix C, "LAN-Specific Data," on page 197.

PORT_OEM_SPECIFIC_DATA

For information on defining the parameters for the PORT_OEM_SPECIFIC_DATA parameter for the Enterprise Extender (EE) DLC or an OEM DLC, see the following sections:

- Appendix B, "EE-Specific Data," on page 187
- Appendix D, "OEM-Specific Data," on page 207

PORT_SDLC_SPECIFIC_DATA

For information on defining the parameters for the PORT_SDLC_SPECIFIC_DATA parameter, see Appendix E, "SDLC-Specific Data," on page 217.

PORT_TWINAX_SPECIFIC_DATA

For information on defining the parameters for the PORT_TWINAX_SPECIFIC_DATA parameter, see Appendix F, "Twinaxial-Specific Data," on page 233.

PORT_X25_SPECIFIC_DATA

For information on defining the parameters for the PORT_X25_SPECIFIC_DATA parameter, see Appendix G, "X.25-Specific Data," on page 237.

SECURITY

Required?	No
Keyword Type	Enumerated
Multiples Allowed?	No, only one for each PORT keyword

The SECURITY parameter specifies the default type of security used for transmission of data over the connection for this port. Valid values are:

ENCRYPTED
There is encryption over the line.

GUARDED_CONDUIT
The conduit is protected against physical tapping.

GUARDED_RADIATION
The line is protected against physical and radiation tapping.

NONSECURE
No security exists.

PUBLIC_SWITCHED_NETWORK
Data is transmitted over a public switched network.

SECURE_CONDUIT
The line is a secure conduit that is not guarded.

UNDERGROUND_CABLE
Data is transmitted over a secure underground cable.

This parameter is optional.

USER_DEFINED_1

Required?	No
Keyword Type	Unsigned number
Multiples Allowed?	No, only one for each PORT keyword

The USER_DEFINED_1 parameter specifies the default maximum limit for a user defined parameter for this port.

This parameter is optional.

USER_DEFINED_2

Required?	No
Keyword Type	Unsigned number
Multiples Allowed?	No, only one for each PORT keyword

The USER_DEFINED_2 parameter specifies the default maximum limit for a user defined parameter for this port.

This parameter is optional.

USER_DEFINED_3

Required?	No
Keyword Type	Unsigned number
Multiples Allowed?	No, only one for each PORT keyword

The USER_DEFINED_3 parameter specifies the default maximum limit for a user defined parameter for this port.

This parameter is optional.

25 RTP_TUNING

This chapter describes the parameter keywords and values you can specify for the RTP_TUNING keyword.

Keyword Definition

Required?	No
Keyword Type	Complex
Key Name	PATH_SWITCH_ATTEMPTS
Multiples Allowed?	No

RTP_TUNING Sample

The following is a sample of the RTP_TUNING keyword:

```
RTP_TUNING = (
     PATH_SWITCH_ATTEMPTS = 6
     SHORT_REQ = 0
     NETWORK_PATH_SWITCH_TIME = 60
     HIGH_PATH_SWITCH_TIME = 120
     MEDIUM_PATH_SWITCH_TIME = 240
     LOW_PATH_SWITCH_TIME = 480
     MAX_SHORT_REQ_TIME = 7000
     MAX_REFIFO_TIME = 4000
     PATH_SWITCH_DELAY = 0
)
```

RTP_TUNING Parameter Keywords

PATH_SWITCH_ATTEMPTS

Required?	No
Keyword Type	Unsigned Number
Default	6
Range	0–255
Multiples Allowed?	No

The PATH_SWITCH_ATTEMPTS parameter specifies the number of path switch attempts that will be attempted before a disconnect is initiated for the active RTP connection.

This parameter is optional.

SHORT_REQ

Required?	No
Keyword Type	Unsigned Number
Default	0
Range	0–255
Multiples Allowed?	No

The SHORT_REQ parameter specifies the number of times a packet with the Status Request Indicator will be sent before the RTP connection is disconnected and a path switch is attempted. If 0 is specified, a default value of 6 times is used.

This parameter is optional.

NETWORK_PATH_SWITCH_TIME

Required?	
Keyword Type	Unsigned Number
Default	60
Range	1–65535
Multiples Allowed?	No

The NETWORK_PATH_SWITCH_TIME parameter specifies the length of time in seconds that an attempt is made to path switch a disconnected network priority (SNASVCMG or SNASVRMGR) RTP connection. Path switch times are specified as four separate time limits for each of the valid transmission priorities in order: LOW_PATH_SWITCH_TIME, MEDIUM_PATH_SWITCH_TIME, HIGH_PATH_SWITCH_TIME, and NETWORK_PATH_SWITCH_TIME. The value you specify for each of these transmission priorities must not exceed the value for any lower transmission priority.

Each of the path switch timers must be greater than the link timeout for the links being used. For example, EEDLC links are tested every INACTIVITY_TIMER and is retried for CONNECT_RETRY_COUNT times before an error is detected. These parameters are configured in the Device panel for IBMEEDLC for IPv4 or IPv6. The default values are INACTIVITY_TIMER=10 seconds and CONNECT_RETRY_COUNT=3. The link failure time could take (3+1)×10=40 seconds. Prior to detecting the link failure, path switch attempts will continue to use the failing link and therefore will be unsuccessful. When the path switch attempts fail, the sessions being routed over the HPR pipe will be terminated. If the path switch is successful, all sessions are nondisruptively routed over the new HPR pipe.

If 0 is specified for NETWORK_PATH_SWITCH_TIME, a default value of 60 is used.

HIGH_PATH_SWITCH_TIME

Required?	
Keyword Type	Unsigned Number
Default	120
Range	1–65535
Multiples Allowed?	No

The HIGH_PATH_SWITCH_TIME parameter specifies the length of time in seconds that an attempt is made to path switch a disconnected high priority RTP connection. See restrictions under "NETWORK_PATH_SWITCH_TIME" on page 140.

If 0 is specified for HIGH_PATH_SWITCH_TIME, a default value of 120 is used.

MEDIUM_PATH_SWITCH_TIME

Required?	
Keyword Type	Unsigned Number
Default	240
Range	1–65535
Multiples Allowed?	No

The MEDIUM_PATH_SWITCH_TIME parameter specifies the length of time in seconds that an attempt is made to path switch a disconnected medium priority RTP connection. See restrictions under "NETWORK_PATH_SWITCH_TIME" on page 140.

If 0 is specified for MEDIUM_PATH_SWITCH_TIME, a default value of 240 is used.

LOW_PATH_SWITCH_TIME

Required?	
Keyword Type	Unsigned Number
Default	480
Range	1–65535
Multiples Allowed?	No

The LOW_PATH_SWITCH_TIME parameter specifies the length of time in seconds that an attempt is made to path switch a disconnected low priority RTP connection. See restrictions under "NETWORK_PATH_SWITCH_TIME" on page 140.

If 0 is specified for LOW_PATH_SWITCH_TIME, a default value of 480 is used.

MAX_SHORT_REQ_TIME

Required?	
Keyword Type	Unsigned Number
Default	8000
Range	500–24000
Multiples Allowed?	No

The RTP protocol uses a timer called the Short Request Timer. The value of the timer is calculated as part of the protocol, but MAX_SHORT_REQ_TIME specifies a maximum value in milliseconds, beyond which the timer cannot increase. In some situations, setting this maximum value can improve performance.

Setting a value of 0 means that the timer is not limited and can take any value calculated by the protocol. The minimum value is 500 milliseconds, with a default value of 8000 milliseconds. If the specified value is 1–499 milliseconds, a value of 500 milliseconds is used.

MAX_REFIFO_TIME

Required?	
Keyword Type	Unsigned Number
Default	4000
Range	250–12000
Multiples Allowed?	No

The RTP protocol uses a timer called the Re-FIFO Timer. The value of the timer is calculated as part of the protocol, but MAX_REFIFO_TIME specifies a maximum value in milliseconds, beyond which the timer cannot increase. In some situations, setting this maximum value can improve performance.

Setting a value of 0 means that the timer is not limited and can take any value calculated by the protocol. The minimum value is 250 milliseconds, with a default value of 4000 milliseconds. If the specified value is 1–249 milliseconds, a value of 250 milliseconds is used.

PATH_SWITCH_DELAY

Minimum delay in seconds before a path switch occurs. Specifying a delay avoids unnecessary path switch attempts caused by transient delays in network traffic, in particular when there is no other route available.

Specify a value in the range 0-65535. The default value is zero, indicating that a path switch attempt can occur as soon as the protocol indicates it is required.

26 SPLIT_STACK

This chapter describes the parameter keywords and values you can specify for the SPLIT_STACK keyword.

Keyword Definition

Required?	No
Keyword Type	Complex
Multiples Allowed?	No

SPLIT_STACK Sample

The following is a sample of the SPLIT_STACK keyword:

```
SPLIT_STACK=(
     STARTUP=1
)
```

SPLIT_STACK Parameter Keywords

POOL_NAME

Required?	No
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No

The POOL_NAME parameter specifies the 1- to 8-character default pool name from which SNA API clients obtain available LU 0 to 3 LUs if an explicit one is not required. If one is specified, all new host LUs created are added to this pool by default. Valid values are:

- The first character must be an uppercase alphabetic character (A–Z) or a special character (@, #, $).
- The remaining characters can be alphanumeric characters (A–Z, 0–9) or special characters (@, #, $).

This parameter is optional.

STARTUP

Required?	Yes
Keyword Type	Boolean
Default	1
Multiples Allowed?	No

The STARTUP parameter specifies whether LU 6.2 sessions can be configured for a remote client at run time. Valid values are:

0 LU 6.2 sessions can still be configured for a remote client, but can not be established at run time.

1 LU 6.2 sessions can be configured and established for a remote client.

This parameter is required. The default is 1.

27 TN3270E_DEF

This chapter describes the parameter keywords and values you can specify for the TN3270E_DEF keyword.

Keyword Definition

Required?	No
Keyword Type	Complex
Multiples Allowed?	No

TN3270E_DEF Sample

The following is a sample of the TN3270E_DEF keyword:

```
TN3270E_DEF=(
     AUTO_LOGOFF=1
     DEFAULT_POOL_NAME=POOL1
     FREQUENCY=60
     KEEPALIVE_TYPE=TN_NOP
     LOGOFF=30
     TIMER=10
)
```

TN3270E_DEF Parameter Keywords

AUTO_LOGOFF

Required?	Yes
Keyword Type	Boolean
Default	0
Multiples Allowed?	No

The AUTO_LOGOFF parameter specifies whether the connection is automatically terminated when the value of the LOGOFF parameter is reached. Valid values are:

0 The connection is not terminated.

1 The connection is terminated.

This parameter is required. The default is 0.

DEFAULT_POOL_NAME

Required?	No
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No

The DEFAULT_POOL_NAME parameter identifies the name of the pool of unassigned workstations or pool of implicit workstations that is used when the TN3270 client does not specify an LU name. The name of the pool is a 1- to 8-byte character string.

This parameter is optional.

DEFAULT_PRINTER_POOL_NAME

Required?	No
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No

The DEFAULT_PRINTER_POOL_NAME parameter identifies the name of the pool of unassigned printers or pool of implicit printers that is used when the TN3270 client does not specify an LU name. The name of the pool is a 1- to 8-byte character string.

This parameter is optional.

ENABLE_FILTERING

Required?	Yes
Keyword Type	Boolean
Default	0
Multiples Allowed?	No

The ENABLE_FILTERING parameter specifies whether TN3270E filtering is enabled. Valid values are:

0 TN3270E filtering is not enabled. Any TCP/IP workstation is granted access to available host resources (that is, those host resources which have been defined as TN3270E resources).

1 TN3270E filtering is enabled. Only TCP/IP workstations matching the IP address and subnet mask of at least one of the filter definitions are allowed access to the host resources defined in the appropriate filters.

This parameter is required. The default is 0.

FILTER_PREFERENCE

Required?	No
Keyword Type	Enumerated
Default	HOSTNAME_FIRST
Multiples Allowed?	No

The FILTER_PREFERENCE parameter specifies the filter record processing order used when determining a match with an incoming client request. Valid values are:

HOSTNAME_FIRST
Specifies that all filters specifying either a TCP/IP host name or domain name should be processed and checked against the client's hostname or domain name before processing filters specifying a TCP/IP address.

IP_ADDR_FIRST
Specifies that all filters specifying a TCP/IP address should be processed before processing filters specifying either a host name or domain name.

This parameter is optional. The default is HOSTNAME_FIRST.

FREQUENCY

Required?	Yes
Keyword Type	Unsigned number
Default	60
Range	1–65 535
Multiples Allowed?	No

The FREQUENCY parameter specifies the seconds to wait after data has been sent or received on a connection before beginning keepalive detection. Choosing a high number means that the connections are checked less often and the resulting network traffic is reduced. Choosing a low frequency means that the connections are checked more frequently and connections are freed more rapidly.

The value is an integer in the range 1–65 535.

This parameter is required. The default is 60.

KEEPALIVE_TYPE

Required?	Yes
Keyword Type	Enumerated
Default	TN_NONE
Multiples Allowed?	No

The KEEPALIVE_TYPE parameter specifies the method used to free connections. Valid values are:

TN_NONE Do not use either the TN_NOP nor the TN_TIMING_MARK methods to free connections.

TN_NOP Use if it is not necessary to free connections after a specific amount of time. Detection and freeing of the connection take an unpredictable amount of time. When the time specified on the FREQUENCY parameter is reached, the connection is tested to see if it is broken.

TN_TIMING_MARK Use if it is necessary to define when connections are freed and additional traffic on the network is acceptable. Detection and freeing of the connection

take place as specified by the TIMER parameter. When the specified time is reached and the client has not responded, the connection is freed.

This parameter is required. The default is TN_NONE.

LOGOFF

Required?	Yes
Keyword Type	Unsigned number
Default	30
Range	1–65 535
Multiples Allowed?	No

The LOGOFF parameter specifies the amount of idle time to allow before a session is disconnected. This parameter is only valid if the AUTO_LOGOFF parameter is specified as AUTO_LOGOFF=1.

The value is an integer in the range 1–65 535.

This parameter is required. The default is 30.

LU_TAKEOVER

Required?	Yes
Keyword Type	Boolean
Default	0
Multiples Allowed?	No

The LU_TAKEOVER parameter specifies whether LU takeover processing is used for controlling unused LU resources at the server.

LU takeover is one technique for controlling unused LU resources at the server. When a new TN3270E session request specifies an LU that is in use at the server, the TN3270E server sends a timing mark to the client of that connection. If the client does not respond to the timing mark within the number of seconds that you specify, the server disconnects the session and assigns the LU to the new connection request.

LU takeover enables you to disconnect unused sessions when they are needed, without the additional network traffic generated by keepalive detection. Keepalive detection enables you to free unused connections more frequently, but generates more network traffic.

Valid values are:

0 LU takeover processing is not used for controlling unused LU resources.

1 LU takeover processing is used for controlling unused LU resources.

This parameter is required. The default is 0.

LU_TAKEOVER_TIMER

Required?	Yes
Keyword Type	Unsigned number
Default	10
Range	1–65 535
Multiples Allowed?	No

The LU_TAKEOVER_TIMER parameter specifies the number of seconds of idle time to allow before a session is disconnected.

The value is an integer in the range 1–65 535.

This parameter is required. The default is 10.

TIMER

Required?	Yes
Keyword Type	Unsigned number
Default	10
Range	1–65 535
Multiples Allowed?	No

The TIMER parameter specifies the number of seconds to wait for a response to a timing mark before the connection is freed.

The value is an integer in the range 1–65 535.

This parameter is required. The default is 10.

28 TN3270E_FILTER

This chapter describes the parameter keywords and values you can specify for the TN3270E_FILTER keyword.

Keyword Definition

Required?	No
Keyword Type	Complex
Key Name	IP_ADDR_MASK_PAIR
Multiples Allowed?	Yes, but each TN3270E_FILTER keyword must have a unique IP_ADDR_MASK_PAIR parameter

TN3270E_FILTER Sample

The following is a sample of the TN3270E_FILTER keyword:

```
TN3270E_FILTER=(
     CLIENT_ID_TYPE=HOST_NAME
     IP_ADDR_MASK_PAIR=nfl.raleigh.ibm.com
     FILTER_ENTRY=(
          CLASS_TYPE=TN_IMPLICIT_WORKSTATION
          IS_POOL=1
          NAME=PUBLIC
     )
)
```

TN3270E_FILTER Parameter Keywords

CLASS_TYPE

Required?	No
Keyword Type	Enumerated
Multiples Allowed?	No, only one for each FILTER_ENTRY parameter

The CLASS_TYPE parameter indicates how this LU or pool is used. Valid values are:

TN_ASSOC_PRINTER
Use for connections that require a printer associated with an explicit workstation or an LU in a pool of implicit workstations.

TN_EXPLICIT_PRINTER
Use for connections that require a specific printer device name.

TN_EXPLICIT_WORKSTATION
Use for connections that require a specific workstation device name.

TN_IMPLICIT_PRINTER
Use for connections that do not require a specific printer device name.

TN_IMPLICIT_WORKSTATION
Use for connections that do not require a specific workstation device name.

TN_UNASSIGNED
Use to delete the TN3270E definition for the selected LU or pool.

This parameter is optional.

CLIENT_ID_TYPE

Required?	No
Keyword Type	Enumerated
Default	IP_ADDRESS
Multiples Allowed?	No, only one for each TN3270E_FILTER keyword

The CLIENT_ID_TYPE parameter indicates the type of address the value of the IP_ADDR_MASK_PAIR parameter specifies. Valid values are:

DOMAIN_NAME The value of the IP_ADDR_MASK_PAIR parameter specifies a domain name.

HOST_NAME The value of the IP_ADDR_MASK_PAIR parameter specifies a host name.

IP_ADDRESS The value of the IP_ADDR_MASK_PAIR parameter specifies the source IP address and subnet mask of a TCP/IP workstation. IP_ADDRESS can be IPv4 or IPv6 format:

- An IPv4 dotted-decimal address (such as 193.1.11.100)
- An IPv6 colon-hexadecimal address (such as 2001:0db8:0000:0000:0000:0000:1428:57ab or 2001:db8::1428:57ab). The subnet mask is not required, while specifying IPv6 address.
- A name (such as server1.mycompany.com)
- An alias (such as server1)

This parameter is optional. The default is IP_ADDRESS.

FILTER_ENTRY

Required?	No
Keyword Type	Complex
Multiples Allowed?	Yes

The FILTER_ENTRY parameter is a complex keyword comprised of the following parameter keywords:

- CLASS_TYPE
- IS_POOL
- NAME

See the descriptions of the parameter keywords to define the FILTER_ENTRY parameter.

IP_ADDR_MASK_PAIR

Required?	Yes
Keyword Type	String
Field Length	1–256
Multiples Allowed?	No, only one for each TN3270E_FILTER keyword

The IP_ADDR_MASK_PAIR parameter specifies one of the following:

- The domain name to which you wish to restrict host resources (LUs)
- The host name to which you wish to restrict host resources (LUs)
- The source IP address and subnet mask of the TCP/IP workstation(s) to which you wish to restrict host resources (LUs). The IP address and the subnet mask values are separated by a comma. Only those clients matching the IP address and subnet mask combination are granted access to the list of resources represented by this filter.

Whether the value you specify is a domain name, host name, or IP address and subnet mask is determined by the CLIENT_ID_TYPE parameter.

The value is a 1- to 256-character string.

If you wish to restrict host resources to a specific workstation, specify that workstation IP address and the subnet mask of 255.255.255.255. If you wish to restrict host resources to all workstations in a particular IP subnetwork, such as a local office LAN, specify one of the workstation IP addresses and a subnet mask to identify the IP address values that are significant for identifying the subnetwork. For example, to restrict host resources for all workstations in the subnet 9.57.0.0, you might specify a source IP address of 9.57.126.4 and a subnet mask of 255.255.0.0. If you specify a specific IP address and full subnet mask (filtering for a specific workstation), that workstation is granted access to the first available host resource, whether it be an explicit LU or an LU from a pool of LUs. If the filter is designated for workstations on a particular subnetwork, these workstations are only granted use of available host resources from pool definitions in this filter; no use of explicit LUs is granted. Ordering of host LUs and host LU pools in the filter list is important. The order implies the ordering of workstations' access to host resources. In other words, if the first LU or pool on the list is in use, access is granted to the next resource on the list. All LUs from within a pool must be in use before the pool is considered in use.

If a full subnet mask is specified (255.255.255.255), host resources are being chosen for use by the specific workstation whose address is specified. If a partial subnet mask is specified (such as 255.0.0.0), any workstation from the subnetwork (identified by the significant fields of the IP address as specified by the subnet mask) may have access to host resources specified in the filter.

If you specify an IP address of 0.0.0.0, all workstations and printers that do not match another filter entry are allowed access to the specified resources.

If subnet mask information is used with only IPv4 address. When IPv6 address specified then subnet mask is not required.

IS_POOL

Required?	Yes
Keyword Type	Boolean
Default	0
Multiples Allowed?	No, only one for each FILTER_ENTRY parameter

The IS_POOL parameter specifies whether the NAME value in the same FILTER_ENTRY complex keyword refers to a host LU name or a host LU pool name. Valid values are:

0 NAME refers to a host LU name.

1 NAME refers to a host LU pool name.

This parameter is required. The default is 0.

NAME

Required?	No
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No, only one for each FILTER_ENTRY parameter

The NAME parameter specifies either a 1- to 8-character host LU name (LU_0_TO_3 definition) or a 1- to 8-character host LU pool name, specified by a collection of LU_0_TO_3 definitions. The value of the IS_POOL parameter specifies whether NAME refers to a host LU name or a host LU pool name.

This parameter is optional.

29 TN3270_PORT_DEF

This chapter describes the parameter keywords and values you can specify for the TN3270_PORT_DEF keyword.

Keyword Definition

Required?	No
Keyword Type	Complex
Key Name	PORT
Multiples Allowed?	Yes, but each TN3270_PORT_DEF keyword must have a unique PORT parameter

TN3270_PORT_DEF Sample

The following is a sample of the TN3270E_PORT_DEF keyword:

```
TN3270_PORT_DEF=(
     PORT=3023
     CLIENT_AUTHENTICATION=0
     SECURITY=0
     SECURITY_LEVEL=HIGH
)
```

TN3270_PORT_DEF Parameter Keywords

CLIENT_AUTHENTICATION

Required?	Yes
Keyword Type	Boolean
Default	0
Multiples Allowed?	No, only one for each TN3270_PORT_DEF keyword

The CLIENT_AUTHENTICATION parameter specifies whether verification that clients are authorized to establish a secure connection to the TN3270E server is performed. Valid values are:

0 Verification of client authorization is not performed.

1 Verification of client authorization is performed.

This parameter is required. The default is 0.

DEFAULT_POOL

Required?	No
Keyword Type	String
Field Length	3–17
Multiples Allowed?	No, only one for each TN3270_PORT_DEF keyword

The DEFAULT_POOL parameter specifies the fully qualified name of a pool of LUs that is used when the TN3270 client does not specify an LU resource name.

Note: If you specify this parameter, the pool name will override the values specified on the DEFAULT_POOL_NAME and DEFAULT_PRINTER_POOL_NAME of the TN3270E_DEF keyword.

The fully qualified CP name is a 17-byte character string. The fully qualified CP name consists of two parts: the network name and the CP name, concatenated with a period. The network name is a 1- to 8-byte SNA Type A character string. The CP name is a 1- to 8-byte SNA Type A character string. The fully qualified CP name is also known as the network qualified CP name.

This parameter is optional.

PORT

Required?	Yes
Keyword Type	Unsigned number
Default	23
Range	1–65 535
Multiples Allowed?	No, only one for each TN3270_PORT_DEF keyword

The PORT parameter specifies the number of the port that the TN3270 client uses to connect to the server.

The value is an integer in the range 1–65 535.

This parameter is required. The default is 23.

Normally, the TN3270E server uses port 23. Telnet typically uses port 23, so if another application is running and is using port 23, you need to change the default. The port number must be not be assigned to any other application. If two applications use the same port number, one of the applications fails.

Note: If you change the port number from 23, the port number defined on TN3270 clients must be changed to the number specified here.

SECURITY

Required?	Yes
Keyword Type	Boolean
Default	0
Multiples Allowed?	No, only one for each TN3270_PORT_DEF keyword

The SECURITY parameter specifies whether security is enabled for TN3270 communication sessions on the specified port. Valid values are:

0 Security is not enabled for TN3270 communication sessions on the port.

1 Security is enabled for TN3270 communication sessions on the port.

This parameter is required. The default is 0.

SECURITY_LEVEL

Required?	Yes
Keyword Type	Enumerated
Default	HIGH
Multiples Allowed?	No

The SECURITY_LEVEL parameter specifies the level of security used for the connection with a client when the SECURITY parameter is specified as SECURITY=1. Valid values are:

AUTHENTICATION_ONLY
Specifies that certificates to authenticate one or both ends of the connection are exchanged, but data is not encrypted.

MEDIUM Specifies that Communications Server can establish connections with any supported level of encryption.

HIGH Specifies that for Communications Servers supporting strong encryption, the port will only accept connections from clients supporting strong encryption. For Communications Servers supporting export encryption only, HIGH is the same as MEDIUM.

This parameter is required. The default is HIGH.

30 TN5250_DEF

This chapter describes the parameter keywords and values you can specify for the TN5250_DEF keyword.

Keyword Definition

Required?	No
Keyword Type	Complex
Multiples Allowed?	No

TN5250_DEF Sample

The following is a sample of the TN5250_DEF keyword:

```
TN5250_DEF=(
     AUTO_LOGOFF=0
     DYNAMIC_LU_SUPPORT=1
     ENABLE_FILTERING=0
     FILTER_PREFERENCE=HOSTNAME_FIRST
     FREQUENCY=60
     KEEPALIVE_TYPE=TN_NONE
     LOGOFF=10
     LU_PREFIX=TN52
     NUMBER_OF_DYNAMIC_LUS=10
     TIMER=10
)
```

TN5250_DEF Parameter Keywords

AUTO_LOGOFF

Required?	Yes
Keyword Type	Boolean
Default	0
Multiples Allowed?	No

The AUTO_LOGOFF parameter specifies whether the connection is automatically terminated when the value of the LOGOFF parameter is reached. Valid values are:

0 The connection is not terminated.

1 The connection is terminated.

This parameter is required. The default is 0.

DYNAMIC_LU_SUPPORT

Required?	Yes
Keyword Type	Boolean
Default	0
Multiples Allowed?	No

The DYNAMIC_LU_SUPPORT parameter specifies whether the TN5250 server should dynamically generate independent LU 6.2 local LU definitions for supporting sessions with iSeries, eServer i5, or System i5 servers. Valid values are:

0 Dynamic LUs are not supported. Sessions with iSeries, eServer i5, or System i5 use statically defined independent local LUs, including the CP LU.

1 Dynamic LUs are supported. The TN5250 server automatically generates as many LUs as indicated by the NUMBER_OF_DYNAMIC_LUS parameter, using the LU_PREFIX parameter value as the common naming prefix for each LU (so that they can easily be identified as dynamically generated LUs).

This parameter is required. The default is 0.

Since each iSeries, eServer i5, or System i5 supports a maximum of 512 concurrent sessions with any one local LU, it may be desirable to have a number of LUs available if more than 512 sessions are active at any given time.

ENABLE_FILTERING

Required?	Yes
Keyword Type	Boolean
Default	0
Multiples Allowed?	No

The ENABLE_FILTERING parameter specifies whether TN5250 filtering is enabled. Valid values are:

0 TN5250 filtering is not enabled. Any TCP/IP workstation is granted access to available host resources (that is, those host resources which have been defined as TN5250 resources.)

1 TN5250 filtering is enabled. Only TCP/IP workstations matching the IP address and subnet mask of at least one of the filter definitions are allowed access to the host resources defined in the appropriate filter(s).

This parameter is required. The default is 0.

FILTER_PREFERENCE

Required?	No
Keyword Type	Enumerated
Default	HOSTNAME_FIRST
Multiples Allowed?	No

The FILTER_PREFERENCE parameter specifies the filter record processing order used when determining a match with an incoming client request. Valid values are:

HOSTNAME_FIRST
Specifies that all filters specifying either a TCP/IP host name or domain name should be processed and checked against the client's hostname or domain name before processing filters specifying a TCP/IP address.

IP_ADDR_FIRST
Specifies that all filters specifying a TCP/IP address should be processed before processing filters specifying either a host name or domain name.

This parameter is optional. The default is HOSTNAME_FIRST.

FREQUENCY

Required?	Yes
Keyword Type	Unsigned number
Default	60
Range	1–65 535
Multiples Allowed?	No

The FREQUENCY parameter specifies the number of seconds to wait after data has been sent or received on a connection before beginning keepalive detection. Choosing a high number means that connections are checked less often and the resulting network traffic is reduced. Choosing a low frequency means that connections are checked more frequently and connections are freed more rapidly.

The value is an integer in the range 1–65 535.

This parameter is required. The default is 60.

KEEPALIVE_TYPE

Required?	Yes
Keyword Type	Enumerated
Default	TN_NONE
Multiples Allowed?	No

The KEEPALIVE_TYPE parameter specifies the method used to free connections. Valid values are:

TN_NONE
Do not use either the TN_NOP nor the TN_TIMING_MARK methods to free connections.

TN_NOP
Use if it is not necessary to free connections after a specific amount of time. Detection and freeing of the connection take an unpredictable amount of

	time. When the time specified on the FREQUENCY parameter is reached, the connection is tested to see if it is broken.
TN_TIMING_MARK	Use if it is necessary to define when connections are freed and additional traffic on the network is acceptable. Detection and freeing of the connection take place as specified by the TIMER parameter. When the specified time is reached and the client has not responded, the connection is freed.

This parameter is required. The default is TN_NONE.

LOGOFF

Required?	Yes
Keyword Type	Unsigned number
Default	30
Range	1–65 535
Multiples Allowed?	No

The LOGOFF parameter specifies the amount of idle time to allow before a session is disconnected. This parameter is only valid if the AUTO_LOGOFF parameter is specified as AUTO_LOGOFF=1.

The value is an integer in the range 1–65 535.

This parameter is required. The default is 30.

LU_PREFIX

Required?	No
Keyword Type	String
Field Length	1–5
Multiples Allowed?	No

The LU_PREFIX parameter specifies the common naming prefix for each LU (so that they can easily be identified as dynamically generated LUs).

LU_PREFIX is a 1- to 5-byte SNA Type A character string.

This parameter is optional.

NUMBER_OF_DYNAMIC_LUS

Required?	No
Keyword Type	Unsigned number
Default	8
Range	0–1000
Multiples Allowed?	No

The NUMBER_OF_DYNAMIC_LUS parameter specifies how many dynamic LUs can be automatically generated by the TN5250 server.

The value is an integer in the range 0–1000.

This parameter is optional. The default is 8.

TIMER

Required?	Yes
Keyword Type	Unsigned number
Default	10
Range	1–65 535
Multiples Allowed?	No

The TIMER parameter specifies the number of seconds to wait for a response to a timing mark before the connection is freed.

The value is an integer in the range 1–65 535.

This parameter is required. The default is 10.

31 TN5250_FILTER

This chapter describes the parameter keywords and values you can specify for the TN5250_FILTER keyword.

Keyword Definition

Required?	No
Keyword Type	Complex
Key Name	IP_ADDR_MASK_PAIR
Multiples Allowed?	Yes, but each TN5250_FILTER keyword must have a unique IP_ADDR_MASK_PAIR parameter

TN5250_FILTER Sample

The following is a sample of the TN5250_FILTER keyword:

```
TN5250_FILTER=(
     IP_ADDR_MASK_PAIR=195.67.99.1,255.255.255.0
     CLIENT_ID_TYPE=IP_ADDRESS
     AS400_SERVER_ENTRY=
)
```

TN5250_FILTER Parameter Keywords

AS400_SERVER_ENTRY

Required?	No
Keyword Type	String
Field Length	3–17
Multiples Allowed?	Yes

The AS400_SERVER_ENTRY parameter specifies the fully qualified CP name of the iSeries, eServer i5, or System i5. Access is granted to TN5250 clients that match this filter definition, as specified in the IP_ADDR_MASK_PAIR parameter.

Note: The AS400_SERVER_ENTRY must specify a server which has been defined using an AS400_SERVER keyword.

The fully qualified CP name is a 17-byte character string. The fully qualified CP name consists of two parts: the network name and the CP name, concatenated with a period. The network name is a 1- to 8-byte SNA Type A character string. The CP name is a 1- to 8-byte SNA Type A character string. The fully qualified CP name is also known as the network qualified CP name.

This parameter is optional.

Up to 32 AS400_SERVER_ENTRIES are allowed. The order of the entries in the TN5250_FILTER keyword determines the order used to establish a session between a TN5250 client and an available iSeries, eServer i5, or System i5.

CLIENT_ID_TYPE

Required?	No
Keyword Type	Enumerated
Default	IP_ADDRESS
Multiples Allowed?	No, only one for each TN5250_FILTER keyword

The CLIENT_ID_TYPE parameter indicates the type of address the value of the IP_ADDR_MASK_PAIR parameter specifies. Valid values are:

DOMAIN_NAME The value of the IP_ADDR_MASK_PAIR parameter specifies a domain name.

HOST_NAME The value of the IP_ADDR_MASK_PAIR parameter specifies a host name.

IP_ADDRESS The value of the IP_ADDR_MASK_PAIR parameter specifies the source IP address and subnet mask of a TCP/IP workstation. IPv6 addressing is not supported.

This parameter is optional. The default is IP_ADDRESS.

IP_ADDR_MASK_PAIR

Required?	Yes
Keyword Type	String
Field Length	1–256
Multiples Allowed?	No, only one for each TN5250_FILTER keyword

The IP_ADDR_MASK_PAIR parameter specifies one of the following:

- The domain name to which you wish to restrict host resources (LUs)
- The host name to which you wish to restrict host resources (LUs)
- The source IP address and subnet mask of the TCP/IP workstation(s) to which you wish to restrict host resources (LUs). The IP address and the subnet mask values are separated by a comma. Only those clients matching the IP address and subnet mask combination are granted access to the list of resources represented by this filter

Whether the value you specify is a domain name, host name, or IP address and subnet mask is determined by the CLIENT_ID_TYPE parameter.

The value is a 1- to 256-byte character string.

This parameter is required.

If you wish to restrict host resources to a specific workstation, specify that workstation's IP address and the subnet mask of 255.255.255.255. If you wish to restrict host resources to all workstations in a particular IP subnetwork, such as a local office LAN, specify one of the workstation IP addresses and a subnet mask to identify the IP address values that are significant for identifying the subnetwork. For example, to restrict host resources for all workstations in the subnet 9.57.0.0, you might specify a source IP address of 9.57.126.4 and a subnet mask of 255.255.0.0. If you specify a specific IP address and full subnet mask (filtering for a specific workstation), that workstation is granted access to the first available host resource, whether it be an explicit LU or an LU from a pool of LUs. If the filter is designated for workstations on a particular subnetwork, these workstations are only granted use of available host resources from pool definitions in this filter; no use of explicit LUs is granted. Ordering of host LUs and host LU pools in the filter list is important. The order implies the ordering of workstations' access to host resources. In other words, if the first LU or pool on the list is in use, access is granted to the next resource on the list. All LUs from within a pool must be in use before the pool is considered in use.

If a full subnet mask is specified (255.255.255.255), host resources are being chosen for use by the specific workstation whose address is specified. If a partial subnet mask is specified (such as 255.0.0.0), any workstation from the subnetwork (identified by the significant fields of the IP address as specified by the subnet mask) may have access to host resources specified in the filter.

If you specify an IP address of 0.0.0.0 and a subnet mask of 0.0.0.0, all workstations that do not match another filter entry are allowed access to the specified resources.

32 TN5250_PORT_DEF

This chapter describes the parameter keywords and values you can specify for the TN5250_PORT_DEF keyword.

Keyword Definition

Required?	No
Keyword Type	Complex
Key Name	PORT
Multiples Allowed?	Yes, but each TN5250_PORT_DEF keyword must have a unique PORT parameter

TN5250_PORT_DEF Sample

The following is a sample of the TN3270E_PORT_DEF keyword:

```
TN5250_PORT_DEF=(
     PORT=23
     CLIENT AUTHENTICATION=0
     DEFAULT_SERVER=USIBMNM.RTP02EN
     SECURITY=0
     SECURITY_LEVEL=HIGH
)
```

TN5250_PORT_DEF Parameter Keywords

CLIENT_AUTHENTICATION

Required?	Yes
Keyword Type	Boolean
Default	0
Multiples Allowed?	No, only one for each TN5250_PORT_DEF keyword

The CLIENT_AUTHENTICATION parameter specifies whether verification that clients are authorized to establish a secure connection to the TN5250 server is performed. Valid values are:

0 Verification of client authorization is not performed.

1 Verification of client authorization is performed.

This parameter is required. The default is 0.

DEFAULT_SERVER

Required?	No
Keyword Type	String
Field Length	3–17
Multiples Allowed?	No, only one for each TN5250_PORT_DEF keyword

The DEFAULT_SERVER parameter specifies the fully qualified CP name of the default iSeries, eServer i5, or System i5 used by TN5250 clients connecting into the specified port without requesting a specific iSeries, eServer i5, or System i5. The iSeries, eServer i5, or System i5 must be specified in an AS400_SERVER keyword. If DEFAULT_SERVER in this TN5250_PORT_DEF keyword is left blank, the default iSeries, eServer i5, or System i5 specified as the DEFAULT_SERVER in the AS400_SERVER keyword is used. Only one AS400_SERVER keyword can be marked as the default iSeries, eServer i5, or System i5 server.

The fully qualified CP name is a 17-byte character string. The fully qualified CP name consists of two parts: the network name and the CP name, concatenated with a period. The network name is a 1- to 8-byte SNA Type A character string. The CP name is a 1- to 8-byte SNA Type A character string. The fully qualified CP name is also known as the network qualified CP name.

This parameter is optional.

PORT

Required?	Yes
Keyword Type	Unsigned number
Default	23
Range	1–65 535
Multiples Allowed?	No, only one for each TN5250_PORT_DEF keyword

The PORT parameter specifies the number of the port that the TN5250 client uses to connect to the iSeries, eServer i5, or System i5.

The value is an integer in the range 1–65 535.

This parameter is required. The default is 23.

Normally, the TN5250 server uses port 23. Telnet typically uses port 23, so if **TELNETD** is running and is using port 23, you need to change the default. If two applications (**TELNETD** and **TN5250**) use the same port number, one of the applications fails.

Note: If you change the port number from 23, the port number defined on TN5250 clients must be changed to the number specified here.

SECURITY

Required?	Yes
Keyword Type	Boolean
Default	0
Multiples Allowed?	No, only one for each TN5250_PORT_DEF keyword

The SECURITY parameter specifies whether security is enabled for TN5250 communication sessions on the specified port. Valid values are:

0 Security is not enabled for TN5250 communication sessions.

1 Security is enabled for TN5250 communication sessions.

This parameter is required. The default is 0.

SECURITY_LEVEL

Required?	Yes
Keyword Type	Enumerated
Default	HIGH
Multiples Allowed?	No

The SECURITY_LEVEL parameter specifies the level of security used for the connection with a client when the SECURITY parameter is specified as SECURITY=1. Valid values are:

AUTHENTICATION_ONLY
Specifies that certificates to authenticate one or both ends of the connection are exchanged, but data is not encrypted.

MEDIUM Specifies that Communications Server can establish connections with any supported level of encryption.

HIGH Specifies that for Communications Servers supporting strong encryption, the port will only accept connections from clients supporting strong encryption. For Communications Servers supporting export encryption only, HIGH is the same as MEDIUM.

This parameter is required. The default is HIGH.

33 TP

This chapter describes the parameter keywords and values you can specify for the TP keyword.

Keyword Definition

Required?	No
Keyword Type	Complex
Key Name	TP_NAME
Multiples Allowed?	Yes, but each TP keyword must have a unique TP_NAME parameter

TP Sample

The following is a sample of the TP keyword:

```
TP=(
     TP_NAME=MYTP
     API_CLIENT_USE=0
     CONVERSATION_TYPE=EITHER
     DUPLEX_SUPPORT=EITHER_DUPLEX
     DYNAMIC_LOAD=1
     INCOMING_ALLOCATE_TIMEOUT=30
     LOAD_TYPE=0
     PATHNAME=d:\tps\mytp.exe
     PIP_ALLOWED=1
     QUEUED=0
     RECEIVE_ALLOCATE_TIMEOUT=3600
     SECURITY_RQD=1
     SYNC_LEVEL=EITHER
     TP_INSTANCE_LIMIT=0
     TP_NAME_FORMAT=0
)
```

TP Parameter Keywords

API_CLIENT_USE

Required?	Yes
Keyword Type	Boolean
Default	0
Multiples Allowed?	No, only one for each TP keyword

The API_CLIENT_USE parameter specifies whether the transaction program resides on an SNA API client and can not be locally attached. Valid values are:

0 The transaction program is local.

1 The transaction program resides on an SNA API client.

If you specify API_CLIENT_USE=1, attaches for this transaction program are routed to the SNA API client.

This parameter is required. The default is 0.

CONVERSATION_TYPE

Required?	Yes
Keyword Type	Enumerated
Default	EITHER
Multiples Allowed?	No, only one for each TP keyword

The CONVERSATION_TYPE parameter specifies the types of conversation supported by this transaction program (TP). Valid values are:

BASIC Basic conversation for system TPs.

EITHER Either basic or mapped conversation is allowed to start the TPs.

MAPPED Mapped conversation for application TPs.

This parameter is required. The default is EITHER.

DUPLEX_SUPPORT

Required?	Yes
Keyword Type	Enumerated
Default	EITHER_DUPLEX
Multiples Allowed?	No, only one for each TP keyword

The DUPLEX_SUPPORT parameter specifies whether the transaction program supports full or half duplex conversations. Valid values are:

EITHER_DUPLEX The transaction program supports either half or full duplex conversations.

FULL_DUPLEX Full duplex conversations refer to the ability of the transaction program to read data from and write data to other transaction programs simultaneously.

HALF_DUPLEX Half duplex conversations require a change of direction before a transaction program may begin writing data after reading data, or vice versa.

This parameter is required. The default is EITHER_DUPLEX.

DYNAMIC_LOAD

Required?	Yes
Keyword Type	Boolean
Default	1
Multiples Allowed?	No, only one for each TP keyword

The DYNAMIC_LOAD parameter specifies whether the transaction program (TP) can be dynamically started by an allocation request received on a conversation. Valid values are:

0 The TP can not be dynamically started.

1 The TP can be dynamically started.

This parameter is required. The default is 1.

INCOMING_ALLOCATE_TIMEOUT

Required?	Yes
Keyword Type	Unsigned number
Default	30
Range	0–65 535
Multiples Allowed?	No, only one for each TP keyword

The INCOMING_ALLOCATE_TIMEOUT parameter specifies the number of seconds that an incoming attach is queued waiting for a RECEIVE_ALLOCATE. Zero implies no timeout, and so it is held indefinitely.

The value is an integer in the range of 0–65 535 seconds.

This parameter is required. The default is 30.

LOAD_TYPE

Required?	Yes
Keyword Type	Boolean
Default	0
Multiples Allowed?	No, only one for each TP keyword

The LOAD_TYPE specifies how the transaction program is loaded. Valid values are:

0 CONSOLE — The transaction program runs in the Communications Server process environment.

1 DETACHED — The transaction program runs in its own process environment.

This parameter is required. The default is 0.

PARAMETERS

Required?	No
Keyword Type	String
Field Length	1–63
Multiples Allowed?	No, only one for each TP keyword

The PARAMETERS parameter specifies the parameters for the transaction program.

The value is an 1- to 63-byte character string.

This parameter is optional.

The program parameters are the names of the variables in which the logical unit (LU) places verbs and other program statements that make up the transaction-processing portion of the program.

PATHNAME

Required?	No
Keyword Type	String
Field Length	1–255
Multiples Allowed?	No, only one for each TP keyword

The PATHNAME parameter specifies the path and transaction program name.

The value is a character string 1–255 bytes in length. The path name cannot include spaces.

This parameter is optional.

The complete path name describes the location of the program to be executed. The location may include the drive, the directory, the subdirectory, and the file name. The special character ″ can not be used.

PIP_ALLOWED

Required?	Yes
Keyword Type	Boolean
Default	1
Multiples Allowed?	No, only one for each TP keyword

The PIP_ALLOWED parameter specifies whether the transaction program can receive program initialization (PIP) parameters. Valid values are:

0 The transaction program can not receive program initialization (PIP) parameters.

1 The transaction program can receive program initialization (PIP) parameters.

This parameter is required. The default is 1.

Program initialization parameters (PIPs) are the names of variables for the remote transaction programs (TPs). The PIPs are supplied by the allocating program. The contents of the PIPs have meaning only to the TPs and are not examined or used by the logical unit (LU).

QUEUED

Required?	Yes
Keyword Type	Boolean
Default	0
Multiples Allowed?	No, only one for each TP keyword

The QUEUED parameter specifies whether the transaction program is queued while waiting for an Attach. Valid values are:

0 The transaction program is not be queued.

1 The transaction program is queued.

This parameter is required. The default is 0.

RECEIVE_ALLOCATE_TIMEOUT

Required?	Yes
Keyword Type	Unsigned number
Default	3 600
Range	0–65 535
Multiples Allowed?	No, only one for each TP keyword

The RECEIVE_ALLOCATE_TIMEOUT parameter specifies the number of seconds that a RECEIVE_ALLOCATE verb can be queued while waiting for an Attach. Zero implies no timeout, and so it is held indefinitely.

The value is an integer in the range of 0–65 535 seconds.

This parameter is required. The default is 3 600 seconds.

SECURITY_RQD

Required?	Yes
Keyword Type	Boolean
Default	1
Multiples Allowed?	No, only one for each TP keyword

The SECURITY_RQD parameter specifies whether conversation security information is required to start the transaction program. Valid values are:

0 Conversation security information is not required.

1 Conversation security information is required.

This parameter is required. The default is 1.

Conversation security allows controlled access to system resources through security parameters associated with a request for access to those resources.

SYNC_LEVEL

Required?	Yes
Keyword Type	Enumerated
Default	EITHER
Multiples Allowed?	No, only one for each TP keyword

The SYNC_LEVEL parameter specifies the synchronization levels supported by the transaction program. The synchronization level is the level allowed on allocation requests that start the local and remote transaction programs (TPs). Valid values are:

CONFIRM_SYNC_LEVEL The transaction program supports a synchronization level of Confirm.

EITHER The transaction program supports a synchronization level of None or Confirm.

NONE The transaction program supports a synchronization level of None.

SYNCPT_NEGOTIABLE The transaction program supports a synchronization level of None, Confirm, or Sync-point.

SYNCPT_REQUIRED The transaction program supports a synchronization level of Sync-point.

This parameter is required. The default is EITHER.

TP_INSTANCE_LIMIT

Required?	Yes
Keyword Type	Unsigned number
Default	0
Range	0–65 535
Multiples Allowed?	No, only one for each TP keyword

The TP_INSTANCE_LIMIT parameter specifies the maximum number of concurrently active TP instances. A value of zero means no limit.

The value is an integer in the range of 0–65 535 instances.

This parameter is required. The default is 0.

TP_NAME

Required?	Yes
Keyword Type	String
Field Length	1–64
Multiples Allowed?	No, only one for each TP keyword

The TP_NAME parameter specifies the 1–64 character name of the transaction program that provides information about how to accept incoming Attaches and optionally start programs on the workstation. Valid characters are any locally displayable characters using the native encoding of the local system. The TP name may also refer to a service transaction program.

This parameter is required.

A transaction program (TP) is a program that uses the advanced program-to-program communications (APPC) system to communicate with a partner application program at the partner node.

Service TPs use a restricted character set for their names. A service TP name must begin with a two-digit hex value between X'00' and X'3D'. The remainder of the name must be three ASCII characters. For example, `07abc` is a valid service TP name. `7abc` is not a valid service TP name.

TP_NAME_FORMAT

Required?	Yes
Keyword Type	Boolean
Default	0
Multiples Allowed?	No, only one for each TP keyword

The TP_NAME_FORMAT parameter specifies whether the TP_NAME value is a service TP or normal TP. Valid values are:

0 The TP_NAME value is a normal TP.

1 The TP_NAME value is a service TP.

This parameter is required. The default is 0.

34 USERID_PASSWORD

This chapter describes the parameter keywords and values you can specify for the USERID_PASSWORD keyword.

Keyword Definition

Required?	No
Keyword Type	Complex
Key Name	USER_ID
Multiples Allowed?	Yes, but each USERID_PASSWORD keyword must have a unique USER_ID parameter

USERID_PASSWORD Sample

The following is a sample of the USERID_PASSWORD keyword:

```
USERID_PASSWORD=(
     USER_ID=MYUSER
     PASSWORD=A098C824DC22B856748B
)
```

USERID_PASSWORD Parameter Keywords

PASSWORD

Required?	Yes
Keyword Type	Hexadecimal string
Field Length	1–20
Multiples Allowed?	No, only one for each USERID_PASSWORD keyword

The PASSWORD parameter specifies the user password. The password is converted to a 20-character hexadecimal string by the encryption process.

Note: Since this value is encrypted, you should not attempt to enter this value directly into the ACG file. The value should only be entered using the SNA Node Configuration application.

This parameter is required.

USER_ID

Required?	Yes
Keyword Type	String
Field Length	1–10
Multiples Allowed?	No, only one for each USERID_PASSWORD keyword

USERID_PASSWORD

The USER_ID parameter specifies the user identifier.

USER_ID is a 1- to 10-byte SNA Type A character string.

This parameter is required.

35 VERIFY

This chapter describes the parameter keywords and values you can specify for the VERIFY keyword.

The VERIFY keyword is required for product configuration.

This keyword should not be modified or deleted by the user.

Keyword Definition

Required?	Yes
Keyword Type	Complex
Multiples Allowed?	No

VERIFY Sample

The following is a sample of the VERIFY keyword:

```
VERIFY=(
   CFG_MODIFICATION_LEVEL = 12
   CFG_VERSION_LEVEL = 1
)
```

VERIFY Parameter Keywords

CFG_LAST_SCENARIO

The CFG_LAST_SCENARIO parameter keyword applies to Communications Server only.

Required?	No
Keyword Type	Unsigned number
Range	0–20
Multiples Allowed?	No

The CFG_LAST_SCENARIO parameter specifies the last configuration scenario used in the SNA Node Configuration application. When this configuration file is opened by the application, the initial configuration scenario will be set according to this value.

The value corresponds to the zero-based index of the scenario name in the **Scenario** pull-down on the menu bar of the SNA Node Configuration application.

Note: You should not attempt to enter this value directly into the ACG file. The value should only be entered by the SNA Node Configuration application.

CFG_LAST_SCENARIO is an integer in the range 0–20.

This parameter is optional.

CFG_MODIFICATION_LEVEL

Required?	No
Keyword Type	Unsigned number
Range	0–100
Multiples Allowed?	No

The CFG_MODIFICATION_LEVEL parameter value is set when a configuration is stored and read when a configuration is loaded. If a new version of Communications Server or Personal Communications reads an older configuration file (indicated by the combination of this value and the CFG_VERSION_LEVEL value being less than the current value), the product migrates the configuration to the new level, if necessary.

Note: You should not attempt to enter this value directly into the ACG file. The value should only be entered by the SNA Node Configuration application.

CFG_MODIFICATION_LEVEL is an integer in the range 0–100.

This parameter is optional.

CFG_VERSION_LEVEL

Required?	No
Keyword Type	Unsigned number
Range	0–10
Multiples Allowed?	No

The CFG_VERSION_LEVEL parameter value is set when a configuration is stored and read when a configuration is loaded. If a new version of Communications Server or Personal Communications reads an older configuration file (indicated by the combination of this value and the CFG_MODIFICATION_LEVEL value being less than the current value), the product migrates the configuration to the new level, if necessary.

Note: You should not attempt to enter this value directly into the ACG file. The value should only be entered by the SNA Node Configuration application.

CFG_VERSION_LEVEL is an integer in the range 0–10.

This parameter is optional.

Appendix A. AnyNet-Specific Data

If you are using the AnyNet DLC, use this appendix to define the keyword parameters for the LINK_STATION and PORT keywords.

In addition to the keyword parameters for the LINK_STATION and PORT keywords, you must also define the ANYNET_COMMON_PARAMETERS keyword described in Appendix H, "ANYNET_COMMON_PARAMETERS," on page 263.

LINK_STATION Keywords for the AnyNet DLC

The following section describes the parameter keywords you can specify in the LINK_STATION keyword to use the AnyNet DLC.

DEST_ADDRESS

Required?	No
Keyword Type	Hexadecimal string
Field Length	0–34
Multiples Allowed?	No, only one for each LINK_STATION keyword

The DEST_ADDRESS parameter specifies the hexadecimal equivalent of either the adjacent CP name (in EBCDIC) or the node ID. The value of this parameter should match the type specified by the PARTNER_ADDRESS_TYPE parameter.

This parameter is optional.

LINK_STATION_ANYNET_SPECIFIC_DATA

Required?	No
Keyword Type	Complex
Multiples Allowed?	No, only one for each LINK_STATION keyword

The LINK_STATION_ANYNET_SPECIFIC_DATA parameter is a complex keyword comprised of the PARTNER_ADDRESS_TYPE parameter keyword.

See the description of the PARTNER_ADDRESS_TYPE parameter keyword to define the LINK_STATION_ANYNET_SPECIFIC_DATA parameter.

PARTNER_ADDRESS_TYPE

Required?	No
Keyword Type	Enumerated
Default	USE_CP_NAME
Multiples Allowed?	No, only one for each LINK_STATION_ANYNET_SPECIFIC_DATA parameter

The PARTNER_ADDRESS_TYPE parameter specifies how the partner address is identified.

USE_BLOCK_ID_AND_PU_ID
The partner address is identified by the block ID and PU ID.

USE_CP_NAME
The partner address is identified by the CP name.

This parameter is optional. The default is to use the CP name to identify the partner address.

PORT Keywords for the AnyNet DLC

The following section describes the parameter keyword you can specify in the PORT keyword to use the AnyNet DLC.

DLC_NAME

Required?	Yes
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No

The DLC_NAME parameter specifies the 1- to 8-byte name of the communication adapter or protocol you are using. For the AnyNet DLC, DLC_NAME should be specified as **ANYNET**.

This parameter is required.

Appendix B. EE-Specific Data

If you are using the Enterprise Extender (EE) DLC, use this appendix to define the keyword parameters for the LINK_STATION and PORT keywords.

LINK_STATION Keywords for an EE DLC

The following section describes the parameter keywords you can specify in the LINK_STATION keyword to use the Enterprise Extender (EE) DLC.

LINK_STATION_OEM_SPECIFIC_DATA

Required?	No
Keyword Type	Complex
Multiples Allowed?	No, only one for each LINK_STATION keyword

The LINK_STATION_OEM_SPECIFIC_DATA parameter is a complex keyword comprised of the OEM_LINK_DATA parameter keyword.

See the description of the OEM_DATA parameter keyword to define the LINK_STATION_OEM_SPECIFIC_DATA parameter.

Considerations

The LINK_STATION_OEM_SPECIFIC_DATA parameter defines a link station. Refer to the following example from a .ACG configuration file:

```
LINK_STATION_OEM_SPECIFIC_DATA=(
 OEM_LINK_DATA=(
  OEM_DATA=0100000004000000040000000300000000F00000001000000
  OEM_DATA=0A000000DE01A8C0
 )
)
```

Take the OEM_DATA fields and concatenate them in order, as follows:

```
0100000004000000040000000300000000F00000001000000000A000000DE01A8C0
```

For IPv4:

```
0100000004000000040000000300000000F00000001000000000A000000DE01A8C0
```

For IPv6:

```
0100000004000000040000000300000000F00000001000000000A00000015000000\
323030323A3937613A3533633A3A3937613A35336300
```

Then break that into 4-byte words:

```
01000000
04000000
04000000
03000000
0F000000
01000000
0A000000
DE01A8C0
```

Reverse the order of the bytes, as follows:

```
00000001
00000004
00000004
00000003
0000000F
00000001
0000000A
C0A801DE
```

The fields are as follows:

00000001: Link Type—only value allowed
00000004: DSAP (Remote SAP)
00000004: SSAP (Local SAP)
00000003: XID retry count (Connect retry count)
0000000F: XID retry timer (Connect timer)
00000001: Reserved
0000000A: Liveness timer (Inactivity timer)
C0A801DE: IP address (Remote IPv4 address)
00000015: Length of IPv6 address or host name
000000323030323A3937613A3533633A3A3937613A35336300:
IPv6 Address (2002:97a:53c::97a:53c).

Notes:

1. All values are in hexadecimal notation.
2. The names in parentheses are the parameter labels in the **EEDLC Connection** tab of the EEDLC link station definition in the SNA Node Configuration tool.
3. Other than the IP address, all the values shown are the default values. There is no default IP address.
4. When you change one of these values in the Node Configuration tool and save to the .ACG file, the relevant byte of OEM_DATA is changed in the configuration file.
5. The IPv6 address can be a numeric address like above or can be a remote host name. If numeric address entered has the ″:″ then Communications Server for Windows treat it as a IPv6 address.

For the IP address, convert each byte to decimal to obtain the IP address. The above example converts to `192.168.1.222`, as follows:

C0: 192
A8: 168
01: 1
DE: 222

If you enter a host name instead of an IP address, the IP address field becomes the length of the host name, and the host name (in ASCII hex codes) is appended, with a trailing 00 byte to mark the end. The bytes of the host name are not swapped. See the following example:

```
LINK_STATION_OEM_SPECIFIC_DATA=(
 OEM_LINK_DATA=(
  OEM_DATA=0100000004000000040000000300000000F00000001000000
  OEM_DATA=0A000000150000006C6F63616C686F73742E6C6F63616C64
  OEM_DATA=6F6D61696E00
 )
)
```

Concatenation produces the following:

```
010000000400000004000000030000000F000000010000000A000000
150000006C6F63616C686F73742E6C6F63616C646F6D61696E00
```

Breaking it up into words and swapping bytes (except the host name) produces the following:

00000001: Link Type—only value allowed
00000004: DSAP (Remote SAP)
00000004: SSAP (Local SAP)
00000003: XID retry count (Connect retry count)
0000000F: XID retry timer (Connect timer)
00000001: Reserved
0000000A: Liveness timer (Inactivity timer).
The range of valid values is 1–255 seconds.
00000015: Length of IPv6 address
6C6F63616C686F73742E6C6F63616C646F6D61696E:
Host name (localhost.localdomain)
00: End of host name marker

OEM_DATA

Required?	No
Keyword Type	Hexadecimal string
Multiples Allowed?	Yes

The OEM_DATA parameter specifies four bytes of data in byte-swapped hexadecimal format for each of the following values:

Link type
This value is always 1 (X'01').

Remote Service Access Point (SAP) or DSAP
Valid values are X'04'—X'FC'. The value must be a multiple of 4.

Local Service Access Point (SAP) or SSAP
Valid values are X'04'—X'FC'. The value must be a multiple of 4.

XID retry count (limit)
The exchange identification (XID) retry limit is the maximum number of times Communications Server will send XID commands to the remote station to establish a link without receiving an acknowledgment from the remote station in the time set by the XID retry interval. Valid values are 3 to 29 times.

XID retry timer (interval)
The exchange identification (XID) retry interval is the time the link station waits for a reply to an XID command before sending another XID to the remote station. The number of times an XID is sent is based on the XID retry count. Valid values are 1 to 59 seconds.

Liveness mode
This value is always 0 (X'00').

Liveness timer (retry interval)
Liveness timer is the time the link station waits before testing whether the

link is still active. After the specified amount of time elapses, a TEST command is sent to the remote station to check if the link is still active. Valid values are 1 to 255 seconds.

Remote Host Name or IP Address
This is the remote partner's host name or IP address. You can either enter the host name (for example, `somesystem` or `somesystem.somedomain.somecompany.com`) or the IPv4 address (for example, 9.37.51.32) or the IPv6 address (for example, 2002:97a:53c::97a:53c). To utilize IP name support, you must have DNS enabled in your TCP/IP configuration.

Data in byte-swapped hexadecimal format is in reverse order of bytes, in case of IPv4 address. For example, the IPv4 address 9.68.43.100 in hexadecimal format is X'09442B64', but in byte-swapped hexadecimal format is X'642B4409'.

Note: Since the format of this data is byte-swapped, it is recommended that the values only be entered using the Node Configuration application.

This parameter is optional.

OEM_LINK_DATA

Required?	No
Keyword Type	Complex
Multiples Allowed?	No, only one for each LINK_STATION_OEM_SPECIFIC_DATA parameter

The OEM_LINK_DATA parameter is a complex keyword comprised of the OEM_DATA parameter keyword.

See the description of the OEM_DATA parameter keyword to define the OEM_LINK_DATA parameter.

PORT Keywords for an EE DLC

The following section describes the parameter keywords you can specify in the PORT keyword to use the Enterprise Extender (EE) DLC.

DLC_NAME

Required?	Yes
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No, only one for each PORT keyword

The DLC_NAME parameter specifies 1- to 8-byte name of the communication adapter or protocol you are using. For the Enterprise Extender (EE) DLC, DLC_NAME should be specified as **IBMEEDLC** for IPv4 and **IBMEE006** for IPv6 support.

This parameter is required.

PORT_OEM_SPECIFIC_DATA

Required?	No
Keyword Type	Complex
Multiples Allowed?	No, only one for each PORT keyword

The PORT_OEM_SPECIFIC_DATA parameter is a complex keyword comprised of the following parameter keywords:

- OEM_LINK_DATA
- OEM_PORT_DATA
- OEM_PORT_DEFAULTS

See the descriptions of the parameter keywords to define the PORT_OEM_SPECIFIC_DATA parameter.

COST_PER_CONNECT_TIME

Required?	No
Keyword Type	Unsigned number
Range	0–255
Multiples Allowed?	No, only one for each PORT keyword

The COST_PER_CONNECT_TIME parameter specifies the cost per connect time.

The value is an integer in the range 0–255.

This parameter is optional.

EFFECTIVE_CAPACITY

Required?	No
Keyword Type	Unsigned number
Multiples Allowed?	No, only one for each PORT keyword

The EFFECTIVE_CAPACITY parameter specifies the actual units of effective capacity. The value is encoded as a 1-byte floating-point number, represented by the following formula:

```
0.1 mmm * 2 eeeee
```

where the bit representation of the byte is ***eeeeemmm***. Each unit of effective capacity is equal to 300 bits per second.

This parameter is optional.

INB_LINK_ACT_LIM

Required?	No
Keyword Type	Unsigned number
Multiples Allowed?	No, only one for each PORT keyword

The INB_LINK_ACT_LIM parameter specifies the number of link stations reserved for inbound activation on this port. The maximum number of outbound link stations that can be active concurrently is the value of the TOT_LINK_ACT_LIM parameter minus the value of the INB_LINK_ACT_LIM parameter.

Notes:

1. If the PORT_TYPE on the PORT keyword is specified as NONSWITCHED and the LINK_STATION_ROLE on the PORT keyword is specified as NEGOTIABLE or PRIMARY, the INB_LINK_ACT_LIM parameter must be specified as 0.
2. If the PORT_TYPE on the PORT keyword is specified as NONSWITCHED and the LINK_STATION_ROLE on the PORT keyword is specified as SECONDARY, the INB_LINK_ACT_LIM parameter must be specified as 0 or 1.
3. If this port is for the AnyNet DLC, the INB_LINK_ACT_LIM parameter must be specified as 0.

This parameter is optional.

OEM_DATA

Required?	No
Keyword Type	Hexadecimal string
Multiples Allowed?	Yes

The OEM_DATA parameter specifies four bytes of data in byte-swapped hexadecimal format for each of the following values:

Link type
This value is always 1 (X'01').

Remote Service Access Point (SAP) or DSAP
This value is always 0 (X'00').

Local Service Access Point (SAP) or SSAP
This value is always 0 (X'00').

XID retry limit (count)
The exchange identification (XID) retry limit is the maximum number of times Communications Server will send XID commands to the remote station to establish a link without receiving an acknowledgment from the remote station in the time set by the XID retry interval. Valid values are 3 to 29 times.

XID retry interval (timer)
The exchange identification (XID) retry interval is the time the link station waits for a reply to an XID command before sending another XID to the remote station. The number of times an XID is sent is based on the XID retry count. Valid values are 1 to 59 seconds.

Liveness mode
This value is always 0 (X'00').

Liveness retry interval (timer)
Liveness retry interval is the time the link station waits before testing whether the link is still active. After the specified amount of time elapses, a TEST command is sent to the remote station to check if the link is still active. Valid values are 1 to 255 seconds.

Data in byte-swapped hexadecimal format is in reverse order of bytes, in case of IPv4 address. For example, the IPv4 address 9.68.43.100 in hexadecimal format is X'09442B64', but in byte-swapped hexadecimal format is X'642B4409'.

Note: Since the format of this data is byte-swapped, it is recommended that the values only be entered using the Node Configuration application.

This parameter is optional.

OEM_LINK_DATA

Required?	No
Keyword Type	Complex
Multiples Allowed?	No, only one for each PORT_OEM_SPECIFIC_DATA parameter

The OEM_LINK_DATA parameter defines the settings for link stations that are dynamically created when an incoming connection request does not match any predefined link station definitions.

The OEM_LINK_DATA parameter is a complex keyword comprised of the OEM_DATA parameter keyword. See the description of the OEM_DATA parameter keyword to define the OEM_LINK_DATA parameter.

OEM_PORT_DATA

The OEM_PORT_DATA parameter keyword applies to Communications Server only.

Required?	No
Keyword Type	Complex
Multiples Allowed?	Yes

```
OEM_PORT_DATA=(
 OEM_DATA=00
)
```

The first byte specifies use of IPv4 host name. Valid values are as follows:

00 An IPv4 hostname is used (default).

01 An IPv4 hostname is not used.

This enables the option to use only IP addresses when establishing connections; this prevents a DNS lookup, which could introduce a short delay on some networks.

OEM_PORT_DEFAULTS

Required?	No
Keyword Type	Complex
Multiples Allowed?	No, only one for each PORT_OEM_SPECIFIC_DATA parameter

The OEM_PORT_DEFAULTS parameter is a complex keyword comprised of the following parameter keywords:

- COST_PER_CONNECT_TIME
- EFFECTIVE_CAPACITY
- INB_LINK_ACT_LIM
- OUT_LINK_ACT_LIM
- PROPAGATION_DELAY
- SECURITY
- TOT_LINK_ACT_LIM

See the descriptions of the parameter keywords to define the OEM_PORT_DEFAULTS parameter.

OUT_LINK_ACT_LIM

Required?	No
Keyword Type	Unsigned number
Multiples Allowed?	No, only one for each PORT keyword

The OUT_LINK_ACT_LIM parameter specifies the number of link stations reserved for outbound activation on this port. The maximum number of inbound link stations that can be active concurrently is the value of the TOT_LINK_ACT_LIM parameter minus the value of the OUT_LINK_ACT_LIM parameter.

Notes:

1. If the PORT_TYPE on the PORT keyword is specified as NONSWITCHED and the LINK_STATION_ROLE on the PORT keyword is specified as NEGOTIABLE, the OUT_LINK_ACT_LIM parameter must be specified as 0.
2. If the LINK_STATION_ROLE on the PORT keyword is specified as PRIMARY, the value of the OUT_LINK_ACT_LIM parameter must be specified as equal to the value of the TOT_LINK_ACT_LIM parameter.
3. If the PORT_TYPE on the PORT keyword is specified as NONSWITCHED and the LINK_STATION_ROLE on the PORT keyword is specified as SECONDARY, the OUT_LINK_ACT_LIM parameter must be specified as 0 or 1.
4. If this port is for the AnyNet DLC, the OUT_LINK_ACT_LIM parameter must be specified as 0.

This parameter is optional.

PROPAGATION_DELAY

Required?	No
Keyword Type	Enumerated
Multiples Allowed?	No, only one for each PORT_OEM_SPECIFIC_DATA parameter

The PROPAGATION_DELAY parameter specifies the time it takes for a signal to travel the length of the link, in microseconds. The value is encoded as a 1-byte floating-point number, represented by the following formula:

```
0.1 mmm * 2 eeeee
```

where the bit representation of the byte is ***eeeeemmm***.

Valid values are:

LAN	Less than 480 microseconds delay.
MAXIMUM	Maximum propagation delay.
MINIMUM	No propagation delay.
PKT_SWITCHED_NET	Between 49 512 and 245 760 microseconds delay.
SATELLITE	Longer than 245 760 microseconds delay.
TELEPHONE	Between 480 and 49 512 microseconds delay.

This parameter is optional.

SECURITY

Required?	No
Keyword Type	Enumerated
Multiples Allowed?	No, only one for each PORT_OEM_SPECIFIC_DATA parameter

The SECURITY parameter specifies the type of security used for transmission of data over the connection. Valid values are:

ENCRYPTED
There is encryption over the line.

GUARDED_CONDUIT
The conduit is protected against physical tapping.

GUARDED_RADIATION
The line is protected against physical and radiation tapping.

NONSECURE
No security exists.

PUBLIC_SWITCHED_NETWORK
Data is transmitted over a public switched network.

SECURE_CONDUIT
The line is a secure conduit that is not guarded.

UNDERGROUND_CABLE
Data is transmitted over a secure underground cable.

This parameter is optional.

TOT_LINK_ACT_LIM

Required?	No
Keyword Type	Unsigned number
Multiples Allowed?	No

The TOT_LINK_ACT_LIM parameter specifies the maximum number of link stations that can be active concurrently. This must be greater than or equal to the sum of the INB_LINK_ACT_LIM and OUT_LINK_ACT_LIM parameter values.

Notes:

1. If the PORT_TYPE on the PORT keyword is specified as NONSWITCHED and the LINK_STATION_ROLE on the PORT keyword is specified as NEGOTIABLE or SECONDARY, the TOT_LINK_ACT_LIM parameter must be specified as 1.
2. If the LINK_STATION_ROLE on the PORT keyword is specified as PRIMARY, the TOT_LINK_ACT_LIM parameter must be specified in the range greater than or equal to 1–256.
3. If this port is for the AnyNet DLC, the TOT_LINK_ACT_LIM parameter must be specified as 65 535.

This parameter is optional.

Appendix C. LAN-Specific Data

If you are using the LAN DLC, use this appendix to define the keyword parameters for the LINK_STATION and PORT keywords.

LINK_STATION Keywords for the LAN DLC

The following section describes the parameter keyword you can specify in the LINK_STATION keyword to use the LAN DLC.

DEST_ADDRESS

Required?	No
Keyword Type	Hexadecimal string
Multiples Allowed?	No, only one for each LINK_STATION keyword

The DEST_ADDRESS parameter specifies a 14 byte hexadecimal string comprised of the 12 byte medium access control (MAC) address concatenated with the two byte service access point (SAP) address.

This parameter is optional.

PORT Keywords for the LAN DLC

The following section describes the parameter keywords you can specify in the PORT keyword to use the LAN DLC.

DLC_DATA

Required?	No
Keyword Type	Hexadecimal string
Multiples Allowed?	No, only one for each PORT keyword

The DLC_DATA parameter specifies a 14 byte hexadecimal string comprised of 12 zeros concatenated with the two byte local service access point (SAP) address specified on the LOCAL_SAP parameter.

This parameter is optional.

DLC_NAME

Required?	Yes
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No, only one for each PORT keyword

The DLC_NAME parameter specifies 1- to 8-byte name of the communication adapter or protocol you are using. For the LAN DLC, DLC_NAME should be specified as ***LAN***.

This parameter is required.

PORT_LAN_SPECIFIC_DATA

Required?	No
Keyword Type	Complex
Multiples Allowed?	No, only one for each PORT keyword

The PORT_LAN_SPECIFIC_DATA parameter is a complex keyword comprised of the following parameter keywords:

- ACK_DELAY
- ACK_TIMEOUT
- ADAPTER_NUMBER
- BUSY_STATE_TIMEOUT
- IDLE_STATE_TIMEOUT
- INB_LINK_ACT_LIM
- LOCAL_SAP
- MAX_RETRY
- OUT_LINK_ACT_LIM
- OUTSTANDING_TRANSMITS
- POLL_TIMEOUT
- POOL_SIZE
- REJECT_RESPONSE_TIMEOUT
- TEST_RETRY_INTERVAL
- TEST_RETRY_LIMIT
- TOT_LINK_ACT_LIM
- XID_RETRY_INTERVAL
- XID_RETRY_LIMIT

See the descriptions of the parameter keywords to define the PORT_LAN_SPECIFIC_DATA parameter.

ACK_DELAY

Required?	Yes
Keyword Type	Unsigned number
Default	100
Range	30–1000
Multiples Allowed?	No, only one for each PORT_LAN_SPECIFIC_DATA parameter

The ACK_DELAY parameter specifies the time that the LAN device withholds a response to a received frame in order to allow more frames to be received and acknowledged with the same Request Ready (RR).

ACK_DELAY is an integer in the range 30–1000 milliseconds.

This parameter is required. The default value is 100 milliseconds.

ACK_TIMEOUT

Required?	Yes
Keyword Type	Unsigned number
Default	10000 
Default	3000 
Range	500–10000
Multiples Allowed?	No, only one for each PORT_LAN_SPECIFIC_DATA parameter

The ACK_TIMEOUT parameter specifies the time that a station should wait for an acknowledgment from a remote station after sending data.

ACK_TIMEOUT is an integer in the range 500–10000 milliseconds. The default is 10000 milliseconds.

ACK_TIMEOUT is an integer in the range 500–10000 milliseconds. The default is 3000 milliseconds.

This parameter is required.

ADAPTER_NUMBER

Required?	Yes
Keyword Type	Unsigned number
Range	0–7 
Range	0–7 or 9 999 
Multiples Allowed?	No, only one for each PORT_LAN_SPECIFIC_DATA parameter

The ADAPTER_NUMBER parameter uniquely identifies this adapter.

ADAPTER_NUMBER is an integer in the range 0–7.

ADAPTER_NUMBER is an integer in the range 0–7 or 9 999. The value 9 999 indicates that the first available LAN adapter will be used.

This parameter is required.

If you are creating a configuration to be exported to another Communications Server system, you can select any adapter number for this definition.

BUSY_STATE_TIMEOUT

Required?	Yes
Keyword Type	Unsigned number
Default	15
Range	10–60
Multiples Allowed?	No, only one for each PORT_LAN_SPECIFIC_DATA parameter

The BUSY_STATE_TIMEOUT parameter specifies the time that the local node waits for the remote node to exit a busy state. A busy state is entered when there is not enough memory to receive the incoming frames; the incoming frames are rejected. When resources are freed, the node exits the busy state.

BUSY_STATE_TIMEOUT is an integer in the range 10–60 seconds.

This parameter is required. The default value is 15.

IDLE_STATE_TIMEOUT

Required?	Yes
Keyword Type	Unsigned number
Default	30
Range	10–120
Multiples Allowed?	No, only one for each PORT_LAN_SPECIFIC_DATA parameter

The IDLE_STATE_TIMEOUT parameter specifies the time that the LAN device driver waits for a frame to be received before declaring the link to be inoperative.

IDLE_STATE_TIMEOUT is an integer in the range 10–120 seconds.

This parameter is required. The default value is 30 seconds.

INB_LINK_ACT_LIM

The INB_LINK_ACT_LIM parameter keyword applies to Communications Server only.

Required?	No
Keyword Type	Unsigned number
Default	128
Range	0–255
Multiples Allowed?	No, only one for each PORT keyword

The INB_LINK_ACT_LIM parameter specifies the number of link stations reserved for inbound activation on this port. The maximum number of outbound link stations that can be active concurrently is the value of the TOT_LINK_ACT_LIM parameter minus the value of the INB_LINK_ACT_LIM parameter.

Note: If the PORT_TYPE on the PORT keyword is specified as NONSWITCHED and the LINK_STATION_ROLE on the PORT keyword is specified as PRIMARY, the INB_LINK_ACT_LIM parameter must be specified as 0.

This parameter is optional.

LOCAL_SAP

Required?	Yes
Keyword Type	Hexadecimal number
Default	X'04'
Range	X'04'–X'FC'
Multiples Allowed?	No, only one for each PORT_LAN_SPECIFIC_DATA parameter

The LOCAL_SAP parameter specifies the local service access point (SAP) number of the local port. The value must be a multiple of 4.

LOCAL_SAP is a hexadecimal value in the range X'04'–X'FC'.

This parameter is required. The default value is X'04'.

MAX_RETRY

Required?	Yes
Keyword Type	Unsigned number
Default	10
Range	1–127
Multiples Allowed?	No, only one for each PORT_LAN_SPECIFIC_DATA parameter

The MAX_RETRY parameter specifies the number of times a frame is resent while waiting for the remote device to respond. When a frame is sent to the remote device with the POLL bit set, the local device waits the amount of time specified for the POLL_TIMEOUT parameter for the remote device to respond. If the timeout expires, the frame is resent and the timeout is reset. This occurs the number of times specified by MAX_RETRY.

This parameter is required. The default value is 10 retries.

OUT_LINK_ACT_LIM

The OUT_LINK_ACT_LIM parameter keyword applies to Communications Server only.

Required?	No
Keyword Type	Unsigned number
Default	127
Range	1–255
Multiples Allowed?	No, only one for each PORT keyword

The OUT_LINK_ACT_LIM parameter specifies the number of link stations reserved for outbound activation on this port. The maximum number of inbound link stations that can be active concurrently is the value of the TOT_LINK_ACT_LIM parameter minus the value of the OUT_LINK_ACT_LIM parameter.

Note: If the LINK_STATION_ROLE on the PORT keyword is specified as PRIMARY, the value of the OUT_LINK_ACT_LIM parameter must be specified as equal to the value of the TOT_LINK_ACT_LIM parameter.

This parameter is optional.

OUTSTANDING_TRANSMITS

Required?	Yes
Keyword Type	Unsigned number
Default	16
Range	2–64
Multiples Allowed?	No, only one for each PORT_LAN_SPECIFIC_DATA parameter

The OUTSTANDING_TRANSMITS parameter specifies the maximum number of frames the LAN device queues to a link station before sending a Receive Not Ready (RNR) to the adjacent link station.

OUTSTANDING_TRANSMITS is an integer in the range 2–64 frames.

This parameter is required. The default value is 16 frames.

POLL_TIMEOUT

Required?	Yes
Keyword Type	Unsigned number
Default	8000 
Default	3000 
Range	500–10000
Multiples Allowed?	No, only one for each PORT_LAN_SPECIFIC_DATA parameter

The POLL_TIMEOUT parameter specifies the time that the LAN device waits for a response to a frame sent with the POLL bit set.

POLL_TIMEOUT is an integer in the range 500–10000 milliseconds.

The default is 8000 milliseconds.

The default is 3000 milliseconds.

This parameter is required.

POOL_SIZE

Required?	Yes
Keyword Type	Unsigned number
Default	32
Range	2–64
Multiples Allowed?	No, only one for each PORT_LAN_SPECIFIC_DATA parameter

The POOL_SIZE parameter specifies the number of buffers that are reserved in memory to hold data received from the host until it can be processed. Each buffer is the size of the PIU.

POOL_SIZE is an integer in the range 2–64 buffers.

This parameter is required. The default value is 32 buffers.

REJECT_RESPONSE_TIMEOUT

Required?	Yes
Keyword Type	Unsigned number
Default	10
Range	5–30
Multiples Allowed?	No, only one for each PORT_LAN_SPECIFIC_DATA parameter

The REJECT_RESPONSE_TIMEOUT parameter specifies the time that the LAN device waits to receive a response to an REJ frame.

REJECT_RESPONSE_TIMEOUT is an integer in the range 5–30 seconds.

This parameter is required. The default value is 10 seconds.

TEST_RETRY_INTERVAL

Required?	Yes	
Keyword Type	Unsigned number	
Default	8	
Range	5–30	
Range	5–60	
Multiples Allowed?	No, only one for each PORT_LAN_SPECIFIC_DATA parameter	

The TEST_RETRY_INTERVAL parameter specifies the time between attempts to find the adjacent link station on the local area network (LAN). The number of attempts made are based on the value specified for the TEST_RETRY_LIMIT parameter.

TEST_RETRY_INTERVAL is an integer in the range 5–30 seconds.

TEST_RETRY_INTERVAL is an integer in the range 5–60 seconds.

This parameter is required. The default value is 8 seconds.

TEST_RETRY_LIMIT

Required?	Yes
Keyword Type	Unsigned number
Default	5
Range	3–30
Multiples Allowed?	No, only one for each PORT_LAN_SPECIFIC_DATA parameter

The TEST_RETRY_LIMIT parameter specifies the maximum number of attempts to find the adjacent link station on the local area network (LAN) without receiving an acknowledgment in the time set by the value for the TEST_RETRY_INTERVAL parameter.

TEST_RETRY_LIMIT is an integer in the range 3–30 attempts.

This parameter is required. The default value is 5 attempts.

TOT_LINK_ACT_LIM

The TOT_LINK_ACT_LIM parameter keyword applies to Communications Server only.

Required?	No
Keyword Type	Unsigned number
Default	255
Range	1–255
Multiples Allowed?	No, only one for each PORT keyword

The TOT_LINK_ACT_LIM parameter specifies the maximum number of link stations that can be active concurrently. This must be greater than or equal to the sum of the INB_LINK_ACT_LIM and OUT_LINK_ACT_LIM parameter values.

Note: If the PORT_TYPE on the PORT keyword is specified as NONSWITCHED and the LINK_STATION_ROLE on the PORT keyword is specified as NEGOTIABLE or SECONDARY, the TOT_LINK_ACT_LIM parameter must be specified in the range greater than or equal to 1–255.

This parameter is optional.

XID_RETRY_INTERVAL

Required?	Yes
Keyword Type	Unsigned number
Default	8
Range	5–60
Multiples Allowed?	No, only one for each PORT_LAN_SPECIFIC_DATA parameter

The XID_RETRY_INTERVAL parameter specifies the time the link station waits for a reply to an XID command before sending another XID to the remote station. The number of times an XID is sent is based on the value specified on the XID_RETRY_LIMIT parameter.

XID_RETRY_INTERVAL is an integer in the range 5–60 seconds.

This parameter is required. The default value is 8 seconds.

XID_RETRY_LIMIT

Required?	Yes
Keyword Type	Unsigned number
Default	5
Range	3–30
Multiples Allowed?	No, only one for each PORT_LAN_SPECIFIC_DATA parameter

The XID_RETRY_LIMIT parameter specifies the maximum number of times Communications Server or Personal Communications sends XID commands to the remote station to establish a link, without receiving an acknowledgment from the remote station in the time specified for the XID_RETRY_INTERVAL parameter.

XID_RETRY_LIMIT is an integer in the range 3–30 times.

This parameter is required. The default value is 5 times.

Appendix D. OEM-Specific Data

If you are using an OEM DLC, use this appendix to define the keyword parameters for the LINK_STATION and PORT keywords.

LINK_STATION Keywords for an OEM DLC

The following section describes the parameter keywords you can specify in the LINK_STATION keyword to use an OEM DLC.

DEST_ADDRESS

Required?	No
Keyword Type	Hexadecimal string
Field Length	0–34
Multiples Allowed?	No, only one for each LINK_STATION keyword

The DEST_ADDRESS parameter specifies the necessary addressing information to contact a remote node over this DLC. The value is a 0- to 34-byte hexadecimal character string. This addressing information is manufacturer-specific.

This parameter is optional.

LINK_STATION_OEM_SPECIFIC_DATA

Required?	No
Keyword Type	Complex
Multiples Allowed?	No, only one for each LINK_STATION keyword

The LINK_STATION_OEM_SPECIFIC_DATA parameter is a complex keyword comprised of the OEM_LINK_DATA parameter keyword.

See the description of OEM_DATA to define the LINK_STATION_OEM_SPECIFIC_DATA parameter.

Considerations

The LINK_STATION_OEM_SPECIFIC_DATA parameter defines a link station. Refer to the following example from a .ACG configuration file:

```
LINK_STATION_OEM_SPECIFIC_DATA=(
 OEM_LINK_DATA=(
  OEM_DATA=0100000004000000040000000300000000F00000001000000
  OEM_DATA=0F000000DE01A8C0
 )
)
```

Take the OEM_DATA fields and concatenate them in order, as follows:

```
0100000004000000040000000300000000F00000001000000000F000000DE01A8C0
```

Then break that into 4-byte words:

```
01000000
04000000
04000000
03000000
0F000000
01000000
0F000000
DE01A8C0
```

Reverse the order of the bytes, as follows:

```
00000001
00000004
00000004
00000003
0000000F
00000001
0000000F
C0A801DE
```

The fields are as follows:

00000001: Link Type—only value allowed
00000004: DSAP (Remote SAP)
00000004: SSAP (Local SAP)
00000003: XID retry count (Connect retry count)
0000000F: XID retry timer (Connect timer)
00000001: Reserved
0000000A: Liveness timer (Inactivity timer)
C0A801DE: IP address (Remote IP address)

Notes:

1. All values are in hexadecimal notation.
2. The names in parentheses are the parameter labels in the **EEDLC Connection** tab of the EEDLC link station definition in the SNA Node Configuration tool.
3. Other than the IP address, all the values shown are the default values. There is no default IP address.
4. When you change one of these values in the Node Configuration tool and save to the .ACG file, the relevant byte of OEM_DATA is changed in the configuration file.

For the IP address, convert each byte to decimal to obtain the IP address. The above example converts to `192.168.1.222`, as follows:

C0: 192
A8: 168
01: 1
DE: 222

If you enter a host name instead of an IP address, the IP address field becomes the length of the host name, and the host name (in ASCII hex codes) is appended, with a trailing 00 byte to mark the end. The bytes of the host name are not swapped. See the following example:

```
LINK_STATION_OEM_SPECIFIC_DATA=(
 OEM_LINK_DATA=(
  OEM_DATA=0100000004000000040000000300000000F00000001000000
```

```
  OEM_DATA=0A000000150000006C6F63616C686F73742E6C6F63616C64
  OEM_DATA=6F6D61696E00
 )
)
```

Concatenation produces the following:

```
010000000400000004000000030000000F000000010000000A000000
150000006C6F63616C686F73742E6C6F63616C646F6D61696E00
```

Breaking it up into words and swapping bytes (except the host name) produces the following:

00000001: Link Type—only value allowed
00000004: DSAP (Remote SAP)
00000004: SSAP (Local SAP)
00000003: XID retry count (Connect retry count)
0000000F: XID retry timer (Connect timer)
00000001: Reserved
0000000A: Liveness timer (Inactivity timer).
The range of valid values is 1–255 seconds.
6C6F63616C686F73742E6C6F63616C646F6D61696E:
Host name (localhost.localdomain)
00: End of host name marker

OEM_DATA

Required?	No
Keyword Type	Hexadecimal string
Multiples Allowed?	Yes

The OEM_DATA parameter specifies binary information specific for the OEM card manufacturer's use only. Communications Server or Personal Communications supports the use of OEM communications devices where the OEM manufacturer provides its own configuration panels. More than one OEM_DATA parameter might appear in the ASCII configuration file.

Note: Since the format of this binary data is very specific to the OEM device, you should not attempt to enter this value directly into the ACG file. The value should only be entered using the configuration application provided by the OEM manufacturer.

This parameter is optional.

OEM_LINK_DATA

Required?	No
Keyword Type	Complex
Multiples Allowed?	No, only one for each LINK_STATION_OEM_SPECIFIC DATA parameter

The OEM_LINK_DATA parameter is a complex keyword comprised of the OEM_DATA parameter keyword.

See the description of the OEM_DATA parameter keyword to define the OEM_LINK_DATA parameter.

PORT Keywords for an OEM DLC

The following section describes the parameter keywords you can specify in the PORT keyword to use an OEM DLC.

DLC_DATA

Required?	No
Keyword Type	Hexadecimal string
Field Length	1–32
Multiples Allowed?	No, only one for each PORT keyword

The DLC_DATA parameter specifies information that is manufacturer-specific. The value is a 1- to 32-byte hexadecimal character string.

This parameter is optional.

DLC_NAME

Required?	Yes
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No, only one each PORT keyword

The DLC_NAME parameter specifies the 1- to 8-byte character name of the communication adapter or protocol you are using.

For OEM devices, DLC_NAME is manufacturer-specific.

This parameter is required.

PORT_OEM_SPECIFIC_DATA

Required?	No
Keyword Type	Complex
Multiples Allowed?	No, only one for each PORT keyword

The PORT_OEM_SPECIFIC_DATA parameter is a complex keyword comprised of the following parameter keywords:

- OEM_LINK_DATA
- OEM_PORT_DATA
- OEM_PORT_DEFAULTS

See the descriptions of the parameter keywords to define the PORT_OEM_SPECIFIC_DATA parameter.

COST_PER_CONNECT_TIME

Required?	No
Keyword Type	Unsigned number
Range	0–255
Multiples Allowed?	No, only one for each PORT keyword

The COST_PER_CONNECT_TIME parameter specifies the cost per connect time.

The value is an integer in the range 0–255.

This parameter is optional.

EFFECTIVE_CAPACITY

Required?	No
Keyword Type	Unsigned number
Multiples Allowed?	No, only one for each PORT keyword

The EFFECTIVE_CAPACITY parameter specifies the actual units of effective capacity. The value is encoded as a 1-byte floating-point number, represented by the following formula:

```
0.1 mmm * 2 eeeee
```

where the bit representation of the byte is ***eeeeemmm***. Each unit of effective capacity is equal to 300 bits per second.

This parameter is optional.

INB_LINK_ACT_LIM

Required?	No
Keyword Type	Unsigned number
Multiples Allowed?	No, only one for each PORT keyword

The INB_LINK_ACT_LIM parameter specifies the number of link stations reserved for inbound activation on this port. The maximum number of outbound link stations that can be active concurrently is the value of the TOT_LINK_ACT_LIM parameter minus the value of the INB_LINK_ACT_LIM parameter.

Notes:

1. If the PORT_TYPE on the PORT keyword is specified as NONSWITCHED and the LINK_STATION_ROLE on the PORT keyword is specified as NEGOTIABLE or PRIMARY, the INB_LINK_ACT_LIM parameter must be specified as 0.
2. If the PORT_TYPE on the PORT keyword is specified as NONSWITCHED and the LINK_STATION_ROLE on the PORT keyword is specified as SECONDARY, the INB_LINK_ACT_LIM parameter must be specified as 0 or 1.
3. If this port is for the AnyNet DLC, the INB_LINK_ACT_LIM parameter must be specified as 0.

This parameter is optional.

OEM_DATA

Required?	No
Keyword Type	Hexadecimal string
Multiples Allowed?	Yes

The OEM_DATA parameter specifies binary information specific for the OEM card manufacturer's use only. Communications Server or Personal Communications supports the use of OEM communications devices where the OEM manufacturer provides its own configuration panels. More than one OEM_DATA parameter might appear in the ASCII configuration file.

Note: Since the format of this binary data is very specific to the OEM device, you should not attempt to enter this value directly into the ACG file. The value should only be entered using the configuration application provided by the OEM manufacturer.

This parameter is optional.

OEM_LINK_DATA

Required?	No
Keyword Type	Complex
Multiples Allowed?	No, only one for each PORT_OEM_SPECIFIC_DATA parameter

The OEM_LINK_DATA parameter defines the settings for link stations that are dynamically created when an incoming connection request does not match any predefined link station definitions.

The OEM_LINK_DATA parameter is a complex keyword comprised of the OEM_DATA parameter keyword. See the description of the OEM_DATA parameter keyword to define the OEM_LINK_DATA parameter.

OEM_PORT_DATA

The OEM_PORT_DATA parameter keyword applies to Communications Server only.

Required?	No
Keyword Type	Complex
Multiples Allowed?	Yes

```
OEM_PORT_DATA=(
 OEM_DATA=00
)
```

The first byte specifies use of IPv4 host name. Valid values are as follows:

00 An IPv4 hostname is used (default).

01 An IPv4 hostname is not used.

This enables the option to use only IP addresses when establishing connections; this prevents a DNS lookup, which could introduce a short delay on some networks.

OEM_PORT_DEFAULTS

Required?	No
Keyword Type	Complex
Multiples Allowed?	No, only one for each PORT_OEM_SPECIFIC_DATA parameter

The OEM_PORT_DEFAULTS parameter is a complex keyword comprised of the following parameter keywords:

- COST_PER_CONNECT_TIME
- EFFECTIVE_CAPACITY
- INB_LINK_ACT_LIM
- OUT_LINK_ACT_LIM
- PROPAGATION_DELAY
- SECURITY
- TOT_LINK_ACT_LIM

See the descriptions of the parameter keywords to define the OEM_PORT_DEFAULTS parameter.

OUT_LINK_ACT_LIM

Required?	No
Keyword Type	Unsigned number
Multiples Allowed?	No, only one for each PORT keyword

The OUT_LINK_ACT_LIM parameter specifies the number of link stations reserved for outbound activation on this port. The maximum number of inbound link stations that can be active concurrently is the value of the TOT_LINK_ACT_LIM parameter minus the value of the OUT_LINK_ACT_LIM parameter.

Notes:

1. If the PORT_TYPE on the PORT keyword is specified as NONSWITCHED and the LINK_STATION_ROLE on the PORT keyword is specified as NEGOTIABLE, the OUT_LINK_ACT_LIM parameter must be specified as 0.
2. If the LINK_STATION_ROLE on the PORT keyword is specified as PRIMARY, the value of the OUT_LINK_ACT_LIM parameter must be specified as equal to the value of the TOT_LINK_ACT_LIM parameter.
3. If the PORT_TYPE on the PORT keyword is specified as NONSWITCHED and the LINK_STATION_ROLE on the PORT keyword is specified as SECONDARY, the OUT_LINK_ACT_LIM parameter must be specified as 0 or 1.
4. If this port is for the AnyNet DLC, the OUT_LINK_ACT_LIM parameter must be specified as 0.

This parameter is optional.

PROPAGATION_DELAY

Required?	No
Keyword Type	Enumerated
Multiples Allowed?	No, only one for each PORT keyword

The PROPAGATION_DELAY parameter specifies the time it takes for a signal to travel the length of the link, in microseconds. The value is encoded as a 1-byte floating-point number, represented by the following formula:

```
0.1 mmm * 2 eeeee
```

where the bit representation of the byte is ***eeeeemmm***.

Valid values are:

LAN	Less than 480 microseconds delay.
MAXIMUM	Maximum propagation delay.
MINIMUM	No propagation delay.
PKT_SWITCHED_NET	Between 49 512 and 245 760 microseconds delay.
SATELLITE	Longer than 245 760 microseconds delay.
TELEPHONE	Between 480 and 49 512 microseconds delay.

This parameter is optional.

SECURITY

Required?	No
Keyword Type	Enumerated
Multiples Allowed?	No, only one for each PORT keyword

The SECURITY parameter specifies the type of security used for transmission of data over the connection. Valid values are:

ENCRYPTED
There is encryption over the line.

GUARDED_CONDUIT
The conduit is protected against physical tapping.

GUARDED_RADIATION
The line is protected against physical and radiation tapping.

NONSECURE
No security exists.

PUBLIC_SWITCHED_NETWORK
Data is transmitted over a public switched network.

SECURE_CONDUIT
The line is a secure conduit that is not guarded.

UNDERGROUND_CABLE
Data is transmitted over a secure underground cable.

This parameter is optional.

TOT_LINK_ACT_LIM

Required?	No
Keyword Type	Unsigned number
Multiples Allowed?	No, only one for each PORT keyword

The TOT_LINK_ACT_LIM parameter specifies the maximum number of link stations that can be active concurrently. This must be greater than or equal to the sum of the INB_LINK_ACT_LIM and OUT_LINK_ACT_LIM parameter values.

Notes:

1. If the PORT_TYPE on the PORT keyword is specified as NONSWITCHED and the LINK_STATION_ROLE on the PORT keyword is specified as NEGOTIABLE or SECONDARY, the TOT_LINK_ACT_LIM parameter must be specified as 1.
2. If the LINK_STATION_ROLE on the PORT keyword is specified as PRIMARY, the TOT_LINK_ACT_LIM parameter must be specified in the range greater than or equal to 1–256.
3. If this port is for the AnyNet DLC, the TOT_LINK_ACT_LIM parameter must be specified as 65 535.

This parameter is optional.

Appendix E. SDLC-Specific Data

If you are using the SDLC DLC, use this appendix to define the keyword parameters for the LINK_STATION and PORT keywords.

LINK_STATION Keywords for the SDLC DLC

The following section describes the parameter keywords you can specify in the LINK_STATION keyword to use the SDLC DLC.

DEST_ADDRESS

Required?	No
Keyword Type	Hexadecimal string
Multiples Allowed?	No, only one for each LINK_STATION keyword

The DEST_ADDRESS parameter specifies the link station address.

The value is a 2 byte hexadecimal character string.

This parameter is optional.

LINK_STATION_SDLC_SPECIFIC_DATA

Required?	No
Keyword Type	Complex
Multiples Allowed?	No, only one for each LINK_STATION keyword

The LINK_STATION_SDLC_SPECIFIC_DATA parameter is a complex keyword comprised of the following parameter keywords:

- BACKUP_PHONE_NUMBER
- CONNECT_RETRY_COUNT
- CONNECT_TIMER
- FRAMING_STANDARD
- INACTIVITY_TIMER
- PORT_SPEED
- PRIMARY_PHONE_NUMBER
- RESPONSE_RETRY_COUNT
- RESPONSE_TIMER
- USE_NRZI_ENCODING

See the descriptions of the parameter keywords to define the LINK_STATION_SDLC_SPECIFIC_DATA parameter.

BACKUP_PHONE_NUMBER

Required?	No
Keyword Type	String
Field Length	1–62
Multiples Allowed?	No, only one for each LINK_STATION_SDLC_SPECIFIC_DATA parameter

The BACKUP_PHONE_NUMBER parameter specifies the 1- to 62-character phone number used as the backup phone number.

This parameter is optional.

CONNECT_RETRY_COUNT

Required?	No
Keyword Type	Unsigned number
Default	10
Range	0–127
Multiples Allowed?	No, only one for each LINK_STATION_SDLC_SPECIFIC_DATA parameter

The CONNECT_RETRY_COUNT parameter is used with CONNECT_TIMER parameter to allow enough time for the receipt of an exchange identifier (XID) response from the secondary link station. This is needed if the local link station is specified or negotiated as primary. The link activation fails if no XID response is received from the secondary station for the interval (CONNECT_TIMER value times CONNECT_RETRY_COUNT value).

The value is an integer in the range 0–127 retries.

This parameter is optional. The default is 10.

CONNECT_TIMER

Required?	No
Keyword Type	Unsigned number
Default	2
Range	1–30
Multiples Allowed?	No, only one for each LINK_STATION_SDLC_SPECIFIC_DATA parameter

The CONNECT_TIMER parameter is used with the CONNECT_RETRY_COUNT parameter to allow enough time for the receipt of an exchange identifier (XID) response from the secondary link station. This is needed if the local link station is specified or negotiated as primary. The link activation fails if no XID response is received from the secondary station for the interval (CONNECT_TIMER value times CONNECT_RETRY_COUNT value).

The value is an integer in the range 1–30 seconds.

This parameter is optional. The default is 2 seconds.

FRAMING_STANDARD

Required?	No
Keyword Type	Enumerated
Default	SNA_OVER_ASYNC
Multiples Allowed?	No, only one for each LINK_STATION_SDLC_SPECIFIC_DATA parameter

The FRAMING_STANDARD parameter specifies the framing options that support the medium access control (MAC) function for COM port devices. The type of standards that can be specified are:

ADVANTIS	SDLC over asynchronous communications when connecting with Advantis (IIN).
HAYES AUTOSYNC	SDLC over asynchronous communications via a Hayes AutoSync modem
SNA_OVER_ASYNC	Synchronous data link control (SDLC) over asynchronous communications, as in the International Organization for Standardization (ISO) Standard 3309.

This parameter is optional. The default is SNA_OVER_ASYNC

INACTIVITY_TIMER

Required?	No
Keyword Type	Unsigned number
Default	80
Range	40–160
Multiples Allowed?	No, only one for each LINK_STATION_SDLC_SPECIFIC_DATA parameter

The INACTIVITY_TIMER parameter specifies the amount of time before the link is disconnected when the secondary link station has not received a poll. The inactivity timer is only used when the link station role is specified or negotiated as primary.

The value is an integer in the range 40–160 seconds.

This parameter is optional. The default is 80 seconds.

PORT_SPEED

Required?	No
Keyword Type	Unsigned number
Default	57 600
Range	2 400–115 200
Multiples Allowed?	No, only one for each LINK_STATION_SDLC_SPECIFIC_DATA parameter

The PORT_SPEED parameter specifies the serial port speed supported by the device used for the connection.

The value is an integer in the range 2 400–115 200 bits per second (bps).

This parameter is optional. The default is 57 600.

If the highest carrier speed of your modem is 14 400 bps, specify a port speed of 57 600 bps or lower. If the highest carrier speed is 28 800 bps or higher, specify a port speed of 115 200 to use the maximum compression capabilities for the modem. A port speed of 115 200 bps is recommended for systems with Pentium® processors.

PRIMARY_PHONE_NUMBER

Required?	No
Keyword Type	String
Field Length	1–62
Multiples Allowed?	No, only one for each LINK_STATION_SDLC_SPECIFIC_DATA parameter

The PRIMARY_PHONE_NUMBER parameter specifies the 1- to 62-character phone number used as the primary phone number.

This parameter is optional.

RESPONSE_RETRY_COUNT

Required?	No
Keyword Type	Unsigned number
Default	10
Range	1–127
Multiples Allowed?	No, only one for each LINK_STATION_SDLC_SPECIFIC_DATA parameter

The RESPONSE_RETRY_COUNT parameter is used with the RESPONSE_TIMER parameter to help maintain the link connection to the secondary link station. The retry count is only used when the link station role is specified or negotiated as

primary. The link is disconnected when no response is received from the secondary station for the interval (RESPONSE_TIMER parameter value times RESPONSE_RETRY_COUNT value).

The value is an integer in the range 1–127 retries.

This parameter is optional. The default is 10.

RESPONSE_TIMER

Required?	No
Keyword Type	Unsigned number
Default	4
Range	2–20
Multiples Allowed?	No, only one for each LINK_STATION_SDLC_SPECIFIC_DATA parameter

The RESPONSE_TIMER parameter is used with the RESPONSE_RETRY_COUNT parameter to help maintain the link connection to the secondary link station. The response timer is only used when the link station role is specified or negotiated as primary. The link is disconnected if no response is received from the secondary station for the interval (RESPONSE_TIMER value times RESPONSE_RETRY_COUNT value).

The value is an integer in the range 2–20 seconds.

This parameter is optional. The default is 4 seconds.

USE_NRZI_ENCODING

Required?	No
Keyword Type	Boolean
Default	0
Multiples Allowed?	No, only one for each LINK_STATION_SDLC_SPECIFIC_DATA parameter

The USE_NRZI_ENCODING specifies how synchronous data sent to the modem is encoded. Valid values are:

0 Use non-return-to-zero (NRZ) encoding.

1 Use non-return-to-zero inverted (NRZI) encoding.

This parameter is optional. The default is 0.

PORT Keywords for the SDLC DLC

The following section describes the parameter keywords you can specify in the PORT keyword to use the SDLC DLC.

DLC_DATA

Required?	No
Keyword Type	Hexadecimal string
Multiples Allowed?	No, only one for each PORT_SDLC_SPECIFIC_DATA parameter

The DLC_DATA parameter specifies the link station address.

The value is a 2 byte hexadecimal character string in the range of X'00'–X'FF'.

This parameter is optional. The default address is X'C1'.

If the LINK_STATION_ROLE parameter on the PORT or LINK_STATION keyword is specified as PRIMARY, this value is forced to X'FF'.

If the LINK_STATION_ROLE parameter on the PORT or LINK_STATION keyword is specified as SECONDARY, this value is forced to X'00'.

DLC_NAME

Required?	Yes
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No, only one for each PORT keyword

The DLC_NAME parameter specifies the 1- to 8-byte name of the communication adapter or protocol you are using. For the SDLC DLC, DLC_NAME should be specified as **SDLC**.

This parameter is required.

PORT_SDLC_SPECIFIC_DATA

Required?	No
Keyword Type	Complex
Multiples Allowed?	No, only one for each PORT keyword

The PORT_SDLC_SPECIFIC_DATA parameter is a complex keyword comprised of the following parameter keywords:

- ACCEPT_INCOMING_CALLS
- CONNECT_RETRY_COUNT
- CONNECT_TIMER
- DUMB_CARD_INTERFACE
- FRAMING_STANDARD
- FULL_DUPLEX_SUPPORT
- INACTIVITY_TIMER
- IRQ_LEVEL
- MODEM_NAME

- MULTIDROP_PRIMARY_SERVER
- OEM_DATA
- OEM_PORT_DATA
- PORT_SPEED
- RESPONSE_RETRY_COUNT
- RESPONSE_TIMER
- SHARED_RAM_ADDRESS
- STATION_POLL_COUNT
- TRANSMISSION_FLAGS
- USE_CONSTANT_RTS
- USE_NRZI_ENCODING

See the descriptions of the parameter keywords to define the PORT_SDLC_SPECIFIC_DATA parameter.

ACCEPT_INCOMING_CALLS

Required?	Yes
Keyword Type	Boolean
Default	0
Multiples Allowed?	No, only one for each PORT_SDLC_SPECIFIC_DATA parameter

The ACCEPT_INCOMING_CALLS parameter specifies whether Communications Server or Personal Communications is able to accept calls from other computers. Valid values are:

0 The product is not able to accept calls from other computers.

1 The product is able to accept calls from other computers.

This parameter is required. The default is 0.

If you allow the product to accept incoming calls through a COM port, it has exclusive use of the port when you start the configuration. If you want another program to use this port, you must stop Communications Server or Personal Communications to stop the COM port device. (Merely closing the session using the port is not enough, because that does not stop the COM port devices.)

CONNECT_RETRY_COUNT

Required?	Yes
Keyword Type	Unsigned number
Default	10
Range	0–127
Multiples Allowed?	No, only one for each PORT_SDLC_SPECIFIC_DATA parameter

The CONNECT_RETRY_COUNT parameter is used with CONNECT_TIMER parameter to allow enough time for the receipt of an exchange identifier (XID) response from the secondary link station. This is needed if the local link station is specified or negotiated as primary. The link activation fails if no XID response is

received from the secondary station for the interval (CONNECT_TIMER value times CONNECT_RETRY_COUNT value).

The value is an integer in the range 0–127 retries.

This parameter is required. The default is 10.

CONNECT_TIMER

Required?	Yes
Keyword Type	Unsigned number
Default	2
Range	1–30
Multiples Allowed?	No, only one for each PORT_SDLC_SPECIFIC_DATA parameter

The CONNECT_TIMER parameter is used with the CONNECT_RETRY_COUNT parameter to allow enough time for the receipt of an exchange identifier (XID) response from the secondary link station. This is needed if the local link station is specified or negotiated as primary. The link activation fails if no XID response is received from the secondary station for the interval (CONNECT_TIMER value times CONNECT_RETRY_COUNT value).

The value is an integer in the range 1–30 seconds.

This parameter is optional. The default is 2 seconds.

DUMB_CARD_INTERFACE

The DUMB_CARD_INTERFACE parameter keyword applies to Communications Server only.

Required?	Yes
Keyword Type	Boolean
Default	0
Multiples Allowed?	No, only one for each PORT_SDLC_SPECIFIC_DATA parameter

The DUMB_CARD_INTERFACE parameter specifies whether the OEM communications device uses the Microsoft® SNA Server synchronous dumb card interface. Communications Server supports the use of OEM communications devices where the OEM manufacturer provides its own configuration panels. Valid values are:

0 The OEM communications device does not use the Microsoft SNA Server synchronous dumb card interface. The device uses the shallow interface provided by Communications Server.

1 The OEM communications device uses the Microsoft SNA Server synchronous dumb card interface.

Note: This value should only be entered using the configuration application provided by the OEM manufacturer.

This parameter is required. The default is 0.

FRAMING_STANDARD

Required?	Yes
Keyword Type	Enumerated
Default	SNA_OVER_ASYNC
Multiples Allowed?	No, only one for each PORT_SDLC_SPECIFIC_DATA parameter

The FRAMING_STANDARD parameter specifies the framing options that support the medium access control (MAC) function for COM port devices. The type of standards that can be specified are:

ADVANTIS SDLC over asynchronous communications when connecting with Advantis (IIN).

HAYES AUTOSYNC SDLC over asynchronous communications via a Hayes AutoSync modem

SNA_OVER_ASYNC Synchronous data link control (SDLC) over asynchronous communications, as in the International Organization for Standardization (ISO) Standard 3309.

This parameter is required. The default is SNA_OVER_ASYNC

FULL_DUPLEX_SUPPORT

Required?	Yes
Keyword Type	Boolean
Default	0
Multiples Allowed?	No, only one for each PORT_SDLC_SPECIFIC_DATA parameter

The FULL_DUPLEX_SUPPORT parameter specifies whether this transaction program supports full duplex conversations. Valid values are:

0 The transaction program does not support full duplex conversations.

1 The transaction program supports full duplex conversations.

This parameter is required. The default is 0.

Full duplex conversations refer to the ability of the transaction program to read data from and write data to other transaction programs simultaneously. Half duplex conversations require a change of direction before a transaction program may begin writing data after reading data, or vice versa. If you specify a 1, the transaction program supports either full duplex or half duplex conversations. If you specify a 0, the transaction program may only support half duplex conversations.

INACTIVITY_TIMER

Required?	Yes
Keyword Type	Unsigned number
Default	80
Range	40–160
Multiples Allowed?	No, only one for each PORT_SDLC_SPECIFIC_DATA parameter

The INACTIVITY_TIMER parameter specifies the amount of time before the link is disconnected when the secondary link station has not received a poll. The inactivity timer is only used when the link station role is specified or negotiated as primary.

The value is an integer in the range 40–160 seconds.

This parameter is required. The default is 80 seconds.

IRQ_LEVEL

Required?	Yes
Keyword Type	Unsigned number
Default	3
Range	2–15
Multiples Allowed?	No, only one for each PORT_SDLC_SPECIFIC_DATA parameter

The IRQ_LEVEL parameter (interrupt request level) specifies the IRQ level used to send or receive data frames to and from the device. Select a value that matches the installed adapter.

The value is an integer in the range 2–15.

Select a value that matches the IRQ level value specified on the installed adapter card.

This parameter is required. The default is 3.

This option only applies to industry standard architecture (ISA) adapters. For the synchronous data link control (SDLC) ISA adapters, the value must be 3. For the Multiprotocol adapter (MPA) for ISA adapters, the value can be set to 3 or 4.

MODEM_NAME

Required?	No
Keyword Type	String
Field Length	1–256
Multiples Allowed?	No, only one for each PORT_SDLC_SPECIFIC_DATA parameter

The MODEM_NAME parameter specifies the 1- to 256-character name of the modem as defined to the operating system. A PORT keyword passes this name to the communications port device driver, which can use this name to open the modem device and initialize it.

Note: Since the Node Configuration application produces a list of available modems from which to choose, you should not attempt to enter this value directly into the ACG file.

The value is a 1–256 character string.

This parameter is optional.

MULTIDROP_PRIMARY_SERVER

Required?	Yes
Keyword Type	Boolean
Default	0
Multiples Allowed?	No, only one for each PORT_SDLC_SPECIFIC_DATA parameter

The MULTIDROP_PRIMARY_SERVER parameter specifies whether this server is a multidrop primary server. Valid values are:

0 This server is not a multidrop primary server.

1 This server is a multidrop primary server.

This parameter is required. The default is 0.

A multidrop primary server allows an SNA node (Gateway, Network and HPR node) to support multiple SDLC secondary PUs with one physical leased line. This support helps to minimize operating costs by reducing the number of lines and hardware required to connect to downstream PUs. The support requires the use of multidrop modems with a configuration of one master and multiple slaves. The primary must be set to use constant RTS while the secondaries must use switched RTS. A modified round robin polling algorithm is used. The polling algorithm consists of an active list (stations which responded to a poll) and an inactive list. Stations from the active list are polled round robin a user-specified number of times before a station is polled from the inactive list. Stations are rotated on the inactive list after each unsuccessful poll.

OEM_DATA

The OEM_DATA parameter keyword applies to Communications Server only.

Required?	No
Keyword Type	Hexadecimal string
Multiples Allowed?	Yes

The OEM_DATA parameter specifies binary information specific for the OEM card manufacturer's use only. Communications Server supports the use of OEM

communications devices where the OEM manufacturer provides its own configuration panels. More than one OEM_DATA parameter might appear in the ASCII configuration file.

Note: Since the format of this binary data is very specific to the OEM device, you should not attempt to enter this value directly into the ACG file. The value should only be entered using the configuration application provided by the OEM manufacturer.

This parameter is optional.

OEM_PORT_DATA

The OEM_PORT_DATA parameter keyword applies to Communications Server only.

Required?	No
Keyword Type	Complex
Multiples Allowed?	Yes

The OEM_PORT_DATA parameter is a complex keyword comprised of the OEM_DATA parameter keyword.

See the description of the OEM_DATA parameter keyword to define the OEM_PORT_DATA parameter.

PORT_SPEED

Required?	Yes
Keyword Type	Unsigned number
Default	57 600
Range	2 400–115 200
Multiples Allowed?	No, only one for each PORT_SDLC_SPECIFIC_DATA parameter

The PORT_SPEED parameter specifies the serial port speed supported by the device used for the connection.

The value is an integer in the range 2 400–115 200 bits per second (bps).

This parameter is required. The default is 57 600.

If the highest carrier speed of your modem is 14 400 bps, specify a port speed of 57 600 bps or lower. If the highest carrier speed is 28 800 bps or higher, specify a port speed of 115 200 to use the maximum compression capabilities for the modem. A port speed of 115 200 bps is recommended for systems with Pentium processors.

RESPONSE_RETRY_COUNT

Required?	Yes
Keyword Type	Unsigned number
Default	10
Range	1–127
Multiples Allowed?	No, only one for each PORT_SDLC_SPECIFIC_DATA parameter

The RESPONSE_RETRY_COUNT parameter is used with the RESPONSE_TIMER parameter to help maintain the link connection to the secondary link station. The retry count is only used when the link station role is specified or negotiated as primary. The link is disconnected when no response is received from the secondary station for the interval (RESPONSE_TIMER parameter value times RESPONSE_RETRY_COUNT value).

The value is an integer in the range 1–127 retries.

This parameter is required. The default is 10.

RESPONSE_TIMER

Required?	Yes
Keyword Type	Unsigned number
Default	4
Range	2–20
Multiples Allowed?	No, only one for each PORT_SDLC_SPECIFIC_DATA parameter

The RESPONSE_TIMER parameter is used with the RESPONSE_RETRY_COUNT parameter to help maintain the link connection to the secondary link station. The response timer is only used when the link station role is specified or negotiated as primary. The link is disconnected if no response is received from the secondary station for the interval (RESPONSE_TIMER value times RESPONSE_RETRY_COUNT value).

The value is an integer in the range 2–20 seconds.

This parameter is required. The default is 4 seconds.

SHARED_RAM_ADDRESS

Required?	No
Keyword Type	Hexadecimal number
Range	X'C0000'–X'FC000'
Multiples Allowed?	No, only one for each PORT_SDLC_SPECIFIC_DATA parameter

The SHARED_RAM_ADDRESS parameter specifies the address in memory at which the 16K buffer used by the adapter starts.

The value is a hexadecimal character string in the range X'C0000'–X'FC000'.

This parameter is optional.

If you are using an industry standard architecture (ISA) adapter, you must specify the shared RAM address. If you are using an IBM Micro Channel® adapter, the shared RAM address is determined automatically.

STATION_POLL_COUNT

Required?	No
Keyword Type	Unsigned number
Default	1
Range	1–10
Multiples Allowed?	No, only one for each PORT_SDLC_SPECIFIC_DATA parameter

The STATION_POLL_COUNT parameter specifies the number of times an active station is polled in the context of the polling list before a station from the inactive list is polled.

The value is an integer in the range 1–10 polls.

This parameter is optional. The default is 1 poll.

TRANSMISSION_FLAGS

Required?	Yes
Keyword Type	Unsigned number
Default	1
Range	1–10
Multiples Allowed?	No, only one for each PORT_SDLC_SPECIFIC_DATA parameter

The TRANSMISSION_FLAGS parameter specifies the minimum number of flags inserted to produce idle time between transmitted frames.

A flag is the time it takes to send one byte, and represents a delay between frames. The values are 1, 3, 4, 6, and 10. Change this parameter to a value other than 1 if the device at the other end of the communication link can not receive frames with only one intervening flag.

This parameter is required. The default is 1 flag.

USE_CONSTANT_RTS

Required?	Yes
Keyword Type	Boolean
Default	1
Multiples Allowed?	No, only one for each PORT_SDLC_SPECIFIC_DATA parameter

The USE_CONSTANT_RTS (request-to-send) parameter specifies whether flow control is used between an adapter and the modem. Valid values are:

0 The adapter waits for the CTS (clear-to-send) signal before sending data to the modem.

1 There is no flow control to the modem.

This parameter is required. The default is 1.

By default, for a synchronous data link control (SDLC) connection, constant RTS is specified. When this local station is a secondary link station on a multidrop connection, constant RTS should not be specified.

USE_NRZI_ENCODING

Required?	Yes
Keyword Type	Boolean
Default	0
Multiples Allowed?	No, only one for each PORT_SDLC_SPECIFIC_DATA parameter

The USE_NRZI_ENCODING specifies how synchronous data sent to the modem is encoded. Valid values are:

0 Use non-return-to-zero (NRZ) encoding.

1 Use non-return-to-zero inverted (NRZI) encoding.

This parameter is required. The default is 0.

Appendix F. Twinaxial-Specific Data

If you are using the twinaxial DLC, use this appendix to define the keyword parameters for the LINK_STATION and PORT keywords.

LINK_STATION Keywords for the Twinaxial DLC

The following section describes the parameter keyword you can specify in the LINK_STATION keyword to use the twinaxial DLC.

DEST_ADDRESS

Required?	No
Keyword Type	Hexadecimal number
Range	X'00'–X'06'
Multiples Allowed?	No, only one for each LINK_STATION keyword

The DEST_ADDRESS parameter specifies the TDLC station address.

The value is a 1-byte hexadecimal character string in the range of X'00'–X'06'.

This parameter is optional.

PORT Keywords for the Twinaxial DLC

The following section describes the parameter keywords you can specify in the PORT keyword to use the twinaxial DLC.

DLC_NAME

Required?	Yes
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No, only one for each PORT keyword

The DLC_NAME parameter specifies the 1- to 8-byte name of the communication adapter or protocol you are using. For the twinaxial DLC, DLC_NAME should be specified as **TWINAX**.

This parameter is required.

PORT_TWINAX_SPECIFIC_DATA

Required?	No
Keyword Type	Complex
Multiples Allowed?	No, only one for each LINK_STATION keyword

The PORT_TWINAX_SPECIFIC_DATA parameter is a complex keyword comprised of the following parameter keywords:

- ADAPTER_TYPE
- IO_ADDRESS
- IRQ_LEVEL
- MEMORY_ADDRESS

See the descriptions of the parameter keywords to define the PORT_TWINAX_SPECIFIC_DATA parameter.

ADAPTER_TYPE

Required?	Yes
Keyword Type	Enumerated
Default	NONE
Multiples Allowed?	No, only one for each PORT_TWINAX_SPECIFIC_DATA

The ADAPTER_TYPE parameter specifies the type of adapter to be used for twinaxial communication. Valid values are:

IBM_5250_EXPRESS_ISA_ADAPTER
IBM_5250_EXPRESS_PCI_ADAPTER
NONE
OTHER_TWINAX_ADAPTER
SYSTEM_36_WORKSTATION_EMULATION_ADAPTER_A
5250_AT_COMMUNICATION_ADAPTER
5250_EMULATION_ADAPTER_A
5250_EMULATION_PCI_ADAPTER
5250E_DISPLAY_STATION_EMULATION_ADAPTER
IBM_5250_EXPRESS_PC_CARD

5250_EMULATION_PCMCIA_ADAPTER

5250_PCMCIA_ADAPTER_CARD

This parameter is required. The default is NONE.

If you choose OTHER_TWINAX_ADAPTER, the product assumes that the necessary software for the adapter is installed. If it is not, you receive an error message when you start the session.

IO_ADDRESS

Required?	No
Keyword Type	Hexadecimal number
Default	X'271A'
Range	X'240A'–X'27FA'
Multiples Allowed?	No, only one for each PORT_TWINAX_SPECIFIC_DATA

The IO_ADDRESS parameter must be set for the following adapters:

- IBM Enhanced 5250 Display Station Emulation Adapter
- IBM 5250 AT-Bus Communication Adapter

The value is a hexadecimal address in the range X'240A'–X'27FA'.

This parameter is optional. The default is X'271A'.

IRQ_LEVEL

Required?	No
Keyword Type	Unsigned number
Default	5
Range	3–7
Multiples Allowed?	No, only one for each PORT_TWINAX_SPECIFIC_DATA

The IRQ_LEVEL parameter must be set for the following adapters:

- IBM Enhanced 5250 Display Station Emulation Adapter
- IBM 5250 AT-Bus Communication Adapter

The value is an integer in the range 3–7. Select a value that matches the IRQ level value specified on the installed adapter card.

This parameter is optional. The default is 5.

MEMORY_ADDRESS

Required?	No
Keyword Type	Hexadecimal number
Default	X'DC000'
Range	X'C0000'–X'DC000'
Multiples Allowed?	No, only one for each PORT_TWINAX_SPECIFIC_DATA parameter

The MEMORY_ADDRESS parameter specifies the location of the shared workstation memory used by this adapter. The IRQ_LEVEL parameter must be set for the following adapters:

- IBM Enhanced 5250 Display Station Emulation Adapter
- IBM 5250 AT-Bus Communication Adapter

The value is a hexadecimal address in the range X'C0000'–X'DC000'. Check your adapter documentation for details on how to select the memory address.

This parameter is optional. The default is X'DC000'.

Appendix G. X.25-Specific Data

If you are using the X.25 DLC, use this appendix to define the keyword parameters for the LINK_STATION and PORT keywords.

LINK_STATION Keywords for the X.25 DLC

The following section describes the parameter keywords you can specify in the LINK_STATION keyword to use the X.25 DLC.

LINK_STATION_X25_SPECIFIC_DATA

Required?	No
Keyword Type	Complex
Multiples Allowed?	Yes

The LINK_STATION_X25_SPECIFIC_DATA parameter is a complex keyword comprised of the following parameter keywords:

- ADDITIONAL_FACILITIES
- CALL_USER_GROUP_FORMAT
- CALL_USER_GROUP_INDEX
- CONNECTION_ID
- CONNECTION_TYPE
- LOGICAL_CHANNEL_NUMBER
- NETWORK_USER_ID
- PACKET_SIZE
- REMOTE_CONFORMANCE
- REQUEST_REVERSE_CHARGING
- WINDOW_SIZE
- X25_DESTINATION_ADDRESS

See the descriptions of the parameter keywords to define the LINK_STATION_X25_SPECIFIC_DATA parameter.

ADDITIONAL_FACILITIES

Required?	No
Keyword Type	Hexadecimal string
Field Length	1–110
Multiples Allowed?	No, only one for each LINK_STATION_X25_SPECIFIC_DATA parameter

The ADDITIONAL_FACILITIES parameter describes the other X.25 optional facilities that apply to this directory entry. To determine which facilities you can specify, refer to the information that you received from the network supplier when

you subscribed to the network. The CCITT X.25 Recommendation also provides general information about the network facilities and their hexadecimal format (facility codes, etc.).

The value is a 1- to 110-byte hexadecimal character string.

This parameter is optional.

Type 1- to 109-bytes of information for each X.25 optional facility in hexadecimal format (0–9, A–F). Do not enclose the information in single quotation marks. To specify more than one facility, keep typing without separating the information with a comma or blank.

If you are using a network user ID for this terminal and the ID contains nonstandard ASCII characters, you need to enter the network user ID in this field in hex format. Type the following information:

- 06 for the facility code
- Number of characters in the network user ID
- Network user ID

CALL_USER_GROUP_FORMAT

Required?	No
Keyword Type	Enumerated
Multiples Allowed?	Yes, only one for each LINK_STATION_X25_SPECIFIC_DATA parameter

The CALL_USER_GROUP_FORMAT parameter describes the type of closed user group subscription assigned to the terminal by the network supplier. This parameter is also referred to as the *Closed User Group Format*. The value you select is the one provided by the network supplier when you subscribed to the network. Valid values are:

BASIC The terminal can only use index names in the range of 00–99.

EXTENDED The terminal can use index names in the range of 0 000–9 999.

NONE No closed user group (CUG) is requested.

This parameter is optional.

CALL_USER_GROUP_INDEX

Required?	No
Keyword Type	String
Field Length	1–6
Multiples Allowed?	No, only one for each LINK_STATION_X25_SPECIFIC_DATA parameter

The CALL_USER_GROUP_INDEX parameter is the index closed user group (CUG) supplied by the provider. The value of the CUG index depends on the closed group (CUG) format selected.

The value is a 1- to 6-byte character string.

This parameter is optional.

CONNECTION_ID

Required?	No
Keyword Type	Hexadecimal string
Field Length	1–16
Multiples Allowed?	No, only one for each LINK_STATION_X25_SPECIFIC_DATA parameter

The CONNECTION_ID parameter permits IBM SNA X.25 DTEs to accept or reject incoming calls based on its content.

The value is a 1- to 16-byte hexadecimal character string, specified in eight octets.

This parameter is optional.

The following rules apply to the use of the optional CID:

1. Some IBM SNA X.25 DTEs may not support the CID.
2. For IBM SNA X.25 DTEs that do support a CID, its use is optional on a per call basis at the discretion of the user.
3. IBM SNA X.25 DTEs that support CIDs may reject incoming calls by transferring a CLEAR_REQUEST with the appropriate diagnostic code when the CID does not compare with the one that is expected.

CONNECTION_TYPE

Required?	No
Keyword Type	Enumerated
Default	PVC
Multiples Allowed?	No, only one for each LINK_STATION_X25_SPECIFIC_DATA parameter

The CONNECTION_TYPE parameter specifies the connection type this directory entry uses. Valid values are:

PVC This directory entry uses permanent virtual circuit (PVC).

SVC This directory entry uses switched virtual circuit (SVC).

This parameter is optional. The default is PVC.

DTE_ADDRESS

Required?	No
Keyword Type	String
Field Length	1–16
Multiples Allowed?	No, only one for each X25_DESTINATION_ADDRESS parameter

The DTE_ADDRESS parameter specifies the address that was assigned to your data terminal equipment (DTE) when you subscribed to the network. The remote DTE address is the X.25 network address of the remote DTE your workstation communicates with. Each DTE link to an X.25 network is identified by its DTE address. The DTE address identifies an X.25 DTE uniquely throughout the world. It includes a 3-digit country code and a national terminal number (NTN). The first four digits of the DTE address contain the data network identification code (DNIC) that defines the country and the service within that country. The first three digits of the DNIC identify the country code, followed by a one-digit number for the service.

The value is a 1- to 16-byte character string.

This parameter is optional.

Note: The data identification code is not always required. For example, you can omit the data identification code for local calls or for a private network that uses its own addressing method. Some networks do not use the full 15 digits when assigning DTE addresses. In this case, you can use the remaining digits as a suffix for your own purposes, such as routing calls to different applications, according to the suffix of the local DTE address of a caller.

DTE_ADDRESS_EXTENSION

Required?	No
Keyword Type	String
Field Length	1–42
Multiples Allowed?	No, only one for each X25_DESTINATION_ADDRESS parameter

The DTE_ADDRESS_EXTENSION parameter specifies the X.25 network address extension of the remote DTE your workstation communicates with. The address extension is an optional CCITT-specified DTE facility which may be used for a given call. It provides for the transparent conveyance in CALL REQUEST and INCOMING CALL packets of all or part of the Network Services Access Point (NSAP) address.

The value is a 1- to 42-byte character string.

This parameter is optional.

The X.25 local DTE address extension was assigned to your data terminal equipment (DTE) when you subscribed to the network.

LOGICAL_CHANNEL_NUMBER

Required?	No
Keyword Type	Unsigned number
Range	0–60000
Multiples Allowed?	No, only one for each LINK_STATION_X25_SPECIFIC_DATA parameter

The LOGICAL_CHANNEL_NUMBER parameter specifies the number of the PVC to be used for this connection. The number you type must be in the range of logical channel numbers reserved for PVCs.

The value is an integer in the range 0–60000.

This parameter is optional.

NETWORK_USER_ID

Required?	No
Keyword Type	Hexadecimal string
Field Length	1–42
Multiples Allowed?	No, only one for each LINK_STATION_X25_SPECIFIC_DATA parameter

The NETWORK_USER_ID parameter enables the transmitting data terminal equipment (DTE) to provide billing, security, or management information on a per-call basis to the data circuit terminating equipment. The value that you type in this field is the one provided by the network supplier when you subscribed to the network. If the terminal subscription from the network supplier includes a network user ID in standard ASCII characters, type the ID. If the network user ID contains non-standard ASCII characters, type the ID using the ADDITIONAL_FACILITIES parameter.

The value is a 1- to 42-byte character string

This parameter is optional.

PACKET_SIZE

Required?	No
Keyword Type	Unsigned number
Default	128
Range	16–4 096
Multiples Allowed?	No, only one for each LINK_STATION_X25_SPECIFIC_DATA parameter

The PACKET_SIZE parameter refers to the length of user data in a data packet. The value that you select should be the value that was agreed upon when you subscribed to the network.

If your network complies with the 1980 or 1984 CCITT recommendation, the agreed-upon size is one of the following: 16, 32, 64, 128, 256, 512, 1 024.

If your network complies with the 1988 CCITT recommendation, the agreed-upon size is one of the following: 16, 32, 64, 128, 256, 512, 1 024, 2 048, or 4 096.

The value is an integer in the range 16–4 096.

This parameter is optional. The default is 128.

REMOTE_CONFORMANCE

Required?	No
Keyword Type	Enumerated
Default	1984_COMPLIANCE
Multiples Allowed?	No, only one for each LINK_STATION_X25_SPECIFIC_DATA parameter

The REMOTE_CONFORMANCE parameter specifies the level of CCITT (International Telegraph and Telephone Consultative Committee) compliance. Valid values are:

- USE_ADAPTER_DEFAULTS
- 1980_COMPLIANCE
- 1984_COMPLIANCE
- 1988_COMPLIANCE

- 1980_COMPLIANCE
- 1984_COMPLIANCE
- 1988_COMPLIANCE

This parameter is optional. The default is 1984_COMPLIANCE.

The CCITT recommendations define the protocols to be used for information exchange at each interface between data terminal equipment (DTE) and data circuit-terminating equipment (DCE) on a packet-switching data network.

Warning: If you change the year from 1984 or 1988 to 1980, you can encounter communications problems if you have used packet sizes larger than 1024. The 1984 and 1988 CCITT X.25 recommendations allow some enhancements that are not supported or defined in the 1980 recommendation.

REQUEST_REVERSE_CHARGING

Required?	No
Keyword Type	Boolean
Default	0
Multiples Allowed?	No, only one for each LINK_STATION_X25_SPECIFIC_DATA parameter

The REQUEST_REVERSE_CHARGING parameter specifies whether the cost of the call is assigned to the remote (calling) data terminal equipment (DTE). Valid values are:

0 The cost of the call is not assigned to the remote (calling) data terminal equipment (DTE).

1 The cost of the call is assigned to the remote (calling) data terminal equipment (DTE).

This parameter is optional. The default is 0.

WINDOW_SIZE

Required?	No
Keyword Type	Unsigned number
Default	2
Range	1–127
Multiples Allowed?	No, only one for each LINK_STATION_X25_SPECIFIC_DATA parameter

The WINDOW_SIZE parameter specifies the number of frames that can be sent or received on a virtual circuit without acknowledgment.

The value is an integer in the range 1–127.

This parameter is optional. The default is 2.

X25_DESTINATION_ADDRESS

Required?	No
Keyword Type	Complex
Multiples Allowed?	Yes, with a maximum of eight

The X25_DESTINATION_ADDRESS parameter is a complex keyword comprised of the following parameter keywords:

- DTE_ADDRESS
- DTE_ADDRESS_EXTENSION

See the descriptions of the parameter keywords to define the X25_DESTINATION_ADDRESS parameter.

PORT Keywords for the X.25 DLC

The following section describes the parameter keywords you can specify in the PORT keyword to use the X.25 DLC.

DLC_DATA

Required?	No
Keyword Type	Hexadecimal string
Field Length	1–32
Multiples Allowed?	No, only one for each PORT keyword

The DLC_DATA parameter specifies the 1- to 32-byte local data terminal equipment (DTE) address in hexadecimal format.

This parameter is optional.

DLC_NAME

Required?	Yes
Keyword Type	String
Field Length	1–8
Multiples Allowed?	No, only one for each PORT keyword

The DLC_NAME parameter specifies the 1- to 8-byte communication adapter or protocol you are using. For the X.25 DLC, DLC_NAME should be specified as ***X25***.

This parameter is required.

PORT_X25_SPECIFIC_DATA

Required?	No
Keyword Type	Complex
Multiples Allowed?	Yes

The PORT_X25_SPECIFIC_DATA parameter is a complex keyword comprised of the following parameter keywords:

- ACCEPT_CHARGES
- ACCEPT_INCOMING_CALLS
- ALTERNATE_REMOTE_PHONE_NUMBER
- COMPLIANCE
- DEFAULT_WINDOW_SIZE
- DIAL_TYPE
- DTE_ADDRESS
- DTE_ADDRESS_EXTENSION
- DUMB_CARD_INTERFACE
- FRAME_INACTIVITY_TIMEOUT
- FRAME_RETRANSMISSION_TIMEOUT
- FRAME_SEQUENCE
- FRAME_TRANSMISSION_RETRY_COUNT
- FRAME_WINDOW_SIZE
- INCOMING_CALL_FILTER
- INSERT_CALLING_ADDRESS
- IN_ONLY_SVC_COUNT
- IN_ONLY_SVC_START
- LOCAL_DTE_ADDRESS
- MAX_PIU_SIZE
- MODEM_NAME
- NETWORK_CONNECTION_TYPE
- OEM_PORT_DATA
- OUT_ONLY_SVC_COUNT
- OUT_ONLY_SVC_START
- PACKET_SIZE

- PORT_SPEED
- PVC_COUNT
- PVC_START
- REMOTE_PHONE_NUMBER
- SEQUENCING
- SHARED_RAM_ADDRESS
- TRANSMISSION_FLAGS
- TWO_WAY_SVC_COUNT
- TWO_WAY_SVC_START
- USE_CONSTANT_RTS
- USE_NRZI_ENCODING
- USE_X32_PROTOCOL
- X32_IDENTITY
- X32_SIGNATURE

See the descriptions of the parameter keywords to define the PORT_X25_SPECIFIC_DATA parameter.

ACCEPT_CHARGES

Required?	No
Keyword Type	Boolean
Default	0
Multiples Allowed?	No, only one for each INCOMING_CALL_FILTER parameter

The ACCEPT_CHARGES parameter specifies whether charges from a calling user are accepted. If the calling user requests Reverse Charges, the filter defined for that user must be set to accept reverse charges. Valid values are:

0 The cost of the call are assigned to the remote (calling) data terminal equipment (DTE).

1 The cost of the call are not assigned to the remote (calling) data terminal equipment (DTE).

This parameter is optional. The default is 0.

ACCEPT_INCOMING_CALLS

Required?	No
Keyword Type	Boolean
Default	0
Multiples Allowed?	No, only one for each PORT_X25_SPECIFIC_DATA parameter

The ACCEPT_INCOMING_CALLS parameter specifies whether Communications Server or Personal Communications is able to accept calls from other computers. Valid values are:

0 The product is not able to accept calls from other computers.

1 The product is able to accept calls from other computers.

This parameter is optional. The default is 0.

If you allow the product to accept incoming calls through a COM port, it has exclusive use of the port when you start this configuration. If you want another program to use this port, you must stop the product; that is, you must use SNA Node Operations to stop the COM port device. (Merely closing the session that is using the port is not enough, because that does not stop the COM port devices.)

ALTERNATE_REMOTE_PHONE_NUMBER

Required?	No
Keyword Type	String
Field Length	1–64
Multiples Allowed?	No, only one for each PORT_X25_SPECIFIC_DATA parameter

The ALTERNATE_REMOTE_PHONE_NUMBER parameter specifies the phone number to dial if the primary remote phone number fails.

The phone number is a 1- to 64-digit string.

This parameter is optional.

COMPLIANCE

Required?	No
Keyword Type	Enumerated
Default	1984_COMPLIANCE
Multiples Allowed?	No, only one for each PORT_X25_SPECIFIC_DATA parameter

The COMPLIANCE parameter specifies the level of CCITT (International Telegraph and Telephone Consultative Committee) compliance. Valid values are:

- 1980_COMPLIANCE
- 1984_COMPLIANCE
- 1988_COMPLIANCE

This parameter is optional. The default is 1984_COMPLIANCE.

The CCITT recommendations define the protocols to be used for information exchange at each interface between data terminal equipment (DTE) and data circuit-terminating equipment (DCE) on a packet-switching data network.

DEFAULT_WINDOW_SIZE

Required?	No
Keyword Type	Unsigned number
Default	2
Range	1–127
Multiples Allowed?	No, only one for each PORT_X25_SPECIFIC_DATA parameter

The DEFAULT_WINDOW_SIZE parameter specifies the number of frames that can be sent or received without acknowledgment.

The value is an integer in the range 1–127.

This parameter is optional. The default is 2.

The value that you type in this field is the one provided by the network supplier when you subscribed to the network, and is specific to this PVC. If the FRAME_SEQUENCE parameter is specified as MODULO_8, type a value from 1 to 7. If the FRAME_SEQUENCE parameter is specified as MODULO_128, type a value from 1 to 127.

DIAL_TYPE

Required?	No
Keyword Type	Enumerated
Default	TONE
Multiples Allowed?	No, only one for each PORT_X25_SPECIFIC_DATA parameter

The DIAL_TYPE parameter specifies the dial mode used. Valid values are:

PULSE For older telephone lines, such as those that have rotary-dial.

TONE For telephone lines that allow multifrequency dialing

This parameter is optional. The default is TONE.

DTE_ADDRESS

Required?	No
Keyword Type	String
Field Length	0–16
Multiples Allowed?	No, only one for each INCOMING_CALL_FILTER parameter

The DTE_ADDRESS parameter specifies the address that was assigned to your data terminal equipment (DTE) when you subscribed to the network. The remote DTE address is the X.25 network address of the remote DTE your workstation communicates with. Each DTE link to an X.25 network is identified by its DTE address. The DTE address identifies an X.25 DTE uniquely throughout the world. It includes a 3-digit country code and a national terminal number (NTN). The first four digits of the DTE address contain the data network identification code (DNIC)

that defines the country and the service within that country. The first three digits of the DNIC identify the country code, followed by a one-digit number for the service.

The value is a 0- to 16-byte character string.

This parameter is optional.

Note: The data identification code is not always required. For example, you can omit the data identification code for local calls or for a private network that uses its own addressing method. Some networks do not use the full 15 digits when assigning DTE addresses. In this case, you can use the remaining digits as a suffix for your own purposes, such as routing calls to different applications, according to the suffix of the local DTE address of a caller.

DTE_ADDRESS_EXTENSION

Required?	No
Keyword Type	String
Field Length	0–8
Multiples Allowed?	No, only one for each INCOMING_CALL_FILTER parameter

The DTE_ADDRESS_EXTENSION parameter specifies the X.25 network address extension of the remote DTE your workstation communicates with. The address extension is an optional CCITT-Specified DTE facility which may be used for a given call. It provides for the transparent conveyance in CALL REQUEST and INCOMING CALL packets of all or part of the Network Services Access Point (NSAP) address.

The value is a 0- to 8-byte character string.

This parameter is optional.

The X.25 local DTE address extension was assigned to your data terminal equipment (DTE) when you subscribed to the network.

DUMB_CARD_INTERFACE

The DUMB_CARD_INTERFACE parameter keyword applies to Communications Server only.

Required?	Yes
Keyword Type	Boolean
Default	0
Multiples Allowed?	No, only one for each PORT_X25_SPECIFIC_DATA parameter

The DUMB_CARD_INTERFACE parameter specifies whether the OEM communications device uses the Microsoft SNA Server synchronous dumb card

interface. Communications Server supports the use of OEM communications devices where the OEM manufacturer provides its own configuration panels. Valid values are:

0 The OEM communications device does not use the Microsoft SNA Server synchronous dumb card interface. The device uses the shallow interface provided by Communications Server.

1 The OEM communications device uses the Microsoft SNA Server synchronous dumb card interface.

Note: This value should only be entered using the configuration application provided by the OEM manufacturer.

This parameter is required. The default is 0.

FRAME_INACTIVITY_TIMEOUT

Required?	No
Keyword Type	Unsigned number
Default	30
Range	0–255
Multiples Allowed?	No, only one for each PORT_X25_SPECIFIC_DATA parameter

The FRAME_INACTIVITY_TIMEOUT parameter specifies how long, in seconds, the link can be idle before it is considered to be malfunctioning.

Valid values are 0 or 4–255. A value of 0 indicates no timeout.

This parameter is optional. The default is 30.

FRAME_RETRANSMISSION_TIMEOUT

Required?	No
Keyword Type	Unsigned number
Default	3
Range	1–60
Multiples Allowed?	No, only one for each PORT_X25_SPECIFIC_DATA parameter

The FRAME_RETRANSMISSION_TIMEOUT parameter specifies the milliseconds allowed for a response to a frame. If a response is not received within the specified number of milliseconds, the frame is transmitted again. The value that you type in this field is the one provided by the network supplier when you subscribed to the network.

The value is an integer in the range 1–60.

This parameter is optional. The default is 3.

If you want to determine your own retransmission timeout value, consider the maximum amount of time it takes for:

- A frame to travel to the data circuit terminating equipment (DCE) from the data terminal equipment (DTE)
- DCE processing
- A response frame to return to the DTE from the DCE

Frame retransmission speed depends on the link speed and the frame size. Maximum frame size is related to the maximum packet size. If you do not allow enough time, a response can not be received. If you allow more than enough time, line connection costs increase because excess time passes before a frame is transmitted.

FRAME_SEQUENCE

Required?	No
Keyword Type	Enumerated
Default	MODULO_8
Multiples Allowed?	No, only one for each PORT_X25_SPECIFIC_DATA parameter

The FRAME_SEQUENCE parameter applies to frames that have been either sent or received. The value that you select is the one provided by the network supplier when you subscribed to the network. Valid values are:

MODULO_8 The frame sequence number fields are modulo 8 (3 bits). For modulo 8, the frame sequence numbers range from 1 to 7.

MODULO_128 The frame sequence number fields are modulo 128 (7 bits). For Modulo 128, the frame sequence numbers range from 1 to 127.

This parameter is optional. The default is MODULO_8.

FRAME_TRANSMISSION_RETRY_COUNT

Required?	No
Keyword Type	Unsigned number
Default	20
Range	1–255
Multiples Allowed?	No, only one for each PORT_X25_SPECIFIC_DATA parameter

The FRAME_TRANSMISSION_RETRY_COUNT parameter specifies the maximum number of times an X.25 frame can be transmitted before the link is considered to be malfunctioning. The value that you type in this field is the one provided by the network supplier when you subscribed to the network.

The value is an integer in the range 1–255.

This parameter is optional. The default is 20.

FRAME_WINDOW_SIZE

Required?	No
Keyword Type	Unsigned number
Default	7
Range	1–127
Multiples Allowed?	No, only one for each PORT_X25_SPECIFIC_DATA parameter

The FRAME_WINDOW_SIZE parameter specifies the number of frames that can be sent or received without acknowledgment. The value that you type is the one provided by the network supplier when you subscribed to the network. If the frame sequence is MODULO_8, type a value from 1 to 7. If the frame sequence is MODULO_128, type a value from 1 to 127.

The value is an integer in the range 1–127.

This parameter is optional. The default is 7.

INCOMING_CALL_FILTER

Required?	No
Keyword Type	Complex
Multiples Allowed?	Yes

The INCOMING_CALL_FILTER parameter is a complex keyword comprised of the following parameter keywords:

- ACCEPT_CHARGES
- DTE_ADDRESS
- DTE_ADDRESS_EXTENSION

See the descriptions of the parameter keywords to define the INCOMING_CALL_FILTER parameter.

INSERT_CALLING_ADDRESS

Required?	No
Keyword Type	Boolean
Multiples Allowed?	No, only one for each PORT_X25_SPECIFIC_DATA parameter

The INSERT_CALLING_ADDRESS parameter specifies whether to insert the address of the local data terminal equipment (DTE) into the calling address field of the call request packet. Valid values are:

0 Do not insert the address of the local data terminal equipment (DTE) into the calling address field of the call request packet.

1 Insert the address of the local data terminal equipment (DTE) into the calling address field of the call request packet.

This parameter is optional.

If you insert a calling address into the call request packet when it is not required, some networks clear the call request with a diagnostic code at run time. Other networks insert the address into the call packet and overwrite the address inserted by the X.25 DLC.

IN_ONLY_SVC_COUNT

Required?	No
Keyword Type	Unsigned number
Default	0
Range	0–60000
Multiples Allowed?	No, only one for each PORT_X25_SPECIFIC_DATA parameter

The IN_ONLY_SVC_COUNT parameter specifies how many SVCs are reserved for incoming calls on this link. The value that you specify is the one provided by the network supplier when you subscribed to the network.

The value is an integer in the range 0–60000.

This parameter is optional. The default is 0.

If you specify a value of 0 (the default), no logical channels are reserved for incoming calls, and no in-only SVCs are allowed on the link.

Note: The total number of virtual circuits for each link can not exceed 1 024, unless the CCITT compliance is specified as 1988. In this case, the total number can be 4 095. This number includes both permanent virtual circuits (PVCs) and SVCs.

IN_ONLY_SVC_START

Required?	No
Keyword Type	Unsigned number
Default	0
Range	0–60000
Multiples Allowed?	No, only one for each PORT_X25_SPECIFIC_DATA parameter

The IN_ONLY_SVC_START parameter specifies the lowest logical channel number that the data circuit-terminating equipment (DCE) can assign an incoming call. The value that you type in this field is the one provided by the network supplier when you subscribed to the network.

The value is an integer in the range 0–60000.

This parameter is optional. The default is 0.

The value you type in this field must match both of the following conditions:

- The value can not be within the range defined for permanent virtual circuits (PVCs), two-way SVCs, or outgoing-only SVCs.

- The value must be greater than the highest PVC channel number configured for this link.

Note: You can not specify a value for this parameter unless the IN_ONLY_SVC_COUNT parameter has a value greater than 0.

LOCAL_DTE_ADDRESS

Required?	No
Keyword Type	String
Field Length	1–15
Multiples Allowed?	No, only one for each PORT_X25_SPECIFIC_DATA parameter

The LOCAL_DTE_ADDRESS parameter specifies the address that was assigned to your data terminal equipment (DTE) when you subscribed to the network. The remote DTE address is the X.25 network address of the remote DTE your workstation communicates with. Each DTE link to an X.25 network is identified by its DTE address. The DTE address identifies an X.25 DTE uniquely throughout the world. It includes a 3-digit country code and a national terminal number (NTN). The first four digits of the DTE address contain the data network identification code (DNIC) that defines the country and the service within that country. The first three digits of the DNIC identify the country code, followed by a one-digit number for the service.

The value is a 1- to 15-byte character string.

This parameter is optional.

Note: The data identification code is not always required. For example, you can omit the data identification code for local calls or for a private network that uses its own addressing method. Some networks do not use the full 15 digits when assigning DTE addresses. In this case, you can use the remaining digits as a suffix for your own purposes, such as routing calls to different applications, according to the suffix of the local DTE address of a caller.

MAX_PIU_SIZE

Required?	No
Keyword Type	Unsigned number
Default	2 048
Range	265–4 115
Multiples Allowed?	No, only one for each PORT_X25_SPECIFIC_DATA parameter

The MAX_PIU_SIZE parameter specifies the maximum PIU size for all link stations using this port.

The value is an integer in the range 265–4 115.

This parameter is optional. The default is 2 048.

Note: This value is negotiated between the origin node and destination node when link activation occurs. Each node has a defined maximum. The smaller of the MAX_PIU_SIZE parameter values is used for the link.

MODEM_NAME

Required?	No
Keyword Type	String
Field Length	1–256
Multiples Allowed?	No, only one for each PORT_X25_SPECIFIC_DATA parameter

The MODEM_NAME parameter specifies the name of the modem as defined to the operating system. A PORT keyword passes this name to the communications port device driver, which uses this name to open the modem device and initialize it.

Note: Since the Node Configuration application produces a list of available modems from which to choose, you should not attempt to enter this value directly into the ACG file.

The value is a 1- to 256-byte character string.

This parameter is optional.

NETWORK_CONNECTION_TYPE

Required?	No
Keyword Type	Enumerated
Default	SWITCHED
Multiples Allowed?	No, only one for each PORT_X25_SPECIFIC_DATA parameter

The NETWORK_CONNECTION_TYPE parameter specifies whether the connection is a leased or a switched connection. Valid values are:

LEASED A leased line is a permanent connection into your telephone network.

SWITCHED A switched line uses a dialed connection. A switched line has a telephone number.

This parameter is optional. The default is SWITCHED.

OEM_DATA

The OEM_DATA parameter keyword applies to Communications Server only.

Required?	No
Keyword Type	Hexadecimal string
Multiples Allowed?	Yes

The OEM_DATA parameter specifies binary information specific for the OEM card manufacturer's use only. Communications Server supports the use of OEM communications devices where the OEM manufacturer provides its own configuration panels. More than one OEM_DATA parameter might appear in the ASCII configuration file.

Note: Since the format of this binary data is very specific to the OEM device, you should not attempt to enter this value directly into the ACG file. The value should only be entered using the configuration application provided by the OEM manufacturer.

This parameter is optional.

OEM_PORT_DATA

The OEM_PORT_DATA parameter keyword applies to Communications Server only.

Required?	No
Keyword Type	Complex
Multiples Allowed?	Yes

The OEM_PORT_DATA parameter is a complex keyword comprised of the OEM_DATA parameter keyword. See the descriptions of the parameter keyword to define the OEM_PORT_DATA parameter.

See the description of the OEM_DATA parameter keyword to define the OEM_PORT_DATA parameter.

OUT_ONLY_SVC_COUNT

Required?	No
Keyword Type	Unsigned number
Default	0
Range	0–60000
Multiples Allowed?	No, only one for each PORT_X25_SPECIFIC_DATA parameter

The OUT_ONLY_SVC_COUNT parameter specifies how many outgoing-only SVCs can be used on this link. The value that you type in this field is the one provided by the network supplier when you subscribed to the network.

The value is an integer in the range 0–60000.

This parameter is optional. The default is 0.

If you type a value of 0 (the default), no out-only SVCs are allowed on the link.

Note: The total number of virtual circuits for each link can not exceed 1 024, unless the CCITT compliance is specified as 1988. In this case, the total number can be 4 095. This number includes both permanent virtual circuits (PVCs) and SVCs.

OUT_ONLY_SVC_START

Required?	No
Keyword Type	Unsigned number
Default	0
Range	0–60000
Multiples Allowed?	No, only one for each PORT_X25_SPECIFIC_DATA parameter

The OUT_ONLY_SVC_START parameter specifies the lowest logical channel number that the data terminal equipment (DTE) can assign to an outgoing call. The value that you type in this field is the one provided by the network supplier when you subscribed to the network.

The value is an integer in the range 0–60000.

This parameter is optional. The default is 0.

The value you type in this field must match both of the following conditions:

- The value can not be within the range defined for the two other SVCs (in-only SVCs and two-way SVCs).
- The value must be greater than the highest two-way SVC channel number configured for this link.

Note: You can not specify a value for this parameter unless the OUT_ONLY_SVC_COUNT parameter has a value greater than 0.

PACKET_SIZE

Required?	No
Keyword Type	Unsigned number
Default	128
Field Length	16–4 096
Multiples Allowed?	No, only one for each PORT_X25_SPECIFIC_DATA parameter

The PACKET_SIZE parameter refers to the length of user data in a data packet. The value that you select should be the value that was agreed upon when you subscribed to the network.

If your network complies with the 1980 or 1984 CCITT recommendation, the agreed-upon size is one of the following: 16, 32, 64, 128, 256, 512, 1 024.

If your network complies with the 1988 CCITT recommendation, the agreed-upon size is one of the following: 16, 32, 64, 128, 256, 512, 1 024, 2 048, or 4 096.

The value is a 16–4 096 byte character string.

This parameter is optional. The default is 128.

PORT_SPEED

Required?	No
Keyword Type	Unsigned number
Default	57 600
Range	2 400–115 200 bps
Multiples Allowed?	No, only one for each PORT_X25_SPECIFIC_DATA parameter

The PORT_SPEED parameter specifies the serial port speed supported by the device used for the connection.

The value is an integer in the range 2 400–115 200 bits per second (bps).

This parameter is optional. The default is 57 600.

If the highest carrier speed of your modem is 14 400 bps, specify a port speed of 57 600 bps or lower. If the highest carrier speed is 28 800 bps or higher, specify a port speed of 115 200 to use the maximum compression capabilities for the modem. A port speed of 115 200 bps is recommended for systems with Pentium processors.

PVC_COUNT

Required?	No
Keyword Type	Unsigned number
Default	0
Range	0–60000
Multiples Allowed?	No, only one for each PORT_X25_SPECIFIC_DATA parameter

The PVC_COUNT parameter specifies how many PVCs are reserved on this link. The value that you type in this field is the one provided by the network supplier when you subscribed to the network.

The value is an integer in the range 0–60000.

This parameter is optional. The default is 0.

Note: The total number of virtual circuits for each link can not exceed 1 024, unless the CCITT compliance is specified as 1988. In this case, the total number can be 4 095. This number includes both permanent virtual circuits (PVCs) and SVCs.

PVC_START

Required?	No
Keyword Type	Unsigned number
Default	0
Range	0–60000
Multiples Allowed?	No, only one for each PORT_X25_SPECIFIC_DATA parameter

The PVC_START parameter specifies the lowest logical channel number assigned to PVCs. The value that you type in this field is the one provided by the network supplier when you subscribed to the network.

The value is an integer in the range 0–60000.

This parameter is optional. The default is 0.

REMOTE_PHONE_NUMBER

Required?	No
Keyword Type	String
Field Length	1–64
Multiples Allowed?	No, only one for each PORT_X25_SPECIFIC_DATA parameter

The REMOTE_PHONE_NUMBER parameter specifies the phone number dialed to activate a connection to the destination.

The phone number is a 1- to 64-digit string.

This parameter is optional.

SEQUENCING

Required?	No
Keyword Type	Enumerated
Default	MODULO_8
Multiples Allowed?	No, only one for each PORT_X25_SPECIFIC_DATA parameter

The SEQUENCING parameter specifies how data frames are numbered to guarantee transmission. These numbers are used for acknowledgment and retransmission of frames. Valid values are:

- MODULO_8
- MODULO_128

This parameter is optional. The default is MODULO_8.

SHARED_RAM_ADDRESS

Required?	No
Keyword Type	Hexadecimal number
Range	X'C0000'–X'FC000'
Multiples Allowed?	No, only one for each PORT_X25_SPECIFIC_DATA parameter

The SHARED_RAM_ADDRESS parameter specifies the address in memory at which the 16K buffer, used by the adapter, starts.

The value is a hexadecimal character string in the range X'C0000'–X'FC000'.

This parameter is optional.

If you are using an industry standard architecture (ISA) adapter, you must select the shared RAM address. If you are using a Micro Channel adapter, the shared RAM address is set automatically. When you select the shared RAM address and your configuration contains another definition of an SDLC-WAC or X.25-WAC device that uses the same adapter number, that definition is automatically updated to use this shared RAM address.

TRANSMISSION_FLAGS

Required?	No
Keyword Type	Unsigned number
Default	1
Range	1–10
Multiples Allowed?	No, only one for each PORT_X25_SPECIFIC_DATA parameter

The TRANSMISSION_FLAGS parameter specifies the minimum number of flags that are inserted to produce idle time between transmitted frames.

The value is an integer in the range 1–10 flags.

This parameter is optional. The default is 1 flag.

A flag is the time it takes to send one byte, and represents a delay between frames. The values are 1, 3, 4, 6, and 10. Change this parameter to a value other than 1 when you know the device at the other end of the communication link can not receive frames with only one intervening flag.

TWO_WAY_SVC_COUNT

Required?	No
Keyword Type	Unsigned number
Default	0
Range	0–60000
Multiples Allowed?	No, only one for each PORT_X25_SPECIFIC_DATA parameter

The TWO_WAY_SVC_COUNT parameter specifies how many two-way SVCs can be used by this link for incoming calls or by the data terminal equipment (DTE) for outgoing calls. The value that you type in this field is the one provided by the network supplier when you subscribed to the network.

The value is an integer in the range 0–60000.

This parameter is optional. The default is 0.

Note: The total number of virtual circuits for each link can not exceed 1 024, unless the CCITT compliance is specified as 1988. In this case, the total number can be 4 095. This number includes both permanent virtual circuits (PVCs) and SVCs.

TWO_WAY_SVC_START

Required?	No
Keyword Type	Unsigned number
Default	0
Range	0–60000
Multiples Allowed?	No, only one for each PORT_X25_SPECIFIC_DATA parameter

The TWO_WAY_SVC_START parameter specifies the lowest logical channel number that the data circuit-terminating equipment (DCE) can assign an incoming call or by the data terminal equipment (DTE) for outgoing calls. The value that you type in this field is the one provided by the network supplier when you subscribed to the network.

The value is an integer in the range 0–60000.

This parameter is optional. The default is 0.

The value you type in this field must match both of the following conditions:

- The value can not be within the range defined for the two other SVCs (in-only SVCs and outgoing-only SVCs).
- The value must be greater than the highest in-only SVC channel number configured for this link.

Note: You can not type a value in this field unless the TWO_WAY_SVC_COUNT parameter has a value greater than 0.

USE_CONSTANT_RTS

Required?	No
Keyword Type	Boolean
Default	1
Multiples Allowed?	No, only one for each PORT_X25_SPECIFIC_DATA parameter

The USE_CONSTANT_RTS (request-to-send) parameter specifies whether flow control is used between an adapter and the modem. Valid values are:

0 The adapter waits for the CTS (clear-to-send) signal before sending data to the modem.

1 There is no flow control to the modem.

This parameter is optional. The default is 1.

USE_NRZI_ENCODING

Required?	No
Keyword Type	Boolean
Default	0
Multiples Allowed?	No, only one for each PORT_X25_SPECIFIC_DATA parameter

The USE_NRZI_ENCODING specifies how synchronous data sent to the modem is encoded. Valid values are:

0 Use non-return-to-zero (NRZ) encoding.

1 Use non-return-to-zero inverted (NRZI) encoding.

This parameter is optional. The default is 0.

USE_X32_PROTOCOL

Required?	No
Keyword Type	Boolean
Default	0
Multiples Allowed?	No, only one for each PORT_X25_SPECIFIC_DATA parameter

The USE_X32_PROTOCOL parameter specifies whether you are using X.32 procedures for security signaling. Valid values are:

0 The X.32 protocol is not be used.

1 The X.32 protocol is used.

This parameter is optional. The default is 0.

X32_IDENTITY

Required?	No
Keyword Type	Hexadecimal string
Field Length	1–32
Multiples Allowed?	No, only one for each PORT_X25_SPECIFIC_DATA parameter

The X32_IDENTITY parameter specifies the exchange station ID (XID) that identifies your workstation to your X.25 network supplier. The information that you type in this field is provided by the network supplier when you subscribed to the network.

The value is a 1- to 32-byte hexadecimal character string.

This parameter is optional.

X32_SIGNATURE

Required?	No
Keyword Type	Hexadecimal string
Field Length	1–32
Multiples Allowed?	No, only one for each PORT_X25_SPECIFIC_DATA parameter

The X32_SIGNATURE parameter specifies the signature identification that is used to enable the network operator to authenticate the claimed identity of the data terminal equipment (DTE). The information that you type in this field is provided by the network supplier when you subscribed to the network.

The value is a 1- to 32-byte hexadecimal character string

This parameter is optional.

Appendix H. ANYNET_COMMON_PARAMETERS

This appendix describes the parameter keywords and values you can specify for the ANYNET_COMMON_PARAMETERS keyword.

Keyword Definition

Required?	No
Keyword Type	Complex
Multiples Allowed?	No

ANYNET_COMMON_PARAMETERS Sample

The following is a sample of the ANYNET_COMMON_PARAMETERS keyword:

```
ANYNET_COMMON_PARAMETERS=(
     CONNWAIT_SECS=30
     CONN_RETRY_SECS=300
     DG_IDLE_TIMEOUT=90
     INACTIVITY_TIMER_SECS=30
     SNASUFFIX=SNA.IBM.COM
     SNA_IP_NODE_TYPE=1
     UNACKED_DG_RETRY_SECS=10
     UNSENT_DG_RETRY_SECS=3
)
```

ANYNET_COMMON_PARAMETERS Parameter Keywords

CONN_RETRY_SECS

Required?	No
Keyword Type	Unsigned number
Default	300
Range	1–65 535
Multiples Allowed?	No

The CONN_RETRY_SECS parameter specifies the maximum time, in seconds, for SNA over TCP/IP to set up a multiprotocol transport network (MPTN) connection over TCP/IP. When an MPTN connection setup fails, Communications Server or Personal Communications tries every IP address associated with a LU name in the domain name server or HOSTS file until all the addresses are exhausted, or until the specified time is reached.

The value is an integer in the range of 1–65 535 seconds.

This parameter is optional. The default is 300 seconds.

CONNWAIT_SECS

Required?	No
Keyword Type	Unsigned number
Default	30
Range	1–65 535
Multiples Allowed?	No

The CONNWAIT_SECS parameter specifies the maximum time, in seconds, that SNA over TCP/IP waits to receive a multiprotocol transport network (MPTN) connection or connection response packet after the TCP connection is established. This limit prevents the connecting node from waiting too long for a session partner to send a packet.

The value is an integer in the range of 1–65 535 seconds.

This parameter is optional. The default is 30 seconds.

DG_IDLE_TIMEOUT

Required?	No
Keyword Type	Unsigned number
Range	1–65 535
Multiples Allowed?	No

The DG_IDLE_TIMEOUT parameter specifies the time that a datagram conversation remains idle before it is deallocated and closed. This timer enables you to balance using system resources to maintain an existing datagram conversation and taking longer to reestablish a new datagram conversation. The value is in the range of 1–65 535 seconds.

This parameter is optional. The default is 90 seconds.

INACTIVITY_TIMER_SECS

Required?	No
Keyword Type	Unsigned number
Range	1–65 535
Multiples Allowed?	No

The INACTIVITY_TIMER_SECS parameter specifies the seconds of inactivity allowed between two partner nodes before SNA over TCP/IP tries to determine whether the partner node is still active. The value is an integer in the range of 1–65 535 seconds.

This parameter is optional. The default is 30 seconds.

Setting the interval below 10 seconds might seriously affect system performance. If you are unsure about what value to enter, use the default.

SNASUFFIX

Required?	No
Keyword Type	String
Default	SNA.IBM.COM
Field Length	1–257
Multiples Allowed?	No

The SNASUFFIX parameter specifies a user-defined domain name suffix created using the hierarchical-naming format recognized by TCP/IP. The suffix consists of strings concatenated with periods. Each string must be less than or equal to 63 characters, with a total length of less than, or equal to, 257 characters.

The value is a 1- to 257-byte character string. Valid characters for each string are:

- The first character must be an alphabetic character (A–Z, a–z).
- The last character must be an alphanumeric character (A–Z, a–z, 0–9).
- The remaining characters can be alphanumeric characters (A–Z, a–z, 0–9) or the special character (-).

This parameter is optional. The default is SNA.IBM.COM.

SNA_IP_NODE_TYPE

Required?	No
Keyword Type	Unsigned number
Default	1
Range	1–2
Multiples Allowed?	No

The SNA_IP_NODE_TYPE parameter specifies what type of node is being configured. Valid values are: Valid values are:

1	**Access node**
2	**Gateway**

This parameter is optional. The default is 1.

The value of the SNA_IP_NODE_TYPE parameter keyword is always 1.

UNACKED_DG_RETRY_SECS

Required?	No
Keyword Type	Unsigned number
Default	10
Range	1–65 535
Multiples Allowed?	No

The UNACKED_DG_RETRY_SECS parameter specifies the maximum time, in seconds, that SNA over TCP/IP waits to resend an unacknowledged out-of-band (OOB) or MPTN keepalive datagram. When expedited data is sent over TCP/IP, this interval is used to help control the delivery of expedited data in congested situations. In SNA, some control messages are sent as expedited data (for example, messages requesting the right to send data or messages taking down a session). Expedited data is not subject to congestion control and can move ahead of normal, non-expedited data. To ensure delivery, AnyNet might send expedited data as normal data and as an OOB datagram.

The value is an integer in the range 1–65 535 seconds.

This parameter is optional. The default is 10 seconds.

UNSENT_DG_RETRY_SECS

Required?	No
Keyword Type	Unsigned number
Default	3
Range	1–65 535
Multiples Allowed?	No

The UNSENT_DG_RETRY_SECS parameter specifies the maximum time, in seconds, that Communications Server or Personal Communications waits for an acknowledgment after sending expedited data on a TCP connection, before sending the data as an out-of-band (OOB) datagram. When expedited data is sent over TCP/IP, this interval is used to help improve the delivery of expedited data in congested situations. In SNA, some control messages are sent as expedited data (for example, messages requesting the right to send data or messages taking down a session). Expedited data is not subject to congestion control and can move ahead of normal, non-expedited data. To ensure delivery, AnyNet might send expedited data as normal data and as an OOB datagram.

The value is an integer in the range 1–65 535 seconds.

This parameter is optional. The default is 3 seconds.

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