



@server

iSeries

CL Commands Volume 7





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Command Descriptions

CPYFRMPCD (Copy from PC Document) Command Description

CPYFRMPCD Command syntax diagram

Purpose

The Copy from PC Document (CPYFRMPCD) command copies the data in a PC document to a system physical database file. This command allows you to copy only files that are in PC format.

Restriction: To issue the CPYFRMPCD command, you must have object operational authority to the command itself, as well as the following authorities:

- *USE authority to the document and the folder containing the document
- One of the following authorities to the physical file:
 - *OBJOPR and *ADD to do MBROPT(*ADD)
 - *OBJOPR, *OBJMGT, *ADD, and *DLT to do MBROPT(*REPLACE)
- If the command creates a new member in the file, the following authorities are required:
 - *OBJOPR, *OBJMGT, and *ADD to the file
 - *OBJOPR, *READ, and *ADD to the library containing the file.

Required Parameters

FROMFLR

Specifies the name of the folder that contains the PC document being copied. You must specify a fully qualified path name. All folders in the path must exist.

TOFILE

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

Note:

The Override Database File (OVRDBF) command can be used to override the file name and the other parameters of this command involving the to-file. If this file is a *SOURCE file, a sequence number and a system date of zeros is added to each record as it is copied to the file.

The name of the file can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

physical-file-name: Specify the name of the physical file.

FROMDOC

Specifies the name of the PC document that is copied.

Optional Parameters

TOMBR

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

Note:

If no member is specified, the first member of the file is the member to which the data is copied. If the specified member does not exist, it is created.

***FIRST:** The document is copied to the first member in the file.

***FROMDOC:** The member has the same name as the PC document name. The PC document name must be a valid system member name. The name must be no longer than 10 characters and must contain only characters that are allowed in a system member name. If the name is not valid, an error message is issued, and the copy is not performed.

member-name: Specify the name of the member to which the document is copied.

MBROPT

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

***REPLACE:** The copied records replace the existing records in the physical file member.

***ADD:** The copied records are added to the existing records in the physical file member.

TRNTBL

Specifies the name of the translation table used to translate the data from ASCII to EBCDIC.

When translation is specified (that is, TRNTBL(*NONE) is omitted for this parameter), the character set is translated from ASCII to EBCDIC characters, and the format of the records in the PC document is handled as specified in the TRNFMT parameter.

When no translation is specified, the records in the document are considered to be fixed-length records of the same length as the physical file records to which they are being copied, and no character translation or truncation is performed.

Note:

For a double-byte character set (DBCS) user, this parameter also specifies whether translation is performed, and if so, which translation table is used for single-byte (SBCS) translation. See the TRNIGC parameter to see how values of this parameter affect DBCS users.

***DFT:** The system default translation table is used.

The name of the translation table can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

translate-table-name: Specify the name of the desired translation table.

Other Single Values

***NONE**: No translation is performed.

TRNFMT

Specifies the format of the records in the PC document. This parameter is not valid if TRNTBL(*NONE) is specified.

***TEXT**: The records are in standard DOS ASCII variable-length format. The records are transformed to a fixed-length format as they are copied to the physical database file. The CR, LF, and EOF characters are removed, imbedded tab characters are expanded to blanks, and the record is padded with blanks to fill out the fixed-length record. A record that is too long to fit in the fixed-length format creates an error condition.

***NOTEXT**: The records in the PC document are considered fixed-length records of the same length as the physical file records to which they are being copied.

TRNIGC

Specifies the double-byte character set (DBCS) used for translation. Unless overridden by the TRNTBL parameter, this parameter also specifies the single-byte translation used to translate single-byte character set (SBCS) data.

***DFT**: The default country's or region's DBCS character set is used for translation.

***JPN**: The Japanese double-byte character set is used for translation.

***CHT**: The Traditional Chinese double-byte character set is used for translation.

***BG5**: The Taiwan Industry Standard (BIG-5) double-byte character set is used for translation.

***CHS**: The Simplified Chinese (People's Republic of China) double-byte character set is used for translation.

***KOR**: The Korean double-byte character set is used for translation.

***KSC**: The Korean Industry Standard double-byte character set is used for translation.

***SCGS**: The People's Republic of China National Standard (GB) double-byte character set is used for translation.

***NONE**: No double-byte translation is performed.

IGCSOSI

Specifies, for DBCS users only, whether shift-out and shift-in characters are inserted during translation. This parameter is not valid if TRNTBL(*NONE) is specified.

***YES**: Shift-out and shift-in characters are inserted during translation.

***NO**: Shift-out and shift-in characters are not inserted during translation.

Example for CPYFRMPCD

```
CPYFRMPCD FROMFLR(MYFOLDER) TOFILE(XYZ/MYDATA)
          FROMDOC(AKDATA.TXT) TOMBR(*FROMDOC)
```

This command copies the data contained in the PC document AKDATA.TXT in folder MYFOLDER to member AKDATA.TXT in database physical file XYZ/MYDATA. If member AKDATA.TXT does not exist in the file, it is added to the file. The data is converted to EBCDIC by using the default translation table.

Error messages for CPYFRMPCD

*ESCAPE Messages

IWS1603

PC document copied to file with &6 truncated records.

IWS1611

PC document &1 not copied.

CPYFRMPCFF (Copy From PCF File) Command Description

CPYFRMPCFF Command syntax diagram

Purpose

The Copy From Portable Compiled Format File (CPYFRMPCFF) command copies all user-defined DBCS character fonts contained in a Portable Compiled Format (PCF) file to a double-byte character set (DBCS) font table. During the copy operation, a dot matrix conversion is automatically performed. The following table lists the supported dot matrix conversions.

Table 1. Supported dot matrix conversion

From DBCS font table	To PCF file
24-by-24	16-by-16
24-by-24	24-by-24
24-by-24	32-by-32
24-by-24	48-by-48
32-by-32	16-by-16
32-by-32	24-by-24
32-by-32	32-by-32
32-by-32	48-by-48

There are differences in the number of supported user-defined DBCS characters between a DBCS font table and PCF file. The following table lists the maximum number of user-defined DBCS character fonts that can be copied for each type of DBCS font table.

Table 2. Maximum number of user-defined DBCS character fonts

DBCS font table	Maximum number	First DBCS code	Last DBCS code
Japanese	1880	6941	72EA
Korean	1880	D441	DDEA
Traditional Chinese	2660	D041	DDFE
Simplified Chinese	1880	7641	7FEA

Restrictions: You must have the following authority:

1. *USE authority to the CPYIGCTBL and CRTPF command.
2. *CHANGE authority to the DBCS font table.
3. *RX authority to directories in the PCF file path name prefixes.
4. *RX authority to directories in the PCF file's parent path name prefix.

5. *R authority to the PCF file.

Required Parameters

FROMPCFF

Specifies the path name of the PCF file from which user-defined DBCS character fonts are copied. The PCF file is a stream file object, and it must be an user-defined character set with UCS-2 encoding. See path names for more information on specifying path names.

path-name: Specify the path name of the PCF file.

TOIGCTBL

Specifies the name of the DBCS font table to which user-defined DBCS character fonts are copied. Choose one of the following table names:

QIGC2424: The Japanese DBCS font table used for displaying and printing extension characters in a 24-by-24 dot matrix font.

QIGC2424C: The Traditional Chinese DBCS font table used for printing extension characters in a 24-by-24 dot matrix font.

QIGC2424K: The Korean DBCS font table used for printing extension characters in a 24-by-24 dot matrix font.

QIGC2424S: The Simplified Chinese DBCS font table used for printing extension characters in a 24-by-24 dot matrix font.

QIGC3232: The Japanese DBCS font table used for displaying and printing extension characters in a 32-by-32 dot matrix font.

QIGC3232S: The Simplified Chinese DBCS font table used for printing extension characters in a 32-by-32 dot matrix font.

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

Optional Parameters

RPLFNT

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

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

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

Examples for CPYFRMPCFF

Example 1: Copying Without Replacing Existing Fonts

```
CPYFRMPCFF
  '/QIBM/ProdData/NetworkStation/fonts/pcf/IBM_JPN17.pcf'
TOIGCTBL(QIGC2424)
RPLFNT(*NO)
```

This command copies all user-defined DBCS character fonts contained in the Japanese PCF file named IBM_JPN17.pcf (24-by-24 dot matrix font) in directory /QIBM/ProdData/NetworkStation/fonts/pcf to the Japanese DBCS font table QIGC2424 (24-by-24 dot matrix font). Only user-defined DBCS character fonts that are not found in the DBCS font table are copied.

Example 2: Copying User-Defined DBCS Character Fonts From DBCS Font Table to PCF File Replacing Existing Fonts

```
CPYFRMPCFF  
  '/QIBM/ProdData/NetworkStation/fonts/pcf/Chtpc17.pcf'  
TOIGCTBL(QIGC2424C)  
RPLFNT(*YES)
```

This command copies all user-defined DBCS character fonts contained in the Traditional Chinese PCF file named Chtpc17.pcf (24-by-24 dot matrix font) in directory /QIBM/ProdData/NetworkStation/fonts/pcf to the Traditional Chinese DBCS font table QIGC2424C (24-by-24 dot matrix). User-defined DBCS character fonts in the DBCS font table are replaced with those found in the PCF file.

Error messages for CPYFRMPCFF

*ESCAPE Messages

None.

CPYFRMQRYF (Copy From Query File) Command Description

CPYFRMQRYF Command syntax diagram

Purpose

The Copy from Query File command copies a set of database records that satisfies a database query request to a physical file, a program-described printer file, an IBM-supplied printer file (QSYSPRT which is used when *PRINT is specified), a DDM file, a tape file, or a diskette file. The records are copied from the open query file associated with an open identifier. The open identifier must name an open query file that was opened for input, update, or all operations.

Note: For more information on DDM files, see the Distributed Data Management topic in the Information Center.

This command can:

- Add records to an existing physical file member or replace contents of a receiving physical file member (MBROPT parameter).
- Copy records from an open query file format that is different than the to-file record format, and convert records when copying to a source physical file. When the formats are different, the copy operation can:
 - Map fields that have the same name in the open query file format and the to-file record format
 - Drop fields from the open query file format that do not exist in the to-file record format
 - Copy the records directly, disregarding the differences between the open query file format and the to-file record format
- Select a printout format when TOFILE(*PRINT) is specified. The records can be listed in character format, or in both character and hexadecimal format (OUTFMT parameter).
- If the to-file does not exist before the copy operation, create the file (CRTFILE parameter) so that it has the same format as the open query file. Only the name, type, length, and decimal positions of each field in the open query format are used.
- Copy a specified number or all of the records from an open query file depending if NBRRCDS(*END) was used or if a specific number was specified on the NBRRCDS parameter.

Additional information about CPYFRMQRYF is in the File Management topic in the Information Center and the Database Programming topic in the Information Center.

Restrictions:

1. The open query file used by the CPYFRMQRYF command must not use any DDM files (specified on the FILE parameter of the OPNQRYF command).
2. A member cannot be copied to itself. This restriction means that a member specified by the TOFILE and TOMBR parameters of the CPYFRMQRYF command cannot have the same name as any member specified on the FILE parameter of the OPNQRYF command, nor can the member have the same qualified name as any physical file members used by logical files that are on the FILE parameter of the OPNQRYF command.
3. When the CRTFILE(*YES) parameter is specified and the FROMOPNID parameter identifies a query file that has an associated trigger, the file created (TOFILE parameter) does not have the associated trigger. The Add Physical File Trigger (ADDPFTRG) command must be used to add a trigger to the file.
4. In multithreaded jobs, this command is NOT threadsafe if the OPNQRYF command is not run in a threadsafe manner, or if copying to multiple database file members, device files (except SPOOL(*YES) print files), distributed files, or DDM files of type *SNA. This command fails for distributed files that use relational databases of type *SNA and DDM files of type *SNA. It is threadsafe ONLY when copying to single database file members (local or DDM of type *IP) or SPOOL(*YES) print files provided the OPNQRYF command is run in a threadsafe manner.

Required Parameters

FROMOPNID

Specifies the name used on the OPNQRYF command for identifying the open identifier for the query file. The open identifier (specified by the OPNID parameter of OPNQRYF) names an open query file that allows input, update, or all operations as specified by the OPNID and OPTION parameters on the OPNQRYF command.

TOFILE

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

Note:

A device file can be a diskette file, tape file, or a program-described printer file.

***PRINT:** The data is copied to the IBM-supplied printer device file, QSYSPRT, and the file is formatted according to the UTFMT parameter.

The IBM-supplied printer file, QSYSPRT, may not be overridden to a different file name, and it must have the RPLUNPRT(*YES) and CTLCHAR(*NONE) attributes.

The name of the file can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

file-name: Specify the qualified name of the physical file or device file that receives the copied records. If no library qualifier is specified, *LIBL is used to locate the file. However, if CRTFILE(*YES) is specified and the specified file cannot be found, the file name must be qualified with a library name. When the physical to-file is created, it is placed in the specified library.

Optional Parameters

TOMBR

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

Note: If the to-file is a printer file, the value of the TOMBR parameter must be *FIRST.

When a physical file is created by the copy operation for the to-file and TOMBR(*FIRST) is specified, the to-file file name is used as the file member name in the created file.

***FIRST:** The first member in the database file receives the copied records.

member-name: Specify the name of the physical to-file member, or the label identifier of the diskette to-file or tape to-file that receives the records. If a member with the specified name does not already exist in the physical to-file, the copy operation attempts to add a member with the specified name to the file.

MBROPT

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

Note: If the copy is to an existing physical file, this parameter must specify either *ADD or *REPLACE. If the to-file does not exist but CRTFILE(*YES) is specified, the copy operation assumes MBROPT(*ADD) for all records copied to the file after it is created, regardless of the value specified on this parameter. The copied records are always physically added to the end of a database file member in the same order that they are retrieved from the open query file.

***NONE:** The MBROPT parameter does not apply to this copy operation. When the to-file is an existing physical file, MBROPT(*NONE) is not allowed; either *ADD or *REPLACE must be specified to indicate whether records should be added or replaced in each to-file member used.

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

***REPLACE:** The system clears the existing member and adds the new records.

CRTFILE

Specifies whether a physical file is created to receive the data if the to-file does not exist. If the to-file already exists when this command is started, this parameter is ignored.

***NO:** The to-file must exist when this command is started. A physical file is not created to receive the data.

***YES:** If the specified to-file does not exist, a physical file is created that has the name specified on the TOFILE parameter. If the open query file format contains a user defined type, datalink, or LOB field type, the physical file created will be an SQL table. In all other instances the to-file created will be a database physical file that is not an SQL table. In addition to the normal copy operation validity checks, the following special conditions must all be true for the copy operation to create a to-file:

- A library name must be specified on the TOFILE parameter (the default value, *LIBL, is not allowed).

- There cannot be an override to a different file or library name; the values specified on this command for the to-file must be used.
- The user running the CPYFRMQRYP command must be authorized to add the file to the TOFILE library and must have operational authority to the CRTPF command.

NBRRCDS

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

Note: The first record copied is the record at the start of the open query file access path.

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

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

FMTOPT

Specifies, when the open query file is copied to a physical to-file, what field-level record format processing (if any) is done. If the to-file is a source physical file, *CVTSRC must be specified on this parameter. The CCSIDs for character and DBCS fields in the open query format are determined by the CCSID of the job in which the Open Query File (OPNQRYF) command is run. All CCSIDs other than 65535 are reset to the job CCSID of the OPNQRYF command, unless the OPNQRYF job CCSID is 65535, in which case the CCSIDs are unchanged. If the open query file format and to-file record formats are identical and the to-file is a data physical file, any FMTOPT value except *CVTSRC can be specified to perform the copy operation.

Note: Change the job CCSID to 65535 before running the OPNQRYF command if you plan to use the CPYFRMQRYP command.

***NONE:** No field mapping or field dropping is done during the copy operation. This value is valid only if the open query file and to-file have the same record format, or if the to-file is not a database file. The record formats are the same only if every field exists in both the open query file and to-file formats, and has the same starting position and attributes in both formats. Attributes include CCSIDs, whether or not a field is null-capable, and the date/time format and separator (if the field is a date/time field). Null values are copied if *NONE is valid and both files are database files.

***NOCHK:** If the record formats of the open query file and the to-file are different, the copy operation continues despite the differences. Record data is copied directly (left to right) from one file to the other. If this value is specified, null values are ignored, no conversion of date/time data occurs, and no CCSID conversions are done.

***CVTSRC:** This value is used to copy to a source file. It is valid only when the to-file is a source file. If the to-file is a source file, sequence number and date fields are added, and the open query file record data is copied to the source data part of each to-file record. Null values are ignored and no conversion of date/time data occurs.

***MAP:** Fields with the same name in the open query file and to-file record formats are copied, and fields in the to-file that do not exist in the open query file format are set to the default value specified on the DFT keyword for the data description specification (DDS) of the to-file (or zero for numeric fields, blanks for character fields, current date/time for date/time fields, or the null value

for null-capable fields). If *MAP is specified, *DROP can also be specified. Mapped fields may have different starting positions in the open query file and to-file record formats. *MAP allows for CCSID conversions, the conversion of date/time data and for the copying of null values.

***DROP:** This value must be specified for field-level mapping if any of the field names in the open query file record format do not exist in the to-file format. If *DROP is specified, *MAP can also be specified. When *DROP is specified, all the field names that exist in both record formats must have the same attributes and relative positions in the open query file and to-file record formats, or *MAP must also be specified. Null values are copied if *DROP is valid.

OUTFMT

Specifies, if TOFILE(*PRINT) is specified, whether the copied records are printed in character or hexadecimal format.

***CHAR:** Records are printed in character format only.

***HEX:** Records are printed in both character format and hexadecimal format.

ERRLVL

Specifies the maximum number of recoverable read or write errors that are tolerated for the file during the copy operation. The recoverable error count is reset at the beginning of each CPYFRMQRYP operation. If the number of recoverable errors handled is larger than the number specified on the ERRLVL parameter, the copy operation ends and a message is sent.

0: If a recoverable error occurs, the copy operation ends.

***NOMAX:** No maximum number of errors is specified. All recoverable errors are tolerated. The copy operation continues regardless of the number of recoverable errors found.

number-of-errors: Specify a value that specifies the maximum number of recoverable errors that is allowed for the copy operation. If one more error occurs than the value specified here, the copy operation ends.

Examples for CPYFRMQRYP

Example 1: Building a File with a Subset of Records

```
OPNQRYF FILE(CUSTOMER/ADDRESS)
  QRYSLT('STATE *EQ "TEXAS"')
CPYFRMQRYP FROMOPNID(ADDRESS)
  TOFILE(TEXAS/ADDRESS) CRTFILE(*YES)
```

These commands create a file from the CUSTOMER/ADDRESS file containing records that have a value of Texas in the STATE field.

Example 2: Printing Records Based on Selection

```
OPNQRYF FILE(FILEA) QRYSLT('CITY *EQ "CHICAGO"')
CPYFRMQRYP FROMOPNID(FILEA) TOFILE(*PRINT)
```

These commands print all records from FILEA where the value of the CITY field is Chicago.

Example 3: Copying a Subset of Records to a Diskette

```
OPNQRYF FILE(FILEB) QRYSLT('FIELDB *EQ "10"')
OPNID(MYID) CPYFRMQRYP FROMOPNID(MYID)
TOFILE(DISK1)
```

These commands copy to a diskette file all records from FILEB where the value of FIELDB is 10.

Example 4: Creating a Copy of the Output from a Dynamic Join

Assume a user wants to create a physical file with the format and data of FILEA and FILEB. Assume the files contain the following fields:

FILEA	FILEB	JOINAB
-----	-----	-----
Cust	Cust	Cust
Name	Amt	Name
addr		Amt

```

OPNQRYF FILE(FILEA FILEB) FORMAT(JOINAB)
  JFLD((FILEA/CUST FILEB/CUST))
  MAPFLD((CUST 'FILEA/CUST')) OPNID(QRYFILE)
CPYFRMQRYF FROMOPNID(QRYFILE)
  TOFILE(MYLIB/FILEC) CRTFILE(*YES)

```

These commands join FILEA and FILEB and save a copy of the results in a new physical file MYLIB/FILEC. The format of the file will be like JOINAB. The file will contain the data from the join of FILEA and FILEB using the Cust field. File FILEC in library MYLIB can be processed like any other physical file with CL commands (for example, Display Physical File Member (DSPPFM)) and utilities (for example, Query/400).

Error messages for CPYFRMQRYF

*ESCAPE Messages

CPF2816

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

CPF2816

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

CPF2817

Copy command ended because of error.

CPF2858

File attributes not valid for printed output.

CPF2859

Shared open data path not allowed.

CPF2864

Not authorized to file &1 in library &2.

CPF2875

Wrong file member or label opened.

CPF2883

Error creating file &1 in library &2.

CPF2888

Member &3 not added to file because of error.

CPF2909

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

CPF2949

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

CPF2952

Error opening file &1 in library &2.

CPF2971

Error reading member &3 in file &1.

CPF2972

Error writing to member &3 in file &1.

CPF2975

Error while reading from keyed file.

CPF2976

Number of errors greater than ERRLVL value.

CPF3140

Initialize or copy of member &2 canceled.

CPF3143

Increments not allowed for member &2.

CPF3148

New records need too much space for member &2.

CPF3150

Data base copy failed for member &2.

CPF9212

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

CPYFRMSTMF (Copy from Stream File) Command Description

CPYFRMSTMF Command syntax diagram

Purpose

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

➤ This command can operate on files of type *STMF and on the /dev/null character special file for the stream file parameter. ⚡

For more information about integrated file system commands, see the Integrated file system topic in the File systems and management category of the Information Center.

Restrictions: The following authorities are required:

1. *X authority to directories in the path name prefix of the database file, or save file, and stream file.
2. *R authority to the stream file.
3. One of the following authorities to the database file:
 - *OBJOPR and *ADD to do MBROPT(*ADD)
 - *OBJOPR, *OBJMGT, *ADD, and *DLT to do MBROPT(*REPLACE)
4. If you create a new member in the database file, the following authorities are required:
 - *OBJOPR, *OBJMGT, and *ADD to the database file.
 - *EXECUTE and *ADD to the directory containing the database file.
5. *OBJMGT, *OBJOPR, *READ, *ADD, and *EXECUTE authorities to the save file if the save file already exists.
6. *OBJOPR, *READ, *ADD, and *EXECUTE authorities to the save file's parent directory if the save file does not already exist.
7. The database-member-path-name must be of the form **name.object-type**. For example, **/QSYS.LIB/LIBA.LIB/FILEA.FILE/MBRA.MBR** is the form required by the QSYS.LIB file system.

8. The save-file-path-name must be of the form **name.object-type**. For example, **/QSYS.LIB/LIBA.LIB/SAVEFILEA.FILE** is the form required by the QSYS.LIB file system.

Required Parameters

FROMSTMF

Specifies the path name of the stream file from which data is copied. For more information on specifying path names, refer to path names.

➤ This command can operate on files of type *STMF and on the /dev/null character special file for the stream file parameter. ⬅

TOMBR

Specifies the path name of the database file member or save file to which data is copied. All directories in the path name must exist.

When copying to a save file, the save file will be created if it does not exist.

When copying to a database file member, the database file must exist. If the member does not exist, it is created. The file may be either a source physical file or a program-described physical file. Source physical files with multiple data fields are not supported.

If the database file is a source physical file, a sequence number and a date stamp of zeros is added to each record as it is copied to the database file member. For more information on specifying path names, refer to path names.

Optional Parameters

MBROPT

Specifies whether the copy operation replaces, adds, or fails to copy the records if the object specified on the TOMBR parameter already exists. If the object does not exist, it is created.

***NONE:** No records are copied and the operation will fail if the object exists.

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

***REPLACE:** The copied records replace the existing records.

CVTDTA

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

This parameter is ignored when copying to a save file.

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

***TBL:** The data is converted using a conversion table. Only single-byte character sets are supported. The conversion table must be specified on the TBL parameter.

***NONE:** Only insertion of the sequence numbers and date stamp to source physical files and the optional removal of specified line-formatting characters from the stream file are performed. Stream file code page to database file CCSID conversion of other characters is not performed.

STMFCODPAG

Specifies the method of obtaining the stream file code page.

This parameter is ignored when copying to a save file.

***STMF:** The code page associated with the stream file is used.

***PCASCII:** Use the code page associated with the file being copied from to compute a code page in the Microsoft Windows encoding scheme (x4105). This code page is used if data conversion is requested. This option allows data to be converted properly, if the data was created using Microsoft Windows.

For example, if the code page associated with the stream file is 37, the stream file data is instead assumed to be in code page 1252 for data conversion.

code-page: Specify the stream file code page.

DBFCCSID

Specifies the method of obtaining the database file CCSID.

This parameter is ignored when copying to a save file.

***FILE:** The database file CCSID is used, unless it is 65535. If the database file CCSID is 65535, the operation will fail.

coded-character-set-identifier: Specify the database file CCSID. This option is valid only if the database file CCSID is 65535 or is the same as the CCSID specified. Otherwise, the operation will fail. The values 0, 65534, and 65535 are not valid.

TBL Specifies the path name of the conversion table to be used to convert data from the stream file to the database file member. See path names for more information on specifying path names.

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

ENDLINFMT

Specifies the end-of-line characters which are recognized in the stream file during copying of records.

This parameter is ignored when copying to a save file.

All records are transformed to a fixed-length format as they are copied to the database file. The fixed-length is equal to the length of the database file records to which they are copied. If one of the end-of-line character options is selected (ENDLINFMT(*FIXED) is not specified) the stream file is read up to the first occurrence of that character. The end-of-line character is stripped from the record. The remainder of the record is padded with blanks. The data is converted to the destination data format (if specified) and copied to the database file member. If a record is too long to fit in the fixed-length format, it is truncated, then copied.

***ALL:** Any single or double character combination of carriage-return and line-feed is appended to the end of the line.

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

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

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

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

***FIXED:** Text lines in the stream file are considered fixed-length records of the same length as the database file records to which they are being copied. Any encountered CR, LF, or EOF characters are not stripped from the stream file. Tab expansion is not allowed and the TABEXPN parameter is not valid. If the last record in the stream file does not fill the database file record, that record is padded with blanks.

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

The following encoding scheme combinations are supported:

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

TABEXP

Specifies whether embedded tab characters are expanded to blanks up to the next eight-character tab position.

This parameter is ignored when copying to a save file.

***YES:** Tab characters are not copied to the database file member. Any encountered tab character is expanded with blanks up to the next tab position.

Note: If ENDLINFMT(*FIXED) is specified, *YES is not a valid value for this parameter.

***NO:** Tab characters are copied to the database file member. No tab expansion occurs.

Examples for CPYFRMSTMF

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

```
CPYFRMSTMF FROMSTMF('STMF.TXT')
           TOMBR('/QSYS.LIB/MYLIB.LIB/MYFILE.FILE/MYMBR.MBR')
```

This command copies the data contained in stream file STMF.TXT in the current working directory to database file member /QSYS.LIB/MYLIB.LIB/MYFILE.FILE/MYMBR.MBR. Automatic conversion of data takes place using the stream file data code page and the database file CCSID. Any single or double character combination of CR and LF will be recognized as the end of a line in the stream file, and any embedded tabs are expanded with blanks out to the next tab position since these are the default values. If member MYMBR.MBR does not exist in the file, it is created. If member MYMBR.MBR exists, no records are copied since MBROPT(*NONE) is the default value.

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

```
CPYFRMSTMF FROMSTMF('FINANCE.NEW')
           TOMBR('/QSYS.LIB/FINANCE.LIB/STAFF.FILE/MNGR.MBR')
           CVTDTA(*TBL) STMFCODPAG(437)
           TBL('/QSYS.LIB/QUSRSYS.LIB/TBL1.TBL')
           ENDLINFMT(*CRLF) TABEXP(*NO)
```

This command copies the data in stream file FINANCE.NEW in the current working directory to the database file member /QSYS.LIB/FINANCE.LIB/STAFF.FILE/MNGR.MBR. The data in the stream file is converted using the user-specified conversion table TBL1.TBL contained in the directory /QSYS.LIB/QUSRSYS.LIB. The double character combination of CR and LF is recognized as the end of a stream file line. Any embedded tabs are not expanded with blanks. The line-formatting characters are recognized from code page 437 specified on the STMFCODPAG parameter.

Example 3: Copying Data from a Stream File to a Data-base File Without Data Conversion

```
CPYFRMSTMF FROMSTMF('FINANCE.NEW')
           TOMBR('/QSYS.LIB/FINANCE.LIB/STAFF.FILE/MNGR.MBR')
           CVTDTA(*NONE) ENDLINFMT(*FIXED)
```

This command copies the data in stream file 'FINANCE.NEW' in the current working directory to the database file member /QSYS.LIB/FINANCE.LIB/STAFF.FILE/MNGR.MBR without data conversion. The stream file data lines are considered to be fixed length records of the same length as the database file

records. Because TABEXPN(*NO) is specified, any tab characters encountered are not expanded to blanks during copying. If the encoding scheme of the stream file and the database file differ, the copy ends with an error message.

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

```
CPYFRMSTMF FROMSTMF('/MYDIR/SOFTWARE')  
TOMBR('/QSYS.LIB/PACKAGE.LIB/SOFTWARE.FILE')
```

This command copies the data contained in stream file /MYDIR/SOFTWARE to the save file /QSYS.LIB/PACKAGE.LIB/SOFTWARE.FILE. The stream file data is copied as fixed-length records with length of 528. No line-formatting characters are inserted, nor is any data conversion performed.

Error messages for CPYFRMSTMF

*ESCAPE Messages

CPFA085

Home directory not found for user &1.

CPFA095

Stream file not copied.

CPFA096

Stream file copied to object with truncated records.

CPYFRMTAP (Copy from Tape) Command Description

CPYFRMTAP Command syntax diagram

Purpose

The Copy from Tape (CPYFRMTAP) command copies records from a tape file to an output file or to a printer. The from-file must be a tape file, but the to-file can be a physical file, a DDM file, diskette file, tape file, or program-described printer file. To obtain a formatted printer file of the records using the IBM-supplied printer file QSYPRT, TOFILE(*PRINT) is specified.

Note:

For more information on DDM files, see the Distributed Data Management topic in the Information Center.

This command offers a subset of the parameters available on the Copy File (CPYF) command, along with more specific tape-oriented parameters. If parameters are needed that are not available on the CPYFRMTAP command, the user can either use overrides for the from-file or to-file, or use the CPYF command or a combination of file overrides with the CPYF command. Only a single tape file (sequence number) can be copied with one call of this command.

The to-file must exist when the CPYFRMTAP command is started. This command does not create the to-file, but it *does* add a member to an existing physical file if the member does not already exist in the to-file.

Restrictions:

1. A file's open data path (ODP) cannot be shared with any other program in the job (routing step) during the copy operation.
2. Non-labeled tapes cannot be duplicated to 1/4 inch or 8mm cartridge devices.

Required Parameters

FROMFILE

Specifies the qualified name of the tape device file that contains the records that are copied.
The name of the tape file can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

tape-file-name: Specify the name of the tape device file containing records to be copied.

TOFILE

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

Note:

If no library qualifier is given, *LIBL is used to find the file.
The device file can be a diskette, tape, or
program-described printer file.

***PRINT:** The records are copied to the IBM-supplied printer file QSYSPRT, and the file is formatted according to the OUTFMT parameter. The IBM-supplied printer file, QSYSPRT, may not be overridden to a different file name, and the RPLUNPRT(*YES) and CTLCHAR(*NONE) attributes must be specified.

The name of the to-file can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

to-file-name: Specify the name of the physical file or device file that receives the copied records.

Optional Parameters

FROMSEQNBR

Specifies the sequence number of the tape file that is copied. If the tapes for the from-file have standard labels, the file sequence number is read from the first header label of the data file. When bypass label processing has been specified for the from-file (that is, FROMREELS(*BLP) has been specified on this command or on the command used to describe the tape file) or when tapes with standard labels are not being used, the system uses the tape marks and the value specified on this parameter to locate the correct data file that is copied.

***TAPF:** The value specified in the tape device file is used.

***NEXT:** The next file in the sequence is processed. If the tape is currently in a position that is prior to the first file, the first file on the tape is processed.

sequence-number: Specify the sequence number of the file on the tape that is copied. For a labeled tape file, the label specified in the FROMLABEL parameter must be found at this sequence number. Valid sequence numbers range from 1 through 16777215.

FROMLABEL

Specifies the data file identifier of a file that is copied from the tape. The file identifier specified must be found at the sequence number specified in the FROMSEQNBR parameter.

***TAPF:** The value specified in the tape device file or override is used.

***NONE:** The file identifier is not specified. No check is made for the file identifier in the labels file specified by the FROMSEQNBR parameter. Any label identifier is accepted.

data-file-identifier: Specify the name of the file label that is copied from the tape from-file. A label may be up to 17 characters in length.

generic-data-file-identifier:* Specify the generic name of the data file identifier. A generic name is a character string of one or more characters followed by an asterisk (*); for example, ABC*. The asterisk substitutes for any valid characters. A generic name specifies all objects with names that begin with the generic prefix for which the user has authority. If an asterisk is not included with the generic (prefix) name, the system assumes it to be the complete object name. See generic names for additional information.

TOMBR

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

Note:

Either *FROMLABEL or *FIRST must be specified for this parameter if the to-file is a printer device file or if *PRINT is specified for the TOFILE parameter. If a member (specified by name or implied by a parameter value of *FROMLABEL) does not exist in a physical to-file, it is added to the to-file by the copy operation.

***FROMLABEL:** The file specified by the FROMLABEL and FROMSEQNBR parameters is copied into a corresponding member or label in the to-file.

The name of the from-file tape label identifier is used as the member or label identifier for a physical to-file, diskette to-file, or tape to-file. If the to-file is a diskette or tape file, the from-file label identifier is used without modification.

If the to-file is a database file, the last 10 characters that appear before all consecutive blanks for the from-file label are used for the to-file member name. If the last 10 characters that appear before all consecutive blanks are not valid, then the characters to the right of the last period (.) are used for the to-file member name.

If the from-file is a nonlabeled tape file, then a to-file member or label name is created that corresponds to the data file on the tape from-file in the form of CPYnnnn, where nnnn is the tape sequence number of the data-file. If the to-file is a tape or diskette device file, the label in the device file description or override is used.

***FIRST:** The first member in the physical to-file receives the copied records.

to-member-name: Specify the name of the physical file member or the label of a diskette or tape file that receives the records copied from the from-file. If the tape label identifier is longer than 10

characters or contains special characters, it must be specified on a CRTTAPF, CHGTAPF, or OVRTAPF command before starting the CPYFRMTAP command.

FROMDEV

Specifies the name of up to four tape devices or one media library device from which the tape from-file is copied.

***TAPF:** The value specified in the tape device file is used.

device-name: Specify the names of up to four tape devices or one media library device used when copying records from the tape from-file. The order in which the device names are specified is the order in which tapes on the devices are read. Each device name must already be known on the system by a device description.

FROMVOL

Specifies one or more volume identifiers of the tapes used when copying records from the (tape) from-file. These volumes must be placed in the devices in the same order as the identifiers are specified (and in the same order as the device names are specified in the FROMDEV parameter).

***TAPF:** The value specified in the tape device file or override is used.

***NONE:** No tape volume identifiers are specified for this file. No volume checking is done beyond verifying that the correct label type volume is placed in the device. The maximum number of reels processed for a *NL, *NS, or *BLP from-file when FROMVOL(*NONE) is specified is determined by the number-of-reels element of the FROMREELS parameter.

volume-identifier: Specify no more than 50 volume identifiers from which the tape file is copied. The identifiers of volumes must be entered in the same order in which they are placed in the devices. Each identifier can have up to 6 alphanumeric characters. The maximum number of reels processed for an *NL, *NS, or *BLP input file is determined by the number of volume identifiers in the list. For *SL and *BLP, the system compares the identifiers of the volumes against the identifiers in the list, and sends the operator an inquiry message if the wrong volume is placed in the device.

FROMREELS

Specifies the type of labeling used on the tape reels that contain the from-file. The number of reels value specified on this parameter is not a limiting value for tape with standard labels. For standard-label tape, the labels on the tape indicate an end-of-file condition that limits the number of volumes processed. The number of reels information is used only if there is no list of volume identifiers specified and if the from-file is either *NL, *NS or *BLP. When the number of reels value is used, the volume identifiers on the volumes that are placed in the device are ignored if the from-file resides on labeled tapes. In that case, the order in which the reels are placed in the device must be checked by the operator.

Element 1: Label Type

***TAPF:** The value specified in the tape device file or override is used.

***SL:** Each tape volume from which records are copied has standard labels.

***NL:** The tape volumes, from which records are copied, have no labels. Tape marks are used to indicate the end of each data file on the tape.

***NS:** Each tape volume from which records are copied has nonstandard labels. Any file label information contained on the tape is ignored; instead, tape marks are used to determine the start and end of a data file. Only a single data file can exist on a nonstandard tape reel (volume).

***BLP:** Standard label processing is bypassed when copying the from-file volumes. Although each reel is checked for a standard label, all other volume label information and file labels on the tape are ignored. Only the tape marks are used when the tape volumes are being copied. Bypass label processing can be used if the names of the volumes are incorrect, or if some of the information in the file labels is incorrect.

***LTM:** The volumes of the from-file have no labels but have a single leading tape mark before the first file on the tape.

Element 2: Number of Reels

***TAPF:** The value specified in the tape device file or override is used.

number-of-reels: Specify the maximum number of reels used when copying records from the from-file for a *NL, *NS, *BLP, or *LTM tape file when there is no list of volume identifiers specified. If the next reel is not placed in the device when the end of a tape is reached, a message is sent to the operator requesting that the next tape be placed in the device.

FROMRCLEN

Specifies the length (bytes) of the records contained in the tape from-file. This parameter should be specified in this command or a tape file command for *NS, *NL, *BLP, or *LTM tapes, or for the tapes that do not have HDR2 labels. For *SL tapes, the record length is obtained from the label itself.

***TAPF:** The value specified in the tape device file or override is used.

***CALC:** No record length is specified for the from-file. The system calculates a correct record length. When label processing is bypassed or when the tape from-file does not have standard labels, the record length is calculated from the block length; the record block format must not be blocked or spanned.

record-length: Specify a value, ranging from 1 through 32767, for use as the record length when copying records from the tape from-file. The record length must be consistent with the block length and record block format parameter values.

FROMBLKLEN

Specifies the length (bytes) of data blocks transferred from the tape from-file. This parameter should be specified for nonstandard or nonlabeled tapes, for tapes whose label processing has been bypassed, or for tapes that do not have HDR2 labels. For standard labeled tapes, the block length is obtained from the label itself, and this parameter is ignored.

***TAPF:** The value specified in the tape device file or override is used.

***CALC:** No block length is specified for the from-file. The system calculates a correct block length. When label processing is bypassed or when the tape from-file does not have standard labels, the block length is calculated from the record length. The record block format must not be blocked or spanned.

block-length: Specify a value, ranging from 18 through 524288 that specifies the block length of each block in the tape from-file. The block length must be consistent with the record length and record block format values.

FROMRCDBLK

Specifies the record block format and blocking attribute of records in the tape from-file. This parameter should be specified for nonstandard or nonlabeled tapes, for tapes whose label processing has been bypassed, or for tapes that do not have HDR2 labels. For standard labeled tapes, the record block format is obtained from the HDR2 label itself and this parameter is ignored.

***TAPF:** The value specified in the tape device file or override is used.

***D:** The tape from-file has variable-length, unblocked records in ASCII type D format.

***DB:** The tape from-file has variable-length, blocked records in ASCII type D format.

***F:** The tape from-file has fixed-length, unblocked records in either EBCDIC or ASCII format.

***FB:** The tape from-file has fixed-length, blocked records in either EBCDIC or ASCII format.

***U:** The tape from-file has records in an undefined format.

***V:** The tape from-file has variable-length, unblocked records in EBCDIC format.

***VB:** The tape from-file has variable-length, blocked records in EBCDIC format.

***VBS:** The tape from-file has variable-length, spanned blocked records.

***VS:** The tape from-file has variable-length spanned records.

FROMENDOPT

Specifies the positioning operation that is performed automatically on the last from-file tape volume when the tape device file is closed. For a multi-volume tape from-file, this parameter applies to the last reel (volume) only; all intermediate volumes are copied with *UNLOAD as the positioning attribute.

***TAPF:** The value specified in the tape device file or override is used.

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

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

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

MBROPT

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

Note: This parameter is required for a physical file and ignored for a device to-file.

***NONE:** No records are added or replaced in the member. This value is valid only for a copy to a device file.

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

***REPLACE:** The system clears the existing member and adds the new records.

NBRRCDS

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

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

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

OUTFMT

Specifies, if TOFILE(*PRINT) is specified, whether the copied records are printed in character or hexadecimal format.

***CHAR:** Records are printed in character format only.

***HEX:** Records are printed in both character format and hexadecimal format.

Examples for CPYFRMTAP

Example 1: Adding Copied Records to Existing Records

```
CPYFRMTAP FROMFILE(QTAPE) TOFILE(DEPT/YTDSALES)
          FROMSEQNBR(3) FROMLABEL(DAILY) FROMDEV(QTAPE1)
          MBROPT(*ADD)
```

This command copies records from tape by using the tape device file QTAPE. The data file at sequence number 3 labeled DAILY on device QTAPE1 is copied. The specific attributes of the data file, such as record length and record block format, is determined by the system from the label on the tape. The

records are added to the existing records in the member DAILY, which is implied by the parameter default of (TOMBR(*FROMLABEL), in file YTDSALES, which is in library DEPT.

Example 2: Replacing Existing Records

```
CPYFRMTAP FROMFILE(QTAPE) TOFILE(MYLIB/KEN)
  FROMSEQNBR(2) FROMDEV(QTAPE1) FROMREELS(*NL 1)
  FROMRCDLEN(100) FROMBLKLEN(1000)
  FROMRCDBLK(*FB) TOMBR(*FIRST) MBROPT(*REPLACE)
```

This command copies records from tape by using the tape device file QTAPE. Records in the data file at sequence number 2 of a nonlabeled tape file on tape device QTAPE1, with fixed-length records that are blocked 1000 bytes (or 10 records) to a block, are copied, and replace the existing records in the first member in file KEN, which is in library MYLIB.

Error messages for CPYFRMTAP

*ESCAPE Messages

CPF2816

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

CPF2817

Copy command ended because of error.

CPF2818

*FROMMBR value is not allowed on TOMBR parameter.

CPF2858

File attributes not valid for printed output.

CPF2859

Shared open data path not allowed.

CPF2875

Wrong file member or label opened.

CPF2888

Member &3 not added to file because of error.

CPF2909

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

CPF2949

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

CPF2952

Error opening file &1 in library &2.

CPF2971

Error reading member &3 in file &1.

CPF2972

Error writing to member &3 in file &1.

CPF9212

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

CPYFCNARA (Copy Functional Area) Command Description

Note: To use this command, you must have the 5722-PT1 (Performance Tools for iSeries) licensed program installed.

CPYFCNARA Command syntax diagram

Purpose

The Copy Functional Area (CPYFCNARA) command allows the user to copy a functional area over to a new functional area. Functional areas are used for Performance Tools reports and graphics. A functional area is a pre-defined list of job names and user names that are included in a report or graph.

Required Parameter

FROMFCNARA

Specifies the functional area from which to copy. Enclose the name in apostrophes if it contains any spaces between characters.

Optional Parameters

FROMLIB

Specifies the location of the functional area to be copied.

QPFRDATA: The IBM-supplied performance data library, QPFRDATA, is the location of the functional area.

library-name: Specify the name of the library where the functional area is located.

TOFCNARA

Specifies the functional area to which the copy is sent.

***FROMFCNARA:** The name specified on the FROMFCNARA parameter is used.

functional-area-name: Specify the name of the functional area to which the copy is sent. Enclose the name in apostrophes if it contains any spaces between characters.

TOLIB Specifies the library to which the copy of the functional area is sent.

***FROMLIB:** The functional area is copied to the library specified on the FROMLIB parameter.

library-name: Specify the name of the library to which the functional area is copied.

REPLACE

Specifies, if a functional area exists, whether to replace it with the functional area specified on the TOFCNARA parameter.

***NO:** The functional area is not replaced with the new functional area.

***YES:** The functional area is replaced with the new functional area.

Examples for CPYFCNARA

Example 1: Copying in the Same Library

```
CPYFCNARA FROMFCNARA(PERSONNEL) TOFCNARA(MIKE)
```

This command copies the functional area PERSONNEL to the functional area MIKE. Both functional areas are in the QPFRDATA library.

Example 2: Copying to a Different Library

```
CPYFCNARA FROMFCNARA('Performance Tools')
  TOFCNARA(MIKE) TOLIB(USRLIB)
```

This command copies the functional area 'Performance Tools' to the functional area MIKE in library USRLIB.

Error messages for CPYFCNARA

*ESCAPE Messages

PFR9062

Value for TOFCNARA parameter must be specified.

PFR9065

Cannot copy functional area &2.

PFR9066

Cannot copy to functional area &2.

CPYGPHFMT (Copy Graph Format) Command Description

Note: To use this command, you must have the 5722-PT1 (Performance Tools for iSeries) licensed program installed.

CPYGPHFMT Command syntax diagram

Purpose

The Copy Graph Format (CPYGPHFMT) command copies an existing graph format into a graph format specified by the user.

Required Parameter

FROMFMT

Specifies the graph format from which the copy is to be created.

The possible library values are:

- **QPFRDATA:** The IBM-supplied performance data library, QPFRDATA, is where the graph format is located.
- ***CURLIB:** The current library for the job is used to locate the graph format. If no library is specified as the current library for the job, the QGPL library is used.
- *library-name:* Specify the name of the library where the graph format is located.

format-name: Specify the name of the graph format.

Optional Parameters

TOFMT

Specifies the graph format location where the copy is to be created.

The possible library values are:

- ***FROMLIB:** The graph format is located in the library specified on the FROMFMT parameter.
- ***CURLIB:** The current library for the job is used to locate the graph format. If no library is specified as the current library for the job, the QGPL library is used.
- *library-name:* Specify the name of the library where the graph format is to be located.

***FROMFMT:** The graph format name specified on the FROMFMT parameter is used.

format-name: Specify the name of the copy of the graph format.

REPLACE

Specifies whether to replace the graph format in the TOFMT parameter, if the graph format already exists.

***NO:** The existing graph format is not replaced with the new graph format.

***YES:** The existing graph format is replaced with the new graph format.

Examples for CPYGPHFMT

Example 1: Sending a Copy to the Default Library

```
CPYGPHFMT FROMFMT(MYFMT) TOFMT(YOURFMT)
```

This command makes a copy of MYFMT and sends it to YOURFMT in the QPFRDATA library.

Example 2: Sending a Copy to a Specified Library

```
CPYGPHFMT FROMFMT(MYLIB/FMT1)  
TOFMT(YOURLIB/FMT2)
```

This command makes a copy of FMT1 in the MYLIB library and sends it to FMT2 in the YOURLIB library.

Error messages for CPYGPHFMT

*ESCAPE Messages

PFR9043

&1 does not exist in library &2.

CPYGPHPKG (Copy Graph Package) Command Description

Note: To use this command, you must have the 5722-PT1 (Performance Tools for iSeries) licensed program installed.

CPYGPHPKG Command syntax diagram

Purpose

The Copy Graph Package (CPYGPHPKG) command copies an existing graph package into a graph package specified by the user.

Required Parameter

FROMPKG

Specifies the graph package from which the copy is to be created.

The possible library values are:

- **QPFRDATA:** The graph package is located in the IBM-supplied performance data library, QPFRDATA.
- ***CURLIB:** The current library for the job is used to locate the graph package. If no library is specified as the current library for the job, the QGPL library is used.
- *library-name*: Specify the name of the library where the graph package is located.

package-name: Specify the name of the graph package.

Optional Parameters

TOPKG

Specifies the location of the graph package into which the copy is to be made.

The possible library values are:

- ***FROMLIB:** The graph package is copied into the library specified on the FROMPKG parameter.
- ***CURLIB:** The current library for the job is where the copy of the graph package will be located. If no library is specified as the current library for the job, the QGPL library is used.
- *library-name:* Specify the name of the library where the graph package is to be copied.

***FROMPKG:** The graph package name specified on the FROMPKG parameter is used.

package-name: Specify the name of the graph package.

REPLACE

Specifies whether an existing graph package is replaced by the new graph package in the TOPKG location.

***NO:** The existing graph package is not replaced with the new graph package.

***YES:** The existing graph package is replaced with the new graph package.

Examples for CPYGPHPKG

Example 1: Sending a Copy to the Default Library

```
CPYGPHPKG FROMPKG(MYPKG) TOPKG(YOURPKG)
```

This command makes a copy of MYPKG and sends it to YOURPKG in the QPFRDATA library.

Example 2: Sending a Copy to a Specified Library

```
CPYGPHPKG FROMPKG(MYLIB/PKG1)  
TOPKG(YOURLIB/PKG2)
```

This command makes a copy of PKG1 in the MYLIB library and sends it to PKG2 in the YOURLIB library.

Error messages for CPYGPHPKG

*ESCAPE Messages

PFR9043

&1 does not exist in library &2.

CPYJOBJS (Copy Job using Job Scheduler) Command Description

Note: To use this command, you must have the 5722-JS1 (Job Scheduler for iSeries) licensed program installed.

CPYJOBJS Command syntax diagram

Purpose

The Copy Job using Job Scheduler (CPYJOBJS) command allows you to copy one job and all its parameters to create a new job. After creating the new job, you can change any or all of the associated parameters.

Required Parameters

FROMJOB

Specifies the name of the job schedule entry that you want to copy to create a new job. You must specify a job and optionally can specify a group to which the job belongs as well as a sequence number for the job within the group.

Element 1: From job

from-job-name: Specify the name of the job that you want to copy.

Element 2: Group

***NONE:** The job that you are copying is not a member of a group.

group-name: Specify the name of the group for the job that you are copying.

Element 3: Group sequence

***NONE:** The job that you are copying does not have a sequence number.

group-sequence-number: Specify the sequence number of the job within the group.

TOJOB

Specifies the name of the job schedule entry that you are creating as a result of copying the job specified in the FROMJOB parameter. You must specify a job and optionally can specify a group to which the job belongs as well as a sequence number for the job within the group.

Element 1: To job

to-job-name: Specify the name of the job that you are copying to.

Element 2: Group

***NONE:** The job that you are copying to is not a member of a group.

group-name: Specify the name of the group for the job that you are copying to.

Element 3: Group sequence

***NONE:** The job that you are copying to does not have a sequence number.

group-sequence-number: Specify the sequence number of the job within the group.

Optional Parameter

CPYDEP

Specifies whether you should copy the dependencies from the job specified in the FROMJOB parameter to the job specified in the TOJOB parameter.

***NO:** The job dependencies from the original job are not copied to the new job.

***YES:** The job dependencies from the original job are copied to the new job.

Example for CPYJOBJS

Example 1: Copying a Job to a New Job

```
CPYJOBJS FROMJOB(JOB02) TOJOB(JOB03)
CPYDEP(*YES)
```

In this example JOB02 is copied to a new job called JOB03. The job dependencies from JOB02 are copied to JOB03.

Error messages for CPYJOBJS

None

CPYLIB (Copy Library) Command Description

CPYLIB Command syntax diagram

Purpose

The Copy Library (CPYLIB) command copies all of the objects in a library to another library, and optionally creates the TOLIB if it does not exist.

Restrictions:

1. If this command is interrupted prior to completion, the results are unpredictable.
2. Only object types supported by the Create Duplicate Object (CRTDUPOBJ) command can be copied.
3. If another job is processing any of the objects in the library, the results may be unpredictable. For example:
 - Objects created in the library after the copy starts are not copied.
 - If objects are deleted from the library after the copy starts, a user of the CPYLIB gets an error message.
 - If objects are in use or are locked by another job, the copy may not be successful.
4. Other jobs should not attempt to use objects in the new library until the copy is complete.
5. The restrictions for the Create Duplicate Object (CRTDUPOBJ) command also apply to the CPYLIB command.
6. The new library specified by the TOLIB parameter, is created in the same ASP (Auxiliary Storage Pool) as the existing library specified by the FROMLIB parameter.
7. All copied objects are created in the same ASP as the target library.
8. Any objects that already exist in the library specified by the TOLIB parameter will remain in the library after the new objects are copied.

Required Parameters

FROMLIB

Specifies the name of the library that is copied.

TOLIB Specifies the name of the new library that is created.

Optional Parameter

CRTLIB

Specifies that a library should be created as specified on the New library prompt (TOLIB parameter).

***YES:** The TOLIB is created during the copy from the FROMLIB. If the TOLIB already exists, the CPYLIB ends.

***NO:** The TOLIB is not created (it is assumed to already exist). If the TOLIB does not exist, the CPYLIB ends.

Example for CPYLIB

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

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

Error messages for CPYLIB

***ESCAPE Messages**

None.

CPYMEDIBRM (Copy Media Information using BRM) Command Description

Note: To use this command, you must have the 5722-BR1 (Backup Recovery and Media Services for iSeries) licensed program installed. For detailed information on the parameters of this command, see the online help.

CPYMEDIBRM Command syntax diagram

Purpose

This command is typically used when you are bringing a system into a network of systems that share BRMS media inventory information. The Copy Media Information using BRM (CPYMEDIBRM) command copies media inventory information to a work file, or copies the contents of the work file to the media inventory. You can copy the media inventory information and media content information or only the media inventory information.

Using the CPYMEDIBRM command prior to adding the system name to a BRMS network allows you to save the contents of the current media inventory into a work file. After network synchronization is complete, you can use CPYMEDIBRM with OPTION(*FROMFILE) on the newly added system to copy the original media inventory information back into the media inventory. Information that is inconsistent with the system's new network level media inventory information will be ignored when OPTION(*FROMFILE) is used.

The Media Merge report is produced when the CPYMEDIBRM command is run. The report, if printed, is written to the printer file QP1AEN.

Examples for CPYMEDIBRM

Example 1: Copying BRMS Media Information To a File

```
CPYMEDIBRM FILE(WORKFILE)
```

In this example you are copying BRMS media information to a file called WORKFILE.

Example 2: Copying BRMS Media Information From a File

```
CPYMEDIBRM OPTION(*FROMFILE) FILE(WORKFILE)
```

In this example you are copying BRMS media information from a file called WORKFILE to the network media inventory.

Error messages for CPYMEDIBRM

None

CPYOPT (Copy Optical) Command Description

CPYOPT Command syntax diagram

Purpose

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

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

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

Note: CPYOPT does not support copying optical files on *UDF formatted media. To copy files on *UDF formatted media use the Copy Object (CPY) CL command.

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

Required Parameters

FROMVOL

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

Element 1: Volume Identifier

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

Element 2: Volume Type

***PRIMARY:** The optical volume is a primary volume.

***BACKUP:** The optical volume is a backup volume.

FROMPATH

Specifies the path name of the directory or file being copied from the from-volume, beginning with the root directory of the volume. If the path name is a directory, all files in the specified directory are copied. If the path name is a file, only that file is copied. See path names for more information on specifying path names.

TOVOL

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

Element 1: Volume Identifier


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

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

Element 2: Volume Type:

***PRIMARY:** The optical volume is a primary volume.

***BACKUP:** The optical volume is a backup volume. You can use a new backup volume or a backup volume which has previously been used as the volume to which objects are copied. For

more information about backup volumes, refer to the Optical Support  book.

Optional Parameters

TOPATH

Specifies the path name of the file to be written or the path name of the directory to receive the new file on the to-volume beginning with the root directory of the volume. See path names for more information on specifying path names.

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

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

SLTFILE

Specifies how the files or directories are selected for copying.

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

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

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

CPYSUBDIR

Specifies whether to copy the files in the subdirectories.

***NO:** The files in the subdirectories are not copied.

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

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

CRTDIR

Specifies whether to create the directory to which to copy the files if it does not exist on the to-volume. For an optical volume whose type is backup, the directory is always created if it does not exist on the to-volume.

Note:

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

***NO:** The directory is not created.

***YES:** The directory is created if it does not exist on the to-volume. This parameter refers only to the directory to which files or directories are copied and does not apply to subdirectories under the directory. The CPYSUBDIR parameter controls whether subdirectories are created.

ALWCPYOPP

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

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

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

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

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

COPYTYPE

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

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

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

***SYSTEM:** The system copies the data using available resources. This type of processing is automatically used when only one drive is operable, or when the two volumes are either in separate optical media libraries or on the opposite side of the same optical cartridge. This option is recommended if interactive requests will be made to volumes in the optical media library during the copy operation.

FROMTIME

Specifies a starting date and time used to determine if a file or directory is selected for copying. All files or directories that have been created or changed, or whose attributes have changed, on or after the starting date and time are selected for copying.

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

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

Element 1: Starting Date

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

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

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

Element 2: Starting Time

***AVAIL:** All available times for the starting date are used.

start-time: Specify a time to use as the starting time or the starting date. The time separator is defined by the system value QTIMSEP. The time is specified in 24-hour format with or without a time separator as follows:

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

Examples for CPYOPT

Example 1: Copying All Files in All Directories

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

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

Example 2: Copying Changed Files

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

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

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

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

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

Error messages for CPYOPT

*ESCAPE Messages

OPT0147

SLTFILE value not allowed for operation.

OPT0149

CPYSUBDIR(*YES) not allowed with FROMPATH value.

OPT0152

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

OPT1105

File is read only.

OPT1115

File not found.

- OPT1120**
File already exists.
- OPT1125**
File is in use.
- OPT1129**
Operation not allowed to file opened for Expanding Buffer I/O.
- OPT1130**
File name specified is a reserved file name.
- OPT1135**
Request failed because number of open files is at the limit.
- OPT1140**
Unexpected error occurred during file processing.
- OPT1185**
Cannot access held optical file.
- OPT1205**
Directory not found.
- OPT1212**
Directory in use.
- OPT1220**
File or directory name already exists.
- OPT1224**
Path length exceeds the maximum of 256 bytes.
- OPT1255**
File is corrupted.
- OPT1261**
Active file found on volume &1.
- OPT1305**
Optical volume & is read only.
- OPT1315**
Optical volume & is write protected.
- OPT1317**
Directory name is too long.
- OPT1320**
Optical volume &1 in use.
- OPT1325**
Optical volume format not recognized.
- OPT1330**
Optical volume not found or not useable.
- OPT1331**
Optical volume &1 not found.
- OPT1340**
Optical volume &1 not initialized.
- OPT1344**
Optical file name not valid.

- OPT1345**
No free space available on media.
- OPT1346**
Operation not allowed to volume located in a remote optical device.
- OPT1350**
Write operations failed to optical volume &1.
- OPT1360**
Media directory corrupted on optical volume &1.
- OPT1460**
Optical volume &1 is not in an optical device.
- OPT1462**
Operation not completed, optical volume is not a backup volume.
- OPT1463**
Operation not completed, optical volume is not a primary volume.
- OPT1530**
&1 does not represent a valid optical device.
- OPT1555**
Optical device & in use.
- OPT1605**
Media or device error occurred.
- OPT1640**
Error occurred reading files or directories.
- OPT1790**
Operation conflicts with another request.
- OPT1795**
Error accessing directory attributes.
- OPT1805**
Error accessing optical volume index file.
- OPT1810**
Error accessing optical directory index file.
- OPT1813**
Unexpected error occurred.
- OPT1815**
Internal program error occurred.
- OPT1820**
Internal error occurred on optical device &1.
- OPT1821**
Internal error occurred on optical device &1.
- OPT1825**
Optical indexes are incorrect for optical device &1.
- OPT1860**
Request to optical device &1 failed.
- OPT1861**
No device description configured for resource &1.

- OPT1862**
No active device description for resource &1.
- OPT1863**
Optical libraries need to be reclaimed.
- OPT1872**
Optical request timed out.
- OPT2001**
Copy request completed. &1 files copied; &2 files failed; &8 files not eligible to copy.
- OPT2004**
Copy request ended abnormally. &1 files copied.
- OPT2005**
No files found in directory.
- OPT2006**
Directory path length too long.
- OPT2007**
TOVOL on opposite side of FROMVOL.
- OPT2008**
Copy request is not allowed.
- OPT2009**
Copy not permitted from backup volume.
- OPT2010**
Copy not permitted to backup volume.
- OPT2015**
File failed to copy.
- OPT2028**
Copy to backup not allowed for optical volumes specified.
- OPT2029**
TOVOL on opposite side of FROMVOL
- OPT2040**
Error accessing backup control file.
- OPT2301**
Internal system object in use.
- OPT2420**
Not authorized to optical volume &2.
- OPT7740**
User not authorized to object &2 in library &3 type &4.

CPYPFRDTA (Copy Performance Data) Command Description

Note: To use this command, you must have the 5722-PT1 (Performance Tools for iSeries) licensed program installed.

CPYPFRDTA Command syntax diagram

Purpose

The Copy Performance Data (CPYPFRDTA) command creates a copy of a performance data member.

Optional Parameters

FROMMBR

Specifies the performance data member to be copied.

***SELECT:** All members available in the specified library are listed so the user can select performance data members to copy.

Note: This value is valid only when the job that copies the performance data is submitted interactively.

member-name: Specify the performance data member to be copied.

FROMLIB

Specifies the library where the performance data members are located.

QPFRDATA: The IBM-supplied performance data library, QPFRDATA, is where the performance data members are located.

library-name: Specify the name of the library where the performance data members are located.

TOMBR

Specifies the name of the performance data member to which the performance data is copied.

***FROMMBR:** The new performance data member has the same name as the one specified on the FROMMBR parameter.

member-name: Specify the name of the performance data member to which the performance data member is copied.

TOLIB Specifies the library in which the new copy of the performance data member is kept.

***FROMLIB:** The new performance data member is kept in the same library as the member from which it is copied.

library-name: Specify the name of the library in which the new performance data member is kept.

JOB Specifies the job description used to submit the batch job that copies the performance data.

The name of the job description can be qualified by one of the following library values:

- ***LIBL:** All libraries in the job's library list are searched until the first match is found.
- ***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.
- *library-name:* Specify the name of the library to be searched.

QPFRJOB: The IBM-supplied Performance Tools job description is used.

job-description-name: Specify the name of an alternate job description.

Other Single Values

***NONE:** A batch job is not submitted; instead, processing continues interactively while the user waits. The user's work station cannot be used during this time. This is something to consider for especially long jobs.

Examples for CPYPFRDTA

Example 1: Showing List of Performance Data Members

CPYPFRDTA

This command shows a display for selecting from all of the performance data members in the QPFRDATA library. From this list, the user can select performance data members to copy.

Example 2: Copying Data

CPYPFRDTA FROMMBR(MEMBER1) TOLIB(NEWLIB)

This command copies performance member MEMBER1 in library QPFRDATA to library NEWLIB. The new copy in library NEWLIB keeps the name MEMBER1.

Error messages for CPYPFRDTA

*ESCAPE Messages

PFR6302

Cannot copy performance data member &2.

CPYPTF (Copy Program Temporary Fix) Command Description

CPYPTF Command syntax diagram

Purpose

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

Restrictions:

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

Required Parameters

LICPGM

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

FROMDEV

Specifies the name of the device that contains the PTFs to be copied.

***SERVICE:** The PTFs sent from the service support system are copied.

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

diskette-device-name: Specify the name of the diskette device from which the PTFs are copied.

tape-device-name: Specify the name of the tape device from which the PTFs are copied.

optical-device-name: Specify the name of the optical device from which the PTFs are copied.

TODEV

Specifies the device to which the PTFs are copied.

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

diskette-device-name: Specify the diskette device name to which the PTFs are copied.

tape-device-name: Specify the name of the tape device to which the PTFs are copied.

optical-device-name: Specify the name of the optical device to which the PTFs are copied.

SELECT

Specifies which of the PTFs for the specified product are copied. The OMIT parameter cannot be specified if SELECT is specified with PTF numbers.

***ALL**: All the PTFs for the specified program are copied.

PTF-number: Specify the PTF identification numbers of the PTFs that are copied.

OMIT Specifies that all PTFs, except for those specified in this parameter, are copied.

PTF-number: Specify the PTF numbers of the PTFs to be omitted. Up to 50 PTF numbers can be specified. The OMIT parameter cannot be specified if single PTF numbers are specified on the SELECT parameter.

Optional Parameters

FROMSAVF

Specifies the save file from which the PTFs are copied.

The name of the save file can be qualified by one of the following library values:

***LIBL**: All libraries in the job's library list are searched until the first match is found.

***CURLIB**: The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

save-file-name: Specify the name of the save file from which the PTFs are copied.

FROMSEQNBR

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

Note:

This parameter is valid only if a tape device name is specified on the FROMDEV parameter.

***SEARCH**: The tape volume is searched for the first program temporary fix (PTF) file for the specified licensed program.

sequence-number: Specify the sequence number at which to begin to copy the PTF data. This sequence number must exist on the tape. Valid values range from 1 to 16777215.

FROMENDOPT

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

Note:

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

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

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

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

FROMPATHID

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

Note:

This parameter is valid only if an optical device name is specified on the FROMDEV parameter.

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

- When a specific PTF identifier is specified on the SELECT parameter, the first occurrence of the specified PTF is copied.
- When *ALL is specified on the SELECT parameter, the existing PTF file with the lowest path identifier is copied.

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

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

TOVOL

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

***MOUNTED:** The volume currently placed in the device is used.

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

TOSEQNBR

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

***END:** The system saves the PTFs after the last sequence number on the tape.

sequence-number: Specify the sequence number of the file. Valid values range from 1 through 16777215.

TOENDOPT

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

Note:

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

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

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

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

TOSAVF

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

The name of the save file can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

save-file-name: Specify the name of the save file to which the PTFs are copied.

CLEAR

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

***NONE:** An uncleared save file encountered while PTF data is being saved is not automatically cleared.

***ALL:** An uncleared save file, encountered while PTF data is being saved, is automatically cleared so the operation can continue.

COVER

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

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

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

CVRLTRLNG

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

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

feature-code: Specify the feature code of the PTF cover letter you want to copy.

DTACPR

Specifies whether data compression is performed.

***DEV:** If the tape device has the hardware compression feature installed, processing proceeds as if DTACPR(*YES) is specified. If the compression feature is not installed or if save data is written to a diskette or save file, processing proceeds as if DTACPR(*NO) is specified.

***NO:** No data compression or decompression occurs.

***YES:** Program data compression is done. If the copy operation is to tape and the target device has the hardware compression feature, hardware compression is done. If the feature is not present or if the copy data is written to a diskette or save file, software compression is done. If the copy operation is running while other jobs on the system are active and software compression is used, overall system performance may be affected.

RLS Specifies the release level of the software product.

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

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

Examples for CPYPTF

Example 1: Copying PTFs to a Save File

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

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

Example 2: Copying PTFs from an optical device

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

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

Error messages for CPYPTF

*ESCAPE Messages

CPF35AE

Duplicate PTF &1 found.

CPF35CC

Library required for PTF operation already exists.

CPF35C2

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

CPF35C3

PTF &1-&2 cannot be included.

CPF35C4

CPYPTF ended abnormally.

CPF35C6

TOVOL parameter must be specified.

CPF35C8

PTF file to be copied is not valid.

CPF354D

Device &1 not allowed.

CPF3558

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

CPF358A

Release not valid.

CPF3586

List of PTFs not correct.

CPF3598

PTF function already in process.

CPF6602

PTF &1-&2 &3 not found.

CPF9812

File &1 in library &2 not found.

CPF9814

Device &1 not found.

CPYPTFCVR (Copy PTF Cover Letter) Command Description

CPYPTFCVR Command syntax diagram

Purpose

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

Restrictions:

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

Parameters

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

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

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

LICPGM

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

***ALL**: Cover letters for all installed and/or supported products are copied.

***SUPPTD**: Cover letters for all supported products are copied.

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

SELECT

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

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

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

PTF-number: Specify the PTF identification numbers of the cover letters to be copied. A maximum of 300 PTF numbers can be specified.

RLS Specifies the release level of the software product.

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

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

CVROPT

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

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

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

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

ENDOPT

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

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

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

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

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

Example for CPYPTFCVR

```
CPYPTFCVR DEV(OPT01) LICPGM(5722SS1) SELECT(*ALL) RLS(V5R2M0)
```

This command copies all cover letters for PTFs that are not applied to product 5722SS1 release V5R2M0 from device OPT01.

Error messages for CPYPTFCVR

*ESCAPE Messages

CPF354D

Device &1 not allowed.

CPF3586

List of PTFs not correct.

CPF358A

Release not valid.

CPF359D

No PTFs on device &3 met the selection criteria.

CPF35BE

Product &1 &3 not supported or installed.

CPF35E0

Error occurred copying PTFs.

CPF35F1

Cover letter file &1 in &2 not found.

CPF363C

No PTF cover letters copied from device &3.

CPF9814

Device &1 not found.

CPF9822

Not authorized to file &1 in library &2.

CPF9825

Not authorized to device &1.



CPYPTFGRP (Copy PTF Group) Command Description

CPYPTFGRP Command syntax diagram

Purpose

The Copy Program Temporary Fix Group (CPYPTFGRP) command copies program temporary fix (PTF) groups from tape, optical, save file, or service to tape, optical, save file or service. Only the PTF group information is copied, the PTFs named within the PTF group are not copied. The Work with PTF Groups (WRKPTFGRP) command can be used to display and work with a list of PTF groups on the system.

Restrictions:

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

Required Parameters

PTFGRP

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

PTF-group-name: Specify the name of the PTF group to be copied.

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

FROMDEV

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

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

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

tape-device-name: Specify the name of the tape device from which the PTF groups are copied.

optical-device-name: Specify the name of the optical device from which the PTF groups are copied.

TODEV

Specifies the device to which the PTF groups are copied.

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

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

tape-device-name: Specify the name of the tape device to which the PTF groups are copied.

optical-device-name: Specify the name of the optical device to which the PTF groups are copied.

Optional Parameters

FROMSAVF

Specifies the save file from which the PTF group is copied.

The name of the save file can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

save-file-name: Specify the name of the save file from which the PTF group is copied.

FROMSEQNBR

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

Note:

This parameter is valid only if a tape device name is specified on the FROMDEV parameter.

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

sequence-number: Specify the sequence number at which to begin to copy the PTF data. This sequence number must exist on the tape. Valid values range from 1 to 16777215.

FROMENDOPT

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

Note:

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

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

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

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

TOVOL

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

***MOUNTED:** The volume currently placed in the device is used.

volume-identifier: Specify the volume identifier of the tape, or optical volume.

TOSEQNBR

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

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

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

TOENDOPT

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

Note:

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

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

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

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

TOSAVF

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

The name of the save file can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

save-file-name: Specify the name of the save file to which the PTF group is copied.

CLEAR

Specifies whether an uncleared save file encountered while copying the PTF group is automatically cleared.

***NONE:** An uncleared save file encountered while the PTF group is being saved is not automatically cleared.

***ALL:** An uncleared save file, encountered while the PTF group is being saved, is automatically cleared so the operation can continue.

REPLACE

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

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

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

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

RELPTFGRP

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

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

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

Examples for CPYPTFGRP

Example 1: Copying a PTF Group to a Save File

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

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

Example 2: Copying a PTF Group to a Tape

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

This command copies the PTF group named SF99200 and all of its related PTF groups from the system to the tape mounted in device TAP01 beginning with sequence number 1.

Example 3: Copying All PTF Groups from Optical

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

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

Example 4: Copying a PTF Groups from Tape to Save File

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

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

Error messages for CPYPTFGRP

***ESCAPE Messages**

CPF35CC

Library required for PTF operation already exists.

CPF354C

Cannot process PTF files on optical volume.

CPF354D

Device &1 not allowed.

CPF354F

Required PTF file cannot be processed.

CPF355D

PTF group does not exist on save/restore media.

CPF355E

CPYPTFGRP ended abnormally.

CPF355F

TODEV and FROMDEV parameters cannot specify the same device.

CPF3598

PTF function already in progress.

CPF36A3

PTF group &1 already exists.

CPF36A4

PTF group &1 not found.

CPF36A6

PTF group name &1 not valid.

CPF36AB

No PTF groups found.

CPF36AF

PTF group function already in progress.

CPF363A

Media type of volume not valid for operation.

CPF363E

Cannot write required PTF file to optical volume.

CPF9812

File &1 in library &2 not found.

CPF9814

Device &1 not found.

OPT1660

Optical device &1 is empty.



CPYPTFSAVF (Copy PTF to Save File) Command Description

Note: To use this command, you must have the 5722-SM1 (System Manager for iSeries) licensed program installed.

CPYPTFSAVF Command syntax diagram

Purpose

The Copy Program Temporary Fix (PTF) to Save File (CPYPTFSAVF) command copies all PTFs from a device into PTF save files (SAVFs).

Restriction: Only PTFs for installed and supported products are copied.

Notes:

The following notes provide information on how this command works.

1. A SAVF is created in the QGPL library for each PTF that is copied.
2. If the PTF exists, the PTF is not copied.
3. When the PTF SAVF is created in the QGPL library, it is named *Qxxxxxxx* where *xxxxxxx* is the PTF identification number or time stamp.
4. Cover-letter files in the QGPL library are named *Qxxxxxxxyy* and placed in file QAPZCOVER where *xxxxxxx* is the PTF identification number and *yy* is the language of the PTF. For English cover letters *yy* is blank.

Required Parameter

FROMDEV

Specifies the tape device or optical device that contains the PTFs to be copied into the save files.
Specify the name of the device.

Optional Parameters

LICPGM

Specifies the names of the licensed programs for which PTFs are to be copied.

***ALL:** PTFs for all licensed programs that are installed or supported are copied on to the system.

***SUPPTD:** Only PTFs for supported licensed programs are copied.

licensed-program: Specify the licensed program for which PTFs are copied.

SELECT

Specifies which PTFs are to be copied. The OMIT parameter cannot be specified if individual PTF identification numbers are specified on the SELECT parameter.

***ALL:** All PTFs are copied.

PTF-number: Specify the PTF identification number of each PTF. Specify up to 50 PTF identification numbers.

OMIT Specifies that all PTFs are copied except for those specified on this parameter. Up to 50 PTF identification numbers can be specified for omission.

Examples for CPYPTFSAVF

Example 1: Copying PTFs for a Specified Program

```
CPYPTFSAVF FROMDEV(TAP01) LICPGM(5722SS1)
```

This command copies all PTFs for the licensed program named 5722SS1 from the device named TAP01 into save files on the system.

Example 2: Copying All PTFs

```
CPYPTFSAVF FROMDEV(TAP01) LICPGM(*ALL)
```

This command copies all PTFs for all supported products from the device named TAP01 to a save file on the system.

Example 3: Copying PTFs for a Supported Product

```
CPYPTFSAVF FROMDEV(TAP01) LICPGM(*SUPPTD)
```

This command copies PTFs for all supported products from the device named TAP01 to a save file on the system.

Example 4: Copying a Specific PTF

```
CPYPTFSAVF FROMDEV(OPT01) LICPGM(5722SS1)  
SELECT(PTF0001)
```

This command copies only the PTF named PTF0001 for the licensed program named 5722SS1 from the device named OPT01 to a save file on the system.

Error messages for CPYPTFSAVF

*ESCAPE Messages

None <<

CPYSRCF (Copy Source File) Command Description

CPYSRCF Command syntax diagram

Purpose

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

Note:

For more information on DDM files, see the Distributed Data Management topic in the Information Center.

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

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

Restrictions:

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

Required Parameters**FROMFILE**

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

The name of the database source file can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

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

TOFILE

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

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

The name of the to-file can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

to-file-name: Specify the name of the physical source file that receives the copied records. (If no library qualifier is given, *LIBL is used to find the file.)

FROMMBR

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

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

***FIRST:** The first member (by creation date) in the database file is copied.

from-member-name: Specify the name of the database file member that is copied.

generic-member-name:* Specify the generic name of the group of members that are copied. A generic name is a character string of one or more characters followed by an asterisk (*); for example, ABC*. The asterisk substitutes for any valid characters. A generic name specifies all objects with names that begin with the generic prefix for which the user has authority. If an asterisk is not included with the generic (prefix) name, the system assumes it to be the complete object name. See generic names for additional information.

Optional Parameters

TOMBR

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

Note:

If a member (specified by a name or implied by a parameter value of *FROMMBR) does not exist in the to-file, it is added to the to-file by the copy operation. Either *FROMMBR or *FIRST must be specified for this parameter if the to-file is *PRINT.

***FROMMBR:** The members specified by the FROMMBR parameter are copied into corresponding members in the to-file. If a member with a corresponding name does not exist in the to-file, a member with that name is added to the to-file.

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

***FIRST:** The first member in the database to-file receives the copied records.

to-member-name: Specify the name of the member that receives the records copied from the from-file. If a member with the specified name does not exist, one with the same name is added.

MBROPT

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

***REPLACE:** The system clears the existing member and adds the new records.

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

SRCOPT

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

***SAME:** The value does not change.

***SEQNBR:** Sequence number and increment values for the sequence number field in the records being copied are assigned as specified in the SRCSEQ parameter.

***DATE:** The date fields in the records being copied are reset to six zeros.

SRCSEQ

Specifies the starting and increment values used for creating sequence numbers for the source sequence number field in the records copied. The maximum value for sequence number is 9999.99; if a value is larger than this limit, additional records in the member are assigned the sequence number 9999.99. The SRCSEQ parameter is ignored unless SRCOPT(*SEQNBR) is specified.

Element 1: Starting Value

1.00: Specifies that the records being copied to the database file start with a first sequence number of 1.00, and are numbered in increments of 1.00.

starting-sequence-number: Specify the value assigned to the sequence number field for the first record copied. Any value within the range of 0.01 to 9999.99 may be specified.

Element 2: Increment Value

1.00: Specifies that the records being copied to the database file start with a first sequence number of 1.00, and are numbered in increments of 1.00.

increment-number: Specify the value by which the sequence number is incremented for each of the following records copied. Any value in the range of 0.01 to 9999.99 may be specified. Once the maximum sequence number of 9999.99 is reached, the sequence number of additional records is 9999.99.

Examples for CPYSRCF

Example 1: Replacing Existing Records

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

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

Example 2: Printing Files

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

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

Example 3: Changing the Increment Value

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

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

Error messages for CPYSRCF

*ESCAPE Messages

CPF2816

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

CPF2817

Copy command ended because of error.

CPF2858

File attributes not valid for printed output.

CPF2859

Shared open data path not allowed.

CPF2864

Not authorized to file &1 in library &2.

CPF2875

Wrong file member or label opened.

CPF2888

Member &3 not added to file because of error.

CPF2909

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

CPF2949

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

CPF2952

Error opening file &1 in library &2.

CPF2968

Position error occurred copying file &1 in &2.

CPF2971

Error reading member &3 in file &1.

CPF2972

Error writing to member &3 in file &1.

CPF3140

Initialize or copy of member &2 canceled.

CPF3143

Increments not allowed for member &2.

CPF3148

New records need too much space for member &2.

CPF3150

Data base copy failed for member &2.

CPF9212

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

CPYSPLF (Copy Spooled File) Command Description

CPYSPLF Command syntax diagram

Purpose

The Copy Spooled File (CPYSPLF) command copies the data records in the specified spooled file to a user-defined physical data-base file. This conversion allows the use of spooled files in applications using microfiche, data communications, or data processing. Print lines that are all blank are not copied.

When you copy a spooled file to a physical file, certain information is lost or changed, including:

- Graphics data is lost.
- Bar code data is lost.
- Data defined by using the DFNCHR or TRNSPY keywords is replaced with blanks.
- Translation for CHRID and TRNTBL is not performed. (CHRID and TRNTBL are specified through DDS and printer device file parameters.)

If the CPYF command is used to copy the data back to another spooled file, additional information is lost, including:

- For printer files, any attribute that varied within the spooled file. This includes variable CPI, variable LPI, variable FONT, variable CHRID, variable PAGRTT, and variable DRAWER. The entire file is produced with the values specified by the file level attributes. Also, any subscripts, superscripts, or justification of text is lost. Text prints in the default color of the device.
- Any file level attributes (CODE, EXCHTYPE, LABEL, and VOL for diskette files; CHRID, CPI, DEVTYPE, DRAWER, FONT, FORMFEED, PAGESIZE, LPI, PAGRTT, and PRTQLTY for printer files) are set from the device file specified by the TOFILE parameter on the CPYF command. To make the new spooled file look as much like the original spooled file as possible, the attributes of the device file should be overridden to have the same values as the original spooled file. The attributes of the original spooled file can be obtained by using the Work with Spooled File Attributes (WRKSPLFA) command.

Required Parameters

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

TOFILE

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

Note:

If this file does not exist at the time of copy operation is specified, the copy operation fails.

The name of the file can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

database-file-name: Specify the name of the database file to which the spooled records are copied.

Optional Parameters

JOB Specifies the name or qualified name of the job that created the spooled file whose data records are to be copied. More information on this parameter is in Commonly used parameters.

***:** The job that issued this CPYSPLF command is the job that created the spooled file. If no job qualifier is given, all of the jobs currently in the system are searched for the simple job name.

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

user-name: Specify the name of the user of the job that created the spooled file.

job-number: Specify the number of the job that created the spooled file.

SPLNBR

Specifies the number of the spooled file from the job whose data records are to be copied. More information on this parameter is in Commonly used parameters.

***ONLY:** One spooled file from the job has the specified file name. The number of the spooled file is not necessary. If *ONLY is specified and more than one spooled file has the specified file name, a message is sent.

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

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

spooled-file-number: Specify the number of the spooled file whose data records are copied.

» JOBSYSNAME

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

***ONLY:** There is one spooled file with the specified job name, user name, job number, spooled file name, spooled file number, and spooled file creation date and time.

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

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

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

CRTDATE

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

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

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

Element 1: Date spooled file was created

date: Specify the date the spooled file was created.

Element 2: Time spooled file was created

***ONLY:** There is one spooled file with the specified job name, user name, job number, spooled file name, spooled file number, job system name, and spooled file creation date.

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

time: Specify the time the spooled file was created. <<

TOMBR

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

***FIRST:** The first member in the physical file receives the copied records.

member-name: Specify the member name of the physical file. If this member does not exist, a member with the specified name is created and the copy operation continues.

MBROPT

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

***REPLACE:** The system clears the existing member and adds the new records.

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

CTLCHAR

Specifies to replace the internal print control characters, if any, of a spooled file. Any invalid internal print control characters that are encountered are ignored and formatting may be unpredictable.

***NONE:** No print control characters are created. This option is required for diskette. This option may be useful for microfiche production.

ANSI First-Character Forms-Control Codes

Code Action before Printing a Line

' '	Space one line (blank code)
0	Space two lines
-	Space three lines
+	Suppress space
1	Skip to next channel 1
2	Skip to next channel 2
3	Skip to next channel 3
4	Skip to next channel 4

- 5 Skip to next channel 5
- 6 Skip to next channel 6
- 7 Skip to next channel 7
- 8 Skip to next channel 8
- 9 Skip to next channel 9
- A Skip to next channel 10
- B Skip to next channel 11
- C Skip to next channel 12

***FCFC:** The first character of every record contains an American National Standards Institute (ANSI) forms control character. If *FCFC is specified, the record length must include one extra position for the first-character forms-control code. This value is not valid for externally described printer files.

***PRTCTL:** Specifies that the first four characters of every record contains skip- and space-before values useful in HLL (high-level language) programs. This code can be viewed as SSSL, where SSS is the skip-before line value and L is the space-before value. SSS can range from 001 through 255 to cause a skip to the specified line. Once there, L can be used to specify a spacing of 0, 1, 2, or 3 lines before printing of the record begins. When one part of the code is used (SSS or L), the other part is left blank.

Note:

Skip-before line values less than three will not be copied to the to-file; however, they will cause a skip of the specified number of lines. All space-before characters will be copied in the to-file.

Sample control codes and their meanings follow:

Code Action before Printing a Line

- '001 ' Skip to line 1
- '010 ' Skip to line 10
- '099 ' Skip to line 99
- ' 1' Space one line
- ' 0' Do not space (or skip)

***S36FMT:** The format of the records copied to a database file is the same as that created by \$UASF on the IBM System/36 for COPYPRT. Only spooled printer files can be copied when *S36FMT is specified.

The first record placed in the database file for each spooled file being copied is a header record. Table 1 (60) shows the format for these header records. Columns that are not defined must be blank.

The 2-byte binary numbers are unsigned. That means a page number of 65535 is the highest page number in a header or data record. When the actual page number is higher than 65535, the page numbering wraps beyond 65535 to 0, and then proceeds to 1, 2, 3, and so on.

CHLVAL

Specifies a list of channel numbers with their assigned line numbers. Specify this parameter only if

CTLCHAR(*FCFC) has been specified. If the spooled file to be printed has data on a line that immediately precedes a line number assigned to a channel, the copy operation ends.

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

Element 1: Channel Numbers

channel-number: Specify which ANSI FCFC channels are used to create first-character forms control codes. The only valid values for this parameter range from 1 through 12. Each channel number may be specified only once per CPYSPLF command.

Element 2: Line Numbers

line-number: Specify the line number assigned for the channel number in the same list. Valid line numbers range from 1 through 255. Each line number may be specified only once per CPYSPLF command.

Notes:

1. The order in which the channels are specified on the command is not important. For example, the following lines would be identical:

CHLVAL((2 1)(6 15)(8 40))

CHLVAL((6 15)(2 1)(8 40))

2. Channel numbers and line numbers do not have to be specified in ascending order.

Table 1. Header Record Format

Beginning Column	Field Length	Contents or Description
1	1	The letter H (to indicate the header)
4	6	The spooled file ID of the entry
12	8	The procedure name
22	8	The job name (the last two characters of the name are truncated)
32	8	The user ID of spooled file creator (the last two characters of the ID are truncated)
42	8	The printer file name (the last two characters of the name are truncated)
52	2	The System/36 printer ID that corresponds to the device that the file prints on. The printer ID shown is the ID for the System/36 environment that copies the file, not the environment that opened the spooled file.
56	4	The forms number (the first 4 characters of the form type of the spooled file)
61	2	The number of copies (in binary)
65	2	The number of pages (in binary)
69	4	The number of data records (in binary) which follow this header record
74	2	The number of lines per page (in binary)
78	1	The letter I if this entry contains print records with double-byte character set (IGC or DBCS) data
81	1	The letter M if this entry contains print records with a length greater than 132
84	1	Lines per inch (in binary)
85	1	Characters per inch (in binary)
86	1	Font ID (in binary) ¹
87	1	Justify ²
88	1	Align ³
89	2	The maximum length of the print lines in the spooled file that was copied
92	10	The user name (not truncated) of the creator of the of the spooled file
102	10	The printer file name (not truncated)
112	10	The form type (not truncated)
122	1	The letter Y if this is a copy of a document originally created by DisplayWrite*

Beginning Column	Field Length	Contents or Description
123	2	The page width of the DisplayWrite document in 1440ths of an inch (in binary)
125	2	The page length of the DisplayWrite document in 1440ths of an inch (in binary)
127	2	The line increment value (lines per inch) of the DisplayWrite document in 1440ths of an inch (in binary).
¹		The iSeries 400 Font printer file parameter is converted to a binary 1 field. The maximum font ID on IBM System/36 Operation Control Language (OCL) is 255, while iSeries 400 supports font identifiers above 255. When an iSeries 400 font ID above 255 is used, this field is set to X'0B' for Courier 11 font. If FONT(*CPI) is specified, the field contains X'00'.
²		This is a percent of justification for 5219 printer files. Valid values are: X'00', X'32', and X'64'.
³		Y means to align forms, and N means not to align forms.

The data records placed in the disk file for each copied spooled file have the following format:

Table 2. Copied Spooled File Format

Beginning Column	Field Length	Contents or Description
1	2	The page number (in binary)
3	2	The line number (in binary)
5	4	The record number (in binary)
9	1	The letter I if this print record contains double-byte character set (IGC or DBCS) data
10	1	A double-byte character set (DBCS or IGC) shift-out character (hexadecimal 0E) if this print record starts with DBCS data
11	nnn	The data to be printed ¹
¹		The field length is the file record length minus 10. If the print data is too long, it is truncated, and if it is too short, it is padded with blanks. The format of data may not precisely match the format that is produced on IBM System/36 when multiple prints are used to construct a single print line.

Examples for CPYSPLF

Example 1: Replacing Data

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

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

Example 2: Adding Data

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

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

Line 3 assigned to channel 1

Line 15 assigned to channel 4

Error messages for CPYSPLF

***ESCAPE Messages**

CPF2207

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

CPF3207

Member not added. Errors occurred.

CPF3303

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

CPF3309

No files named &1 are active.

CPF3311

Copy request failed for file &6 in &7.

CPF3330

Necessary resource not available.

CPF3340

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

CPF3342

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

CPF3343

Duplicate job names found.

CPF3344

File &1 number &2 no longer in the system.

CPF3394

Cannot convert spooled file data.

CPF3429

File &1 number &2 cannot be displayed, copied, or sent.

CPF3482

Copy request failed. Spool file &1 is open.

CPF3483

Copy request failed for file &6 in &7.

CPF3486

CHLVAL parameter value not valid.

CPF3492

Not authorized to spooled file.

CPF3493

CTLCHAR parameter not correct for file &1.

CPF3499

Records in file &1 preceded all assigned channel values.

CPF5812

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

CPF9812

File &1 in library &2 not found.

CPF9837

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

CPF9845

Error occurred while opening file &1.

CPF9846

Error while processing file &1 in library &2.

CPYTODIR (Copy To Directory) Command Description

CPYTODIR Command syntax diagram

Purpose

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

Caution: Do not use this command as a backup utility to save and restore directory data for data recovery purposes. Follow the normal backup and recovery procedure guidelines described in the Backup and Recovery topic in the Information Center.

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

Required Parameters

LABEL

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

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

tape-device-name: Specify the names of one or more tape devices used for the copy operation. If multiple tape devices are used, they must have compatible media formats and their names must be specified in the order in which they are used. Using more than one tape device permits one tape volume to be rewound and unloaded while another tape device processes the next tape volume.

diskette-device-name: Specify the name of the diskette device to be used for the copy operation.

Optional Parameters

AUTOINZ

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

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

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

RPLDTA

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

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

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

VOL Specifies one or more volume identifiers used by the file. More information on this parameter is in Commonly used parameters.

***NONE:** No volume identifiers are specified for the file. No volume identifiers are checked.

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

SEQNBR

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

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

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

ENDOPT

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

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

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

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

Example for CPYTODIR

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

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

Error messages for CPYTODIR

*ESCAPE Messages

CPF90A8

*SECADM special authority required to do requested operation.

CPF90FB

Directory data not copied because of errors.

CPYTODKT (Copy To Diskette) Command Description

CPYTODKT Command syntax diagram

Purpose

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

Note: For more information on DDM files, see the Distributed Data Management topic in the Information Center.

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

One label, a generic set, or all labels from the tape can be copied. A complete description of the combinations allowed and how to specify them is in the File Management topic in the Information Center.

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

Required Parameters

FROMFILE

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

The name of the from-file can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

from-file-name: Specify the name of the file being copied.

TOFILE

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

The name of the diskette file can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

diskette-file-name: Specify the name of the diskette file that receives the copied records.

Optional Parameters

FROMMBR

Specifies the database member names, diskette file label identifiers, or a tape file label identifier of records copied from the from-file. If the from-file is a spooled inline file, *FIRST must be specified.

***FIRST:** The first member in the database file is copied. If the from-file is a tape or diskette file, the label in the device file description is used to identify the member being copied.

***ALL:** All members in a database file or all data files on a diskette device file are copied. This value is not valid for a tape file or a spooled inline file.

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

generic-member-name:* Specify the generic name of the member name. A generic name is a character string of one or more characters followed by an asterisk (*); for example, ABC*. The asterisk substitutes for any valid characters. A generic name specifies all objects with names that begin with the generic prefix for which the user has authority. If an asterisk is not included with the generic (prefix) name, the system assumes it to be the complete object name. See generic names for additional information.

TOLABEL

Specifies the label identifiers of the diskette data files that receives the records copied from the from-file. The label identifier can be no longer than 8 characters.

***FROMMBR:** Single or many members or label identifiers named in the FROMMBR parameter are copied into data files with the same names in the diskette to-file.

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

***DKTF:** The value in the diskette device file identifies the data file that receives the copied records.

data-file-identifier: Specify the label identifier of the data file on the diskette to-file that receives the records copied from the from-file.

TODEV

Specifies the name of diskette device that is used to copy records to the diskette to-file.

***DKTF:** The devices specified in the diskette device file description are used.

device-name: Specify the names of the diskette device used when writing records to the diskette to-file.

TOVOL

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

***DKTF:** The diskette volume identifiers in the diskette device file are used to identify the diskettes that receive the copied records.

***NONE:** No volume identifier checking is done.

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

TOEXCHTYPE

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

***DKTF:** The value specified in the diskette device file is used to determine the exchange type of the file being written.

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

***BASIC:** The basic exchange type is used.

***H:** The diskette to-file is written in H exchange format. This value is valid for type 2D diskettes initialized with 256-byte sectors.

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

TOEXPDATE

Specifies the expiration date for the diskette to-file. If a date is specified, the file is protected and is not overwritten until the day after the expiration date.

***DKTF:** The expiration date specified in the diskette device file is used.

***PERM:** The data file is permanently protected. An expiration date of 999999 is assigned.

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

NBRRCDSD

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

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

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

Examples for CPYTODKT

Example 1: Copying 50 Records

```
CPYTODKT FROMFILE(PGMSRC) TOFILE(QDKT)
FROMMMBR(PGMA) TOLABEL(A)
TOEXCHTYPE(*I) NBRRCDSD(50)
```

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

Example 2: Copying All Members

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

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

Error messages for CPYTODKT

*ESCAPE Messages

CPF2816

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

CPF2817

Copy command ended because of error.

CPF2857

Multiple member or label copy not allowed with override.

CPF2859

Shared open data path not allowed.

CPF2864

Not authorized to file &1 in library &2.

CPF2875

Wrong file member or label opened.

CPF2904

Diskette labels not valid for multiple label copy.

CPF2949

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

CPF2952

Error opening file &1 in library &2.

CPF2968

Position error occurred copying file &1 in &2.

CPF2971

Error reading member &3 in file &1.

CPF2972

Error writing to member &3 in file &1.

CPF9212

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

CPYTOIMPF (Copy To Import File) Command Description

CPYTOIMPF Command syntax diagram

Purpose

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

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

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

Error Handling: The escape message CPF2817 is sent for many different error conditions that can occur during a copy operation. At least one diagnostic message that indicates the specific error condition always comes before the escape message. More information on handling errors is in the File Management topic in the Information Center.

Overrides: All overrides will be in effect for this command. The parameters of the overrides that will be supported by CPYTOIMPF are:

1. FILE NAME
2. MBR
3. OPNSCOPE
4. SHARE
5. LVLCHECK
6. RCDFMLCK
7. SEQONLY
8. INHWRT
9. WAITRCD
10. DSTDTA
11. NBRRCDS
12. STMFCODPAG

Status Message: During the running of the CPYTOIMPF command, message CPI2801 is sent as a status message informing the interactive user that a copy is occurring. More information on preventing status messages from appearing is in the File Management topic in the Information Center.

Restrictions:

1. During the time a CPYTOIMPF request is run, the file named on the TOFILE parameter may be locked (similar to an *EXCL lock with no timeout) so that no access is possible.
2. If the FROMFILE is defined with the SHARE(*YES) option for the file, unpredictable results can occur. Therefore, if the file is defined with SHARE(*YES), the user should make sure the file is not opened by any process prior to the copy.

Required Parameters

FROMFILE

Specifies the qualified name of the FROMFILE that contains the records to be copied. Either this parameter or the FROMMBR parameter is required. The database file can be a single-format logical, physical, or multi-system file.

Element 1: From File Name

The name of the file can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

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

Element 2: From File Member Name

Specifies the FROMFILE member name that is copied.

***FIRST:** The first member (in order of creation date) in the FROMFILE is copied.

member-name: Specify the name of the FROMFILE member to be copied.

The FROMFILE can be any one of the file types:

- source physical file.
- distributed physical file.
- single format logical file.
- externally described physical file.

TOFILE

Specifies the qualified name of the to file that receives the copied records. Either this parameter or the TOSTMF parameter is required.

Element 1: To File Name

The name of the file can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

file-name: Specify the name of the to file that receives the copied records.

Element 2: To File Member Name

Specifies the name of the to file member that receives the copied record.

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

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

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

The to file can be any one of the file types:

- source physical file.
- if the file is not a source file, the file can have only one field. The field of the file cannot be a numeric data type.
- program described physical file.
- externally described physical file that can have only one field. The field of the file cannot be a numeric data type.

TOSTMF

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

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

See path names for more information on specifying path names.

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

MBROPT

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

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

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

***REPLACE:** The copied records replace the existing member records.

Additional information is available in the File Management topic in the Information Center.

TOCCSID

Specifies the coded character set identifier (CCSID) to use for the file specified on the TOFILE parameter.

***TOFILE:** The CCSID of the TOFILE database file is used.

CCSID-value: Specify the CCSID the data should be copied to if the TOFILE's CCSID is 65535. If the TOFILE's CCSID is not 65535, an error condition is created.

STMFCODPAG

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

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

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

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

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

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

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

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

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

RCDDLML

Specifies the record delimiter.

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

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

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

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

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

end-of-line-character: Specify the single character which indicates the end of a single record.

DTAFMT

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

***DLM:** The data contains delimiter characters. Refer to parameter descriptions for STRDLM, FLDDLML, and RCDDLML for information on string, field, and record delimiter characters.

***FIXED:** The data format is fixed. The data is in fixed columns in each record. Refer to the NULLFLD parameter for more information on how null fields will appear in the to file.

STRDLM

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

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

***NONE:** No string delimiter will be inserted.

character-value: Specify the character value for the string delimiter. The string delimiter will be placed around all character, date, time, and timestamp fields.

FLDDLML

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

',': The comma (,) character is used as the field delimiter.

character-value: Specify the character value for the field delimiter.

NULLFLD

Specifies that the first character following each field will contain either a **Y** or **N** indicating if the field is null. NULLFLD(*YES) is only valid if DTAFMT(*FIXED) specified.

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

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

DECPNT

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

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

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

DATFMT

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

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

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

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

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

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

***YYMD:** The date format **yyyymmdd** is used.

TIMFMT

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

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

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

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

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

Example for CPYTOIMPF

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

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

Error messages for CPYTOIMPF

***ESCAPE Messages**

CPF2817

Copy command ended because of error.

CPYTOPCD (Copy to PC Document) Command Description

CPYTOPCD Command syntax diagram

Purpose

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

Restrictions: To use this command you must have object operational authority to the command itself as well as:

- *OBJOPR and *READ authorities to the physical file
- *CHANGE authority to the document and the folder containing the document
- *READ authority to the library containing the file

Required Parameters

FROMFILE

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

If this file is a *SOURCE file and the records are being translated from EBCDIC to ASCII, the line number and date are removed when the records are written to the PC document. You can use the Override Database File (OVRDBF) command to override the file name and the other command parameters dealing with the from-file.

The name of the file can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

database-file-name: Specify the name of the database file from which data is being copied.

TOFLR

Specifies the name of the folder that contains the PC document to which you are copying data or records. You must specify a fully qualified path name, and all folders in the path must exist.

Optional Parameters

FROMMBR

Specifies the name of the member being copied to a PC document.

***FIRST:** The first member of the file is copied.

member-name: Specify the name of the member being copied to a PC document.

TODOC

Specifies the name of the PC document in the folder that receives the copied file. If the document does not exist, it is created. If the document name is not valid, an error message is issued, and the copy operation is not completed.

***FROMMBR:** Specifies that the name of the PC document is the same as that of the member name.

document-name: Specify a valid name of the PC document that receives the copied file. A valid file name contains 1 through 8 characters. An extension, separated from the file name with a period, can be up to 3 characters.

REPLACE

Specifies whether the copy operation replaces an existing PC document.

***NO:** If a PC document with this name already exists in the folder specified by the TOFLR parameter, the copy operation is not performed.

***YES:** If a PC document with this name already exists in the folder specified by the TOFLR parameter, it is replaced by the file being copied into the folder.

TRNTBL

Specifies the qualified name of the translation table used to translate the data from EBCDIC characters to ASCII characters.

When translation is specified, the character set is translated from EBCDIC characters to ASCII characters, and the format of the records in the PC document is handled by the TRNFMT parameter.

When translation is not specified, the records are copied into the PC document as fixed-length records. No CR, LF, or EOF characters are added to the file, and character translation is not performed. The file contains no indication of the length of its fixed-length records. A personal computer program that processes these records must contain information about the length of the fixed-length records, which is the same as the length of the records in the database file member.

***DFT:** Specifies that the default system translation table is used.

***NONE:** Translation is not performed.

The name of the translation table can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

translation-table-name: Specify the name of the translation table.

RCDFMT

Specifies whether database file records with all types of formats are copied or whether only those records with a specified format are copied.

***ALL:** Records with all types of formats are copied.

record-format-name: Specify the name of the record format that is copied. Only records with this format are copied.

TRNFMT

Specifies the format of the records in the PC document. This parameter is not valid if TRNTBL(*NONE) is specified.

***TEXT:** The records being copied into the PC document are written in standard DOS ASCII variable-length format. When a record is copied from the database file member, trailing blanks are removed, the record is translated, and the ASCII carriage return (CR) and line feed (LF) characters are added at the end of each record before it is written to the PC document. The ASCII EOF character is added at the end of the document.

***NOTEXT:** The records in the PC document are written as fixed-length records. CR and LF characters are not added at the end of each record, and the EOF character is not added at the end of the document. Trailing blanks are not removed from the end of each record. The lengths of the records in the database file are used as the lengths of the records in the PC document.

TRNIGC

Specifies the double-byte character set (DBCS) being used for translation. Unless it is overridden by the TRNTBL parameter, this parameter also specifies the single-byte translation used to translate single-byte character set (SBCS) data.

***DFT:** The default country's or region's double-byte character set is used for translation.

***JPN:** The Japanese double-byte character set is used for translation.

***CHT:** The Traditional Chinese double-byte character set is used for translation.

***BG5:** The Taiwan Industry Standard (BIG-5) double-byte character set is used for translation.

***CHS:** The Simplified Chinese (People's Republic of China) double-byte character set is used for translation.

***KOR:** The Korean double-byte character set is used for translation.

***KSC:** The Korean Industry Standard double-byte character set is used for translation.

***SCGS:** The People's Republic of China National Standard (GB) double-byte character set is used for translation.

***NONE:** No double-byte translation is performed.

Example for CPYTOPCD

```
CPYTOPCD FROMFILE(XYZ/MYDATA) TOFLR(YOURFLR)
          FROMMBR(MBRNAME) TODOC(NEWDATA.TXT)
```

This command copies the data contained in member MBRNAME of database file XYZ/MYDATA to a PC folder named YOURFLR. The PC document that contains the data is named NEWDATA.TXT. The data is translated to ASCII using the default translation table. Records of all formats are copied. If the PC document already exists in the folder, the copy operation is not performed because the default for the REPLACE parameter is *NO.

Error messages for CPYTOPCD

*ESCAPE Messages

IWS1612

Member &1 not copied to PC document.

CPYTOPCFF (Copy To PCF File) Command Description

CPYTOPCFF Command syntax diagram

Purpose

The Copy To Portable Compiled Format File (CPYTOPCFF) command copies all user-defined DBCS character fonts contained in a double-byte character set (DBCS) font table to an existing PCF file. During the copy operation, a dot matrix conversion is automatically performed. The following table lists the supported dot matrix conversions.

Table 1. Supported dot matrix conversion

From DBCS font table	To PCF file
24-by-24	16-by-16
24-by-24	24-by-24
24-by-24	32-by-32

From DBCS font table

24-by-24
 32-by-32
 32-by-32
 32-by-32
 32-by-32

To PCF file

48-by-48
 16-by-16
 24-by-24
 32-by-32
 48-by-48

There are differences in the number of supported user-defined DBCS characters between a DBCS font table and PCF file. The following table lists the maximum number of user-defined DBCS character fonts that can be copied for each type of DBCS font table.

Table 2. Maximum number of user-defined DBCS character fonts

DBCS font table	Maximum number	First DBCS code	Last DBCS code
Japanese	1880	6941	72EA
Korean	1880	D441	DDEA
Traditional Chinese	2660	D041	DDFE
Simplified Chinese	1880	7641	7FEA

Restrictions: You must have the following authority:

1. *USE authority to the CPYIGCTBL and CRTPF commands.
2. *USE authority to the DBCS font table.
3. *X authority to directories in the stream file path name prefix.
4. *RW authority to the PCF file.

Required Parameters**FROMIGCTBL**

Specifies the name of the DBCS font table from which all user-defined DBCS character fonts are copied. Choose one of the following table names:

QIGC2424: The Japanese DBCS font table used for displaying and printing extension characters in a 24-by-24 dot matrix font.

QIGC2424C: The Traditional Chinese DBCS font table used for printing extension characters in a 24-by-24 dot matrix font.

QIGC2424K: The Korean DBCS font table used for printing extension characters in a 24-by-24 dot matrix font.

QIGC2424S: The Simplified Chinese DBCS font table used for printing extension characters in a 24-by-24 dot matrix font.

QIGC3232: The Japanese DBCS font table used for displaying and printing extension characters in a 32-by-32 dot matrix font.

QIGC3232S: The Simplified Chinese DBCS font table used for printing extension characters in a 32-by-32 dot matrix font.

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

TOPCFF

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

path-name: Specify the path name of the PCF file.

Optional Parameter

RPLFNT

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

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

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

Examples for CPYTOPCFF

Example 1: Copying Without Replacing Existing Fonts

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

This command copies all user-defined DBCS character fonts contained in the Japanese DBCS font table QIGC2424 (24-by-24 dot matrix font) to the Japanese PCF file named IBM_JPN12.pcf (16-by-16 dot matrix font) in directory /QIBM/ProdData/NetworkStation/fonts/pcf. Only user-defined DBCS character fonts that are not found in the PCF file are copied. During the copy operation, user-defined DBCS character fonts are converted from 24-by-24 dot matrix to 16-by-16 dot matrix.

Example 2: Copying Replacing Existing Fonts

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

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

Error messages for CPYTOPCFF

*ESCAPE Messages

CPFB7A7

&1 command ended due to error.

CPYTOSTMF (Copy To Stream File) Command Description

CPYTOSTMF Command syntax diagram

Purpose

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

» This command can operate on files of type *STMF and on the /dev/null character special file for the stream file parameter. «

For more information about integrated file system commands, see the Integrated file system topic in the File systems and management category of the Information Center.

Restrictions: You must have the following authority:

1. *X authority to directories in the path name prefix of the database file, or save file, and stream file.
2. *RX authority to the database file or save file.
3. *W authority to the stream file if the stream file already exists.
4. *WX authority to the stream file's parent directory if the stream file does not already exist.
5. The database-member-path-name must be of the form **name.object-type**. For example, **/QSYS.LIB/LIBA.LIB/FILEA.FILE/MBRA.MBR** is the form required by the QSYS.LIB file system.
6. The save-file-path-name must be of the form **name.object-type**. For example, **/QSYS.LIB/LIBA.LIB/SAVEFILEA.FILE** is the form required by the QSYS.LIB file system.

Required Parameters

FROMMBR

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

If the database file is a source physical file, the sequence number and date stamp are removed when the records are written to the stream file. For more information on specifying path names, refer to path names.

TOSTMF

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

» This command can operate on files of type *STMF and on the /dev/null character special file for the stream file parameter. «

Note:

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

See path names for more information on specifying path names.

Optional Parameters

STMFOPT

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

***NONE:** No records are copied and an error condition is created.

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

This value is not allowed when copying a save file.

***REPLACE:** The records replace the existing stream file records.

CVTDTA

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

This parameter is ignored when copying a save file.

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

***TBL:** The data is converted using a conversion table. Only single-byte character sets are supported. The conversion table must be specified on the TBL parameter. If a conversion table is not available, an error will occur.

***NONE:** Only the removal of the sequence numbers and date stamp from source physical files and the optional insertion of specified line-formatting characters into the stream file are performed. Database file CCSID to stream file code page conversion of other characters is not performed.

DBFCCSID

Specifies the method of obtaining the database file CCSID.

This parameter is ignored when copying a save file.

***FILE:** The database file CCSID is used, unless it is 65535. If the database file CCSID is 65535, the operation will fail.

Note:

If the database file is a program-described file the job's CCSID is used.

coded-character-set-identifier: Specify the database file CCSID. The values 0, 65534, and 65535 are not valid.

STMFCODPAG

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

This parameter is ignored when copying a save file.

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

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

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

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

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

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

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

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

TBL Specifies the path name of the conversion table used to convert data from the database file member to the stream file. See path names for more information on specifying path names.

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

ENDLINFMT

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

This parameter is ignored when copying a save file.

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

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

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

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

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

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

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

The following encoding scheme combinations are supported:

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

Examples for CPYTOSTMF

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

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

This command copies the data contained in database file member /QSYS.LIB/MYLIB.LIB/MYFILE.FILE/MYMBR.MBR to a stream file named STMF.TXT in the current working directory. Automatic data conversion uses the database file CCSID and the code page equivalent of the database file CCSID. The database file member records are stripped of trailing blanks, and CR and

LF characters are inserted at the end of each record since ENDLINFMT(*CRLF) is the default value. If the stream file STMF.TXT already exists in the current working directory, the copy operation is not performed since STMFOPT(*NONE) is the default value.

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

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

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

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

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

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

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

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

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

Error messages for CPYTOSTMF

*ESCAPE Messages

CPFA085

Home directory not found for user &1.

CPFA097

Object not copied.

CPYTOTAP (Copy To Tape) Command Description

CPYTOTAP Command syntax diagram

Purpose

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

Note: For more information on DDM files, see the Distributed Data Management topic in the Information Center.

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

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

Required Parameters

FROMFILE

Specifies the qualified name of the physical, logical, diskette, tape, or spooled inline file from which records are copied.

The name of the from-file can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

from-file-name: Specify the file from which records are copied.

TOFILE

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

The name of the to-file can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

tape-file-name: Specify the name of the tape device file that receives the copied records.

Optional Parameters

FROMMBR

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

***FIRST:** The first member in the database file is copied. If the from-file is a tape or diskette file, the label in the device file description is used.

***ALL:** All members in a database diskette file are copied.

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

generic-member-name:* Specify the generic name of the member. A generic name is a character string of one or more characters followed by an asterisk (*); for example, ABC*. The asterisk substitutes for any valid characters. A generic name specifies all objects with names that begin with the generic prefix for which the user has authority. If an asterisk is not included with the generic (prefix) name, the system assumes it to be the complete object name. See generic names for additional information.

TOSEQNBR

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

***TAPF:** The value specified in the tape device file is used.

***END:** The system saves the file after the last sequence number on the tape.

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

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

file-sequence-number: Specify the sequence number of the file that is used. Valid values range from 1 through 65535.

TOLABEL

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

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

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

***TAPF:** The value specified in the tape device file or override is used.

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

data-file-identifier: Specify the label value (17 characters maximum) that identifies the data file to receive the copied records.

TODEV

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

***TAPF:** The value specified in the tape device file is used.

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

TOVOL

Specifies, for tapes with standard labels, one or more volume identifiers of the tapes used when copying records to the tape to-file. The tape volumes must be in the device in the same order as the identifiers are specified. A message is sent to the operator if they are not.

***TAPF**: The value specified in the tape device file is used.

***NONE**: No tape volume identifiers are specified for this file. No volume checking is done beyond verifying that a volume with the correct label type is on the device.

volume-identifier: Specify up to 50 volume identifiers used to identify the tapes to receive the copied records. The tape volumes must be on the device in the same order as the identifiers are specified and in the same order as the device names are specified on the TODEV parameter. Each identifier can have up to 6 alphanumeric characters.

TORREELS

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

***TAPF**: The value specified in the tape device file is used.

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

***NL**: The volume used for receiving copied records has no labels. Tape marks are used to indicate the end of each volume and the data file on it.

***LTM**: The volume used for receiving copied records has no labels, but has a leading tape mark before the first data record.

TORCDLEN

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

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

***CALC**: No record length is specified for the tape to-file. The record length from the existing data file label is used if an existing data file is being extended in the to-file.

***TAPF**: The value specified in the tape device file is used.

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

TOBLKLEN

Specifies the length of data (in bytes) of data blocks transferred to the tape. The block length must be consistent with the record length and record block format values.

***TAPF**: The value specified in the tape device file is used.

***CALC:** No block length is specified for the tape to-file. The block length from the existing data file label is used if the copied records are being written into a data file that is being extended.

block-length: Specify the maximum length of the data block written to the tape. The minimum block size value is 18 bytes and the maximum size is 524288 bytes.

TORCDBLK

Specifies the record format and blocking attributes of records being copied to the tape to-file. The record block format from an existing data file label is used if an existing data file is being extended as the to-file. The record length, block length, and record block format parameters must be consistently specified.

***TAPF:** The value specified in the tape device file is used.

***D:** The tape to-file has variable-length, unblocked records in ASCII type D format.

***DB:** The tape to-file has variable-length, blocked records in ASCII type D format.

***F:** The tape to-file has fixed-length, unblocked records in either EBCDIC or ASCII format.

***FB:** The tape to-file has fixed-length, blocked records in either EBCDIC or ASCII format.

***U:** The tape to-file has records in an undefined format.

***V:** The tape to-file has variable-length, unblocked records in EBCDIC format.

***VB:** The tape to-file has variable-length, blocked records in EBCDIC format.

***VBS:** The tape to-file has variable, spanned blocked records.

***VS:** The tape to-file has variable, spanned records.

TOEXPDATE

Specifies the expiration date for the data file being added to the to-file. The data file expiration date is established for standard label tape files only and is stored in the tape header label immediately preceding the data file that the label describes.

***TAPF:** The value specified in the tape device file is used.

***PERM:** The data file is permanently protected. An expiration date of 999999 is assigned.

file-expiration-date: Specify the expiration date that is used for the data file. The date must be specified in the format defined by the system values QDATFMT and, if separators are used, QDATSEP.

TOENDOPT

Specifies the positioning operation that is done automatically on the to-file tape volume when the tape device-file is closed. For a multivolume tape to-file, this parameter applies to the last reel only; all intermediate reels are positioned *UNLOAD.

***TAPF:** The value specified in the tape device file is used.

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

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

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

NBRRCDS

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

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

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

COMPACT

Specifies whether device data compaction is performed. If the tape device used by the to-file does not support data compaction, this parameter is ignored. The possible values are:

***TAPF:** To-file device data compaction is performed only if the device used by the to-file supports data compaction.

***NO:** To-file device data compaction is not performed.

Examples for CPYTOTAP

Example 1: Copying the First Member in a Database File to Tape

```
CPYTOTAP  FROMFILE(MYLIB/MYFILE)  TOFILE(QTAPE)
          TODEV(QTAPE1)  TORCDLEN(*FROMFILE)
          TOEXPDATE(10 15 89)
```

This command copies the first member in database file MYFILE in library MYLIB to tape. The tape device file QTAPE is used which has attributes of SEQNBR(1) and RCDBLKFM(*F), which are used as defaults for parameters TOSEQNBR and TORCDBLK. The additional attributes specified on the copy command include the tape device name and the expiration date of the file written on tape. The label name used on tape is the same name as that of the member copied. The record length of the tape file is also the same as the database from-file record length since TORCDLEN (*FROMFILE) was specified.

Example 2: Copying a Member in a Database File to Tape

```
CPYTOTAP  FROMFILE(MYLIB/MYFILE)  TOFILE(QTAPE)
          FROMMBR(M1)  TOLABEL(BACKUPM1)  TODEV(QTAPE1)
          TORCDLEN(50)  TOBLKLEN(1000)  TORCKBLK(*FB)
          TOENDOPT(*LEAVE)
```

This command copies member M1 from database file MYFILE in library MYLIB to tape, using tape device file QTAPE. The records are copied to label BACKUPM1 on tape device QTAPE1 and the reel is left at its current position when the copy is completed. The data file written on tape has fixed-length 50-byte records that are blocked 1000 bytes (or 20 records) to a block.

Error messages for CPYTOTAP

*ESCAPE Messages

CPF2816

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

CPF2817

Copy command ended because of error.

CPF2859

Shared open data path not allowed.

CPF2864

Not authorized to file &1 in library &2.

CPF2875

Wrong file member or label opened.

CPF2904

Diskette labels not valid for multiple label copy.

CPF2949

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

CPF2952

Error opening file &1 in library &2.

CPF2968

Position error occurred copying file &1 in &2.

CPF2971

Error reading member &3 in file &1.

CPF2972

Error writing to member &3 in file &1.

CPF9212

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

COPYRIGHT (Copyright) Command Description

COPYRIGHT Command syntax diagram

Purpose

The Copyright (COPYRIGHT) command defines the text of a copyright statement to be added to a CL module.

Restrictions:

1. The COPYRIGHT command is valid only within an ILE CL module.
2. If used, the COPYRIGHT command must follow the PGM command and must precede any other commands except for DCL and DCLF.
3. Only one COPYRIGHT command will be used by the CL compiler; if more than one are specified, only the first one is used, and warning messages will be issued for additional COPYRIGHT statements.

Required Parameter

TEXT Specifies the copyright text to be inserted into the module.

copyright-text: Specify the text to be used for the copyright statement. The text will be used exactly as specified. The maximum length allowed is 256 characters.

Example for COPYRIGHT

Example 1:

```
COPYRIGHT  
TEXT('Copyright ACME Corp. 1995. All rights reserved.')
```

This command specifies the copyright text for the module being created. This text will be displayed when a user runs the Display Module (DSPMOD) command, specifying DETAIL(*COPYRIGHT), for the module.

Error messages for COPYRIGHT


None

CRTDTADCT (Create a Data Dictionary) Command Description

CRTDTADCT Command syntax diagram

Purpose

The Create a Data Dictionary (CRTDTADCT) command is used to create a data dictionary. A data dictionary must be created before the user can use the Interactive Data Definition Utility (IDDU) to

describe and create database files. The user can create a data dictionary with IDDU or with the CRTDTADCT command. More information is in the IDDU Use  book.

Required Parameter

DTADCT

Specifies the name of the library where the data dictionary is created and the name assigned to the data dictionary when it is created. The library must already exist. The dictionary name must be the same as that of the library where it is created.

Optional Parameters

AUT Specifies the authority given to users who do not have specific authority to the data dictionary, who are not on an authorization list, and whose user group has no specific authority to the data dictionary.

***LIBCRTAUT:** The public authority for the data dictionary is taken from the value on the CRTAUT parameter of the target library (the library that is to contain the data dictionary). The public authority is determined when the data dictionary is created. If the CRTAUT value for the library changes after the data dictionary is created, the new value does not affect any existing objects.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the data dictionary.

***USE:** The user can perform basic operations on the dictionary, such as displaying the data dictionary or linking a dictionary definition to a file (see the Link Data Definition (LNKDTADFN) command). The user cannot change the dictionary or any definition.

***EXCLUDE:** The user cannot access the data dictionary.

authorization-list-name: Specify the name of the authorization list used.

TEXT Specifies the text that briefly describes the data dictionary. More information on this parameter is in Commonly used parameters.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Examples for CRTDTADCT

Example 1: Creating a Data Dictionary and Granting USE Authority

```
CRTDTADCT DTADCT(DEPT547) AUT(*USE)
          TEXT('dept547 dictionary')
```

This command creates a data dictionary named DEPT547 in library DEPT547. The authority given for the dictionary to other users is *USE.

Example 2: Creating a Restricted Data Dictionary

```
CRTDTADCT DTADCT(DEPT245) AUT(MYLIST)
          TEXT('restricted dictionary')
```

This command creates a restricted data dictionary named DEPT245 in library DEPT245. The authority given for the dictionary to the users comes from the authorization list named MYLIST.

Error messages for CRTDTADCT

*ESCAPE Messages

CPF2DAB

Authority list &1 not found

CPF2D71

Dictionary name cannot be &1.

CPF2F04

Dictionary &1 already exists.

CPF2F07

Dictionary &1 in error.

CPF2F11

Dictionary &1 not created.

CPF9820

Not authorized to use library &1.

CPF9830

Cannot assign library &1.

CRTALRTBL (Create Alert Table) Command Description

CRTALRTBL Command syntax diagram

Purpose

The Create Alert Table (CRTALRTBL) command is used to create an alert table for storing alert description records. An alert table specifies the hardware and software products it is used for and defines alerts (problem notifications in a network). The typical user is the system or network programmer or operator

responsible for network management. More information on alerts is in the Alerts Support  book.

Required Parameter

ALRTBL

Specifies the qualified name of the alert table that is created. An alert table has a one-to-one correspondence with a message file. To define an alert for a particular message, the name of the alert table must be the same as the name of a message file.

Note:

The alert table and message file do not have to be in the same library. The alert table library does have to be in the library list of the job that causes the alert to be created.

The name of the alert table can be qualified by one of the following library values:

***CURLIB:** The alert table is created in the current library for the job. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library where the alert table is created.

alert-table-name: Specify the name of the alert table that is created.

Optional Parameters

LICPGM

Specifies the licensed program that the alert table is identifying. The program identifier is included in the alert as product identification for the alert sender.

5716SS1: The licensed program for the OS/400 system is used.

***NONE:** There is no licensed program for this alert table. This value is allowed for products that do not have a licensed program.

licensed-program: Specify a 7-character identifier for the licensed program. This identifier retrieves release and level information for the program.

Note:

The licensed program is not necessarily an IBM Licensed Program. Any 7-character identifier that is meaningful to the use of alerts can be specified (for example, USR1234). If the value is assigned to the system, the identifier and release level information are included in the alert. If the value is not known, only the identifier and text specified in LICPGMTXT are included in the alert.

LICPGMTXT

Specifies descriptive text for the licensed program (for example, the OS/400 system). This text is included in the alert as product identification for the alert sender.

***BLANK:** Text is not specified.

'licensed-program-text': Specify up to 30 characters of text that describe the licensed program.

TEXT Specifies the text that briefly describes the alert table. More information on this parameter is in Commonly used parameters.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

AUT Specifies the authority given to users who do not have specific authority to the alert table, who are not on an authorization list, and whose user group has no specific authority to the alert table. More information on this parameter is in Commonly used parameters.

***LIBCRTAUT:** The public authority for the alert table is taken from the value on the CRTAUT parameter of the target library (the library that is to contain the alert table). The public authority is determined when the alert table is created. If the CRTAUT value for the library changes after the alert table is created, the new value does not affect any existing objects.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the alert table.

***USE:** The user can perform basic operations on the alert table, such as running a program or reading a file. The user cannot change the alert table. *USE authority provides object operational authority, read authority, and execute authority.

***EXCLUDE:** The user cannot access the alert table.

authorization-list-name: Specify the name of the authorization list used.

Example for CRTALRTBL

```
CRTALRTBL ALRTBL(ALRTBLLIB/ALRTBLNBR1)
  LICPGM(5716SS1) LICPGMTXT('OS/400')
  TEXT('This is the first alert table created')
```

This command creates an alert table in the library ALRTBLLIB called ALRTBLNBR1. The public has *CHANGE authority to the table. The licensed program associated with this ALRTBL is the OS/400 system.

Error messages for CRTALRTBL

*ESCAPE Messages

CPF2108

Object &1 type *&3 not added to library &2.

CPF2112

Object &1 in &2 type *&3 already exists.

CPF2113

Cannot allocate library &1.

CPF2151

Operation failed for &2 in &1 type *&3.

CPF2182

Not authorized to library &1.

CPF2283

Authorization list &1 does not exist.

CPF9810

Library &1 not found.

CPF9820

Not authorized to use library &1.

CRTAUTHLR (Create Authority Holder) Command Description

CRTAUTHLR Command syntax diagram

Purpose

The Create Authority Holder (CRTAUTHLR) command allows a user to create an authority holder to secure an object of type *FILE before it exists on the system. The file must be a program-described database file. When an object by the specified name is created, the authorities specified in the authority holder are linked to the newly created object.

The authority holder is associated with one specific object, object type, and library. This allows only users with the correct authority to access the object. The authority holder and associated object always have the same owner.

If the object has authorities associated with it, they are linked to the newly created authority holder. The owner of the object becomes the owner of the authority holder. Authority holders are located in library QSYS.

Restrictions:

1. This command is shipped with public *EXCLUDE authority.

2. The object type being secured by the new authority holder is limited to *FILE. The file must be a program-described database file.
3. The authority holder cannot be created for objects located in libraries QRCL, QRECOVERY, QSPLxxxx, QSYS, or QTEMP.
4. **»** Authority holders can only secure files in the system auxiliary storage pool (ASP) or a basic user ASP.**«**

Required Parameter

OBJ Specifies the qualified name of the database file that the authority holder secures when it is created.

Optional Parameter

AUT Specifies the authority given to users who do not have specific authority to the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority to the object.

***LIBCRTAUT:** The public authority for the object is taken from the value on the CRTAUT parameter of the target library (the library that is to contain the object). The public authority is determined when the object is created. If the CRTAUT value for the library changes after the object is created, the new value does not affect any existing objects.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE:** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. *USE authority provides object operational authority, read authority, and execute authority.

***EXCLUDE:** The user cannot access the object.

authorization-list-name: Specify the name of the authorization list used.

Examples for CRTAUTHLR

Example 1: Granting EXCLUDE Authority

```
CRTAUTHLR OBJ(QGPL/FIL1) AUT(*EXCLUDE)
```

By running this command, user ONE creates an authority holder with *EXCLUDE authority.

Example 2: Granting USE Authority

```
GRTOBJAUT OBJ(QGPL/FIL1) TYPE(*FILE) USER(TWO)
AUT(*USE)
```

By running this command, user ONE grants *USE authority to user TWO for the specified authority holder.

Example 3: Granting Matching Authority

```
CRTSRCF FILE(QGPL/FIL1)
```

By running this command, user ONE creates a file that has a matching authority holder. User ONE becomes the owner of the file with user TWO having *USE authority to QGPL/FIL1.

Error messages for CRTAUTHLR

***ESCAPE Messages**

CPC2212

Authority holder created.

CPF2122

Storage limit exceeded for user profile &1.

CPF2163

Creation of authority holder in &2 not allowed.

CPF22BA

Authority holder could not be created.

CPF22BC

Object &1 type &3 is not program defined.

CPF22B2

Not authorized to create or delete authority holder.

CPF22B5

Authority holder already exists.

CPF22B6

Authority holder could not be created.

CPF2283

Authorization list &1 does not exist.

CPF2289

Unable to allocate authorization list &1.

CPF9803

Cannot allocate object &2 in library &3.

CRTAUTL (Create Authorization List) Command Description

CRTAUTL Command syntax diagram

Purpose

The Create Authorization List (CRTAUTL) command creates an authorization list. Authorization lists are used to grant to a set of users specified authorities to an object or to a set of objects. Each user has the authorities to all of the objects. When an authorization list is granted authority to an object, the users on the list get authority to the object. The authorities they receive are those specified for them in the authorization list.

A user's authority on an authorization list can be overridden by granting the user specific authority to the object. Specific authorities override the user's authority specified in the authorization list. Specific authorities override the user's group authority, if both are specified.

If public authority specified for the object is *AUTL, then the public authority specified on the authorization list is used.

Restrictions:

1. Authorization lists cannot be used to specify the authority for user profiles or other authorization lists.

2. Only one authorization list can be used to specify the authority for an object.

Required Parameter

AUTL Specifies the name of the authorization list being created. Up to 10 alphanumeric characters can be used. The authorization list name follows the system naming conventions.

Optional Parameters

AUT Specifies the authority given to users who do not have specific authority to the object, who are not on an authorization list, and whose user group has no specific authority to the object.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE:** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. *USE authority provides object operational authority, read authority, and execute authority.

***EXCLUDE:** The user cannot access the object.

TEXT Specifies the text that briefly describes the authorization list. More information on this parameter is in Commonly used parameters.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CRTAUTL

```
CRTAUTL AUTL(PROGMR) AUT(*CHANGE)
      TEXT('Programmers authorization list')
```

This command creates an authorization list (PROGMR). If an object whose authority comes from the authorization list has specified USER(*PUBLIC) as AUT(*AUTL), the users who do not have specific authority and whose group does not have specific authority to the object are given *CHANGE authority for the object secured by this authorization list.

Error messages for CRTAUTL

*ESCAPE Messages

CPF2122

Storage limit exceeded for user profile &1.

CPF22AD

Group profile for user not found.

CPF22A6

User creating an authorization list must have *ADD authority to his user profile.

CPF2204

User profile &1 not found.

CPF2217

Not authorized to user profile &1.

CPF2222

Storage limit is greater than specified for user profile &1.

CPF2278

Authorization list &1 already exists.

CPF2289

Unable to allocate authorization list &1.

CRTBNDDIR (Create Binding Directory) Command Description

CRTBNDDIR Command syntax diagram

Purpose

The Create Binding Directory (CRTBNDDIR) command creates a binding directory object in the specified library.

Restriction: You must have *READ and *ADD authority for the library where the binding directory is created.

Required Parameter

BNDDIR

Specifies a binding directory name to be created.

The name of the binding directory can be qualified by one of the following library values:

***CURLIB:** The binding directory is created in the current library for the job. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library where the binding directory is created.

binding-directory-name: Specify the name of the binding directory to be created.

Optional Parameters

AUT Specifies the authority given to users who do not have specific authority to the binding directory, who are not on an authorization list, and whose user group has no specific authority to the binding directory.

***LIBCRTAUT:** The public authority for the binding directory is taken from the value on the CRTAUT parameter of the target library (the library that is to contain the binding directory). The public authority is determined when the binding directory is created. If the CRTAUT value for the library changes after the binding directory is created, the new value does not affect any existing objects.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the binding directory.

***USE:** The user can perform basic operations on the binding directory, such as running a program or reading a file. The user cannot change the binding directory. *USE authority provides object operational authority, read authority, and execute authority.

***EXCLUDE:** The user cannot access the binding directory.

authorization-list: Specify an authorization list name. The list must exist when the object is created. Users are granted authority to the object as specified by the list.

TEXT Specifies the text that briefly describes the binding directory object. More information on this parameter is in Commonly used parameters.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CRTBNDDIR

```
CRTBNDDIR BNDDIR(DISPLAYS)
```

This command creates the binding directory named DISPLAYS in the current library or QGPL.

Error messages for CRTBNDDIR

*ESCAPE Messages

CPF5D0B

Binding directory &1 was not created

CRTBNDCL (Create Bound Control Language Program) Command Description

CRTBNDCL Command syntax diagram

Purpose

The Create Bound Control Language Program (CRTBNDCL) command creates an Integrated Language Environment (ILE) control language (CL) program from the specified CL source program. The command is valid in batch and interactive jobs, and in both compiled and interpreted CL.

Most of the parameters and values for this command are the same as the parameters and values for the Create Control Language Module (CRTCLMOD) command, with the exception of the USRPRF parameter, which only exists on this command. Also, OPTION(*NOGEN) is not available on this command. The full compilation is always run.

Required Parameter

PGM Specifies the qualified name of the compiled program.

The name of the program can be qualified by one of the following library values:

***CURLIB:** The program is created in the current library for the job. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library where the program is created.

program-name: Specify the name of the program being created.

Optional Parameters

SRCFILE

Specifies the qualified name of the source file that contains the CL source program being compiled. The program is known by the name specified on the PGM parameter.

The name of the source file can be qualified by one of the following library values:

***LIBL**: All libraries in the job's library list are searched until the first match is found.

***CURLIB**: The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

QCLSRC: The IBM-supplied source file, QCLSRC, that contains the CL source member being compiled is used.

source-file-name: Specify the name of the source file that contains the CL source member being compiled. The source file can be a database file, a device file, or an inline data file.

SRCMBR

Specifies the name of the member of the source file that contains the CL source program being compiled.

***PGM**: The CL source program being compiled is in the member of the source file that has the same name as that specified on the PGM parameter for the compiled program.

source-file-member-name: Specify the name of the member that contains the CL source program, if the member name is not the same as the name of the program being created.

OUTPUT

Specifies whether or not a compiler listing is produced.

***PRINT**: The compiler listing is produced. The information contained in the listing is dependent on the values specified on the OPTION parameter.

***NONE**: The compiler listing is not produced. When a listing is not required, this option should be used because compile-time performance may be better.

OPTION

Specifies the types of output lists created when this command is processed and whether a program is created. Up to three of the following values can be specified in any order on this parameter. If neither or both of the values in each group are specified, the underlined value will be used.

Note:

The underlined values for this parameter are *similar* to, but not *actually* default values, and therefore, cannot be changed with the Change Command Default (CHGCMDDFT) command.

Cross-Reference Options

***NOXREF**: No cross-reference list of references to variable and data items in the source is created.

***XREF:** A cross-reference listing of the source program is produced. OUTPUT(*PRINT) must be specified.

Second-Level Message Text Options

***NOSECLVL:** Second-level message text is not included in the source listing.

***SECLVL:** Second-level message text is printed. OUTPUT(*PRINT) must be specified.

Event File Creation Options

***NOEVENTF:** The compiler does not produce an event file for use by the CoOperative Development Environment/400 (CODE/400) product.

***EVENTF:** The compiler produces an event file for use by the CODE/400 product. The event file is created as a member in the file EVFEVENT in your source library. The CODE/400 product uses this file to offer error feedback integrated with the CODE/400 editor. This option is normally specified by the CODE/400 product on your behalf.

USRPRF

Specifies whether the authority checking done while this program is running includes only the user who is running the program (*USER) or both the user running the program and the program owner (*OWNER). The profiles of the program user or both the program user and the program owner are used to control which objects can be used by the program, including the authority the program has for each object. Only the program owner or a user with QSECOFR authority can change the user profile attribute.

Note:

This parameter is ignored if REPLACE(*YES) is specified.

***USER:** The program runs under the user profile of the program's user.

***OWNER:** The user profiles of both the program's owner and the program's user are used when the program is processed. The collective sets of object authority in both user profiles are used to find and access objects during program processing. Authority from the owning user profile's group profile is not included in the authority for the running program.

LOG Specifies the logging options for a created CL program.

***JOB:** Logging of commands in a running CL program depends on the status of the job's logging flag (see the LOGCLPGM parameter of the Change Job (CHGJOB) command). To list the logged commands, the logging level of the jobs must be 3 or 4.

A *YES or *NO value takes precedence over any value specified in the CHGJOB command.

***YES:** The commands are logged in all cases.

***NO:** The commands are not logged.

ENBPFRCOL

Specifies whether collection of performance data is enabled.

***PEP:** or ***NONE:** Performance data is collected for the Program Entry Procedure entry and exit. There are no entry or exit hooks in the module's internal procedures and no precall or postcall hooks around calls to other procedures.

***FULL:** Performance data is collected for procedure entry and exit. Performance data is also collected before and after calls to external procedures.

DFACTGRP

Specifies whether the program is associated with the default activation group.

***YES:** The program is associated with the default activation group.

Note:

If this value is specified, the ACTGRP parameter cannot be specified.

***NO:** The program is not associated with the default activation group.

ACTGRP

Specifies the activation group that the program is associated with when it is called. The activation group provides:

- Run-time data structures to support the running of programs
- Addressing protection
- A logical boundary for message creation
- A logical boundary for application cleanup processing

***STGMDL:** If STGMDL(*SNGLVL) is specified, this program will be activated into the QILE activation group when it is called. If STGMDL(*TERASPACE) is specified, the program will be activated into the QILETS activation group when it is called.

***CALLER:** When this program is called, the program is activated into the caller's activation group.

***NEW:** When this program is called, the system creates a new activation group.

activation-group-name: Specify the name of the activation group to be used when this program is called.

REPLACE

Specifies whether an existing program is replaced if a program with the same name already exists in the specified library.

***YES:** The existing program is replaced by moving it to the QRPLOBJ library.

Notes:

1. If a running CL program is recompiled with *YES specified on the REPLACE parameter, message queue errors may occur in the running CL program.
2. Specifying *YES on this parameter causes the values on the AUT and USRPRF parameters to be ignored. The existing program is used as the source of authority, and the user profile attribute is copied from the existing program to the new program. To change the user profile, you can use the Change Program (CHGPGM) command. To change the authority for the program, you can use the Grant Object Authority (GRTOBJAUT) or Revoke Object Authority (RVKOBJAUT) command.

***NO:** The existing program is not replaced. When a program with the same name exists in the specified library, a message is displayed and compilation stops.

TGTRLS

Specifies the release level of the operating system on which you intend to use the program being created.

When specifying the *target-release* value, the format VxRxMx is used to specify the release, where Vx is the version, Rx is the release, and Mx is the modification level. For example, V3R6M0 is version 3, release 6, modification level 0.

Valid values depend on the current version, release, and modification level, and they change with each new release. See the **Valid Values for TGTRLS Parameter** table in the Backup and Recovery topic in the Information Center for a complete list of valid values.

***CURRENT:** The program is to be used on the release of the operating system currently running on your system. The program can also be used on a system with any subsequent release of the operating system installed.

***PRV:** The program is to be used on the previous release with modification level 0 of the operating system. The program can also be used on a system with any subsequent release of the operating system installed.

target-release: Specify the release in the format VxRxMx. The program can be used on a system with the specified release or with any subsequent release of the operating system installed.

AUT Specifies the authority given to users who do not have specific authority to the CL program, who are not on an authorization list, and whose user group has no specific authority to the CL program.

Note: This parameter is ignored if REPLACE(*YES) is specified.

***LIBCRTAUT:** The public authority for the CL program is taken from the value specified on the Create Authority (CRTAUT) parameter of the Create Library (CRTLIB) command of the library containing the object to be created. The public authority is determined when the CL program is created. If the CRTAUT value for the library changes after the CL program is created, the new value does not affect any existing objects.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the CL program.

***USE:** The user can perform basic operations on the CL program, such as running a program or reading a file. The user cannot change the CL program. *USE authority provides object operational authority, read authority, and execute authority.

***EXCLUDE:** The user cannot access the CL program.

authorization-list-name: Specify the name of the authorization list used.

SRTSEQ

Specifies the sort sequence table to be used for string comparisons for this CL program. The sort sequence value is used with the language identifier and the coded character set identifier of the job to determine the sort sequence table to use.

***HEX:** A sort sequence table is not used. The hexadecimal values of the characters are used to determine the sort sequence.

***JOB:** The sort sequence used is the SRTSEQ associated with the job when the CL program is created.

***JOBRUN:** The sort sequence used is the SRTSEQ associated with the job when the CL program is run.

***LANGIDUNQ:** The sort sequence table uses a unique weight for each character, and is the unique-weight sort table for the language specified on the LANGID parameter.

***LANGIDSHR:** The sort sequence table uses the same weight for multiple characters, and is the shared-weight sort sequence table associated with the language specified on the LANGID parameter.

The name of the sort sequence table can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

table-name: Specify the name of the sort sequence table to be used with this CL program.

LANGID

Specifies the language identifier to be used when SRTSEQ(*LANGIDUNQ) or SRTSEQ(*LANGIDSHR) is specified.

***JOBRUN:** The language ID used is the LANGID associated with the job when the CL program is run.

***JOB:** The language ID used is the LANGID associated with the job when the CL program is created.

language-ID: Specify the language identifier to be used by the job.

TEXT Specifies the text that briefly describes the compiled CL program. More information on this parameter is in Commonly used parameters.

***SRCMBRTXT:** The text is taken from the source file member being used to create the CL program. If the source file is an inline data file or a device file, the text is blank.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

OPTIMIZE

Specifies the optimization level of the generated program code.

***NONE:** The generated code is not optimized. This value is the fastest level of optimization in terms of translation time. This level allows variables to be displayed and changed while debugging.

***BASIC:** Some optimization is performed on the code. This level allows user variables to be displayed but not changed while debugging.

***FULL:** Full optimization is performed on the generated code. Translation time is the longest. During a debug session, user variables cannot be changed, but can be displayed. The presented values may not be the current value of the variable.

DBGVIEW

Specifies which level of debugging is available for the compiled program, and which source views are available for source-level debugging.

***STMT:** The compiled program can be debugged using program statement numbers and symbolic identifiers.

***ALL:** All of the debug options for debugging the compiled program can be used. The source and debug listing views are generated.

***SOURCE:** The source view for debugging the compiled program is generated.

***LIST:** The listing view for debugging the compiled program is generated.

***NONE:** None of the debug options for debugging the compiled program are available.

STGMDL

Specifies the storage model attribute of the program.

***SNGLVL:** The program is created with single-level storage model. When a single-level storage model program is activated and run, it is supplied single-level storage for automatic and static storage. A single-level storage program runs only in a single-level storage activation group.

***TERASPACE:** The program is created with teraspace storage model. When a teraspace storage model program is activated and run, it is supplied teraspace storage for automatic and static storage. A teraspace storage program runs only in a teraspace storage activation group. STGMDL(*TERASPACE) cannot be specified if DFTACTGRP(*YES) is specified.

Examples for CRTBNDCL

Example 1: Compiling a Program to be Run by Any System User

```
CRTBNDCL  PAYROLL  TEXT('Payroll Program')
```

This command calls the CL compiler to compile a program named PAYROLL. The source program is in the default source file QCLSRC in the member PAYROLL. A compiler listing is created. The program is processed under the program user's user profile and can be run by any system user.

Example 2: Compiling a Program to be Run by an Authorized User

```
CRTBNDCL  PGM(PARTS)  SRCFILE(MYLIB/PARTDATA)  
  AUT(*EXCLUDE)  OUTPUT(*PRINT)  
  TEXT('This program displays all parts data')
```

This command creates a CL program named PARTS and stores it in the current library. The source for the program is in the PARTS member of the source file PARTDATA in the library MYLIB. A compiler listing is created. This program can be processed under the profile of the user that is running the program, who could be the owner or another user to which the owner has granted specific authorization by name in the Grant Object Authority (GRTOBJAUT) command.

Error messages for CRTBNDCL

*ESCAPE Messages

CPF0C33

Target release &1 not valid.

CPF0C35

Target release &1 is not a supported release.

CPF0807

File containing compiler printout not opened.

CPF0808

Error in compiler-created code.

CPF0814

Licensed Program 5769-SS1 Option 9 not installed.

CPF0815

CL program &1 in &2 cannot be created for previous release.

CPF0820

Program &1 not created.

CPF0849

Space addressing violation.

CPF3202

File &1 in library &2 in use.

CPF3203

Cannot allocate object for file &1 in &2.

CPF3224

Not authorized to perform operation on file &1.

CRTCRQD (Create Change Request Description) Command Description

CRTCRQD Command syntax diagram

Purpose

The Create Change Request Description (CRTCRQD) command can be used to create a change request description. A change request description contains a list of activities that are performed to complete the specified change.

Required Parameter

CRQD Specifies the name and the library of the change request description being created.

The name of the change request description can be qualified by one of the following library values:

***CURLIB:** The change request description is created in the current library for the job. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library where the change request description is created.

change-request-description-name: Specifies the name of the change request description being created.

Optional Parameters

USRPRF

Specifies whether the authority checking (done while this change request is running) is based on the user who submitted the change request description or on the owner of the change request description. The user profile is used to run the change request and control which objects can be used by the change request.

***SBM:** The user profile of the submitter is used when the change request is run.

***OWNER:** The user profile of the change request description owner is used when the change request is run.

Note:

This is not like a program that runs under its owner's profile, for which both the program owner and the program user profiles are used. Only the owner's profile is used if this value is specified.

PRBID

Specifies the ID of the problem to be associated with this change request description. Problems with different origin systems might have the same identifier.

***NONE:** A problem ID is not specified.

problem-identifier: Specify the ID of the problem to be associated with the change request description. If a problem ID is not found, a diagnostic message is issued.

PRBORG

Specifies the origin system of the problem ID.

Element 1: Network Identifier

***NETATR**: The network ID is the same as the one defined in the network attributes for this system.

network-identifier: Specify a network ID.

Element 2: Control Point Name

***NETATR**: The control point name is the same as the local control point name defined in the network attributes for this system.

control-point-name: Specify a control point name.

AUT Specifies the authority given to users who do not have specific authority to the object, who are not on an authorization list, and whose user group has no specific authority to the object.

***EXCLUDE**: The user cannot access the object.

***LIBCRTAUT**: The public authority for the object is taken from the value on the CRTAUT parameter of the target library (the library that is to contain the object). The public authority is determined when the object is created. If the CRTAUT value for the library changes after the object is created, the new value does not affect any existing objects.

***CHANGE**: The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

Note:

The user with *CHANGE authority cannot change the user profile value (USRPRF). To change the user profile value, the user must be the owner or must have *ALLOBJ and *SECADM authority.

***ALL**: The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE**: The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. *USE authority provides object operational authority, read authority, and execute authority.

authorization-list-name: Specify the name of the authorization list whose authority is used.

TEXT Specifies the text that briefly describes the object. More information on this parameter is in Commonly used parameters.

***BLANK**: Text is not specified.

'description': Specify a maximum of 50 characters, enclosed in apostrophes.

Examples for CRTCRQD

Example 1: Creating a Change Request Description in Your Own Library

```
CRTCRQD  CRQD(MYLIB/CHG001)
```

This command creates a change request description in MYLIB with the name CHG001 and a text description.

Example 2: Creating a Change Request Description That Runs Under Another Person's Profile

```
CRTCRQD CRQD(CHG222)
        USRPRF(*SBM)
```

This command creates a change request description called CHG222 that runs under the user profile that submits it.

Example 3: Creating a Change Request Description and Associating a Problem With It

```
CRTCRQD CRQD(CHG999)
        PRBID(1234567890) PRBORG(*NETATR STORE101)
```

This command creates a change request description in *CURLIB called CHG999 that is associated with problem ID 1234567890. The problem origin network ID is the same as the local system. The control point name is STORE101.

Error messages for CRTCRQD

*ESCAPE Messages

CPF969A

Change request description created, but warnings exist.

CRTCLS (Create Class) Command Description

CRTCLS Command syntax diagram

Purpose

The Create Class (CRTCLS) command creates a class object and specifies the attributes to be contained in the class. The class defines the processing attributes for jobs that use the class. The class used by a job is specified in the subsystem description routing entry that is used to start the job. If a job consists of multiple routing steps, the class used by each subsequent routing step is specified in the routing entry used to start the routing step.

Required Parameter

CLS Specifies the qualified name of the class. More information on this parameter is in Commonly used parameters.

The name of the class can be qualified by one of the following library values:

***CURLIB:** The class is created in the current library for the job. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library where the class is created.

class-name: Specify the name of the class.

Optional Parameters

RUNPTY

Specifies the run priority of jobs that use the class being created. Run priority is a value, ranging from 1 (highest priority) through 99 (lowest priority), that represents the priority at which the job competes for the processing unit relative to other jobs that are active at the same time. This value represents the relative, not absolute, importance of the job. For example, a job with a run priority of 25 is *not* twice as important as one with a run priority of 50. This value is the highest run priority allowed for any thread within the job. Individual threads within the job may have a lower priority.

50: Jobs that use this class have a run priority of 50.

run-priority: Specify the run priority of jobs using this class.

TIMESLICE

Specifies the maximum amount of processor time (in milliseconds) given to each thread in a job using this class before other threads in the job or other jobs are given the opportunity to run. The time slice establishes the amount of time needed by a thread in the job to accomplish a meaningful amount of processing. At the end of the time slice, the thread might be put in an inactive state so that other threads can become active in the storage pool.

2000: A maximum running time of 2000 milliseconds is allocated to each thread each time it is allowed to process.

time-slice: Specify the maximum amount of time (in milliseconds) that each thread in a job in this class can have to run when it is given processing time. Valid entries range from 1 through 9999999 (that is, 9 999 999 milliseconds or 9999.999 seconds).

Note:

Although you can specify a value of less than 8, the system takes a minimum of 8 milliseconds to run a process. If you display a job's run attributes, the time slice value is never less than 8.

PURGE

Specifies whether the job is marked eligible to be moved out of main storage and put into auxiliary storage at the end of a time slice or when there is a long wait (such as waiting for a work station user's response). This attribute is ignored when more than one thread is active within the job.

***YES:** The job is eligible to move out of main storage and into auxiliary storage. However, a job with multiple threads is never purged from main storage.

***NO:** The job is not eligible to be moved out of main storage and put into auxiliary storage. However, when main storage is needed, pages belonging to a thread in this job may be moved to auxiliary storage. Then, when a thread in this job runs again, its pages are returned to main storage as they are needed.

DFTWAIT

Specifies the default maximum time (in seconds) that a thread in the job waits for a system instruction, such as the LOCK machine interface (MI) instruction, to acquire a resource. This default wait time is used when a wait time is not otherwise specified for a given situation. Normally, this would be the amount of time the system user is willing to wait for the system before the request is ended.

If the wait time for any one instruction is exceeded, an error message can be displayed or it can be automatically handled by a Monitor Message (MONMSG) command.

30: An instruction wait has up to 30 seconds in which to complete.

***NOMAX:** There is no maximum wait time.

seconds-to-wait: Specify a value, ranging from 1 through 9999999 seconds, that specifies the maximum time that the system waits for the system instruction to acquire a resource.

CPUTIME

Specifies the maximum processing unit time (in milliseconds) that the job can use. If the job consists of multiple routing steps, each routing step is allowed to use this amount of processing unit time. If the maximum time is exceeded, the job is ended.

***NOMAX:** There is no limit on the processing unit time used.

maximum-CPU-time: Specify the maximum amount of processing unit time (in milliseconds) that can be used. Valid values range from 1 through 99999999 (that is, 9 999 999 milliseconds or 9999.999 seconds).

MAXTMPSTG

Specifies the maximum amount of temporary (auxiliary) storage (in kilobytes) that the job can use. If the job consists of multiple routing steps, this is the maximum temporary storage that the routing step can use. This temporary storage is used for storage required by the program itself and by implicitly created internal system objects used to support the job. (It does not include storage in the QTEMP library.) If the maximum temporary storage is exceeded, the job is ended. This parameter does not apply to the use of permanent storage, which is controlled through the user profile.

***NOMAX:** The system maximum is used.

maximum-temporary-storage: Specify a value in kilobytes (ranging from 1 through 2147483647) that specifies the maximum amount of temporary storage that can be used.

Note: Although the value is specified in kilobytes, the specified value is stored in the class rounded up to the nearest megabyte.

MAXTHD

Specifies the maximum number of threads that a job using this class can run with at any time. If multiple threads are initiated simultaneously, this value may be exceeded. If this maximum value is exceeded, the excess threads will be allowed to run to their normal completion. Initiation of additional threads will be inhibited until the maximum number of threads in the job drops below this maximum value.

***NOMAX:** There is no maximum number of threads.

maximum-threads: Specify a value (ranging from 1 through 32767) that specifies the maximum number of threads for a job.

Note: Depending upon the resources used by the threads and the resources available on the system, the initiation of additional threads may be inhibited before this maximum value is reached.

AUT Specifies the authority given to users who do not have specific authority to the class, who are not on an authorization list, and whose user group has no specific authority to the class.

***LIBCRTAUT:** The public authority for the class is taken from the value on the CRTAUT parameter of the target library (the library that is to contain the class). The public authority is determined when the class is created. If the CRTAUT value for the library changes after the class is created, the new value does not affect any existing objects.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the class.

***USE:** The user can perform basic operations on the class, such as running a program or reading a file. The user cannot change the class. *USE authority provides object operational authority, read authority, and execute authority.

***EXCLUDE:** The user cannot access the class.

authorization-list-name: Specify the name of the authorization list used.

TEXT Specifies the text that briefly describes the class being created. More information on this parameter is in Commonly used parameters.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CRTCLS

```
CRTCLS CLS(CLASS1) RUNPTY(60) TIMESLICE(900)
      TEXT('This class for all batch jobs
      from Dept 4836')
```

This command creates a class called CLASS1. The class is stored in the current library specified for the job. The user text 'This class for all batch jobs from Dept 4836' describes the class. The attributes of this class provide a run priority of 60 and a time slice of 900 milliseconds. If the job has not finished running at the end of a time slice, it is eligible to be moved out of main storage until it is allocated another time slice. The defaults for the other parameters are assumed.

Error messages for CRTCLS

*ESCAPE Messages

CPF1027

No authority to library &1.

CPF1039

Class library &1 not found.

CPF1064

Class &1 exists in library &2.

CPF1067

Cannot allocate library &1.

CPF9802

Not authorized to object &2 in &3.

» CPF9899

Error occurred during processing of command. «

CRTCOSD (Create Class-of-Service Description) Command Description

CRTCOSD Command syntax diagram

Purpose

The Create Class-of-Service Description (CRTCOSD) command creates a class-of-service description. A class-of-service description determines the nodes and transmission groups that are eligible to be included in advanced program-to-program communications (APPC) or Advanced Peer-to-Peer Networking (APPN) support.

Table 1. Default Table for Row/Lines 1-8

Line	(A)	(B)	(C)	(D)
ROW1LINE	30	4M	0	*LAN
ROW2LINE	60	56000	0	*TELEPHONE
ROW3LINE	90	19200	0	*TELEPHONE
ROW4LINE	120	9600	0	*TELEPHONE
ROW5LINE	150	19200	0	*PKTSWTNET
ROW6LINE	180	9600	128	*PKTSWTNET
ROW7LINE	210	4800	196	*MAX
ROW8LINE	240	*MIN	255	*MAX

Table 2. Default Table for Row/Nodes 1-8

Node	(E)	(F)	(G)
ROW1NODE	5	31	*LOW
ROW2NODE	10	63	*LOW
ROW3NODE	20	95	*LOW
ROW4NODE	40	127	*LOW
ROW5NODE	80	159	*LOW
ROW6NODE	100	191	*LOW
ROW7NODE	120	223	*HIGH
ROW8NODE	150	255	*HIGH

Required Parameter

COSD Specifies the name of the class-of-service description created. This name ranges from 1 through 8 characters.

Optional Parameters

TMSPTY

Specifies the transmission priority for this class-of-service description. The priority levels are listed below.

***MED:** Medium transmission priority is given for this class-of-service description.

***LOW:** The lowest transmission priority is given for this class-of-service description.

***HIGH:** The highest transmission priority is given for this class-of-service description.

ROW1LINE - ROW8LINE

Specifies the list of line-related criteria used for the first through the eighth rows of the class-of-service description. These rows describe the attributes of the line connection between two nodes in the APPN network. The rows are examined in order (from 1 through 8) to define a network routing path.

Element 1: Line Weight Factor

line-weighting-factor: Specify the relative weight of lines for this row. The weight, which ranges from 0 through 255, indicates the relative cost of a line connection. Refer to (A) in Table 1 (110) for the default. This value varies for each ROWxLINE.

Element 2: Minimum Link Speed

***MIN:** The minimum link speed is specified.

***MAX:** The maximum link speed is specified.

minimum-link-speed: This is the minimum link speed for a line connection that is accepted by this row criteria. Valid values are *MIN, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, or *MAX. Refer to (B) in Table 1 (110) for the default. This value varies for each ROWxLINE.

Element 3: Maximum Link Speed

***MAX:** The maximum link speed is specified.

***MIN:** The minimum link speed is specified.

maximum-link-speed: This is the maximum link speed for a line connection that is accepted by this row criteria. See the list of valid values under minimum link speed in Element 2.

Element 4: Minimum Cost Per Connect Time

cost/connect-minimum: Specify the minimum relative cost per connect time that is accepted by this row criteria. Valid costs range from 0 through 255. The default value is 0.

Element 5: Maximum Cost Per Connect Time

cost/connect-maximum: Specify the maximum relative cost per connect time that is accepted by the row criteria. Valid costs range from 0 through 255. Refer to (C) in Table 1 (110) for the default. This value varies for each ROWxLINE.

Element 6: Minimum Cost Per Byte

cost/byte-minimum: Specify the minimum relative cost per byte that is accepted by this row criteria. Valid costs range from 0 through 255. The default value is 0.

Element 7: Maximum Cost Per Byte

cost/byte-maximum: Specify the maximum relative cost per byte that is accepted by this row criteria. Valid costs range from 0 through 255. Refer to (C) in Table 1 (110) for the default. This value varies for each ROWxLINE.

Element 8: Minimum Security Level

Minimum Security: This is the minimum security level that is accepted by this row criteria. Valid values are in order from least secure to most secure. The default value is *NONSECURE.

***NONSECURE**

Nonsecured line

***PKTSWTNET**

Packet switched network

***UNDGRDCBL**

Underground cable

***SECURECND**

Secure conduit

***GUARDCND**

Guarded conduit

***ENCRYPTED**

Encrypted line

***MAX** Guarded conduit, protected against physical and radiation tapping.

Element 9: Maximum Security Level

Maximum Security: This is the maximum security level that is accepted by this row criteria. Valid values are in order from least to most secure. The default value is *MAX.

***MAX** Guarded conduit, protected against physical and radiation tapping.

***NONSECURE**

Nonsecured line

***PKTSWTNET**

Packet switched network

***UNDGRDCBL**

Underground cable

***SECURECND**

Secure conduit

***GUARDCND**

Guarded conduit

***ENCRYPTED**

Encrypted line

Element 10: Minimum Propagation Delay

Minimum Propagation Delay: This is the minimum propagation delay that is accepted by this row criteria. The default value is *MIN.

***MIN** Minimum propagation delay

***LAN** Local area network

***TELEPHONE**

Telephone propagation delay

***PKTSWTNET**

Packet switched network propagation delay

***SATELLITE**

Satellite propagation delay

***MAX** Maximum propagation delay

Element 11: Maximum Propagation Delay

Maximum Propagation Delay: This is the maximum propagation delay that is accepted by this row criteria. Refer to (D) in Table 1 for the default. This value will vary for each ROWxLINE.

The values are:

***MIN** Minimum propagation delay

***LAN** Local area network

***TELEPHONE**

Telephone propagation delay

***PKTSWTNET**

Packet switched network propagation delay

***SATELLITE**

Satellite propagation delay

***MAX** Maximum propagation delay

Element 12: User's First Minimum Line Connection Criteria

user-1-minimum: Specify your own line connection criteria. Valid values range from 0 through 255 with a default value of 0.

Element 13: User's First Maximum Line Connection Criteria

user-1-maximum: Specify your own line connection criteria. Valid values range from 0 through 255 with a default value of 255.

Element 14: User's Second Minimum Line Connection Criteria

user-2-minimum: Specify your own line connection criteria. Valid values range from 0 through 255 with a default value of 0.

Element 15: User's Second Maximum Line Connection Criteria

user-2-maximum: Specify your own line connection criteria. Valid values range from 0 through 255 with a default value of 255.

Element 16: User's Third Minimum Line Connection Criteria

user-3-minimum: Specify your own line connection criteria. Valid values range from 0 through 255 with a default value of 0.

Element 17: User's Third Maximum Line Connection Criteria

user-3-maximum: Specify your own line connection criteria. Valid values range from 0 through 255 with a default value of 255.

ROW1NODE - ROW8NODE

Specifies the list of node-related criteria used for the first through eight rows of the class-of-service description. These rows describe the attributes of a node in the APPN network. The rows are examined in order (from 1 to 8) to define a network routing path.

Element 1: Node Weighting Factor

node-weighting-factor: Specify the relative weight of nodes for this row. The weight, which ranges from 0 through 255, indicates the relative cost of passing through a node in the network. Refer to (E) in Table 2 for the default. This value varies for each ROWxNODE.

Element 2: Minimum Route Additional Resistance

route-additional-resistance-minimum: Specify the minimum route additional resistance accepted by this row criteria. Valid values range from 0 through 255 with a default of 0.

Element 3: Maximum Route Additional Resistance

route-additional-resistance-maximum: Specify the maximum route additional resistance accepted by this row criteria. Refer to (F) in Table 2 for the default. This value varies for each ROWxNODE.

Element 4: Minimum Congestion Level

***LOW** congestion-minimum: Low congestion is tolerated.

Element 5: Maximum Congestion Level

***HIGH** congestion-maximum: High congestion is tolerated. Refer to (G) in Table 2 (110) for the default. This value varies for each ROWxNODE.

AUT Specifies the authority given to users who do not have specific authority to the class-of-service description, who are not on an authorization list, and whose user group has no specific authority to the class-of-service description.

***LIBCRTAUT:** The authority for the object is the same as the create authority for QSYS. The create authority for QSYS can be displayed by using the Display Library Description (DSPLIBD) command. If the create authority is changed with the Change Library (CHGLIB) command, the new authority does not affect existing objects.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***USE:** The user can perform basic operations on the class-of-service description, such as running a program or reading a file. The user cannot change the class-of-service description. *USE authority provides object operational authority, read authority, and execute authority.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the class-of-service description.

***EXCLUDE:** The user cannot access the class-of-service description.

authorization-list-name: Specify the name of the authorization list used.

TEXT Specifies the text that briefly describes the description. More information on this parameter is in Commonly used parameters.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CRTCOSD

```
CRTCOSD COSD(COSD1)
ROW1LINE(15 9600 19200 20 30
50 75 *SECURECND *GUARDCND
*PKTSWTNET *SATELLITE
100 200 50 100 25 50)
TEXT('customized Row1line')
```

This command creates COSD1. All values are specified for Row1Line, and defaults are accepted for all the other rows.

Error messages for CRTCOSD

*ESCAPE Messages

CPF26CB

Class-of-service description &1 not created due to errors.

CPF2610

Parameter not valid.

CPF2660

Class-of-service description &1 already exists.

CPF9838

User profile storage limit exceeded.



CRTCLU (Create Cluster) Command Description

CRTCLU Command syntax diagram

Purpose

The Create Cluster (CRTCLU) command is used to create a new cluster of one or more nodes. Each node specified on the Node parameter will be placed in the cluster membership list.

If the Start parameter is *NO, each node that is being added will have a status of New and Cluster Resource Services will not be started on any node. In order to start Cluster Resource Services, the Start Cluster Node (STRCLUNOD) command must be invoked on a node that ran the Create Cluster command. The Start Cluster Node command may be used to start nodes in the cluster membership list.

If the Start parameter is *YES, the cluster can contain only one node. Cluster Resource Services will be started on the node being defined. Successful completion of this command results in two jobs (QCSTCTL and QCSTCRGM) started in the QSYSWRK subsystem. If Cluster Resource Services is not successfully started, the status of the node remains New.

After Cluster Resource Services has been started on the original node, additional nodes can only be started by call the Start Cluster Node (STRCLUNOD) command on the original node. If Cluster Resource Services is active on more than one node, additional nodes may be started by invoking the Start Cluster Node (STRCLUNOD) command on any node that has a status of Active.

Once the cluster has been created, the Add Cluster Node Entry (ADDCLUNODE) command can be used to add additional nodes to the cluster membership list. The ADDCLUNODE command can be invoked on any node in the cluster that has a status of Active or from the node on which the cluster was originally created.

Restrictions

1. To use this command you must have *IOSYSCFG authority.
2. This CL command cannot be called from a cluster resource group exit program.
3. A node can be a member of only one cluster.
4. You must include the system on which the command is issued in the cluster membership list.

Required Parameters

CLUSTER

Specifies the name of the cluster which will be created.

cluster-name: Specify the name of the cluster to be created.

NODE Specifies information about the cluster and the list of nodes which will be placed in the cluster membership list. A maximum of 128 nodes can be in a cluster.

Element 1: Node Identifier

A name that uniquely identifies a node.

node-identifier: Specify the name for the system.

Element 2: Interface Address

The cluster interface address is an IP address that is used by Cluster Resource Services to communicate with other nodes in the cluster. Maximum of 2 interface addresses per node can be specified.

Interface-address: Specify the interface address to be used to communicate with other nodes in the cluster. The address is in dotted decimal format.

Optional Parameters

START

Specifies whether or not Cluster Resource Services is to be started on the node being defined.

***YES:** Cluster Resource Services will be started on the node.

***NO:** Cluster Resource Services will not be started on any node.

VERSION

Specifies the version the cluster will use in conversation with other nodes in the cluster. This also determines the potential node version of the nodes allowed to join the cluster. The following possible values are based on the node originating the request:

***CUR:** The cluster will communicate at the requesting node's potential node version. In addition, nodes with a potential node version less than the requesting or local node will not be allowed to join the cluster.

***PRV:** The cluster will communicate at the requesting node's potential node version minus 1. This allows nodes at a previous potential node version to join the cluster. However, no new cluster function can be used until all nodes have the latest cluster version.

Example for CRTCLU

```
CRTCLU CLUSTER(MYCLUSTER) NODE((NODE01 ('9.5.13.187')) (NODE02 ('9.5.13.193')))  
START(*NO) VERSION(*PRV)
```

This command creates cluster MYCLUSTER. The cluster membership list is NODE01 and NODE02. Interface address 9.5.13.187 will be used to communicate with node NODE01. Interface address 9.5.13.193 will be used to communicate with node NODE02. Cluster communications will use the cluster version previous to the requesting nodes potential version level. Cluster Resource Services is not started on the nodes.

Error messages for CRTCLU

*ESCAPE Messages

CPF0001

Error found on &1 command.



CRTCRG (Create Cluster Resource Group) Command Description

CRTCRG Command syntax diagram

Purpose

The Create Cluster Resource Group (CRTCRG) command creates a cluster resource group object. The cluster resource group serves as the control object for a collection of resilient resources. It identifies a recovery domain, which is a set of nodes in the cluster that will play a role in recovery. You also define additional characteristics for the cluster resource group, such as the exit program that will be called to perform resource specific processing. Successful completion of this command results in a new job started in the QSYSWRK subsystem. The name of this job name is the cluster resource group name.

To change attributes of the cluster resource group use the Change Cluster Resource Group (CHGCRG) command.

This command will do the following:

- Create the cluster resource group object on all nodes in the recovery domain. The cluster resource group may be accessed by a cluster resource group command running on any node in the cluster.
- Provide users a single system image of the cluster resource group object. That is, any changes made to the cluster resource group will be made on all nodes in the recovery domain.
- Call the cluster resource group exit program with an action code of Initialize after the cluster resource group has been created on each node in the recovery domain, if an exit program is specified for the cluster resource group. The cluster resource group status will be set to Initialize Pending. If the exit program fails, the cluster resource group object is deleted from all nodes in the recovery domain.
- If the exit program is successful, the cluster resource group status is set to Inactive. To change the cluster resource group status to Active, use the Start Cluster Resource Group (STRCRG) command.
- After the exit program is called, the command verifies the queue (CRGMSGUSRQ parameter), used by the Distribute Information (QcstDistributeInformation) API, exists if one was specified. The distributed information user queue must be created with pointer capable messages disabled. This means that pointers are not allowed within the message content.
- After the exit program is called, the command verifies the failover message queue and library on all recovery domain nodes if one was specified.

Restrictions

1. To use this command you must have *IOSYSCFG authority.
2. This CL command cannot be called from a cluster resource group exit program.
3. The cluster resource group name cannot begin with QCST.
4. Cluster Resource Services must be active on the node processing the API request.
5. All nodes in the recovery domain must be in the cluster with a status of Active.
6. The cluster resource group exit program must exist on all nodes in the recovery domain if an exit program is specified. It must have the same name and be in the same library on each node.
7. Each node can be specified only once in the recovery domain.
8. The cluster resource group name cannot be used by an existing cluster resource group on any node in the cluster.
9. For application cluster resource groups, the following restrictions apply to the specified takeover IP address:
 - a. If Cluster Resource Services configures the takeover IP address, all nodes in the recovery domain must be in the same subnet (network address) and the subnet defined on all nodes in the recovery domain.
 - b. The takeover IP address must be unique. If Cluster Resource Services is responsible for configuring the takeover IP address, it will be added to each node in the recovery domain.
 - c. The takeover IP address must not be active on any node in the recovery domain.
10. For device cluster resource groups:
 - a. Only auxiliary storage pool devices are supported.
 - b. All nodes in the recovery domain must belong to the same device domain.
 - c. The configuration objects, such as device descriptions, for the devices specified for the cluster resource group must exist on all nodes in the recovery domain and the resource name specified in a configuration object must be the same on all nodes in the recovery domain.
 - d. If a data base name is specified in a configuration object, it must be the same on all nodes in the recovery domain.
 - e. The server takeover IP address must be unique. It can only be associated with a primary auxiliary storage pool.
 - f. The same configuration object cannot be specified for more than one cluster resource group.

- g. Devices attached to the same input/output processor (IOP) or high-speed link I/O bridge can be specified for only one cluster resource group.
- h. If devices attached to different IOPs or high-speed link I/O bridges are grouped such as for an auxiliary storage pool, all devices for the affected IOPs or high-speed link I/O bridges must be specified in the same cluster resource group.
- i. The IOP or high-speed link I/O bridge controlling the devices specified in a cluster resource group must be accessible by all nodes in the cluster resource group's recovery domain. This is verified if sufficient hardware configuration has been performed so that all nodes are aware of the new hardware. If hardware configuration is incomplete, this is verified when the Start Cluster Resource Group (STRCRG) command is called.
- j. If configuration objects are specified and the primary node does not currently own the devices, the command fails with an error message.
- k. A cluster resource group may be created with no device entries. Device entries must be added using the Add Cluster Resource Group Device Entry (ADDCRGDEVE) command before the cluster resource group can be started.
- l. If the cluster resource group contains any members of an auxiliary storage pool group, it must contain **all** members before the cluster resource group can be started. All members do not have to be specified when the cluster resource group is created. Additional members can be added with the Add Cluster Resource Group Device Entry (QcstAddClusterResourceGroupDev) API. If the auxiliary storage pool group exists and clustering can determine the members of the group, a warning message is sent if any members were not specified.

Required Parameters

CLUSTER

Specifies the name of the cluster containing the cluster resource group which will be created.

cluster-name: Specify the name of the cluster.

CRG

Specifies the name of the cluster resource group to be created.

cluster-resource-group-name: Specify the name of the cluster resource group.

CRGTYPE

Specifies the type of the cluster resource group that is to be created.

***DATA**: The cluster resource group is a data cluster resource group.

***APP**: The cluster resource group is an application cluster resource group.

***DEV**: The cluster resource group is a device cluster resource group.

EXITPGM

Specifies the name of the exit program that is used to handle action codes that are passed to it due to operations on the cluster resource group. The exit program cannot be in an independent auxiliary storage pool. The action codes are described in Cluster Resource Group Exit Program API.

***NONE**: The cluster resource group does not have an exit program. This is valid only for a device cluster resource group.

library-name: Specify the name of the library where the exit program exists. QTEMP is not a valid library name. If the cluster resource group exit program name is *NONE, the exit program library name is ignored.

cluster-resource-group-exit-program-name: Specify the name of the exit program.

USRPRF

Specifies the name of the user profile under which the exit program should be run. The user profile must exist on all nodes in the recovery domain. This field must be set to *NONE if no exit program is specified. The following user profiles are not valid:

- QDBSHR
- QDOC
- QDTFOWN
- QRJE
- QLPAUTO
- QLPINSTALL
- QSECOFR
- QSPL
- QSYS
- QTSTRQS

***NONE:** There is no exit program so no user profile is needed.

user-profile-name: Specify the name of the user profile to use for running the exit program.

RCYDMN

Specifies the list of nodes that compose the recovery domain. A role must be defined for each node in the recovery domain. The node role can be primary, backup, or replicate. Nodes in the recovery domain must be unique.

Element 1: Node Identifier

Specifies the node being added to the recovery domain of the cluster resource group specified. The node specified must be in the cluster and must be unique in the recovery domain of the cluster resource group specified.

node-identifier: Specify the name of the system.

Element 2: Node Role

Specifies the role of the node in the recovery domain of the cluster resource group.

***BACKUP:** The node will be added as a backup node.

***PRIMARY:** The node will be added as the primary node. One node in the recovery domain must have the role or *PRIMARY.

***REPLICATE:** The node will be added as a replicate. Replicate nodes are not ordered.

Element 3: Backup sequence number

Specifies the backup order for a node with role of *BACKUP. At the completion of the request the nodes with backup roles will be sequentially renumbered from the first backup to the last. The first backup will always be 1.

***LAST:** The node will be added as the last backup in the recovery domain. If *LAST is specified for more than one node, then the first node specified with *LAST will be the last backup node, second node specified will be the second to the last backup node, etc..

backup-sequence-number: Specify the backup sequence number.

TKVINTNETA

Specifies the interface address that is to be associated with an application. This is the takeover IP address that will be switched between systems. The field must be represented in dotted decimal format.

takeover-IP-address: Specify the takeover IP address for the application cluster resource group.

Optional Parameters

EXITPGMDTA

Specifies up to 256 bytes of data that is passed to the cluster resource group exit program when it is called. This parameter may contain any scalar data except pointers. For example, it can be used to provide state information. This data will be stored with the specified cluster resource group and copied to all nodes in the recovery domain. Pointers in this area will not resolve correctly on all nodes and should not be placed in the data.

***NONE:** There is no exit program data.

exit-program-data: Specify up to 256 bytes of data to be passed to the cluster resource group exit program.

CRGMSGUSRQ

Specifies the name of the user queue to receive distributed information from the Distribute Information (QcstDistributeInformation) API. If the user would like to distribute cluster-wide information through this cluster resource group using the Distribute Information API, then this field must be set to a value other than *NONE. If this field is set, the specified user queue must exist on all nodes in the recovery domain after the exit program completes. The only way to change the value of this field once the cluster resource group has been created is to delete and recreate the cluster resource group.

***NONE:** The Distribute Information API will not be used to distribute information through this cluster resource group.

Element 1: *library-name:* Specify the name of the library that contains the user queue to receive the distributed information. The library name cannot be *CURLIB, QTEMP, or *LIBL.

Element 2: *distribute-information-user-queue-name:* Specify the name of the user queue.

CFGINTNETA

Specifies who is responsible for configuring (adding and removing) the takeover IP address. This does not affect the starting and ending of the takeover IP address, Cluster Resource Services will perform this function.

***CRS:** Cluster Resource Services is responsible for configuring the takeover IP address. The takeover IP address must not exist on any of the nodes in the recovery domain prior to creating cluster resource group. The takeover IP address will be removed when the cluster resource group is deleted.

***USR:** User is responsible for configuring the takeover IP address. The takeover IP address must be added on all nodes in the recovery domain except replicates prior to starting the cluster resource group. For details on configuring a takeover IP address for an application cluster resource group that has recovery domain nodes in different subnets, go to Configuring under the Clustering topic in the iSeries Information Center. You can access the Information Center from the iSeries 400 Information Center CD-ROM.

JOB Specifies the name given the batch job that is submitted by the cluster resource group. This job will call the cluster resource group exit program with the action code generated by the command being used. If this field is blank, the job name will be the value of the job description found in the user profile.

***JOBID:** The job name in the job description for the specified user profile will be used.

job-name: Specify the name to be given to the batch job submitted for running the exit program.

ALWRESTART

Specifies whether or not to restart an application if the cluster resource group exit program fails.

***NO:** Do not attempt to restart the application. The cluster resource group exit program is called with an action code of Failover.

***YES:** Attempt to restart the application on the same node. The cluster resource group exit program will be called with an action code of Restart. If the application cannot be restarted in the specified maximum number of attempts, the cluster resource group exit program will be called with an action code of Failover.

NBRRESTART

Specifies the number of times a cluster resource group exit program can be called on a same node before failure occurs. Maximum number of restarts is 3.

***NONE:** There should be no restart attempts before a failover is started.

number-of-restarts: Specify the number of times that restart will be attempted before doing a failover.

CFGOBJ

Specifies detailed information about the resilient devices to be added to the cluster resource group.

***NONE:** There are no configuration objects defined for this cluster resource group.

Element 1: Configuration Object

The name of the auxiliary storage pool device description object which can be switched between the nodes in the recovery domain. An auxiliary storage pool device description can be specified in only one cluster resource group.

configuration-object: Specify the device description name.

Element 2: Configuration Object Type

Specifies the type of configuration object specified with configuration object name.

***DEV:** Type of configuration object is device description.

Element 3: Configuration Object Online

Specifies what configuration action to take when the cluster resource group is switched over or failed over to a backup node. The configuration object can be varied on and the server takeover IP address can be started or leave the configuration object varied off and the server takeover IP address inactive when a device ownership is moved to another node. This attribute does **not** vary the device on or off when the cluster resource group is started or ended.

***OFFLINE:** Do not vary the configuration object on and do not start the server takeover IP address.

***ONLINE:** Vary the configuration object on and start the server takeover IP address.

***PRIMARY:** This is a secondary ASP. Vary on processing and starting of the server takeover IP address is determined by the corresponding primary ASP for this ASP group.

Element 4: Server Takeover IP Address

Specifies a takeover IP address for servers associated with the relational database name in the device description for an auxiliary storage pool. This element is optional and can only be specified for a primary auxiliary storage pool. If specified, the address must be presented in dotted decimal format. The specified address must exist on all nodes in the recovery domain if the cluster resource group is active. If not specified, or for a secondary or UDFS auxiliary storage pool, the element must be set to ***NONE**.

***NONE:** There is no server takeover IP address associated with the relational database name in the device description for an auxiliary storage pool.

server-takeover-IP-address: Specify the server takeover IP address for the relational database.

TEXT Specifies the text used to briefly describe the cluster resource group object.

***NONE:** There is no text describing this cluster resource group.

text-description: Specify the text to describe the cluster resource group object.

FLVMSGQ

Specifies the name of the message queue to receive messages (CPABB01) dealing with failover. If the user would like to receive notice before a failover occurs, then this parameter must be set to a value other than *NONE. If this field is set, the specified message queue must exist on all nodes in the recovery domain after the exit program completes. The message queue cannot be in an independent auxiliary storage pool.

***NONE:** No messages will be sent when a failover occurs for this cluster resource group. This is the way V5R1M0 and prior releases work.

library-name: Specify the qualified name of where the failover message queue exist. The library name cannot be *CURLIB, QTEMP, or *LIBL.

failover-message-queue-name: Specify the name of the failover message queue.

FLVWAITTIM

Specifies the number of minutes to wait for a reply to the failover message that was enqueued on the failover message queue.

***NOWAIT:** Failover proceeds without user intervention. Acts the same as V5R1M0 and prior.

***NOMAX:** Wait forever until a response is given to the failover inquiry message.

number-of-minutes: Specify the number of minutes to wait for a response to the failover inquiry message. If no response is received in the specified number of minutes, the failover default action field will be looked at to decide how to proceed.

FLVDFTACN

If a response to the failover message in the failover message queue is not received in the failover wait time limit, then this field tells clustering what it should do pertaining to the failover request.

***PROCEED:** Proceed with failover.

***CANCEL:** Do not attempt failover.

Example for CRTCRG

```
CRTCRG CLUSTER(MYCLUSTER) CRG(MYCRG) CRGTYPE(*DEV) EXITPGM(TEST/EXITPGM)
USRPRF(USER1) TEXT('IASP for Application 17')
RCYDMN((NODE01 *PRIM) (NODE *BACKUP *LAST)) CFGOBJL(*NONE)
```

This command creates a device cluster resource group called MYCRG in the cluster called MYCLUSTER. The recovery domain consists of two nodes. NODE01 is the primary and NODE02 is the only backup. The list of configuration objects not specified. They will be added later with the ADDCRGDEVE command.

Error messages for CRTCRG

***ESCAPE Messages**

CPF0001

Error found on &1 command.



CRTCMD (Create Command) Command Description


CRTCMD Command syntax diagram

Purpose

The Create Command (CRTCMD) command creates a new user-defined command (that is, a command definition) that can use the command processing support used by IBM-supplied commands. The command definition is an object that can be stored in the general purpose library (the QGPL library) or in a user library. The CRTCMD command also can be used to update an existing command; for example, to change the name of one of its parameter keywords. To do this, the command must first be deleted by the Delete Command (DLTCMD) command and then created again by the CRTCMD command. However, some of the values can be changed by the Change Command (CHGCMD) command.

To create a command, a set of command definition statements are entered into a source file. The CRTCMD command is used to process the source file and create a command definition object. The following command definition statements are used as needed:

- Command statement (CMD): One CMD statement is needed for each command being defined.
- Parameter statement (PARM): One PARM statement is required for each command parameter in the command being defined. It defines the parameter to be passed to the command processing program (CPP).
- Element statement (ELEM): An ELEM statement further defines a parameter that is a list of values. One statement is required for each possible element of the list.
- Qualifier statement (QUAL): A QUAL statement is required to describe each part of a qualified name that can be accepted for a parameter (defined in a PARM statement) or for an element in a list of values (defined in an ELEM statement).
- Dependent statement (DEP): The DEP statement indicates which parameters are interdependent.
- Prompt control statement (PMTCTL): The PMTCTL statement describes the conditions used to select a parameter for prompting.

Descriptions of the five command definition statements are in command definition statements. Additional information about command definitions is in the CL Programming  book.

Restriction: The CRTCMD command can be used only to create the command definition of an actual CL command. That is, it cannot be used to create definitions of *statements*, such as the command definition statements themselves.

Required Parameters

CMD Specifies the qualified name of the command being created.

The name of the command can be qualified by one of the following library values:

***CURLIB:** The command is created in the current library for the job. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library where the command is created.

command-name: Specify the name of the command being created.

PGM Specifies the qualified name of the compiled program.

Note: The CPP is not required to exist until command run time.

The name of the CPP can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

program-name: Specify the name of the program that is to process the command.

Other Single Values

***REXX:** The CPP for this command is the REXX procedure identified by the REXSRCMBR and REXSRCFILE parameters.

The parameters passed to the CPP are the ones defined by the command definition statements in the source file specified by the SRCFILE parameter.

Optional Parameters

SRCFILE

Specifies the qualified name of the source file that contains the command definition statements.

The name of the source file can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

QCMDSRC: The IBM-supplied source file, QCMDSRC, contains the command definition statements.

source-file-name: Specify the name of the source file that contains the command definition statements for the command being created.

SRCMBR

Specifies the name of the source file member that contains the command definition statements used to create the command.

***CMD:** When the file specified in the SRCFILE parameter is a database file, the name of the source file member is the name specified in the CMD parameter of this command.

source-file-member-name: Specify the name of the source file member that contains the command definition statements used to create the command.

REXSRCFILE

Specifies the qualified name of the source file containing the REXX procedure that is the command processing program.

The name of the source file can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

QREXSRC: The IBM-supplied source file, QREXSRC, contains the source member that is used.

source-file-name: Specify the name of the source file containing the source member (the member that holds the REXX procedure) that is used.

REXSRCMBR

Specifies the source member containing the REXX procedure that is the command processing program.

***CMD:** The source member name is the same as the command name (the name specified on the CMD parameter).

source-member-name: Specify the name of the source member that contains the REXX procedure.

REXCMDENV

Specifies the command environment that is active when the REXX CPP starts to run. If the iSeries 400 control language (CL) environment is not used, a program can be specified to process commands found in the REXX procedure. The REXX interpreter calls this program to process commands encountered in the procedure. This environment can be changed with the REXX ADDRESS instruction.

***COMMAND:** The iSeries 400 control language (CL) command environment is used.

***CPICOMM:** The Common Programming Interface (CPI) for Communications command environment is used. CPICOMM is the command environment used for CL commands that are imbedded within a REXX procedure.

***EXECSQL:** The Structured Query Language (SQL) Command environment is used. EXECSQL is the command environment used for CL commands that are imbedded within a SQL procedure.

The name of the program can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

program-name: Specify the name of the program to process commands found in the REXX procedure.

REXEXITPGM

Specifies the exit programs to be used when the REXX interpreter is started. This parameter can be specified as a single value (*NONE) or as a list of two values (elements).

***NONE:** There are no exit programs for this call of the CPP.

The name of the program can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

Element 1: Program Name

program-name: Specify the name of the exit program.

Element 2: Exit Code

exit-code: Specify one of the following values for the exit code:

Exit-code

	Description
2	The associated program is called whenever an external function or subroutine has been called by the REXX program. The exit program is then responsible for locating and calling the requested routine.
3	The associated program is called whenever the interpreter is going to call a command. The exit program is responsible for locating and calling the command given the command string and the current environment name.
4	The associated program is called whenever a REXX instruction or function attempts an operation on the REXX external data queue.
5	The associated program is called when session input or output operations are attempted.
7	The associated program is called after running each clause of the REXX procedure to determine whether it must be halted.
8	The associated program is called after running each clause of the REXX program to check if tracing must be turned on or off.
9	The associated program is called before interpretation of the first instruction of a REXX procedure (including REXX procedures called as external functions and subroutines).
10	The associated program is called after interpretation of the last instruction of a REXX procedure (including REXX procedures called as external functions and subroutines).

VLDCR

Specifies, each time the command is used, the qualified name of a program that performs additional user-defined validity checking on the parameters in the command being created. The same parameters that are passed to the CPP (these are identified in the PGM parameter) are also passed to the validity checking program. The validity checker performs additional user-defined validity checking beyond that specified by the command definition statements in the source file, and beyond normal control language syntax checking. More information on validity checking is in

the CL Programming  book.

***NONE:** No separate user-defined validity checking is done for this command. All validity checking is done by the command analyzer and the command processing program.

The name of the user-defined validity checking program can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

program-name: Specify the name of the user-defined validity checking program that checks the validity of the command being created. The validity checker is not required to exist until command run time.

MODE Specifies the modes of operating environment to which the newly defined command applies. One or more of the modes can be specified.

***ALL:** The command is valid in all the types of operation: production, debug, and service modes.

***PROD:** The command is valid for production mode operations.

***DEBUG:** The command is valid for debug mode operations.

***SERVICE:** The command is valid for service mode operations.

ALLOW

Specifies where the CRTCMD command can be processed. One or more of the following options can be specified.

***ALL:** The command can be processed in a batch input stream, in a CL program, in a REXX procedure, in a CL ILE module, or when processed interactively. It can also be passed to the system program QCMDXEC (or QCAEXEC) for processing.

Note:

User-created commands created in releases prior to REXX must be modified to work in REXX.

***BATCH:** The command can be processed in a batch input stream, external to a compiled CL program.

***INTERACT:** The command can be processed interactively, external to a compiled CL program.

***BPGM:** The command can be processed in a compiled OPM-CL or ILE-CL program that is called from batch entry.

***IPGM:** The command can be processed in a compiled OPM-CL or ILE-CL program that is called from interactive entry.

***BREXX:** The command can be used in a REXX procedure that is run in batch job.

***IREXX:** The command can be used in a REXX procedure that is run in an interactive job.

***BMOD:** The command can be used in a batch CL ILE module only.

***IMOD:** The command can be used in an interactive CL ILE module only.

***EXEC:** The command can be processed as a parameter on the CALL command, and can be passed as a character string to the system program QCMDEXC (or QCAEXEC) for processing. If *EXEC is specified, either *BATCH or *INTERACT must also be specified.

ALWLMTUSR

Specifies whether a user whose profile is set for limited capabilities is allowed to use the command by typing it in the command line on a menu.

***NO:** A user whose profile is set for limited capabilities is not allowed to use the command by typing it in the command line on a menu.

***YES:** A user whose profile is set for limited capabilities is allowed to use the command by typing it in the command line on a menu.

MAXPOS

Specifies the maximum number of parameters that can be coded positionally for this command. This parameter value must be greater than the number of nonconstant required parameters and less than the total number of nonconstant parameters. Parameters of TYPE(*ZEROELEM), parameters with the CONSTANT attribute, and lists and qualified names whose ELEM and QUALs have the CONSTANT attribute or are of TYPE(*ZEROELEM) are not included in the number of parameters that can be coded positionally for this command.

***NOMAX:** The system maximum is used.

positional-limit: Specify the maximum number of parameters that can be coded positionally for this command. Valid values range from 0 through 75.

PMTFILE

Specifies the qualified name of the message file from which the prompt text for the command is retrieved.

***NONE:** No message file is needed for the prompt text. The text, if any, is supplied in the definition statements that define the command.

The name of the message file can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

message-file-name: Specify the name of the message file to use.

MSGF Specifies the qualified name of the message file from which messages identified on the DEP statements used to define the command are retrieved. These messages are those that can be sent if the command, while running, finds a parameter dependency error. The messages referred to by this MSGF parameter are those whose message identifiers are specified in the MSGID parameter of one or more DEP definition statements, but whose identifiers do not have the 3-character prefix, CPF. QCPFMSG is always used for messages that have the CPF prefix.

The name of the message file can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

QCPFMSG: Dependency error messages are retrieved from the IBM-supplied CPF message file, QCPFMSG.

message-file-name: Specify the name of the message file to use.

HLP SHELF

Specifies a bookshelf name, or a list of bookshelves, that is to be used when the InfoSeeker key is pressed from the help display.

***NONE:** No bookshelf is specified. InfoSeeker will not be available from the help display.

***LIST:** The list of bookshelves in the user's bookpath will be displayed.

bookshelf-name: Specify the bookshelf name.

Note: If both a HLP SHELF and HLP SCHIDX parameter value are specified, an error message is issued when the command is created.

HLP PNLGRP

Specifies the qualified name of the help panel group for this command.

***NONE:** No help panel group is specified.

Note: If *NONE is specified on this parameter and a value is specified on the HLPID parameter, an error message is issued when the command is created.

The name of the panel group can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

panel-group-name: Specify the name of the help panel group for this command.

HLPID Specifies the name of the general help module for the names of the help identifiers for this command.

***CMD:** The name of the command is the name of the general help module.

***NONE:** No help identifier is specified.

Note: If *NONE is specified on this parameter and a value is specified on the HLPID parameter, an error message is issued when the command is created.

help-ID-name: Specify the name of the general help module for the help identifiers for this command.

HLPSCHIDX

Specifies the qualified name of the help search index to be used when the search index function key is pressed.

***NONE:** No search index is specified.

The name of the search index can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

search-index-name: Specify the name of the search index to be used when the search index function key is pressed.

Note: If both a HLP SHELF and HLPSCHIDX parameter value are specified, an error message is issued when the command is created.

CURLIB

Specifies the name of the library being used as the current library for jobs initiated by this user profile.

Note: This library is also the current library when the validity checker program (if any) is processed for the command.

***NOCHG:** The current library does not change for the processing of this command. If the current library is changed during processing of the command, the change remains in effect after command processing is complete.

***CRTDFT:** No current library is active during processing of the command. The current library that was active before command processing began is restored when processing is completed.

If *CURLIB was specified as the to-value for any single values or special values for this command, or for any command processed while no current library is active, the QGPL library is used as the current library.

library-name: Specify the name of the library used as the current library. The library need not exist when the command is created, but must exist when the command is processed. When command processing is completed, the current library is restored to its previous value. If the current library is changed during command processing by the Change Library List (CHGLIBL) command or Change Current Library (CHGCURLIB) command, the change is effective only until the command is processed. QTEMP cannot be specified for the current library.

PRDLIB

Specifies the name of the product library that is in effect during the processing of the command.

Note:

The product library for a command or menu remains in the library list while a command or menu is active, unless another command or menu changes the product library. When a command or menu that changed the product library ends, the product library is restored to what it was when the command or library started.

***NOCHG:** The product library does not change when command processing starts. If the product library is changed during the processing of the command, the change remains in effect after command processing is complete.

***NONE:** There is no product library in the job's library list. The product library is restored to its previous value on completion of command processing.

library-name: Specify the name of the library used as the current library. The library need not exist when the command is created, but must exist when the command is processed. When command processing is completed, the current library is restored to its previous value. If the current library is changed during command processing by the Change Library List (CHGLIBL) command or Change Current Library (CHGCURLIB) command, the change is effective only until the command is processed. QTEMP cannot be specified for the current library.

PMTOVRPGM

Specifies the qualified name of the prompt override program (POP) that replaces (on the prompt display) the default values with the current actual values for the parameter. If a POP is specified, the key parameters (specified as KEYPARAM(*YES) on the PARM statement in the command definition source) are the only parameters visible on the initial prompt display. When values are input for the key parameters, the remaining parameters are shown on the display with the actual values instead of the default values.

***NONE:** No prompt override program is specified.

Note:

If *NONE is specified when key parameters exist in the command definition source (KEYPARAM(*YES) specified on the PARM statement), a warning message is issued when the command is created, and KEYPARAM(*NO) is assumed for all parameters.

The name of the prompt override program can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

program-name: Specify the name of the prompt override program for the command.

AUT

Specifies the authority given to users who do not have specific authority to the command, who are not on an authorization list, and whose user group has no specific authority to the command. More information on this parameter is in Commonly used parameters.

***LIBCRTAUT:** The public authority for the command is taken from the value on the CRTAUT parameter of the target library (the library that is to contain the command). The public authority is determined when the command is created. If the CRTAUT value for the library changes after the command is created, the new value does not affect any existing objects.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the command.

***USE:** The user can perform basic operations on the command, such as running a program or reading a file. The user cannot change the command. *USE authority provides object operational authority, read authority, and execute authority.

***EXCLUDE:** The user cannot access the command.

authorization-list-name: Specify the name of the authorization list used.

REPLACE

Specifies the replacement of an existing command with a new version of the same name, type, and library, without first issuing a DLTCMD command to remove the old one.

The old version is renamed, moved to library QRPLOBJ, and then cleared on the next IPL of the system.

***YES:** If the create operation is successful, existing commands are replaced by new versions of the same command.

***NO:** No replacement occurs.

ENBGUI

Specifies whether the command prompt panels are enabled for conversion to a graphical user interface.

***NO:** The command prompt panels are not enabled for conversion to a graphical user interface.

***YES:** The command prompt panels are enabled for conversion to a graphical user interface by including information about the panel content in the 5250 data stream.

THDSAFE

Specifies whether a command can be safely used in a multithreaded job. If you specified PGM(*REXX), you must specify THDSAFE(*NO).

***NO:** The command is not threadsafe. The MLTTHDACN parameter defines the action to be taken by the command analyzer when the command is used in a multithreaded job.

***YES:** The command is threadsafe.

***COND:** The command is threadsafe under some conditions. The documentation for the command should describe the conditions under which the command is threadsafe.

MLTTHDACN

Specifies the action to take if the command is not threadsafe and it is being used in a multithreaded job.

***SYSVAL:** The action specified in the system value QMLTTHDACN will be taken.

***RUN:** The command is run, and no message is sent to the caller of the command.

***MSG:** The command is run, and an informational message is sent to the caller of the command.

***NORUN:** The command is not run, and an escape message is sent to the caller of the command.

TEXT Specifies the text that briefly describes the command and its function. More information on this parameter is in Commonly used parameters.

Note: The text in the command description can be displayed by the Display Object Description (DSPOBJD) command.

***SRCMBRTXT:** The text is taken from the source file member being used to create the CL command. If the source file is an inline file or a device file, the text is blank.

***CMDPMT:** The text is taken from the text defined for the PROMPT keyword of the CMD statement in the command definition source.

***BLANK:** No text is specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CRTCMD

```
CRTCMD  CMD(PAYROLL)  PGM(PAY076)
        SRCFILE(PAYSOURCE)  AUT(*EXCLUDE)
```

The command named PAYROLL is created from the source file PAYSOURCE. The command is private and calls the command processing program (CPP) named PAY076. It is a valid command when entered in a batch input stream, when compiled in a control language program, when entered interactively, or when passed to the QCMDEXC program.

Error messages for CRTCMD

*ESCAPE Messages

CPF0201

Command &2 not created in library &3.

CPF0210

Cannot open printer file.

CPF0212

Unable to open source file.

CRTCSI (Create Communications Side Information) Command Description

CRTCSI Command syntax diagram

Purpose

The Create Communications Side Information (CRTCSI) command is used to create a side information object in a specific library. The side information object name must be unique for the library in which the side information object is to be created.

Required Parameters

CSI Specifies the name of the side information object to be created. An object name must be specified. The side information object is accessed by the symbolic destination name (sym_dest_name) parameter on the Initialize_Conversation (CMINIT) call.

The name of the side information object can be qualified by one of the following library values:

***CURLIB:** The side information object is created in the current library for the job. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library where the side information object is created.

side-information-name: Specify the name of the object that contains the desired side information. This is the CPI-Communications symbolic destination name (sym_dest_name).

RMTLOCNAME

Specifies the remote location name that is associated with the symbolic destination name. The Common Programming Interface (CPI) -Communications partner_LU_name, which consists of the remote network identifier and the remote location, determines the remote logical unit (LU) of the remote program.

TNSPGM

Specifies the name (up to 64 characters) of the transaction program on the remote system to be started. This is the CPI-Communications TP_name. The user can enter SNA service transaction program names by specifying hexadecimal input. For example, '03F0F0F4' is a valid input format for an SNA service transaction program.

Optional Parameters

DEV Specifies the name of the device description used for the remote system.

***LOC:** The device associated with the remote location is used. If several devices are associated with the remote location, the system determines which device is used.

device-name: Specify the name of a communications device associated with the remote location. If the device name is not valid for the remote location, a message is sent when the program device entry is acquired.

LCLLOCNAME

Specifies the local location name.

***LOC:** The device associated with the remote location is used. If several devices are associated with the remote location, the system determines which device is used.

***NETATR:** The LCLLOCNAME value specified in the system network attributes is used.

local-location-name: Specify the name of the local location. Specify the local location if the remote location is also indicated by a specific local location name.

MODE Specifies the mode used to control the session. This name is the same as the CPI-Communications mode_name.

***NETATR:** The mode name specified in the network attributes is used.

***BLANK:** Eight blank characters are used.

mode-name: Specify a mode_name for the remote location.

Note: The values SNASVCMG and CPSVCMG cannot be specified.

RMTNETID

Specifies the remote network identifier used with the remote location. The CPI-Communications partner_LU_name, which consists of the remote network identifier and the remote location, locates the LU in the network.

***LOC:** The remote network ID for the remote location is used.

***NETATR:** The RMTNETID value specified in the system network attributes is used.

***NONE:** The remote network has no name.

remote-network-ID: Specify a remote network ID.

AUT Specifies the authority given to users who do not have specific authority to the object, who are not on the authorization list, and whose user groups have no specific authority to the object.

***LIBCRTAUT:** Authority for the object is taken from the CRTAUT parameter of the specified library. This value is determined at create time. If the CRTAUT value for the library changes after the object is created, the new value does not affect any existing objects.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***ALL:** The user can perform all operations on the object except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user can transfer ownership of the object.

***USE:** The user can perform basic operations on the communications side information, such as running a program or reading a file. The user cannot change the communications side information. *USE authority provides object operational authority, read authority, and execute authority.

***EXCLUDE:** The user cannot access the communications side information.

authorization-list: Specify the name of the authorization list whose authority is used for the side information.

TEXT Specifies the text that briefly describes the object and its function. More information on this parameter is in Commonly used parameters.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CRTCSI

```
CRTCSI  CSI(QGPL/SIDEOBJ) RMTLOCNAME(APPC2)
        TNSPGM(TESTNOP)  AUT(*CHANGE)
```

This command creates a communications side information object named SIDEOBJ in library QGPL. The remote location name is set to APPC2, the transaction program name to TESTNOP. The authority to the object is *CHANGE.

Error messages for CRTCSI

*ESCAPE Messages

CPF3B82

Communications side information object &1 already exists in library &2.

CPF3B83

Communications side information object &1 not created in library &2.

CRTCFGL (Create Configuration List) Command Description

CRTCFGL Command syntax diagram

Purpose

The Create Configuration List (CRTCFGL) command creates a configuration list.

Required Parameters

TYPE Specifies the type of configuration list that will be created.

***APPNDIR:** An advanced peer-to-peer networking (APPN) directory search filter configuration list is created. Only the text description (TEXT) and the default action (DFTACN) parameters can be specified using this command.

***APPNLCL:** An APPN local location list is created. Up to 476 APPN local location entries are allowed in the configuration list.

***APPNRMT:** An APPN remote location list is created. Up to 1898 APPN remote location entries are allowed in the configuration list.

***APPNSSN:** An APPN session end point filter configuration list is created. Only the text description (TEXT) and the default action (DFTACN) parameters can be specified using this command.

***ASYNCADR:** An asynchronous network address list is created. Up to 294 asynchronous network address entries are allowed in the configuration list.

***ASYNCLOC:** An asynchronous remote location list is created. Up to 32000 asynchronous remote location entries are allowed in the configuration list.

***RTLPASTHR:** A retail pass-through list. Up to 450 retail pass-through entries are allowed in the configuration list.

***SNAPASTHR:** An SNA pass-through list. Up to 254 SNA pass-through entries are allowed in the configuration list. Only the text description for an SNA configuration list can be specified using this command.

Notes:

1. To add an entry to an SNA configuration list, use the Add Configuration List Entry (ADDCFGLE) command.
2. To add a device name and description to an existing entry, use the Change Configuration List Entry (CHGCFGLE) command.

CFGFL Specifies the name of the configuration list. This parameter is valid only when *ASYNCADR is specified on the TYPE parameter. Only one of the other configuration list types is allowed on a system. The list types have system-supplied names: QAPPNDIR, QAPPNLCL, QAPPNRMT, QAPPNSSN, QASYNCADR, QASYNCLOC, QRTLPASTHR, QSNAPASTHR.

Optional Parameters

DFTFTRACN

Specifies the default filter action for APPN requests being handled by the local system. This filter action applies to all directory search requests and session endpoint requests that are not specifically listed in the configuration list.

Note: This parameter is valid only if TYPE(*APPNDIR) or TYPE(*APPNSSN) is specified.

***REJECT:** The request is rejected.

***ACCEPT:** The request is accepted.

APPNRMTFTR

Specifies whether APPN remote configuration list entries should be used when filtering session endpoint requests.

Note:

This parameter is valid only if TYPE(*APPNSSN) is specified.

***ACCEPT:** Session endpoint requests for entries specified in the APPN remote configuration list are accepted.

***NONE:** Session endpoint requests will not be filtered using the entries specified in the APPN remote configuration list.

APPNLCL

Specifies the APPN local location entry. This value is required if *APPNLCL is specified for the TYPE parameter.

***PROMPT:** The value of *PROMPT allows the user to add, remove, and change entries using a full-screen entry display.

Element 1: Operation on a Local Entry

local-location-name: Specify the local location name residing on the local system. These names are used by the local APPN controller to determine whether a request being received is intended for its system or another system in the network. The local location name must be unique, and it cannot already exist as a remote location name used by configuration list QAPPNRMT or be specified on another system as a local location in the same APPN network.

Element 2: Describing a Local Entry

***BLANK:** Text is not specified.

'entry-description': Specify a short description for each local entry.

APPNRMTE

Specifies the APPN remote location entry. This value is required if *APPNRMT is specified for the TYPE parameter.

***PROMPT:** The value of *PROMPT allows the user to add, remove, and change entries using a full-screen entry display.

Element 1: Remote Location Name

***ANY:** The system potentially accepts all requests sent to it.

generic-remote-location-name:* Specify the generic name (part of a name followed by an asterisk) of the remote location(s) to be changed. The generic location name allows one directory entry to be defined for all locations, on a single control point, with a name that matches the characters preceding an *. A generic name is a character string of one or more characters followed by an asterisk (*); for example, ABC*. The asterisk substitutes for any valid characters. A generic name specifies all objects with names that begin with the generic prefix for which the user has authority. If an asterisk is not included with the generic (prefix) name, the system assumes it to be the complete object name. See generic names for additional information.

remote-location-name: Specify the full name of a remote location.

Element 2: Remote Network Identifier

***NETATR:** The RMTNETID value specified in the system network attributes is used.

***NONE:** No remote network identifier (ID) is used.

remote-network-identifier: Specify the network identifier of the network in which the remote location resides.

Element 3: Local Location Name

***NETATR:** The LCLLOCNAME value specified in the system network attributes is used.

local-location-name: Specify the location name on the local system. This name is used by APPN to match a local/remote location pair entry.

Element 4: Control Point Name

***NONE:** There is no control point name.

control-point-name: Specify the name of the control point that provides network functions for the remote location. This field is required if the entry is either a generic name or *ANY.

Element 5: Control Point Network Identifier

***NETATR:** The LCLNETID value specified in the system network attributes is used.

control-point-network-identifier: Specify the network identifier of the network in which the control point resides.

Element 6: Location Password

***NONE:** There is no location password.

location-password: Specify the password used when establishing sessions on the local location/remote location name pair. It must be an even number of hexadecimal characters.

Element 7: Location Security

Specifies how security information is handled for program start requests received from remote systems. The value is sent to the remote system when sessions are established. It is used in determining how allocate or evoke requests should be built. The value only applies to conversations started with the SECURITY(SAME) level of security.

***NO:** The remote system is not a secure location. Security validation done by the remote system is not accepted. SECURITY(SAME) conversations are treated as SECURITY(NONE). No security information will be sent with allocate or evoke requests.

***YES:** The remote system is a secure location and the local system will accept security validation done by remote systems. For SECURITY(SAME) conversations, the local system allows the remote system to verify user passwords. On the remote system, user IDs are retrieved from the operating system. The user IDs are then sent with an already verified indicator in the allocate or evoke requests.

***VFYENCPWD:** The remote system is not a secure location. For SECURITY(SAME) conversations, the remote system is not allowed to send the already verified indicator. On the remote system, user IDs and passwords are retrieved from the operating system. Passwords are then encrypted and sent with the user IDs in the allocate or evoke requests, to be verified by the local system. This value should only be used if the remote system is using OS/400 V3R2M0 or later. If the remote system does not support password protection then session establishment will not be allowed. For remote systems that support password protection, but do not support verification of encrypted passwords (VFYENCPWD), conversations will be treated as SECURITY(NONE).

Element 8: Single Session Location

This value specifies whether the connection between the local location and remote location is a single session connection.

***NO:** The connection between the local location and the remote location is not a single session connection.

***YES:** The connection between the local location and the remote location is a single session connection.

Element 9: Locally Controlled Session

This value specifies, for single connection sessions only, whether the connection between the local location and remote location is locally controlled.

***NO:** The single session connection is not locally controlled.

***YES:** The single session connection is locally controlled.

Element 10: Preestablished Session

This value specifies whether the single session is automatically bound when the mode is started between the local location and remote location.

***NO:** The single session connection is not automatically bound between the local and remote location.

***YES:** The single session connection is automatically bound between the local and remote location.

Element 11: Remote Entry Description

***BLANK:** Text is not specified.

'entry-description': Specify up to 20 characters of text, enclosed in apostrophes, for the entry description.

Element 12: Number of Single-Session Conversations

10: The number of single session conversations allowed for this device description is ten.

single-session-conversations: Specify the number of conversations allowed for a single session of this device description. Valid values range from 1 through 512.

Note:

The combination of remote location name, remote network identifier, and local location name must be unique. Also, the remote location name cannot already exist as a local location in configuration list QAPPNLCL, or as the current value for either LCLLOCNAME or CPNAME network attribute.

ASYNCADRE

Specifies the asynchronous network address entry. This value is required if *ASYNCADR is specified for the TYPE parameter.

Element 1: Operation on a Network Address Entry

***PROMPT:** The value of *PROMPT allows the user to add, remove, and change entries using a full-screen entry display.

network-address: Specify the X.25 network address. This value must contain only digits ranging from 0 to 9.

Element 2: Number of Dial Retries

2: The LZ algorithm with the 12-bit code for repeated substrings in the data stream is used. These codes refer to entries in a common dictionary, created as the data flows between the sender and receiver. The LZ algorithms require storage and extra processing time. The LZ12 requires the most storage and processing time of the LZ algorithms; however, it compresses the data stream the most.

dial-retry: Specify the number of times dialing is retried (because errors occur) before the next number on the list is dialed. The valid number of dial retries ranges from 1 through 255.

Element 3: Description of Network Address Entry

***BLANK**: Text is not specified.

'entry-description': Specify a short description for each remote network address entry. Specify no more than 20 characters of text, enclosed in apostrophes.

ASYNCCLOC

Specifies the asynchronous remote location entry. This value is required if *ASYNCCLOC is specified for the TYPE parameter.

***PROMPT**: The value of *PROMPT allows the user to add, remove, and change entries using a full-screen entry display.

Element 1: Remote Location Name

This name, in combination with the remote location identifier, is used to determine whether an incoming call is accepted. This value must be unique on the system.

remote-location-name: Specify the full name of a remote location.

Element 2: Remote Location Identifier

remote-location-identifier: Specify an identifier which, when combined with the remote location name, determines whether an incoming call is accepted. This identifier must be the same as the remote system's local identifier.

Element 3: Description of Remote Location Entry

***BLANK**: Text is not specified.

'entry-description': Specify a short description for each remote location entry.

RTLPASTRHRE

Specifies the retail pass-through entry. This value is required if TYPE(*RTLPASTRHRE) is specified. Up to of 50 entries can be specified for this parameter.

The values for the retail-pass-through entry can be specified as a single value (*PROMPT) or as a list of values (elements).

***PROMPT**: The value of *PROMPT allows the user to add, remove, and change entries using a full-screen entry display.

Element 1: Retail Device Name

retail-device-name: Specify the name of the retail device to use for the pass-through session. This must be a unique value.

Element 2: SNA Upline Facility Device Name

SNUF-device-name: Specify the name of the host device to use for the pass-through session. This must be a unique value. retail controller.

Element 3: Default Host Program Name

default-host-program-name: Specify the name of the program to be started on the host if a program name was not specified by the retail controller.

Element 4: Text Description

***BLANK**: Text is not specified.

'entry-description': Specify a short description for each retail pass-through entry.

AUT Specifies the authority given to users who do not have specific authority to the configuration list, who are not on an authorization list, and whose user group has no specific authority to the configuration list.

***LIBCRTAUT:** The authority for the object is the same as the create authority for QSYS. The create authority for QSYS can be displayed by using the Display Library Description (DSPLIBD) command. If the create authority is changed with the Change Library (CHGLIB) command, the new authority does not affect existing objects.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***USE:** The user can perform basic operations on the configuration list, such as running a program or reading a file. The user cannot change the configuration list. *USE authority provides object operational authority, read authority, and execute authority.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the configuration list.

***EXCLUDE:** The user cannot access the configuration list.

authorization-list-name: Specify the name of the authorization list used.

TEXT Specifies the text that briefly describes the configuration list. More information on this parameter is in Commonly used parameters.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CRTCFGL

```
CRTCFGL TYPE(*APPNLCL)
```

This command brings up a full-screen entry display that allows the user to add new entries to configuration list QAPPNLCL.

Error messages for CRTCFGL

*ESCAPE Messages

CPF218Z

Not authorized to library &1.

CPF260D

Configuration list &1 already exists.

CPF260E

Configuration list &1 not created.

CPF261C

Index for configuration list &1 not changed.

CPF261D

Index for configuration list &1 not changed.

CPF261F

Configuration list &1 has been deleted.

CPF2625

Not able to allocate object &1.

CPF2634

Not authorized to object &1.

CPF9838

User profile storage limit exceeded.

CRTCNNL (Create Connection List) Command Description

CRTCNNL Command syntax diagram

Purpose

The Create Connection List (CRTCNNL) command is used to create a connection list. A connection list consists of up to 256 connection list entries and is used to manage incoming and outgoing calls. Users specify a network type and the removal of extra characters for all of the entries of a list. To add entries to a connection list, use the Add Connection List Entry (ADDCNNLE) Command.

Required Parameter

CNNL Specifies the name of the connection list being created.

Optional Parameters

NETTYPE

Specifies the type of integrated services digital network (ISDN) to which the system is attached. The value specified on this parameter is used to determine the defaults for several parameters that are dependent on the type of ISDN to which the system is attached.

***NETATR:** This value indicates that the default network type specified in the network attributes are used. The values of the parameters in the network attributes for the system can be displayed by using the Display Network Attributes (DSPNETA) command. If no value is specified on the DFTNETTYPE parameter, the user should specify one by using the Change Network Attributes (CHGNETA) command.

***ATT:** This value is used when attaching to an ISDN that uses the AT&T Generic interface.

***DBP1TR6:** This value is used when attaching to an ISDN controlled by Germany's post telephone and telegraph administration (PTT). (Deutsche Bundespost 1TR6).

***ETSI:** This value is used when attaching to an ISDN that uses the European interface (ETSI, also known as EuroISDN standard).

***JAPAN:** This value is used when attaching to an ISDN that uses the Japanese interface.

***NISDN:** This value is used when attaching to a National ISDN interface.

***NORTEL:** This value is used when attaching to an ISDN that uses the Northern Telecom interface.

Note: The following choices are available and should only be used when directed to do so.

***NORTHAMT1:** This value is used when attaching to a channelized North American T1 interface.

RMVCHR

Specifies up to 10 characters that are removed from remote and local numbers. Extra characters are removed from numbers before sending or comparing those numbers. The ability to shorten numbers prior to their use by the system means extra characters can be inserted in the numbers to help organize and read them.

***NETTYPE:** A default value is used based on the network type specified on the NETTYPE parameter when the connection list was created using the Create Connection List (CRTCNNL) command.

***NONE:** No characters are removed.

'character': Specify a character to be removed. Up to 10 characters can be specified.

AUT Specifies the level of public authority for this object.

***LIBCRTAUT:** The authority for the object is the same as the create authority for QSYS. The create authority for QSYS can be displayed by using the Display Library Description (DSPLIBD) command. If the create authority is changed with the Change Library (CHGLIB) command, the new authority does not affect existing objects.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***ALL:** The user can perform all operations on the object except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user can transfer ownership of the object.

***USE:** The user can perform basic operations on the connection list, such as running a program or reading a file. The user cannot change the connection list. *USE authority provides object operational authority, read authority, and execute authority.

***EXCLUDE:** The user cannot access the connection list.

authorization-list-name: Specify the name of an authorization list. Users included on the authorization list are granted authority to the object as specified by the list. The authorization list must exist when the object is created.

TEXT Specifies the text that briefly describes the connection list. More information on this parameter is in Commonly used parameters.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CRTCNL

```
CRTCNL  CNL(CHICAGO)
        NETTYPE(*ETSI)
```

This command creates a connection named CHICAGO with a network type of *ETSI. Any entries added or changed (using the ADDCNNLE or CHGCNNLE commands) that have parameters specified with the value *NETTYPE have values set to work on a *ETSI type ISDN.

Error messages for CRTCNL

*ESCAPE Messages

CPF267A

Connection list &1 not created due to errors.

CRTCLMOD (Create Control Language Module) Command Description

CRTCLMOD Command syntax diagram

Purpose

The Create Control Language Module (CRTCLMOD) command creates a control language (CL) module from the specified CL source member. The command is valid in batch and interactive jobs, and in both compiled and interpreted CL.

Required Parameter

MODULE

Specifies the qualified name of the CL module being created.

The name of the module can be qualified by one of the following library values:

***CURLIB:** The module is created in the current library for the job. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library where the module is created.

module-name: Specify the name of the module being created.

Optional Parameters

SRCFILE

Specifies the qualified name of the source file that contains the CL source module being compiled. The module is known by the name given in the MODULE parameter.

The name of the source file can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

QCLSRC: The IBM-supplied source file, QCLSRC, that contains the CL source member being compiled is used.

source-file-name: Specify the name of the source file that contains the CL source member being compiled. The source file can be a database file, a device file, or an inline data file.

SRCMBR

Specifies the name of the member of the source file that contains the CL source member being compiled.

***MODULE:** The CL source member being compiled is in the member of the source file that has the same name as that specified on the MODULE parameter for the compiled module.

source-file-member-name: Specify the name of the member that contains the CL source, if the member name is not the same as the name of the module being created.

TEXT Specifies the text that briefly describes the compiled CL module. More information on this parameter is in Commonly used parameters.

***SRCMBRTXT:** The text is taken from the source file member being used to create the CL module. If the source file is an inline data file or a device file, the text is blank.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

OUTPUT

Specifies whether or not a compiler listing is produced.

***PRINT**: The compiler listing is produced. The information contained in the listing is dependent on the values specified on the OPTION parameter.

***NONE**: The compiler listing is not produced. When a listing is not required, this option should be used because compile-time performance may be better.

OPTION

Specifies the types of output lists created when this command is processed and whether a program is created. A maximum of four of the following values can be specified in any order on this parameter. If neither or both of the values in each group are specified, the underlined value is used.

Note:

The underlined values for this parameter are *similar* to, but not *actually* default values, and therefore, cannot be changed with the Change Command Default (CHGCMDDFT) command.

Module Creation Options

***GEN**: All phases of the compilation process are carried out.

***NOGEN**: Compilations stops after syntax checking. No module is created.

Cross-Reference Options

***NOXREF**: No cross-reference list of references to variable and data items in the source is created.

***XREF**: A cross-reference listing of the source program is produced. OUTPUT(*PRINT) must be specified.

Second-Level Message Text Options

***NOSECLVL**: No second level message text is printed.

***SECLVL**: Second-level message text is printed. OUTPUT(*PRINT) must be specified.

Event File Creation Options

***NOEVENTF**: The compiler will not produce an event file for use by the CoOperative Development Environment/400 (CODE/400) product.

***EVENTF**: The compiler produces an event file for use by the CODE/400 product. The event file will be created as a member in the file EVFEVENT in your source library. The CODE/400 product uses this file to offer error feedback integrated with the CODE/400 editor. This option is normally specified by the CODE/400 product on your behalf.

LOG Specifies the logging options for a created CL module.

***JOB**: Logging of commands in a running CL module depends on the status of the job's logging flag (see the LOGCLPGM parameter of the Change Job (CHGJOB) command). To list the logged commands, the logging level of the jobs must be 3 or 4.

A *YES or *NO value takes precedence over any value specified in the CHGJOB command.

***YES:** The commands are logged in all cases.

***NO:** The commands are not logged.

ENBPFCOL

Specifies whether collection of performance data is enabled.

***PEP or *NONE:** Performance data is collected for the Program Entry Procedure entry and exit. There are no entry or exit hooks in the module's internal procedures and no precall or postcall hooks around calls to other procedures.

***FULL:** Performance data is collected for procedure entry and exit. Performance data is also collected before and after calls to external procedures.

REPLACE

Specifies whether an existing module is replaced if a module with the same name already exists in the specified library.

***YES:** The existing module is replaced by moving it to the QRPLOBJ library.

Notes:

1. If a running CL module is recompiled with ***YES** specified for the REPLACE parameter, message queue errors may occur in the running CL module.
2. Specifying ***YES** for this parameter causes the value on the AUT parameter to be ignored. The existing module is used as the source of authority. To change the authority for the module, you can use the Grant Object Authority (GRTOBJAUT) or Revoke Object Authority (RVKOBJAUT) commands.

***NO:** The existing module is not replaced. When a module with the same name exists in the specified library, a message is displayed and compilation stops.

TGTRLS

Specifies the release level of the operating system on which you intend to use the CL module being created.

When specifying the *target-release* value, the format VxRxMx is used to specify the release, where Vx is the version, Rx is the release, and Mx is the modification level. For example, V3R6M0 is version 3, release 6, modification level 0.

Valid values depend on the current version, release, and modification level, and they change with each new release. See the **Valid Values for TGTRLS Parameter** table in the Backup and Recovery topic in the Information Center for a complete list of valid values.

***CURRENT:** The CL module is to be used on the release of the operating system currently running on your system. The CL module can also be used on a system with any subsequent release of the operating system installed.

***PRV:** The CL module is to be used on the previous release with modification level 0 of the operating system. The CL module can also be used on a system with any subsequent release of the operating system installed.

target-release: Specify the release in the format VxRxMx. The CL module can be used on a system with the specified release or with any subsequent release of the operating system installed.

AUT Specifies the authority given to users who do not have specific authority to the CL module, who are not on an authorization list, and whose user group has no specific authority to the CL module.

Note: This parameter will be ignored if REPLACE(*YES) is specified.

***LIBCRTAUT:** The public authority for the CL module is taken from the value on the CRTAUT parameter of the target library (the library that is to contain the CL module). The public authority is determined when the CL module is created. If the CRTAUT value for the library changes after the CL module is created, the new value does not affect any existing objects.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the CL module.

***USE:** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. *USE authority provides object operational authority, read authority, and execute authority.

***EXCLUDE:** The user cannot access the object.

authorization-list-name: Specify the name of the authorization list used.

SRTSEQ

Specifies the sort sequence table to be used for string comparisons for this CL module. The sort sequence is used with the language identifier and the coded character set identifier of the job to determine the sort sequence table to use.

Note:

SRTSEQ(*HEX) must be specified when a previous release is specified on the TGTRLS parameter.

***HEX:** A sort sequence table is not used. The hexadecimal values of the characters are used to determine the sort sequence.

***JOB:** The sort sequence used is the SRTSEQ associated with the job when the CL module is created.

***JOBRUN:** The sort sequence used is the SRTSEQ associated with the job when the CL module is run.

***LANGIDUNQ:** The sort sequence table uses a unique weight for each character, and is the unique-weight sort table for the language specified on the LANGID parameter.

***LANGIDSHR:** The sort sequence table uses the same weight for multiple characters, and is the shared-weight sort sequence table associated with the language specified on the LANGID parameter.

The name of the sort sequence table can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

table-name: Specify the name of the sort sequence table to be used with this CL module.

LANGID

Specifies the language identifier to be used when SRTSEQ(*LANGIDUNQ) or SRTSEQ(*LANGIDSHR) is specified.

***JOBRUN:** The language ID used is the LANGID associated with the job when the CL module is run.

***JOB:** The language ID used is the LANGID associated with the job when the CL module is created.

language-ID: Specify the language identifier to be used by the job.

OPTIMIZE

Specifies the optimization level of the generated module code.

***NONE:** The generated code is not optimized. This value is the fastest level of optimization in terms of translation time. This level allows variables to be displayed and changed while debugging.

***BASIC:** Some optimization is performed on the code. This level allows user variables to be displayed but not changed while debugging.

***FULL:** Full optimization is performed on the generated code. Translation time is the longest. During a debug session, user variables cannot be changed, but can be displayed. The presented values may not be the current value of the variable.

DBGVIEW

Specifies which level of debugging is available for the compiled module, and which source views are available for source-level debugging.

***STMT:** The compiled module can be debugged using module statement numbers and symbolic identifiers.

***NONE:** None of the debug options for debugging the compiled module are available.

***ALL:** All of the debug options for debugging the compiled module can be used. The source and debug listing views are generated.

***SOURCE:** The source view for debugging the compiled module is generated.

***LIST:** The listing view for debugging the compiled module is generated.

Example for CRTCLMOD

Example 1: Compiling a Module

```
CRTCLMOD PAYROLL TEXT('Payroll Program')
```

This command calls the ILE CL compiler to compile a module named PAYROLL. The source program is in the default source file QCLSRC in the member PAYROLL. A compiler listing is created.

Error messages for CRTCLMOD

*ESCAPE Messages

CPF0C33

Target release &1 not valid.

CPF0C35

Target release &1 is not a supported release.

CPF0807

File containing compiler printout not opened.

CPF0808

Error in compiler-created code.

CPF0814

Licensed Program 5769-SS1 Option 9 not installed.

CPF0815

CL program &1 in &2 cannot be created for previous release.

CPF0821

Module &1 not created.

CPF0849

Space addressing violation.

CPF3202

File &1 in library &2 in use.

CPF3203

Cannot allocate object for file &1 in &2.

CPF3224

Not authorized to perform operation on file &1.

CRTCLPGM (Create Control Language Program) Command Description

CRTCLPGM Command syntax diagram

Purpose

The Create Control Language Program (CRTCLPGM) command creates a CL program from the specified CL source program. The command is valid in batch and interactive jobs, and in both compiled and interpreted CL.

Restriction: The amount of auxiliary storage occupied by a compiled program varies with the number of commands in the program, the kinds of functions performed by the commands (for example: display, create, add, and call), and the kinds of parameter values specified (variables versus constants). Some combinations of these factors can cause the system internal size limits for the program to be exceeded (an unlikely occurrence). When the limits are exceeded, the program must be rewritten, usually as several programs instead of one program.

Required Parameter

PGM Specifies the qualified name of the compiled program.

The name of the program can be qualified by one of the following library values:

***CURLIB:** The program is created in the current library for the job. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library where the program is created.

program-name: Specify the name of the program being created.

Optional Parameters

SRCFILE

Specifies the qualified name of the source file that contains the CL source program being compiled. The program is known by the name given in the PGM parameter.

The name of the source file can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

QCLSRC: The IBM-supplied source file, QCLSRC, that contains the CL source program being compiled is used.

source-file-name: Specify the name of the source file that contains the CL source program being compiled. The source file can be a database file, a device file, or an inline data file.

SRCMBR

Specifies the name of the member of the source file that contains the CL source program being compiled.

***PGM:** The CL source program being compiled is in the member of the source file that has the same name as that specified in the PGM parameter for the compiled program.

source-file-member-name: Specify the name of the member that contains the CL source program, if the member name is not the same as the name of the program being created.

OPTION

Specifies the types of output lists created when this command is processed and whether a program is created. Up to five of the following values can be specified in any order on this parameter. If neither or both of the values in each group are specified, the underlined value will be used.

Note:

The underlined values for this parameter are *similar* to, but not *actually* default values, and therefore, cannot be changed with the CHGCMDDFT (Change Command Default) command.

Source Listing Options

***SRC** or ***SOURCE:** The compiler creates a list of the source input used to compile the program.

***NOSRC** or ***NOSOURCE:** A complete compiler source list is not created; only compiler errors are listed.

Cross-Reference Options

***XREF:** A cross-reference listing of the source program is produced.

***NOXREF:** No cross-reference list of references to variables and data items in the source is created.

Program Creation Options

***GEN:** The compiler creates a program that can run after the program is compiled.

***NOGEN:** A program object is not created. The compiler checks only the syntax of the statements.

Second-Level Message Text Options

***NOSECLVL:** No second level message text is printed.

***SECLVL:** Second-level message text is printed.

Debug Options

***NOSRCDBG:** Source-level debug information is not generated. Source-level error information will not be created unless *LSTDBG is specified.

***SRCDBG:** The compiler generates source-level error and debug information for use with CoOperative Development Environment/400 (CODE/400). Source-level or listing-level debugging information is also necessary if you want to use the source-level debug function of the system debugger (STRDBG OPMSRC(*YES)) to debug OPM programs. An event file is created even if the compiler completes the process without error.

***NOLSTDBG:** A listing view or listing-level debugging information is not generated. Source-level error information will not be created unless *SRCDBG is specified.

***LSTDBG:** The compiler generates a listing view, source-level error information, and listing-level debugging information for use with CoOperative Development Environment/400 (CODE/400). Source-level or listing-level debugging information is also necessary if you want to use the source-level debug function of the system debugger (STRDBG OPMSRC(*YES)) to debug OPM programs.

GENOPT

Specifies whether the intermediate representation of a program, a cross-reference list of objects defined in the intermediate representation of a program, an attribute list from the intermediate representation of a program, and the program template are printed, and whether a program patch area is included in the compiled program. This information may be required if a problem occurs in RPG/400*. This parameter also specifies whether program optimization is done.

Note:

Up to three of the following values can be specified in any order on this parameter. If neither or both of the values in each group are specified, the underlined value will be used. The underlined values for this parameter are **similar** to, but not **actually** default values, and therefore, cannot be changed with the CHGCMDDFT (Change Command Default) command.

Listing Options

***NOLIST:** An intermediate representation of the program listing is not created.

***LIST:** An intermediate representation of the program is included in the compiler listing.

Cross-Reference Options

***NOXREF:** No cross-reference list of variable and data item references in the intermediate representation of the program is created.

***XREF:** A cross-reference listing of all objects defined in the intermediate representation of the program is produced.

Patch Options

***NOPATCH:** No space is reserved in the compiled program for a program patch area.

***PATCH:** Space is reserved in the compiled CL program for a program patch area.

USRPRF

Specifies whether the authority checking done while this program is running includes only the user who is running the program (*USER) or both the user running the program and the program owner (*OWNER). The profiles of the program user or both the program user and the program owner are used to control which objects can be used by the program, including the authority the program has for each object. Only the program owner or a user with QSECOFR authority can change the user profile attribute.

Note: This parameter will be ignored if REPLACE(*YES) is specified.

***USER:** The program runs under the user profile of the program's user.

***OWNER:** The user profiles of both the program's owner and the program's user are used when the program is processed. The collective sets of object authority in both user profiles are used to find and access objects during program processing. Authority from the owning user profile's group profile is not included in the authority for the running program.

LOG Specifies the logging options for a created CL program.

***JOB:** Logging of commands in a running CL program depends on the status of the job's logging flag (see the LOGCLPGM parameter of the Change Job (CHGJOB) command). To list the logged commands, the logging level of the jobs must be 3 or 4.

A *YES or *NO value takes precedence over any value specified in the CHGJOB command.

***YES:** Commands are logged in all cases.

***NO:** Commands are not logged.

ALWRTVSRC

Specifies whether the source for the CL program is saved with the program. This source can be retrieved later by using the Retrieve CL Source (RTVCLSRC) command.

***YES:** The source for the CL program is saved with the program.

***NO:** The source for the CL program is not saved with the program.

Notes:

1. If the RTVCLSRC command specifies a program that does not have the source saved with the program, a message is sent, and the RTVCLSRC command is not processed.
2. Specifying ALWRTVSRC(*NO) does not prevent commands from being logged while a CL program is running. To prevent logging of commands in the program, LOG(*NO) must be specified on the CRTCLPGM command.

REPLACE

Specifies whether an existing program is replaced if a program with the same name already exists in the specified library.

***YES:** Replace the existing program by moving it to the QRPLOBJ library.

Notes:

1. If a running CL program is recompiled with *YES specified for the REPLACE parameter, message queue errors may occur in the running CL program.
2. Specifying *YES for this parameter will cause the values of USRPRF (user profile) and AUT (authority) parameters to be ignored. The existing program is used as the source of authority, and the user profile attribute is copied from the existing program to the new program. Use the Change Program (CHGPGM) command to change the user profile and the Grant Object Authority (GRTOBJAUT) or Revoke Object Authority (RVKOBJAUT) commands to change the authority for the program.

***NO:** No replacement occurs.

TGTRLS

Specifies the release level of the operating system on which you intend to use the object being created.

When specifying the *target-release* value, the format VxRxMx is used to specify the release, where Vx is the version, Rx is the release, and Mx is the modification level. For example, V3R6M0 is version 3, release 6, modification level 0.

Valid values depend on the current version, release, and modification level, and they change with each new release. See the **Valid Values for TGTRLS Parameter** table in the Backup and Recovery topic in the Information Center for a complete list of valid values.

***CURRENT:** The program is to be used on the release of the operating system currently running on your system. The program can also be used on a system with any subsequent release of the operating system installed.

***PRV:** The program is to be used on the previous release with modification level 0 of the operating system. The program can also be used on a system with any subsequent release of the operating system installed.

target-release: Specify the release in the format VxRxMx. The program can be used on a system with the specified release or with any subsequent release of the operating system installed.

AUT Specifies the authority given to users who do not have specific authority to the command language program, who are not on an authorization list, and whose user group has no specific authority to the command language program. More information on this parameter is in Commonly used parameters.

Note:

This parameter will be ignored if REPLACE(*YES) is specified.

***LIBCRTAUT:** The public authority for the command language program is taken from the value on the CRTAUT parameter of the target library (the library that is to contain the command language program). The public authority is determined when the command language program is created. If the CRTAUT value for the library changes after the command language program is created, the new value does not affect any existing objects.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change

and perform basic functions on the object. Change authority provides object operational authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the command language program.

***USE:** The user can perform basic operations on the command language program, such as running a program or reading a file. The user cannot change the command language program.

***USE** authority provides object operational authority, read authority, and execute authority.

***EXCLUDE:** The user cannot access the command language program.

authorization-list-name: Specify the name of the authorization list used.

SRTSEQ

Specifies the sort sequence table to be used for string comparisons for this CL program. The sort sequence is used with the language identifier and the coded character set identifier of the job to determine the sort sequence table to use.

Note:

SRTSEQ(*HEX) must be specified when a previous release is specified on the TGTRLS parameter.

***HEX:** A sort sequence table is not used. The hexadecimal values of the characters are used to determine the sort sequence.

***JOB:** The sort sequence used is the SRTSEQ associated with the job when the CL program is created.

***JOBRUN:** The sort sequence used is the SRTSEQ associated with the job when the CL program is run.

***LANGIDUNQ:** A unique weight sort table is used. The sort sequence table must contain a unique weight for multiple characters and is the unique weight table associated with the language specified on the LANGID parameter.

***LANGIDSHR:** A shared weight sort table is used. The sort sequence table can contain the same weight for multiple characters and is the shared weight table associated with the language specified on the LANGID parameter.

The name of the sort sequence table can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

table-name: Specify the name of the sort sequence table to be used with this CL program.

LANGID

Specifies the language identifier to be used when SRTSEQ(*LANGIDUNQ) or SRTSEQ(*LANGIDSHR) is specified.

***JOB RUN**: The language ID used is the LANGID associated with the job when the CL program is run.

***JOB**: The language ID used is the LANGID associated with the job when the CL program is created.

language-ID: Specify the language identifier to be used by the job.

TEXT Specifies the text that briefly describes the compiled CL program. More information on this parameter is in Commonly used parameters.

***SRCMBRTXT**: The text is taken from the source file member being used to create the CL program. If the source file is an inline file or a device file, the text is blank.

***BLANK**: Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Examples for CRTCLPGM

Example 1: Compiling a Program to be Run by Any System User

```
CRTCLPGM  PAYROLL TEXT('Payroll Program')
```

This command calls the CL compiler to compile a program named PAYROLL. The source program is in the default source file QCLSRC in the member PAYROLL. A compiler listing is created. The program is processed under the program user's user profile and can be run by any system user.

Example 2: Compiling a Program to be Run by an Authorized User

```
CRTCLPGM  PGM(PARTS) SRCFILE(MYLIB/PARTDATA)
AUT(*EXCLUDE)
TEXT('This program displays all parts data')
```

This command creates a CL program named PARTS and stores it in the current library. The source for the program is in the PARTS member of the source file PARTDATA in the library MYLIB. A compiler listing is created. This program can be processed under the profile of the user that is running the program, who could be the owner or another user to which the owner has granted specific authorization by name in the Grant Object Authority (GRTOBJAUT) command.

Example 3: Compiling a Program to be Run on a Previous Release System

```
CRTCLPGM  PGM(MYPGM) SRCFILE(MYLIB/MYDATA)
TGTRLS(*PRV)
```

This command creates a CL program that can be saved for a previous release system, restored on that system, and run on that system.

Error messages for CRTCLPGM

*ESCAPE Messages

CPF0C33

Target release &1 not valid.

CPF0C35

Target release &1 is not a supported release.

CPF0801

Program &1 not created.

CPF0804

Built-in function operands not valid. Reason code &1.

CPF0807

File containing compiler printout not opened.

CPF0808

Error in compiler-created code.

CPF0814

Licensed Program 5769-SS1 Option 9 not installed.

CPF0815

CL program &1 in &2 cannot be created for previous release.

CPF0816

%SWITCH mask &1 not valid.

CPF0849

Space addressing violation.

CPF3202

File &1 in library &2 in use.

CPF3203

Cannot allocate object for file &1 in &2.

CPF3224

Not authorized to perform operation on file &1.

EVF3140

The program's debug information was not created.

CRTCTLAPPC (Create Controller Description (APPC)) Command Description

CRTCTLAPPC Command syntax diagram

Purpose

The Create Controller Description (APPC) (CRTCTLAPPC) command creates a controller description for an advanced program-to-program communications (APPC) controller. More information about using this

command is in the Communications Configuration  book.

Required Parameters

CTLD Specifies the name of the controller description being created.

LINKTYPE

Specifies the type of line to which this controller is attached.

***ANYNW:** This controller is not directly attached to a line. It is being used to run APPC applications over a transport other than the native transport (SNA). RMTCPNAME (remote CP name) and RMTNETID (remote network identifier) are required when *ANYNW is specified. The following parameters can be specified:

- RMTNETID (remote network identifier)
- ONLINE (online at IPL)
- USRDFN1 (user-defined 1)

- USRDFN2 (user-defined 2)
- USRDFN3 (user-defined 3)
- TEXT
- AUT (authority)
- CMNRCYLMT (communications recovery limit)

***FR:** This controller is attached to a frame relay line.

***IDLC:** This controller is attached to an integrated services digital network (ISDN) data link control (IDLC) line.

***ILAN:** This controller does not use a communication line since all communications are within the system. This link type allows multiple operating systems (running on one physical system) to communicate without requiring a physical communications link.

Note:

If LINKTYPE(*ILAN) is specified, the value specified for NODETYPE must be *LENNODE or *NETNODE and the value specified on the SSAP parameter must be different than the value specified on the DSAP parameter.

***LAN:** This controller is attached to a distributed data interface (DDI), Ethernet, or token-ring local area network line.

***LOCAL:** This controller uses no communication lines since all communications are local. If *LOCAL is specified, the following criteria must be met:

- SWITCHED, SNBU, and APPN must remain unspecified or be *NO
- The LINE, MAXFRAME, RMTNETID, RMTCPNAME, EXCHID, CPSSN, NODETYPE, TMSGRPNBR, SSCPID, and ROLE parameters must not be specified
- Parameters relating to SDLC, X.21 short-hold mode, X.25, or LAN configuration must not be specified
- Since LINKTYPE(*LOCAL) controllers must have APPN(*NO) specified, any attached devices must also have APPN(*NO) specified

***OPC:** This controller is attached to the optical bus (OptiConnect).

***SDLC:** This controller is attached to a synchronous data link control (SDLC) line.

***TDLC:** This controller is attached to a twinaxial data link control (TDLC) line.

***VRTAPPN:** This controller is used for APPN communications. It is not attached to any specific communications line. If *VRTAPPN is specified, the following criteria must be met:

- SWITCHED and SNBU must remain unspecified or be *NO
- APPN(*YES) must be specified
- The LINE, MAXFRAME, RMTNETID, RMTCPNAME, EXCHID, CPSSN, NODETYPE, TMSGRPNBR, SSCPID, and ROLE parameters must not be specified
- Parameters relating to SDLC, X.21 short-hold mode, X.25, or LAN configuration must not be specified
- Since LINKTYPE(*VRTAPPN) controllers are for supporting APPN communications, any attached devices must have APPN(*YES) specified

***X25:** This controller is attached to an X.25 line.

Optional Parameters

ONLINE

Specifies whether this object is automatically varied on at initial program load (IPL).

***YES:** The controller is automatically varied on at IPL.

***NO:** This controller is not automatically varied on at IPL.

SWITCHED

Specifies whether this controller is attached to a switched line, a token-ring network, Ethernet LAN, or an X.25 switched virtual circuit (SVC). ***NO** must be specified for APPC controllers attached to a TDLC line.

***NO:** This controller is attached to a nonswitched line or to an X.25 permanent virtual circuit (PVC) connection.

***YES:** This controller is attached to a switched line, an X.25 switched virtual circuit (SVC), or a LAN line.

Note: If LINKTYPE is *LAN, the SWITCHED parameter value must be *YES or must not be specified.

SHM Specifies whether this controller is used for X.21 short-hold mode. To specify *YES, LINKTYPE(*SDLC) and SWITCHED(*YES) must also be specified.

***NO:** This controller is not used for X.21 short-hold mode.

***YES:** This controller is used for X.21 short-hold mode.

SNBU Specifies, for controllers supporting the switched network backup (SNBU) feature, whether the SNBU feature is activated or deactivated. Both the local and remote modems must support the SNBU feature to perform a valid activation.

***NO:** The remote modem does not have the switched network backup (SNBU) feature.

***YES:** The remote system's modem has the SNBU feature.

APPN Specifies whether the local system uses advanced peer-to-peer networking (APPN) functions when communicating with this controller. *YES must be specified for APPC controllers attached to a TDLC line.

***YES:** The local system uses APPN functions.

***NO:** The local system does not use APPN functions.

TYPE Specifies the type of controller for this description. This parameter is valid only when *NO is specified on the APPN parameter.

***BLANK:** No T2.0 controller is specified.

3174: This description represents a 3174 controller.

3274: This description represents a 3274 controller.

3651: This description represents a 3651 controller.

3684: This description represents a 3684 controller.

3694: This description represents a 3694 controller.

4680: This description represents a 4680 controller.

4684: This description represents a 4684 controller.

4701: This description represents a 4701 finance controller.

4702: This description represents a 4702 finance controller.

4730: This description represents a 4730 personal banking machine.

4731: This description represents a 4731 personal banking machine.

4732: This description represents a 4732 personal banking machine.

4736: This description represents a 4736 self-service transaction machine.

***FBSS:** This description represents a Financial Branch System Services (FBSS) controller.

LINE Specifies the name of the nonswitched lines to which this controller is attached. The line description must already exist.

Note: The associated line must be varied off before this command is entered. For X.25, this parameter is used only for permanent virtual circuits (PVC).

SWTLINLST

Specifies the names of the switched lines to which this controller attaches. The line descriptions must already exist. Up to 64 switched line names can be specified.

DEV Specifies the names of devices attached to this controller. The device descriptions must already have been created. Up to 254 devices can be specified.

CODE Specifies the character code used. The code can be either extended binary-coded decimal interchange code (*EBCDIC) or the American National Standard Code for Information Interchange (*ASCII).

***EBCDIC:** The extended binary-coded decimal interchange code (EBCDIC) character set code is used.

***ASCII:** The ASCII character set code is used.

MAXFRAME

Specifies the maximum frame (path information unit (PIU)) size that the controller can send or receive. This value is used to calculate request unit (RU) sizes. Since the maximum PIU size that the controller can send or receive is negotiated at exchange identifier time, the maximum PIU size used at run time may be different. This value matches the corresponding value on the host system.

***LINKTYPE:** The maximum frame size depends on the type of link being used. One of the following values (measured in bytes) is used if *LINKTYPE is specified:

*SDLC -521	*LAN-16393	*TDLC-4105
*IDLC-2048	*X25-1024	*FR -1590

maximum-frame: Specify the maximum frame size for the controller. The frame size that can be used depends on the type of line being used. Valid frame sizes for each line type are shown below.

Link Type

Frame Size (in bytes)

***FR** 265 - 8182

***IDLC** 265 - 8196

***LAN** 265 - 16393 (265 - 4444 for DDI LANs)

***SDLC**
265, 521, 1033, 2057

***X25** 256, 265, 512, 521, 1024, 1033, 2048, 4096

Note: The numeric values listed for *LINKTYPE are valid only if TYPE(*BLANK) is specified when the controller is created.

RMTNETID

Specifies the name of the remote network in which the adjacent control point resides.

Note: If MDLCTL(*YES) is specified, parameters RMTNETID, RMTCPNAME, and ADPTADR are optional. More information on model controllers is in the MDLCTL parameter description.

***NETATR:** The RMTNETID value specified in the system network attributes is used.

***NONE:** No remote network identifier (ID) is used.

***ANY:** The system determines which remote network identifier is used.

remote-network-ID: Specify the remote network identifier.

RMTCPNAME

Specifies the name of the remote control point. This control point name must match the remote system's local control point name. The remote control point name can be seen on the remote system with the DSPNETA command only if it is another iSeries 400.

Note: If MDLCTL(*YES) is specified, parameters RMTNETID, RMTCPNAME, and ADPTADR are optional. For more information on model controllers see the MDLCTL parameter.

***ANY:** The system determines the name of the remote control point used.

remote-control-point-name: Specify the remote control point name.

RMTSYSNAME

Specifies the name of the remote system to which there is an OptiConnect bus connection. The current system name of the remote system can be found by using the DSPNETA command on that system.

Note: This parameter is valid only when LINKTYPE(*OPC) is specified.

EXCHID

Specifies the exchange identifier of this controller. The controller sends (exchanges) its identifier to another location when a connection is established. The 8-digit hexadecimal identifier contains three digits for the block number and five digits for the identifier of the specific controller.

Note: This parameter is required for both SDLC switched lines and SNBU lines when either of the following occurs:

- Both APPN(*YES) and NODETYPE(*LENNODE) are specified.
- APPN(*NO) is specified and RMTCPNAME is not specified.

The block number of the exchange identifier is related to the controller:

Controller

Block Number

3174, 3274

001 to 0FE

3601 * 016 (* 3601 is configured as 4701)

3651, 3684

005

3694 02F

4680 04D

4684 005

4702, 4702

057

5251 020

5294 045

5394 05F

5494 073

iSeries 400

056

Displaywriter

03A

System/36

03E

System/38

022

For the 5251, 5394, and 5294 controllers, the last five digits must begin with 000. For 5494 controllers, the last five digits are either 000nn where nn is the station address of the 5494 controller, or the last five digits of the 5494 serial number when the serial number starts with XI.

SSCPID

Specifies the system service control point (SSCP) of the host system.

Note:

The SSCP identifier is a 12-digit hexadecimal value ranging from 000000000001 to FFFFFFFFFFFFFF.

INLCNN

Specifies the method used to establish a connection with this controller.

***DIAL:** The connection is made by a call initiated from the iSeries 400.

For X.25 connection, the line attached to the controller requires switched virtual circuits (SVCs) configured on the LGLCHLE parameter of type OUT or BOTH(*SVCOUT or *SVCBOTH) for the connection to succeed.

***ANS:** The connection is made by the iSeries 400 when it answers an incoming call from this controller. If a call is received from the remote controller and all necessary conditions are met, the incoming call is answered by the system.

For X.25 connections, the line to which the controller attaches requires switched virtual circuits (SVC) configured on the LGLCHLE parameter of type IN or BOTH(*SVCIN or *SVCBOTH) for the connection to succeed. The line can be changed using the Change Line Description (X.25) (CHGLINX25) command.

DIALINIT

Specifies the method used to make the initial dial on a switched line between the system and the remote controller.

***LINKTYPE:** The type of dial connection initiated is specified on the LINKTYPE parameter. For LAN or SDLC short-hold mode connections, the default is to dial the connection as soon as the controller description is varied on. For all other link types, the default is to delay dialing.

***IMMED:** The dial connection is initiated as soon as the controller description is varied on.

***DELAY:** The dial connection is delayed until a job is initiated that requests the use of the remote controller resources.

CNNNBR

Specifies, for switched lines, the telephone number used to establish a switched connection on this line description. The value specified on this parameter is sent to the autocal unit if automatic calling is used to establish a switched connection, or it is sent to the V.25 bis modem if V.25 bis automatic dialing is used to establish the connection. When manual dialing is used to establish a switched connection on the line, this number is displayed to the system operator. For X.25, this number is the remote data terminal equipment (DTE) address for the switched virtual circuit (SVC) provided by the X.25 network.

***DC:** For X.21 circuit switched connections, a direct call is used to connect to the controller.

***ANY:** Calls are accepted from any network address.

connection-number: Specify a telephone number, an X.25 network address, or an X.21 connection number.

ANSNBR

Specifies the X.25 network address from which to accept calls.

***CNNNBR:** Calls from the X.25 network address specified by the connection number (CNNNBR) parameter are accepted.

***ANY:** Calls are accepted from any X.25 network address.

CNNLSTOUT

Specifies, for ISDN switched connections, the name of a connection list object that contains the ISDN assigned numbers for a dial out operation to the ISDN.

CNNLSTOUTE

Specifies, for ISDN switched connections, the entry name from the connection list that is used to make a call to the ISDN. The connection list must be specified on the CNNLSTOUT parameter.

IDLCWDWSIZ

Specifies the window size for transmission to and reception from controllers attached to the IDLC line.

***LIND:** The window size specified in the line description is used.

IDLC-window-size: Specify the window size. Valid values range from 1 through 31.

IDLCFRMRTY

Specifies the maximum number of attempts to transmit before an error is reported.

***LIND:** The number of attempts specified in the line description is used.

IDLC-frame-retry: Specify the number of attempts. Valid values range from 0 through 100.

IDLCRSPTMR

Specifies the amount of time, in tenths of a seconds to wait before retransmitting a frame if acknowledgement has not been received.

***LIND:** The time specified in the line description is used.

IDLC-response-timer: Specify the amount of time to wait before retransmitting an unacknowledged frame of data. Valid values range from 10 through 100 tenths of a second. For example, 10 seconds equals 100 tenths of a second.

IDLCCNRTY

Specifies the number of times to attempt re-transmission at connection time.

***LIND:** The number of attempts specified in the line description is used.

***NOMAX:** There is no disconnect limit.

IDLC-response-retry: Specify the number of attempts. Valid values range from 1 through 100.

PREDIALDLY

Specifies how long to wait (in 0.5 second intervals) before dialing.

Note:

This parameter can be specified only if *YES is specified on either the SWITCHED or SNBU parameter, and LINKTYPE(*SDLC) and SHM(*NO) are both specified.

6: The value of 6 provides a 3-second delay.

predial-delay: Specify a value ranging from 1 through 254 in 0.5-second intervals, or specify 0 to indicate no delay.

REDIALDLY

Specifies how long to wait (in 0.5 second intervals) before re-dialing when the call attempt is unsuccessful. This parameter can be specified only if *YES is specified on either the SWITCHED or SNBU parameter, and if both LINKTYPE(*SDLC) and SHM(*NO) are specified.

120: The default value of 120 provides a 60-second delay.

redial-delay: Specify a value ranging from 1 through 254 in 0.5-second intervals, or specify 0 to indicate no delay.

DIALRTY

Specifies the number of re-dial attempts made by the system before considering the dialing unsuccessful.

Note:

This parameter can be specified only if *YES is specified on either the SWITCHED or SNBU parameter, and LINKTYPE(*SDLC) and SHM(*NO) are both specified.

2: The LZ algorithm with the 12-bit code for repeated substrings in the data stream is used. These codes refer to entries in a common dictionary, created as the data flows between the sender and receiver. The LZ algorithms require storage and extra processing time. The LZ12 requires the most storage and processing time of the LZ algorithms; however, it compresses the data stream the most.

dial-retry: Specify a value ranging from 0 through 254 for the number of times the dialing is tried.

SWTDSC

Specifies whether the switched connection to this controller is disconnected when the last session is unbound.

***YES**: The switched connection is disconnected when the last device is varied off.

***NO**: This switched connection is not dropped when the last session is unbound.

DSCTMR

Specifies options for controlling the time (in seconds) before an inactive connection is dropped (Element 1), or the amount of time to delay the automatic disconnection (Element 2). If the user does not want the line to drop, specify ***NO** for the SWTDSC parameter.

Element 1: Minimum Connect Timer

170: A connection is dropped when it has been inactive for 170 seconds.

disconnect-timer: Specify a time to wait before disconnecting. Valid values range from 0 through 65535 seconds.

Element 2: Disconnect Delay Timer

30: The disconnection is delayed for 30 seconds.

disconnect-delay-timer: Specify a value to delay link take down after the last session on the controller is terminated. Valid values range from 0 through 65535 seconds.

Note: For objects migrated from V2R1M1 or previous systems, the disconnect delay timer has a value of zero. This value is interpreted by the system as 30 seconds.

ROLE Specifies the data link role of the remote controller on this connection.

The primary station is the controlling station and the secondary station is the responding station. The primary station controls the communications link by sending commands to the secondary station, and the secondary station responds to the commands.

Note: When LINKTYPE is *OPC, you must specify *PRI or *SEC for this parameter.

***NEG**: The iSeries 400 and the remote system negotiate to determine which system is the primary station.

Note: This value is not valid when LINKTYPE is *OPC.

***PRI**: The remote system (controller) is the primary station on this communications line.

***SEC**: The remote system (controller) is a secondary station on this communications line.

SHMDSCLMT

Specifies the number of nonproductive responses (RR or RNR) that are required from the remote station before the connection can be suspended for this X.21 short-hold mode connection. This parameter is used only if ***YES** is specified on the SHM parameter.

10: Ten nonproductive responses must be received before the connection can be suspended.

***NOMAX**: There is no disconnect limit.

SHM-disconnect-limit: Specify a number ranging from 1 through 254, indicating the number of nonproductive responses that must be received before the connection can be suspended.

SHMDSCTMR

Specifies the minimum length of time that the primary system maintains the connection to the remote system for this X.21 short-hold mode controller, in tenths of a second. This parameter is used only if *YES is specified on the SHM parameter.

50: The primary system maintains the connection to the remote system for a minimum of 5 seconds.

SHM-disconnect-timer: Specify a value ranging from 2 through 3000, indicating the minimum length of time, in tenths of a second, that the primary maintains the connection to the remote system.

STNADR

Specifies, for SDLC or TDLC link types, the station address used when communicating with the controller. A hexadecimal value ranging from 01 through FE is used.

Note:

If *SEC is specified on the ROLE parameter, this is the station address of the remote controller. If *PRI or *NEG is specified on the ROLE parameter, this is the local station address.

POLLPTY

Specifies, for an SDLC secondary or negotiable controller, whether this controller has priority when polled. This parameter can be specified only if SHM is *NO.

***NO:** This controller does not have polling priority.

***YES:** This controller has polling priority.

POLLMT

Specifies, for an SDLC secondary or negotiable controller, the number of consecutive polls issued to the same controller when the poll results in receiving frames. This parameter can be specified only if *NO is specified on the SHM parameter.

0: The format of this tape is QIC3040, which is used for 1/4 inch minicartridge tapes that can hold up to 840 megabytes of data.

poll-limit: Specify a value ranging from 0 through 4 for the number of consecutive polls.

OUTLMT

Specifies the number of times SDLC allows the consecutive transmission of the maximum number of frames to a station before allowing transmission to another station.

***POLLMT:** The value specified on the POLLMT parameter is used.

out-limit: Specify a value ranging from 0 through 4 for the number of consecutive transmissions.

CNNPOLLRTY

Specifies, for an SDLC secondary or negotiable controller, the number of connect poll retries before reporting the error. This parameter can be specified only if *NO is specified on the SHM parameter.

***CALC:** The number of retries is 7 if the controller is switched, and *NOMAX if the controller is nonswitched.

***NOMAX:** There is no disconnect limit.

connect-poll-retry: Specify a value ranging from 0 through 65534 connect poll retries.

NDMPOLLTMR

Specifies the minimum interval at which a secondary station must be polled if a poll from the primary to the secondary (which is in normal response mode) does not result in receiving appropriate response.

This prompt is valid only if the link type is *SDLC and the controller role is secondary or negotiable and *NO is specified on the SHM parameter.

***CALC:** The system determines the value to use.

NDM-poll-timer: Specify a value ranging from 1 through 3000 in 0.1-second intervals, or specify 0 to indicate no timer.

ADPTADR

Specifies the 12-character adapter address of the remote controller. This is the address to which the system sends data when it communicates with the remote controller. This value can be obtained from the remote controller's configuration record. Valid values range from hex 000000000001 through hex FFFFFFFF.

DSAP Specifies the logical address of the SNA destination service access point (DSAP) to which this system sends data when it communicates with the remote controller. This address allows the controller and the system to route the data that comes from this system. The value must match the value specified on the source service access point (SSAP) parameter in the remote controller's configuration record.

04: The destination service access point is the default 04.

Note:

The *OPC controller uses the value above for this field. The combination of RMTSYSNAME and DSAP defines a unique controller. This allows multiple controllers to exist between two systems.

destination-service-access-point: Specify a hexadecimal value ranging from 04 through 9C, in increments of 4 (for example, 04, 08, 0C, 10) to represent the destination service access point.

SSAP Specifies the source service access point. This is the logical address this system uses when it sends data to the remote controller. This address allows the remote controller and the system to route the data that comes from this system. It must match the value assigned to the destination service access point (DSAP) prompt in the remote controller's configuration record.

04: The system uses the logical address of 04.

source-service-access-point: Specify a hexadecimal value ranging from 04 through 9C, in increments of 4 (for example, 04, 08, 0C, 10) to represent the source service access point.

LANFRMRTY

Specifies the number of times a frame is transmitted if there is no acknowledgment from the remote controller in the time period specified by the LANRSPTMR parameter. This value is only used after a successful connection has been made.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-frame-retry: Specify a value ranging from 0 through 254 for the number of times a frame is transmitted before an acknowledgement is received.

LANCNRRTY

Specifies the number of times a transmission is attempted before an acknowledgement is received. This value is used at connection time (unlike LANFRMRTY which is used *after* a connection has been made).

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-connection-retry: Specify a value ranging from 0 through 254 for the number of times the transmission is attempted before an acknowledgement is received.

LANRSPTMR

Specifies the length of time the system waits before an inoperative condition occurs on a link after a connection is made.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.
LAN-response-timer: Specify a value ranging from 1 through 254 in 0.1-second intervals for the amount of time the system waits before an inoperative condition occurs.

LANCNTMR

Specifies the length of time the system waits before an inoperative condition occurs on a link at connection time.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.
LAN-connection-timer: Specify a value ranging from 1 through 254 in 0.1-second intervals for the amount of time the system waits before an inoperative condition occurs.

LANACKTMR

Specifies the length of time the system waits before sending an acknowledgement for received frames.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.
LAN-acknowledgment-timer: Specify a value ranging from 1 through 254 in 0.1-second intervals, or specify 0 to indicate no delay. If 0 is specified for this parameter, 0 must also be specified for the LANACKFRQ parameter; if a nonzero value is specified for this parameter, a nonzero value must also be specified for the LANACKFRQ parameter.

LANINACTMR

Specifies the length of time used to determine an inactive condition for the controller.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.
LAN-inactivity-timer: Specify a value ranging from 1 through 255 in 0.1-second intervals for the length of time used to determine an inactive condition for the controller.

LANACKFRQ

Specifies the maximum number of frames that are received before an acknowledgment is sent to the controller.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.
LAN-acknowledgment-frequency: Specify a value ranging from 0 through 127 for the number of frames received. If 0 is specified for this parameter, 0 must also be specified for the LANACKTMR parameter; if a nonzero value is specified for this parameter, a nonzero value must also be specified for the LANACKTMR parameter.

LANMAXOUT

Specifies the maximum number of frames that can be sent before an acknowledgment is received from the remote system.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.
LAN-maximum-outstanding-frames: Specify a value ranging from 1 through 127 for the number of frames that can be sent before an acknowledgement is received.

LANACCPTY

Specifies the priority granted to the sending system for sending frames. The larger the number, the higher the priority. This parameter is only used when the controller attaches to TRLAN.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.
LAN-access-priority: Specify a value ranging from 0 through 3 to indicate how soon a frame can be sent on a local area network (LAN).

LANWDWSTP

Specifies whether to reduce to 1 the maximum number of frames outstanding to the remote system during network congestion. This parameter indicates the number of frames that must be successfully received by the remote system before the number of maximum outstanding frames

can be increased by 1. The increase continues this way until the maximum number of outstanding frames reaches the value specified by the LAN maximum outstanding frames (LANMAXOUT) parameter.

***NONE:** The number of outstanding frames is not reduced during network congestion.

LAN-window-step: Specify a value from 1 to 127 for the number of frames that must be successfully received by the remote system before the maximum number of outstanding frames can be increased by 1.

NETLVL

Specifies the level of X.25 support implemented by the network and remote DTE. The level is specified by giving the year of the CCITT standard implemented.

Note:

Use of the lower value of the remote DTE or the network level is suggested; for example, if the remote DTE is using the CCITT standard of 1980 and the network 1984, specify 1980 for this prompt.

1980: The 1980 standard is used.

1984: The 1984 standard is used.

1988: The 1988 standard is used.

LINKPCL

Specifies the link level protocol used on the X.25 network to communicate with this controller.

***QLLC:** The qualified logical link control (QLLC) protocol is used.

***ELLC:** The enhanced logical link control (ELLC) protocol is used.

***LLC2:** The IEEE logical link control 802.2 protocol is used.

LGLCHLID

Identifies the logical channel ID in the X.25 line description that this permanent virtual circuit (PVC) uses.

The valid entry is xyy. Where:

x = the logical group number derived from the user network subscription.

yy = the logical channel number derived from the user subscription.

CNNPWD

Specifies, for X.25 switched virtual circuit (SVC) controllers, the password used when connecting to this controller.

Note:

The password for each controller can consist of any alphanumeric characters represented by the hexadecimal range from 40 through FF. When less than 8 bytes are specified, the end of the password field is padded with blanks. A password of all blank is valid. All incoming call requests must match this password to establish a connection.

SWTLINSLCT

Specifies the method that is used to select lines from an X.25 switched line list.

***FIRST:** The lines are selected in the order in which they are specified.

***CALC:** The system determines the value to use.

DFTPKTSIZE

Specifies the default packet size used by the X.25 network.

Element 1: Transmit Packet Size

***LIND:** The value specified in the line description is used as the default packet size.

transmit-packet-size: Specify a default packet size for transmission. The valid values for the packet size are 64, 128, 256, 512, 1024, 2048, and 4096.

Element 2: Receive Packet Size

***LIND:** The value specified in the line description is used as the default packet size.

***TRANSMIT:** The value specified as the default packet size for transmission is used as the default for reception.

receive-packet-size: Specify a default packet size for reception. The valid values for the packet size are 64, 128, 256, 512, 1024, 2048, and 4096.

DFTWDWSIZE

Specifies the default window size used by the X.25 network.

Element 1: Transmit Window Size

***LIND:** The value specified in the line description is used as the default window size.

transmit-window-size: Specify the appropriate default window size. Valid values range from 1 through 7 for networks that use modulus 8 packet numbering. Valid values range from 1 through 15 for networks that use 128 packet numbering.

Element 2: Receive Window Size

***LIND:** The value specified in the line description is used as the default window size.

***TRANSMIT:** The value specified as the default window size for transmission is used as the default for reception.

receive-window-size: Specify the appropriate default window size. Valid values range from 1 through 7 for networks that use modulus 8 packet numbering. Valid values range from 1 through 15 for networks that use 128 packet numbering.

USRGRPID

Specifies the closed user-group ID for contacting this X.25 switched virtual circuit (SVC) controller. Specify a value ranging from 0 through 99, as provided by the network subscription. This parameter is not valid for permanent virtual circuit (PVC) connections. It is valid only for SVC circuit outgoing call operations and is ignored for SVC incoming call connections.

RVSCRG

Specifies whether reverse charges are accepted or requested when contacting this controller.

***NONE:** No reverse charging for network tariff billing is accepted.

***REQUEST:** Charges are requested on outgoing call request packets.

***ACCEPT:** Reverse charging for network tariff billing is accepted on incoming requests.

***BOTH:** Both incoming and outgoing requests are accepted.

X25FRMRTY

Specifies the maximum number of times that a logical link control (LLC) protocol data unit is sent after the response timer ends when connected to this controller. The value used in this prompt depends on the quality of service provided by the network and the connection to that network; that is, the frequency of lost link protocol data units.

7: Rotation of the text is done 270 degrees clockwise from the 0 degree writing position.

X.25-frame-retry: Specify a value ranging from 0 through 21 for the number of times a frame is sent.

X25CNNRTY

Specifies, for X.25 controllers specifying *SEC or *NEG on the ROLE parameter, the maximum number of times that an LLC is sent after the connect response timer ends when connecting to this controller.

7: Rotation of the text is done 270 degrees clockwise from the 0 degree writing position.

X.25-connection-retry: Specify a value ranging from 0 through 21 for the number of times a frame is sent.

X25RSPTMR

Specifies the time allowed to return an acknowledgment when an LLC is sent while connecting to this controller.

300: The time allowed to return an acknowledgment is 30 seconds.

X.25-response-timer: Specify a value ranging from 1 through 2550 in 0.1-second intervals.

X25CNNTMR

Specifies, for X.25 controllers specifying *SEC or *NEG on the ROLE parameter, the time allowed for an acknowledgment to be returned when an LLC is sent while connecting to this controller.

300: The time allowed for an acknowledgment to be returned is 30 seconds.

X.25-connection-timer: Specify a value ranging from 1 through 2550 in 0.1-second intervals.

X25DLYTMR

Specifies, for X.25 controllers specifying *SEC or *NEG on the ROLE parameter, how often to try establishing a connection to the controller.

*CALC: The system determines the value to use.

X.25-delayed-connection-timer: Specify a value ranging from 1 through 32767 in 0.1-second intervals. The system retries the connection indefinitely at the specified interval.

X25ACKTMR

Specifies, for X.25 links using an enhanced logical link control (ELLC) link protocol, the time period to delay sending acknowledgments for received LLC.

20: The time allowed to delay sending an acknowledgment is 2 seconds.

X.25-acknowledgment-timer: Specify a value ranging from 1 through 2550 in 0.1-second intervals, or specify 0 to indicate no delay in sending an acknowledgement.

X25INACTMR

Specifies, for X.25 links using an ELLC link protocol, the time period used to determine an inactive condition for the controller.

1050: An inactive condition occurs after 105 seconds.

X.25-inactivity-timer: Specify a value ranging from 1 through 2550 0.1-second intervals.

USRFCL

Specifies a string of hexadecimal digits sent to the X.25 network to request additional services. The iSeries 400 allows up to 218 hexadecimal characters.

CPSSN

Specifies whether this controller supports APPN control-point to control-point (CP to CP) sessions.

*YES: This controller supports CP to CP sessions.

*NO: This controller does not support CP to CP sessions.

NODETYPE

Specifies the type of APPN node this controller represents.

***ENDNODE:** This node is an end node in an APPN network.

***LENNODE:** This node is a low-entry networking node in an APPN network.

***NETNODE:** This node is a network node in an APPN network.

***CALC:** The system determines the value to use.

BEXROLE

Specifies the role of the local system in an APPN network for the remote controller being configured. This parameter is only used when the local system has enabled the branch extender function via the NODETYPE parameter in the network attributes being set to *BEXNODE.

***NETNODE:** The local system takes the role of a network node for the remote controller.

***ENDNODE:** The local system takes the role of an end node for the remote controller.

HPR Specifies whether the local system can use APPN high-performance routing (HPR) when communicating with this controller. The controller description must specify APPN(*YES) to enable HPR. If HPR(*YES) is specified, the value of the MAXFRAME parameter of the line specified by the switched line list must be greater than or equal to 768, otherwise HPR will not be enabled over this connection.

***YES:** The local system can use HPR, and HPR flows can proceed over the link defined by this controller.

***NO:** The local system cannot use HPR, and HPR flows cannot proceed over the link defined by this controller.

HPRPHTSWT

Specifies whether an attempt is made to switch paths of HPR connections associated with this controller at the time the controller is varied off. If a path switch is not attempted or if there are no other available paths, jobs associated with the HPR connections will be ended.

***NO:** When this controller is varied off path switching will not be done for HPR connections associated with this controller. Jobs associated with HPR connections will be ended.

***YES:** When this controller is varied off an attempt to switch paths of HPR connections associated with this controller will be made.

TMSGRPNBR

Specifies the APPN transmission group number for this controller.

1: The transmission group number is 1.

***CALC:** The system determines the value to use.

APPN-transmission-group-number: Specify a value ranging from 1 through 20 for the transmission group number.

MINSWTSTS

Specifies, for the switched connection, the minimum status that APPN requires for a controller to be considered available for routing.

***VRYONPND:** APPN considers the controller available for routing if the status is vary on pending, varied on, or active.

***VRYON:** Indicates that APPN considers the controller available for routing only if the status is varied on or active.

AUTOCRTDEV

Specifies which devices are automatically created.

Note:

This parameter does not apply to the automatic creation of APPC devices. This parameter only applies to dependent devices on this controller.

***ALL:** All dependent devices (non-APPC) on this controller are automatically created.

***NONE:** Dependent devices on this controller are not automatically created.

AUTODLTDEV

Specifies the number of minutes an automatically created device can remain in an idle state (when there are no active conversations on that device). When the time expires, the system automatically varies off and deletes the device description.

1440: The system will automatically vary off and delete the automatically-configured idle device descriptions after 1440 minutes (24 hours).

***NO:** The system will not automatically vary off and delete the automatically-configured idle device descriptions.

wait-time: Specify the number of minutes to wait before deleting the automatically-configured idle device descriptions for this controller. Valid values range from 1 to 10,000.

USRDFN1

Specifies the first of the three user-defined fields. This field is used to describe unique characteristics of the line that is controlled. This parameter is valid only if APPN* support is used on the system.

***LIND:** The user-defined value specified in the line description is used.

user-defined-1: Specify a value ranging from 0 through 255.

USRDFN2

Specifies the second of the three user-defined fields. This field is used to describe unique characteristics of the line that is controlled. This parameter is valid only if APPN* support is used on the system.

***LIND:** The user-defined value specified in the line description is used.

user-defined-2: Specify a value ranging from 0 through 255.

USRDFN3

Specifies the third of the three user-defined fields. This field is used to describe unique characteristics of the line that is controlled. This parameter is valid only if APPN is used on the system.

***LIND:** The user-defined value specified in the line description is used.

user-defined-3: Specify a value ranging from 0 through 255.

MDLCTL

Specifies whether this controller description is a *model* for automatically created controller descriptions. Values on the model description, such as timer delays, retry limits, and frame size, are used for new controller descriptions that are automatically created and configured when communications with a remote system is started. The new controller must be attached to one of the SINGLE line descriptions in the switched line list (SWTLINLST parameter) of the model controller.

A model controller description is not attached to any devices, and only one controller description can be varied on for each line description.

***NO:** This controller description is not used as a model controller description.

***YES:** This controller description is used as a model for automatically created controller descriptions.

Note: This parameter is only valid if the parameter LINKTYPE is *LAN.

CNNNETID

Specifies the connection network identifier of this controller description. If a value is specified for this parameter (other than *NONE), this controller description represents this connection to the connection network.

Note: This parameter is only valid if MDLCTL(*YES) is specified.

***NETATR:** The LCLNETID value specified in the system network attributes is used.

***NONE:** No network connection identifier is used.

connection-network-ID: Specify the network connection identifier that represents this controller description to the network.

CNNCPNAME

Specifies the connection network control point name for this controller. If this value and a CNNNETID value (other than *NONE) are specified, this controller description represents this connection to the connection network.

Note: This parameter is only valid if MDLCTL(*YES) is specified.

CMNRCYLMT

Specifies the number of recovery attempts made by the system before an inquiry message is sent to the system operator. Also specifies the time (in minutes) that must elapse before the system sends an inquiry message to the system operator indicating that the recovery attempt count limit is reached.

Element 1: Maximum Recovery Limit

2: Two recovery attempts are made within the interval specified.

count-limit: Specify the number of second-level recovery attempts to be made. Valid values range from 0 through 99.

Element 2: Recovery Time Interval

5: A 15-second time-out period is used.

time-interval: Specify the time interval (in minutes) at which the specified number of second-level recoveries are attempted. Valid values range from 0 through 120. If the value specified for *count-limit* is not 0, the value 0 specifies infinite recovery.

Other Single Value

***SYSVAL:** The recovery limits specified in the QCMNRCYLMT system value are used.

AUT Specifies the authority given to users who do not have specific authority to the controller description, who are not on an authorization list, and whose user group has no specific authority to the controller description.

***LIBCRTAUT:** The authority for the object is the same as the create authority for QSYS. The create authority for QSYS can be displayed by using the Display Library Description (DSPLIBD) command. If the create authority is changed with the Change Library (CHGLIB) command, the new authority does not affect existing objects.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.


***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the controller description.

***USE:** The user can perform basic operations on the controller description, such as running a program or reading a file. The user cannot change the controller description. *USE authority provides object operational authority, read authority, and execute authority.

***EXCLUDE:** The user cannot access the controller description.

authorization-list-name: Specify the name of the authorization list used.

MSGQ

Specifies the qualified name of the message queue to which messages are sent. More information about using this parameter is in the Communications Management  book.

Single Values

***SYSVAL:** Messages are sent to the message queue defined in the system value QCFGMSGQ.

***SYSOPR:** Messages are sent to the system operator message queue (QSYS/QSYSOPR).

library-name/message-queue-name: Specify the library-qualified name of the message queue to which operational messages are sent.

TEXT Specifies the text that briefly describes the object and its function. More information on this parameter is in Commonly used parameters.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CRTCTLAPPC

```
CRTCTLAPPC  CTLD(OUTLAND)  LINKTYPE(*SDLC)
             APPN(*NO)     LINE(OUTLINE)  RMTNETID(*NONE)
             STNADR(C1)
```

This command configures an APPC controller description attached to a nonswitched SDLC line with a station address of C1.

Error messages for CRTCTLAPPC

*ESCAPE Messages

CPF26BB

Extended wireless controller member not changed.

CPF26BC

Extended wireless controller member not displayed.

CPF26BD

Entry for barcode group not removed from extended wireless controller member.

CPF26BE

Entry for PTC group not removed from extended wireless controller member.

CPF26BF

Program QZXCINZ terminated abnormally. See previous messages.

CPF26B3

Extended wireless line member not added.

CPF26B4

Extended wireless line member not changed.

CPF26B5

Extended wireless line member not displayed.

CPF26B8

Extended wireless controller member not added.

CPF2716

Controller description &1 not created.

CRTCTLASC (Create Controller Description (Async)) Command Description

CRTCTLASC Command syntax diagram

Purpose

The Create Controller Description (Async) (CRTCTLASC) command creates a controller description for an asynchronous controller. More information about using this command is in the Communications

Configuration  book.

Required Parameters

CTLD Specifies the name of the controller description being created.

LINKTYPE

Specifies the type of line to which this controller is attached.

***ASYNC:** This controller is attached to an asynchronous line.

***X25:** This controller is attached to an X.25 line.

Optional Parameters

ONLINE

Specifies whether this object is automatically varied on at initial program load (IPL).

***YES:** The controller is automatically varied on at IPL.

***NO:** This controller is not automatically varied on at IPL.

SWITCHED

Specifies whether this controller is attached to a switched line or to an X.25 switched virtual circuit (SVC).

***NO:** The controller is attached to a nonswitched line or, for X.25, to a permanent virtual circuit (PVC).

***YES:** The controller is attached to a switched line or, for X.25, to a switched virtual circuit (SVC).

SNBU Specifies, for controllers supporting the switched network backup (SNBU) feature, whether the SNBU feature is activated or deactivated. Both the local and remote modems must support the SNBU feature to perform a valid activation.

***NO:** The remote modem does not have the switched network backup (SNBU) feature.

***YES:** The remote modem has the SNBU feature.

LINE Specifies the name of the nonswitched lines to which this controller is attached. The line description must already exist.

Note: This parameter can be specified only if the user specified *NO for the switched line (SWITCHED parameter) for asynchronous communications controllers. If this controller is attached to an X.25 permanent virtual circuit (PVC), specify the name of the line on which that PVC is configured.

SWTLINLST

Specifies the names of the switched lines to which this controller attaches. The line descriptions must already exist. Up to 64 switched line names can be specified.

DEV Specifies the name of a device attached to this controller. Asynchronous communications supports only one device attached to each controller. The device name must be the same as that specified when the associated device description was created. The device description must already exist.

INLCNN

Specifies the method used to establish a connection with this controller.

***DIAL:** The connection is made by a call initiated from the iSeries 400.

For X.25 connection, the line attached to the controller requires switched virtual circuits (SVCs) configured on the LGLCHLE parameter of type OUT or BOTH(*SVCOUT or *SVCBOTH) for the connection to succeed.

***ANS:** The connection is made by the iSeries 400 when it answers an incoming call from this controller. If a call is received from the remote controller and all necessary conditions are met, the incoming call is answered by the system.

For X.25 connections, the line to which the controller attaches requires switched virtual circuits (SVC) configured on the LGLCHLE parameter of type IN or BOTH(*SVCIN or *SVCBOTH) for the connection to succeed. The line can be changed using the Change Line Description (X.25) (CHGLINX25) command.

CNNNBR

Specifies the telephone number to dial to connect to this controller.

***ANY:** Any X.25 SVC incoming call can use this controller.

connection-number: Specify the connection number used to call this controller. This could be a telephone number or an X.25 network address.

ANSNBR

Specifies the X.25 network address from which to accept calls.

***CNNNBR:** Calls from the X.25 network address specified by the connection number (CNNNBR) parameter are accepted.

***ANY:** Calls are accepted from any X.25 network address.

PREDIALDLY

Specifies how long to wait (in 0.5 second intervals) before dialing.

Note: Predial delay can be specified only if switched line or switched network backup is *YES and the link type is *ASYNC for asynchronous controllers.

6: The value of 6 provides a 3-second delay.

predial-delay: Specify a value ranging from 1 through 254 in 0.5-second intervals, or specify 0 to indicate no delay.

REDIALDLY

Specifies how long to wait (in 0.5 second intervals) before re-dialing when the call attempt is unsuccessful.

Note: Redial delay can be specified only if switched line or switched network backup is *YES and the link type is *ASYNC for asynchronous controllers.

120: The default value of 120 provides a 60-second delay.

redial-delay: Specify a number ranging from 1 through 254 in 0.5- second intervals, or specify 0 to indicate no delay.

DIALRTY

Specifies the number of re-dial attempts made by the system before considering the dialing unsuccessful.

Note: Dial retries can be specified only if switched line or switched network backup is *YES and the link type is *ASYNC for asynchronous controllers.

2: The LZ algorithm with the 12-bit code for repeated substrings in the data stream is used. These codes refer to entries in a common dictionary, created as the data flows between the sender and receiver. The LZ algorithms require storage and extra processing time. The LZ12 requires the most storage and processing time of the LZ algorithms; however, it compresses the data stream the most.

dial-retry: Specify a value ranging from 0 through 254 for the number of retries.

SWTDSC

Specifies whether the switched connection to this controller is made inoperative when the last device is varied off.

***NO:** The switched connection is not dropped when the last device is varied off.

***YES:** The switched connection is disconnected when the last device is varied off.

ACKTMR

Specifies the time allowed for an acknowledgment on an asynchronous file transfer.

16: The default value is 16 seconds.

file-transfer-acknowledgment-timer: Specify a value ranging from 16 through 65535 seconds for an acknowledgment on an Async file transfer.

RETRY

Specifies the number of retries on an Async file transfer.

7: Seven is the default for number of retries.

file-transfer-retry: Specify a value ranging from 1 through 255 for the number of retries.

RMTVfy

Specifies whether the remote system requires verification of local location name and local ID. The remote system requires verification if a generic controller and device are configured to accept calls from any X.25 network address.

*NO: The remote system does not require verification of local location name and local ID.

*YES: The remote system requires verification of the local location name and local ID.

LCLLOCNAME

Specifies the local location name.

Note:

This name must be the same as that specified by the remote system in its remote location list.

LCLID Specifies the local ID which, when combined with the local location name, identifies the controller to a remote system. This ID must be the same ID as that specified by the remote system in its remote location list.

PADEML

Specifies whether this controller emulates an X.25 packet assembler/disassembler (PAD). This PAD emulation follows CCITT recommendations for X.3, X.28, and X.29. PAD emulation is valid only for asynchronous controllers for which the initial connection(INLCNN) is set to *DIAL.

*NO: This controller does not emulate an X.25 packet assembler/disassembler (PAD).

*YES: This controller emulates an X.25 packet assembler/disassembler (PAD).

LGLCHLID

Specifies the logical channel ID used for the X.25 permanent virtual circuit (PVC) to this controller. Specify the logical channel ID.

The valid entry is xyy, where:

x = the logical group number, derived from the network subscription.

yy = the logical channel number, derived from the user's subscription. The logical channel identifier must be one of the PVC logical channel identifiers that was defined in the X.25 line description. There is no default for this parameter.

SWTLINSLCT

Specifies the method that is used to select lines from an X.25 switched line list.

*FIRST: The lines are selected in the order in which they are specified.

*CALC: The system determines the value to use.

DFTPkTSize

Specifies the default packet size used by the X.25 network.

Element 1: Transmit Packet Size

*LIND: The value specified in the line description is used as the controller.

transmit-packet-size: Specify a default packet size for transmission. The valid values for the packet size are 64, 128, 256, 512, 1024, 2048, and 4096.

Element 2: Receive Packet Size

***LIND**: The value specified in the line description is used as the controller.

***TRANSMIT**: The value specified as the default packet size for transmission is used as the default for reception.

receive-packet-size: Specify a default packet size for reception. The valid values for the packet size are 64, 128, 256, 512, 1024, 2048, and 4096.

DFTWDWSIZE

Specifies the default window size used by the X.25 network.

Element 1: Transmit Window Size

***LIND**: The value specified in the line description is used as the controller.

transmit-window-size: Specify the appropriate default window size. Valid values range from 1 through 7 for networks that use modulus 8 packet numbering. Valid values range from 1 through 15 for networks that use 128 packet numbering.

Element 2: Receive Window Size

***LIND**: The value specified in the line description is used as the controller.

***TRANSMIT**: The value specified as the default window size for transmission is used as the default for reception.

receive-window-size: Specify the appropriate default window size. Valid values range from 1 through 7 for networks that use modulus 8 packet numbering. Valid values range from 1 through 15 for networks that use 128 packet numbering.

USRGRPID

Specifies the closed user-group ID for contacting this X.25 switched virtual circuit (SVC) controller. Specify a value ranging from 0 through 99, as provided by the network subscription. This parameter is not valid for permanent virtual circuit (PVC) connections. It is valid only for SVC circuit outgoing call operations and is ignored for SVC incoming call connections.

RVSCRG

Specifies whether reverse charges are accepted or requested when contacting this controller.

***NONE**: No reverse charging for network tariff billing is accepted.

***REQUEST**: Charges are requested on outgoing call request packets.

***ACCEPT**: Reverse charging for network tariff billing is accepted on incoming requests.

***BOTH**: Both incoming and outgoing requests are accepted.

USRFCL

Specifies a string of hexadecimal digits sent to the X.25 network to request additional services. The iSeries 400 allows up to 218 hexadecimal characters.

Note:

Values entered in this field are determined by the supplier of the network subscription. Do not include coding of facilities shown through keywords: packet size, window size, user group identifier, and reverse charging.

CMNRCYLMT

Specifies the number of recovery attempts made by the system before an inquiry message is sent

to the system operator. Also specifies the time (in minutes) that must elapse before the system sends an inquiry message to the system operator indicating that the recovery attempt count limit is reached.

Element 1: Maximum Recovery Limit

2: Two recovery attempts are made within the interval specified.

count-limit: Specify the number of second-level recovery attempts to be made. Valid values range from 0 through 99.

Element 2: Recovery Time Interval


5: A 15-second time-out period is used.

time-interval: Specify the time interval (in minutes) at which the specified number of second-level recoveries are attempted. Valid values range from 0 through 120. If the value specified for *count-limit* is not 0, the value 0 specifies infinite recovery.

Other Single Values

***SYSVAL:** The recovery limits specified in the QCMNRCYLMT system value are used.

MSGQ

Specifies the qualified name of the message queue to which messages are sent. More information about using this parameter is in the Communications Management  book.

Single Values

***SYSVAL:** Messages are sent to the message queue defined in the system value QCFGMSGQ.

***SYSOPR:** Messages are sent to the system operator message queue (QSYS/QSYSOPR).

library-name/message-queue-name: Specify the library-qualified name of the message queue to which operational messages are sent.

AUT

Specifies the authority given to users who do not have specific authority to the controller description, who are not on an authorization list, and whose user group has no specific authority to the controller description.

***LIBCRTAUT:** The authority for the object is the same as the create authority for QSYS. The create authority for QSYS can be displayed by using the Display Library Description (DSPLIBD) command. If the create authority is changed with the Change Library (CHGLIB) command, the new authority does not affect existing objects.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***USE:** The user can perform basic operations on the controller description, such as running a program or reading a file. The user cannot change the controller description. *USE authority provides object operational authority, read authority, and execute authority.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the controller description.

***EXCLUDE:** The user cannot access the controller description.

authorization-list-name: Specify the name of the authorization list used.

TEXT

Specifies the text that briefly describes the object and its function. More information on this parameter is in Commonly used parameters.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CRTCTLASC

```
CRTCTLASC  CTLD(ASCCTL)  LINKTYPE(*ASYNC)
           LINE(ASCLIN)
```

This command creates an asynchronous controller attached to a nonswitched asynchronous line.

Error messages for CRTCLTASC

*ESCAPE Messages

CPF26BB

Extended wireless controller member not changed.

CPF26BC

Extended wireless controller member not displayed.

CPF26BD

Entry for barcode group not removed from extended wireless controller member.

CPF26BE

Entry for PTC group not removed from extended wireless controller member.

CPF26BF

Program QZXCINZ terminated abnormally. See previous messages.

CPF26B3

Extended wireless line member not added.

CPF26B4

Extended wireless line member not changed.

CPF26B5

Extended wireless line member not displayed.

CPF26B8

Extended wireless controller member not added.

CPF2716

Controller description &1 not created.

CRTCTLBSC (Create Controller Description (BSC)) Command Description

CRTCTLBSC Command syntax diagram

Purpose

The Create Controller Description (BSC) (CRTCTLBSC) command creates a controller description for a binary synchronous communications (BSC) controller. More information about using this command is in the

Communications Configuration  book.

Required Parameter

CTLD Specifies the name of the controller description being created.

Optional Parameters

ONLINE

Specifies whether this object is automatically varied on at initial program load (IPL).

***YES:** The controller is automatically varied on at IPL.

***NO:** This controller is not automatically varied on at IPL.

CNN Specifies the type of line connection used.

Note: This value must match the value specified for the CNN parameter in the CRTLINBSC command.

***NONSWTPP:** A nonswitched point-to-point connection is used. This value cannot be selected if *EML is chosen for the APPTYPE parameter.

***SWTPP:** A switched point-to-point connection is used. This value cannot be selected if *EML is chosen for the APPTYPE parameter.

***MPTRIB:** A multipoint tributary connection is used. This value cannot be selected if *RJE is chosen for the APPTYPE parameter.

SNBU Specifies, for controllers supporting the switched network backup (SNBU) feature, whether the SNBU feature is activated or deactivated. Both the local and remote modems must support the SNBU feature to perform a valid activation.

***NO:** The remote modem does not have the switched network backup (SNBU) feature.

***YES:** The remote modem has the SNBU feature.

LINE Specifies the name of the nonswitched lines to which this controller is attached. The line description must already exist.

SWTLINLST

Specifies the names of the switched lines to which this controller attaches. The line descriptions must already exist. Up to 64 switched line names can be specified.

DEV Specifies the names of the devices attached to this controller. The device descriptions must already exist.

Use this parameter only when the associated device descriptions have already been created. The maximum number of devices that can attach to the controller is 32 when specifying CNN(*MPTRIB), 24 when specifying APPTYPE(*RJE), and 1 for all other cases.

APPTYPE

Specifies the application type being used.

Note: This value must match the value specified on the APPTYPE parameter in the CRTLINBSC command.

***PGM:** The application is a user-written program.

***RJE:** The application is a BSC Remote Job Entry (RJE).

***EML:** The application is a 3270 device emulation.

INLCNN

Specifies the method used to establish a connection with this controller.

***DIAL:** The connection is made by a call initiated from the iSeries 400.

For X.25 connection, the line attached to the controller requires switched virtual circuits (SVCs) configured on the LGLCHLE parameter of type OUT or BOTH(*SVCOUT or *SVCBOTH) for the connection to succeed.

***ANS:** The connection is made by the iSeries 400 when it answers an incoming call from this controller. If a call is received from the remote controller and all necessary conditions are met, the incoming call is answered by the system.

For X.25 connections, the line to which the controller attaches requires switched virtual circuits (SVC) configured on the LGLCHLE parameter of type IN or BOTH(*SVCIN or *SVCBOTH) for the connection to succeed. The line can be changed using the Change Line Description (X.25) (CHGLINX25) command.

CNNNBR

Specifies the telephone number to dial to connect to this controller.

PREDIALDLY

Specifies how long to wait (in 0.5 second intervals) before dialing.

6: The value of 6 provides a 3-second delay.

predial-delay: Specify a value ranging from 1 through 254 in 0.5-second intervals, or specify 0 to indicate no delay.

REDIALDLY

Specifies how long to wait (in 0.5 second intervals) before re-dialing when the call attempt is unsuccessful.

120: The default value of 120 provides a 60-second delay.

redial-delay: Specify a number ranging from 1 through 254 in 0.5- second intervals, or specify 0 to indicate no delay.

DIALRTY

Specifies the number of re-dial attempts made by the system before considering the dialing unsuccessful.

2: The LZ algorithm with the 12-bit code for repeated substrings in the data stream is used. These codes refer to entries in a common dictionary, created as the data flows between the sender and receiver. The LZ algorithms require storage and extra processing time. The LZ12 requires the most storage and processing time of the LZ algorithms; however, it compresses the data stream the most.

dial-retry: Specify a value ranging from 0 through 254 for the number of retries.

LCLID Specifies the local ID used to identify the system to the remote controller.

***NOID:** The iSeries 400 sends a null identifier.

local-ID: Specify a local ID that is from 2 to 30 hexadecimal characters long and contains an even number of characters. The identifier cannot contain any BSC control characters.

The following guidelines are recommended to help ensure that the phone connection is made to the correct BSC controller:

- The local ID should be a minimum of 4 characters.
- If the ID is only 4 characters, the first 2 and last 2 should be the same (example: F3F3 or 8484).

RMTID

Specifies the identifiers for remote BSC controllers. A maximum of 64 remote controller IDs can be specified.

***NOID:** The iSeries 400 accepts a null identifier.

***ANY:** The iSeries 400 accepts any identifier sent by the remote controller.

Note: This value is valid only when it is the last or the only value specified.

remote-ID: Specify a remote controller ID that is from 2 to 30 hexadecimal characters long and contains an even number of characters. The identifier cannot contain any BSC control characters.

The following guidelines are recommended to help ensure that the phone connection is made to the correct BSC controller:

- The remote ID should be a minimum of 4 characters.
- If the ID is only 4 characters, the first 2 and last 2 should be the same (example: F1F1 or 8585).

RJEHOST

Specifies the subsystem type of the host to which the Remote Job Entry (RJE) is connected.

***RES:** This value specifies that the host is an RES (Remote Entry System).

***JES2:** This value specifies that the host is a JES2 (Job Entry Subsystem 2).

***JES3:** This value specifies that the host is a JES3 (Job Entry Subsystem 3).

***RSCS:** This value specifies that the host is an RSCS (Remote Spooling Communications System).

Note: This parameter is required only when APPTYPE(*RJE) is specified.

RJELOGON

Specifies the sign-on (logon) text for the RJE host system.

Note: This parameter is required only when APPTYPE(*RJE) is specified. Specify the sign-on information required by the host system.

CMNRCYLMT

Specifies the number of recovery attempts made by the system before an inquiry message is sent to the system operator. Also specifies the time (in minutes) that must elapse before the system sends an inquiry message to the system operator indicating that the recovery attempt count limit is reached.

Element 1: Maximum Recovery Limit

2: Two recovery attempts are made within the interval specified.

count-limit: Specify the number of second-level recovery attempts to be made. Valid values range from 0 through 99.

Element 2: Recovery Time Interval

5: A 15-second time-out period is used.

time-interval: Specify the time interval (in minutes) at which the specified number of second-level recoveries are attempted. Valid values range from 0 through 120. If the value specified for *count-limit* is not 0, the value 0 specifies infinite recovery.

Other Single Value

***SYSVAL:** The recovery limits specified in the QCMNRCYLMT system value are used.

AUT Specifies the authority given to users who do not have specific authority to the controller description, who are not on an authorization list, and whose user group has no specific authority to the controller description.

***LIBCRTAUT:** The authority for the object is the same as the create authority for QSYS. The create authority for QSYS can be displayed by using the Display Library Description (DSPLIBD) command. If the create authority is changed with the Change Library (CHGLIB) command, the new authority does not affect existing objects.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the controller description.

***USE:** The user can perform basic operations on the controller description, such as running a program or reading a file. The user cannot change the controller description. *USE authority provides object operational authority, read authority, and execute authority.

***EXCLUDE:** The user cannot access the controller description.

authorization-list-name: Specify the name of the authorization list used.

TEXT Specifies the text that briefly describes the program and its function. More information on this parameter is in Commonly used parameters.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CRTCTLBSC

```
CRTCTLBSC  CTLD(BSC1)  CNN(*SWTPP)
           CNNNBR(1234567)  LCLID(020202)
           RMTID(*ANY)  SWTLINLST(BSC1)
           INLCNN(*ANS)
```

This command creates a BSC controller on a switched line that accepts calls from any remote location.

Error messages for CRTCTLBSC

*ESCAPE Messages

CPF26BB

Extended wireless controller member not changed.

CPF26BC

Extended wireless controller member not displayed.

CPF26BD

Entry for barcode group not removed from extended wireless controller member.

CPF26BE

Entry for PTC group not removed from extended wireless controller member.

CPF26BF

Program QZXCINZ terminated abnormally. See previous messages.

CPF26B3

Extended wireless line member not added.

CPF26B4

Extended wireless line member not changed.

CPF26B5

Extended wireless line member not displayed.

CPF26B8

Extended wireless controller member not added.

CPF2716

Controller description &1 not created.

CRTCTLFNC (Create Controller Description (Finance)) Command Description

CRTCTLFNC Command syntax diagram

Purpose

The Create Controller Description (Finance) (CRTCTLFNC) command creates a controller description for a finance controller. More information about using this command is in the Communications Configuration



book.

Required Parameters

CTLD Specifies the name of the controller description being created.

TYPE Specifies the type of controller.

3694: A 3694 check processor is used.

4701: A 4701 finance controller is used.

4702: A 4702 finance controller is used.

4730: A 4730 personal banking machine is used.

4731: A 4731 personal banking machine is used.

4732: A 4732 personal banking machine is used.

4736: A 4736 personal banking machine is used.

***FBSS:** A Finance Branch System Services (FBSS) controller is used.

MODEL

Specifies the model number of the controller that is described. This number tells the system features of the controller. The only valid model number is 0.

LINKTYPE

Specifies the type of line to which this controller is attached.

***LAN:** This controller is attached to a local area network (LAN) line.

***SDLC:** This controller is attached to a synchronous data link control (SDLC) line.

***X25:** This controller is attached to an X.25 line.

Optional Parameters

ONLINE

Specifies whether this object is automatically varied on at initial program load (IPL).

***YES:** The controller is automatically varied on at IPL.

***NO:** This controller is not automatically varied on at IPL.

SWITCHED

Specifies whether this controller is attached to a switched line or, for an X.25 connection, to a switched virtual circuit (SVC).

***NO:** This controller is attached to a nonswitched line or, for an X.25 connection, to a permanent virtual circuit (PVC).

***YES:** This controller is attached to a switched line or, for an X.25 connection, to a switched virtual circuit (SVC).

SHM Specifies whether this controller is used for an X.21 short-hold mode. If ***YES** is specified, LINKTYPE(*SDLC) and SWITCHED(*YES) must also be specified.

***NO:** This controller is not used for X.21 short-hold mode.

***YES:** This controller is used for X.21 short hold mode.

SNBU Specifies, for controllers supporting the switched network backup (SNBU) feature, whether the SNBU feature is activated or deactivated. Both the local and remote modems must support the SNBU feature to perform a valid activation.

Note: This parameter is not used for X.25 lines.

***NO:** The remote modem does not have the switched network backup (SNBU) feature.

***YES:** The remote modem has the SNBU feature.

LINE Specifies the name of the nonswitched lines to which this controller is attached. The line description must already exist.

Note: If this controller is attached by an X.25 permanent virtual circuit (PVC), specify the name of the line on which that PVC is configured.

SWTLINLST

Specifies the names of the switched lines to which this controller attaches. The line descriptions must already exist. Up to 64 switched line names can be specified.

DEV Specifies the names of devices attached to this controller. The device descriptions must already exist. The maximum number of device descriptions that can be attached to this controller and active (varied on) is shown in the table below:

Table 1. Maximum Number of Device Descriptions that can be Attached and Active

Controller Type	Maximum Attached	Maximum Active
4701,4702	255	120
*FBSS	255	240
4730	3	3
4731,4732,4736	2	2

CODE Specifies the character code used. The code can be either extended binary-coded decimal interchange code (*EBCDIC) or the American National Standard Code for Information Interchange (*ASCII).

***EBCDIC:** The extended binary-coded decimal interchange code (EBCDIC) character set code is used.

***ASCII:** The ASCII character set code is used.

MAXFRAME

Specifies the maximum frame (path information unit (PIU)) size that the controller can send or receive. This value is used to calculate request unit (RU) sizes. Since the maximum PIU size that the controller can send or receive is negotiated at exchange identifier time, the maximum PIU size used at run time may be different. This value matches the corresponding value on the host system.

***LINKTYPE:** The following frame sizes (measured in bytes) are specified if *LINKTYPE is used:

*SDLC - 265 *LAN - 521 *X25 - 256

maximum-frame-size: Specify a maximum frame size for the controller. The frame size that can be used depends on the controller and type of line being used. Valid frame sizes are shown below.

Table 2. Maximum Frame Sizes (in bytes)

Controllers	Link Type	Frame Sizes
*FBSS	*LAN	265 - 521
4701, 4702, *FBSS	*SDLC	265, 521, 1033
4701, 4702, *FBSS	*X25	256, 265, 512, 521
3694, 4730, 4731, 4732, 4746	*SDLC	265

EXCHID

Specifies the exchange identifier of this controller. The controller sends (exchanges) its identifier to another location when a connection is established. The 8-digit hexadecimal identifier contains three digits for the block number and five digits for the identifier of the specific controller. This parameter is required for synchronous data link control (SDLC) switched or switched network backup (SNBU) connections.

SSCPID

Specifies the system service control point (SSCP) of the host system.

050000000000: The default value is 050000000000.

system-service-control-point-identifier: Specify the system service control point identifier (SSCPID) as a 12-digit hexadecimal value.

INLCNN

Specifies the method used to make the initial connection on a switched line between the system and the remote controller. For X.25 lines, this parameter specifies the type of switched virtual circuit (SVC) connection that is made over the X.25 line.

***DIAL:** The connection is made by a call initiated from the iSeries 400.

For X.25 connection, the line attached to the controller requires switched virtual circuits (SVCs) configured on the LGLCHLE parameter of type OUT or BOTH(*SVCOUT or *SVCBOTH) for the connection to succeed.

***ANS:** The connection is made by the iSeries 400 when it answers an incoming call from this controller. If a call is received from the remote controller and all necessary conditions are met, the incoming call is answered by the system.

For X.25 connections, the line to which the controller attaches requires switched virtual circuits (SVC) configured on the LGLCHLE parameter of type IN or BOTH(*SVCIN or *SVCBOTH) for the connection to succeed. The line can be changed using the Change Line Description (X.25) (CHGLINX25) command.

CNNNBR

Specifies the telephone number to dial to connect to this controller.

***DC:** For X.21 circuit switched connections, a direct call is used to connect to the controller.

***ANY:** Calls are accepted from any network address.

connection-number: Specify the connection number. This could be a telephone number, an X.25 network address, or an X.21 connection number, depending on the type of controller and the type of line to which it is attached.

ANSNBR

Specifies the X.25 network address from which to accept calls.

***C>NNNBR:** Calls from the X.25 network address specified by the connection number (C>NNNBR) parameter are accepted.

***ANY:** Calls are accepted from any X.25 network address.

PREDIALDLY

Specifies how long to wait (in 0.5 second intervals) before dialing.

6: The value of 6 provides a 3-second delay.

predial-delay: Specify a value ranging from 1 through 254 in 0.5-second intervals, or specify 0 to indicate no delay.

REDIALDLY

Specifies how long to wait (in 0.5 second intervals) before re-dialing when the call attempt is unsuccessful.

120: The default value of 120 provides a 60-second delay.

redial-delay: Specify a value ranging from 1 through 254 in 0.5-second intervals, or specify 0 to indicate no delay.

DIALRTY

Specifies the number of re-dial attempts made by the system before considering the dialing unsuccessful.

2: The LZ algorithm with the 12-bit code for repeated substrings in the data stream is used. These codes refer to entries in a common dictionary, created as the data flows between the sender and receiver. The LZ algorithms require storage and extra processing time. The LZ12 requires the most storage and processing time of the LZ algorithms; however, it compresses the data stream the most.

dial-retry: Specify a value ranging from 0 through 254 for the number of dial retries.

SWTDSC

Specifies whether the switched connection to this controller is made inoperative when the last device is varied off.

***YES:** The switched connection is disconnected when the last device is varied off.

***NO:** The switched connection is not dropped when the last device is varied off.

SHMDSCLMT

Specifies the number of nonproductive responses (RR or RNR) that are required from the remote station before the connection can be suspended for this X.21 short-hold mode (SHM) connection. This parameter is used only if SHM(*YES) is specified.

10: Ten nonproductive responses must be received before the connection can be suspended.

***NOMAX:** There is no disconnect limit.

SHM-disconnect-limit: Specify a value ranging from 1 through 254, indicating the number of nonproductive responses that must be received before the connection can be suspended.

SHMDSCTMR

Specifies the minimum length of time that the primary system maintains the connection to the remote system for this X.21 short-hold mode controller, in tenths of a second. This parameter is used only if SHM(*YES) is specified.

50: The primary system maintains the connection to the remote system for a minimum of five seconds.

SHM-disconnect-timer: Specify a value ranging from 2 through 3000, indicating the minimum length of time, in tenths of a second, that the primary system maintains the connection to the remote system.

STNADR

Specifies the station address used when communicating with the controller.

Note:

This is the station address of the remote controller.
Specify a 2-character hexadecimal value ranging from 01 through FE.

POLLPTY

Specifies whether this controller has priority when polled.

***NO:** This controller does not have priority when polled.

***YES:** This controller has priority when polled.

POLLMT

Specifies the number of consecutive polls issued to the same controller when the poll results in receiving frames.

0: The format of this tape is QIC3040, which is used for 1/4 inch minicartridge tapes that can hold up to 840 megabytes of data.

poll-limit: Specify a value ranging from 0 through 4.

OUTLMT

Specifies the number of times SDLC allows the consecutive transmission of the maximum number of frames to a station before allowing transmission to another station.

***POLLMT:** The value specified on the POLLMT parameter is used.

out-limit: Specify a value ranging from 0 through 4 for the number of consecutive transmissions.

CNNPOLLRTY

Specifies the number of connect poll retries before reporting the error.

***CALC:** The number of retries is 7 if the controller is switched, and *NOMAX if the controller is nonswitched.

***NOMAX:** There is no disconnect limit.

connect-poll-retry: Specify a value ranging from 0 through 65534 to indicate the number of retries.

NDMPOLLTMR

Specifies the slow poll interval for this controller when it is in normal disconnect mode (NDM).

***CALC:** The system determines the value to use.

NDM-poll-timer: Specify a value ranging from 1 through 3000 in 0.1-second intervals, or specify 0 to indicate no timer.

ADPTADR

Specifies the 12-character adapter address of the remote controller. This is the address to which

the system sends data when it communicates with the remote controller. This value can be obtained from the remote controller's configuration record. Valid values range from hex 000000000001 through hex FFFFFFFF.

DSAP Specifies the logical address of the SNA destination service access point (DSAP) to which this system sends data when it communicates with the remote controller. This address allows the controller and the system to route the data that comes from this system. The value must match the value specified on the source service access point (SSAP) parameter in the remote controller's configuration record.

04: The destination service access point is 04.

destination-service-access-point: Specify a hexadecimal value ranging from 04 through 9C, in increments of four (for example, 04, 08, 0C, 10) to represent the destination service access point.

SSAP Specifies the source service access point. This is the logical address this system uses when it sends data to the remote controller. This address allows the remote controller and the system to route the data that comes from this system. It must match the value assigned to the destination service access point (DSAP) prompt in the remote controller's configuration record.

04: The default value of 04 is used.

source-service-access-point: Specify a hexadecimal value ranging from 04 through 9C, in increments of four (for example, 04, 08, 0C, 10) to represent the source service access point.

LANFRMRTY

Specifies the number of times a frame is transmitted if there is no acknowledgment from the remote controller in the time period specified by the LANRSPTMR parameter. This value is only used after a successful connection has been made.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-frame-retry: Specify a value ranging from 0 through 254 for the number of times a frame is transmitted before an acknowledgement is received.

LANCNRRTY

Specifies the number of times a transmission is attempted before an acknowledgement is received. This value is used at connection time (unlike LANFRMRTY which is used *after* a connection has been made).

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-connection-retry: Specify a value ranging from 0 through 254 for the number of times the transmission is attempted before an acknowledgement is received.

LANRSPTMR

Specifies the length of time the system waits before an inoperative condition occurs on a link after a connection is made.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-response-timer: Specify a value ranging from 1 through 254 in 0.1-second intervals for the amount of time the system waits before an inoperative condition occurs.

LANCNTMR

Specifies the length of time the system waits before an inoperative condition occurs on a link at connection time.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-connection-timer: Specify a value ranging from 1 through 254 in 0.1-second intervals for the amount of time the system waits before an inoperative condition occurs.

LANACKTMR

Specifies the length of time the system waits before sending an acknowledgement for received frames.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-acknowledgment-timer: Specify a value ranging from 1 through 254 in 0.1-second intervals, or specify 0 to indicate no delay. If 0 is specified for this parameter, 0 must also be specified for the LANACKFRQ parameter; if a nonzero value is specified for this parameter, a nonzero value must also be specified for the LANACKFRQ parameter.

LANINACTMR

Specifies the length of time used to determine an inactive condition for the controller.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-inactivity-timer: Specify a value ranging from 1 through 255 in 0.1-second intervals for the length of time used to determine an inactive condition for the controller.

LANACKFRQ

Specifies the maximum number of frames that are received before an acknowledgment is sent to the controller.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-acknowledgment-frequency: Specify a value ranging from 0 through 127 for the number of frames received. If 0 is specified for this parameter, 0 must also be specified for the LANACKTMR parameter; if a nonzero value is specified for this parameter, a nonzero value must also be specified for the LANACKTMR parameter.

LANMAXOUT

Specifies the maximum number of frames that can be sent before an acknowledgment is received from the remote system.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-maximum-outstanding-frames: Specify a value ranging from 1 through 127 for the number of frames that can be sent before an acknowledgment is received.

LANACCPTY

Specifies the LAN priority granted to the sending system for sending frames. The larger the number, the higher the priority. This parameter is only used when the controller is attached to TRLAN.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-access-priority: Specify a value ranging from 0 through 3 to indicate how soon a frame can be sent on a local area network.

LANWDWSTP

Specifies whether to reduce the number of outstanding frames that can be sent before an acknowledgment is received from the remote system during network congestion. This parameter (LAN Window Step) also indicates the number of frames that must be successfully received before the number of outstanding frames can be incremented to the maximum allowable value.

***NONE:** The number of outstanding frames is not reduced during network congestion.

LAN-number-of-frames: Specify the number of outstanding frames to be reduced before an acknowledgment is received from the remote system.

NETLVL

Specifies the level of the X.25 network used to reach this controller. The level is specified by giving the year of the standard used by X.25 network.

1980: The 1980 standard is used.

1984: The 1984 standard is used.

1988: The 1988 standard is used.

LINKPCL

Specifies the link level protocol used on the X.25 network to communicate with this controller.

***QLLC:** The QLLC protocol is used.

***ELLC:** The ELLC protocol is used.

LGLCHLID

Specifies the logical channel ID used for the X.25 permanent virtual circuit to this controller. The valid entry is in the format *xyy*, where:

x = the logical group number, derived from the network subscription

yy = the logical channel number, derived from the subscription

CNNPWD

Specifies, for X.25 switched virtual circuit (SVC) controllers, the password used when connecting to this controller.

SWTLINSLCT

Specifies the method that is used to select lines from an X.25 switched line list.

***FIRST:** The lines are selected in the order in which they are specified.

***CALC:** The system determines the value to use.

DFTPKTSIZE

Specifies the default packet size used by the X.25 network.

Element 1: Transmit Packet Size

***LIND:** The value specified in the line description is used as the controller.

transmit-packet-size: Specify a default packet size for transmission. The valid values for the packet size are 64, 128, 256, 512, 1024, 2048, and 4096.

Element 2: Receive Packet Size

***LIND:** The value specified in the line description is used as the controller.

***TRANSMIT:** The value specified as the default packet size for transmission is used as the default for reception.

receive-packet-size: Specify a default packet size for reception. The valid values for the packet size are 64, 128, 256, 512, 1024, 2048, and 4096.

DFTWDWSIZE

Specifies the default window size used by the X.25 network.

Element 1: Transmit Window Size

***LIND:** The value specified in the line description is used as the controller.

transmit-window-size: Specify the appropriate default window size. Valid values range from 1 through 7 for networks that use modulus 8 packet numbering. Valid values range from 1 through 15 for networks that use 128 packet numbering.

Element 2: Receive Window Size

***LIND:** The value specified in the line description is used as the controller.

***TRANSMIT:** The value specified as the default window size for transmission is used as the default for reception.

receive-window-size: Specify the appropriate default window size. Valid values range from 1 through 7 for networks that use modulus 8 packet numbering. Valid values range from 1 through 15 for networks that use 128 packet numbering.

USRGRPID

Specifies the closed user-group ID for contacting this X.25 switched virtual circuit (SVC) controller. Specify a value ranging from 0 through 99, as provided by the network subscription. This parameter is not valid for permanent virtual circuit (PVC) connections. It is valid only for SVC circuit outgoing call operations and is ignored for SVC incoming call connections.

RVSCRG

Specifies whether reverse charges are accepted or requested when contacting this controller.

***NONE:** No reverse charging for network tariff billing is accepted.

***REQUEST:** Charges are requested on outgoing call request packets.

***ACCEPT:** Reverse charging for network tariff billing is accepted on incoming requests.

***BOTH:** Both incoming and outgoing requests are accepted.

X25FRMRTY

Specifies the maximum number of times a frame is sent after the response timer ends when connected to this controller.

7: Rotation of the text is done 270 degrees clockwise from the 0 degree writing position.

X.25-frame-retry: Specify a value ranging from 0 through 21 for the number of times a frame is sent.

X25CNNRTY

Specifies the maximum number of times a frame is sent after the connect response timer ends when connecting to this controller.

7: Rotation of the text is done 270 degrees clockwise from the 0 degree writing position.

X.25-connection-retry: Specify a value ranging from 0 through 21 for the number of times a frame is sent.

X25RSPTMR

Specifies the time allowed for an acknowledgment to return when a frame is sent while connected to this controller.

100: Ten seconds is allowed for acknowledgment.

X.25-response-timer: Specify a value ranging from 1 through 2550 in 0.1-second intervals.

X25CNNTMR

Specifies the time allowed for an acknowledgment to be returned when a frame is sent while connecting to this controller.

100: The time allowed for acknowledgment is 10 seconds.

X.25-connection-timer: Specify a value ranging from 1 through 2550 in 0.1-second intervals.

X25DLYTMR

Specifies the time interval to try establishing a connection to the controller.

***CALC:** Uses the values specified in the X25CNNTMR and X25CNNRTY parameters to determine how often and how many times to try establishing the connection.

X.25-delayed-connection-timer: Specify a value ranging from 1 through 32767 in 0.1-second intervals. The system retries the connection indefinitely at the specified interval.

X25ACKTMR

Specifies the time period to delay sending acknowledgments for received frames.

20: The time allowed for acknowledgment is two seconds.

X.25-acknowledgment-timer: Specify a value ranging from 1 through 2550 in 0.1-second intervals, or specify 0 to indicate no delay.

X25INACTMR

Specifies the time period used to determine an inactive condition for the controller.

350: An inactive condition is detected after 35-seconds.

X.25-inactivity-timer: Specify a value ranging from 1 through 2550 in 0.1-second intervals.

USRFCL

Specifies a string of hexadecimal digits sent to the X.25 network to request additional services. The iSeries 400 allows up to 218 hexadecimal characters.

CMNRCYLMT

Specifies the number of recovery attempts made by the system before an inquiry message is sent to the system operator. Also specifies the time (in minutes) that must elapse before the system sends an inquiry message to the system operator indicating that the recovery attempt count limit is reached.

Element 1: Maximum Recovery Limit

2: Two recovery attempts are made within the interval specified.

count-limit: Specify the number of second-level recovery attempts to be made. Valid values range from 0 through 99.

Element 2: Recovery Time Interval

5: A 15-second time-out period is used.

time-interval: Specify the time interval (in minutes) at which the specified number of second-level recoveries are attempted. Valid values range from 0 through 120. If the value specified for *count-limit* is not 0, the value 0 specifies infinite recovery.

Other Single Value

***SYSVAL:** The recovery limits specified in the QCMNRCYLMT system value are used.

AUT

Specifies the authority given to users who do not have specific authority to the controller description, who are not on an authorization list, and whose user group has no specific authority to the controller description.

***LIBCRTAUT:** The authority for the object is the same as the create authority for QSYS. The create authority for QSYS can be displayed by using the Display Library Description (DSPLIBD) command. If the create authority is changed with the Change Library (CHGLIB) command, the new authority does not affect existing objects.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***USE:** The user can perform basic operations on the controller description, such as running a program or reading a file. The user cannot change the controller description. *USE authority provides object operational authority, read authority, and execute authority.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the controller description.

***EXCLUDE:** The user cannot access the controller description.

authorization-list-name: Specify the name of the authorization list used.

TEXT Specifies the text that briefly describes the program and its function. More information on this parameter is in Commonly used parameters.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CRTCTLFNC

```
CRTCTLFNC  CTLD(FNC1)  TYPE(4701)
           MODEL(0)  LINKTYPE(*SDLC)
           LINE(FNCLINE)  STNADR(C1)
```

This command creates a 4701 finance controller attached to a nonswitched SDLC line with a station address of C1.

Error messages for CRTCTLFNC

*ESCAPE Messages

CPF26BB

Extended wireless controller member not changed.

CPF26BC

Extended wireless controller member not displayed.

CPF26BD

Entry for barcode group not removed from extended wireless controller member.

CPF26BE

Entry for PTC group not removed from extended wireless controller member.

CPF26BF

Program QZXCINZ terminated abnormally. See previous messages.

CPF26B3

Extended wireless line member not added.

CPF26B4

Extended wireless line member not changed.

CPF26B5

Extended wireless line member not displayed.

CPF26B8

Extended wireless controller member not added.

CPF2716

Controller description &1 not created.

CRTCTLLWS (Create Controller Description (Local Work Station)) Command Description


CRTCTLLWS Command syntax diagram


Purpose

The Create Controller Description (Local Work Station) (CRTCTLLWS) command creates a controller description for a local work station controller.

Note:

Extended wireless controller configuration data is contained in the source file and member specified by the INZFILE and INZMBR parameters, respectively. When the controller is varied on, this configuration data is downloaded to the wireless adapter. It is recommended that INZPGM(QZXCINZ) and INZFILE(QEWCSRC) be used, and that a valid value be specified for the INZMBR parameter. For more information about downloading extended wireless controller configuration data, see the

LAN, Frame-Relay and ATM Support  book.

More information about using this command is in the Local Device Configuration  book.

Required Parameters

CTLD Specifies the name of the controller description being created.

TYPE Specifies the type of work station controller for this description.

2637: The ASCII work station controller for the 9402 system is used.

2638: The twinaxial work station controller for the 9402 system is used.

2661: The twinaxial work station controller for the 9402 system is used.

266A: The wireless LAN adapter work station controller for wireless devices is used.

266A: The wireless LAN adapter work station controller for wireless devices is used.

266C: Local work station controller.

2722: Local work station controller.

2746: Twinaxial work station controller.

2747: Twinaxial work station controller.

6040: The twinaxial work station controller for the 9406 system is used.

6041: The ASCII work station controller for the 9406 system is used.

6050: The twinaxial work station controller for the 9402, 9404, or 9406 system is used.

6054: The LocalTalk** work station adapter for the 9402, 9404, or 9406 system is used.

6055: The LocalTalk work station adapter for the 9402, 9404, or 9406 system is used.

6056: The LocalTalk work station adapter for the 9402, 9404, or 9406 system is used.

6140: The twinaxial work station controller for the 9404 or 9406 system is used.

6141: The ASCII work station controller for the 9404 or 9406 system is used.

6A58: The local work station controller for the 9401, 9402, 9404, or 9406 system is used.

6A59: The local work station controller for the 9401, 9402, 9404, or 9406 system is used.

915A: The twinaxial work station controller for the 9406-3XX system is used.

916A: The twinaxial work station controller for the 9406-3XX system is used.

9173: The LocalTalk work station adapter for the 9402-2XX system is used.

MODEL

Specifies the model of the work station controller. The model number for the work station controller is one.

RSRCNAME

Specifies the resource name.

Note:

Use the Work with Hardware Resources (WRKHDWRSC) command with *LWS specified for the TYPE parameter to determine the resource name.

Optional Parameters

ONLINE

Specifies whether this object is automatically varied on at initial program load (IPL).

***YES:** The controller is automatically varied on at IPL.

***NO:** This controller is not automatically varied on at IPL.

DEVICE

Specifies the device description names of devices attached to this controller. The device descriptions must already exist. The maximum number of device descriptions that can be attached to each controller and the number of devices that can be active for each controller is shown below:

Table 1. Maximum Device Descriptions and Active Devices for Local Work Station Controller (DEVICE Parameter)

Controller	Maximum Number of Device Descriptions	Maximum Number of Active Devices
2661,6050	120	40
6040,6140, 915A,916A	56	40
6041,6141	36	18
6054,6055, 6056,266A,9173	56	56
2637	24	24
2638	56	56
6A58,6A59	1	1

DEVWAITTMR

Specifies the device wait timeout value. This is used to limit the amount of time that a subsystem takes for the work station input/output to complete. The timeout value that is used for each device is taken from the controller that it is attached to at vary on time.

A change in the DEVDWAITTMR parameter value takes effect for attached devices when they are next varied on.

10: For local controllers, the subsystem waits a maximum of 10 seconds for the completion of the input/output of each work station attached to this controller.

device-wait-timer: Specify a value ranging from 2 through 600 that specifies the maximum number of seconds that the subsystem waits for work station input/output to complete for all work stations attached to this controller.

When selecting a value for this parameter, the types of devices attached to the controller should be taken into account. Locally attached work stations should have a low value for this parameter (10 seconds or less).

AUTOCFG

Specifies whether this controller description is the one to which automatically configured devices are attached when they are configured. Although there can be more than one controller description for each controller, only one description can be an automatic configuration controller. When new devices are automatically configured on that controller, they are attached to the automatic configuration controller description.

***NO:** This is not an automatic configuration controller description.

***YES:** This is an automatic configuration controller.

AUT Specifies the authority given to users who do not have specific authority to the controller description, who are not on an authorization list, and whose user group has no specific authority to the controller description.

***LIBCRTAUT:** The authority for the object is the same as the create authority for QSYS. The create authority for QSYS can be displayed by using the Display Library Description (DSPLIBD) command. If the create authority is changed with the Change Library (CHGLIB) command, the new authority does not affect existing objects.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the controller description.

***USE:** The user can perform basic operations on the controller description, such as running a program or reading a file. The user cannot change the controller description. *USE authority provides object operational authority, read authority, and execute authority.

***EXCLUDE:** The user cannot access the controller description.

authorization-list-name: Specify the name of the authorization list used.

INZFILE

Specifies the name of a source file containing configuration initialization data.

Note:

The INZFILE and INZMBR parameters are required when downloading extended wireless controller configuration data to the wireless adapter as discussed at the beginning of this command description.

***NONE:** No initialization file name is specified.

The name of the initialization file name can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

initialization-file-name: Specify the name of a source file containing the initialization data. A value of *NONE is accepted for this parameter. If a source file name has not been added prior to varying on this controller description, then the current IOP defaults are used for initialization.

INZMBR

Specifies the name of a source file member containing configuration initialization data (for a type 266A controller only).

Note:

The INZFILE and INZMBR parameters are required when downloading extended wireless controller configuration data to the wireless adapter as discussed at the beginning of this command description.

***NONE:** No source file member is specified.

initialization-member-name: Specify the name of a source file member containing the initialization data. A value of *NONE is accepted for this parameter. If a source member name has not been added prior to varying on this controller description, then the current IOP defaults are used for initialization.

INZPGM

Specifies the name of a program to manage configuration initialization data.

Note:

For 266A wireless controllers, it is recommended that INZPGM(QZXCINZ) be specified. This results in the values of INZFILE and INZMBR being passed to the Add Extended Wireless Controller Member (ADDEWCM) command when the controller is varied on.

***NONE:** No initialization program name is specified.

The name of the initialization program name can be qualified by one of the following library values:


***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

initialization-program-name: Specify the name of a program to manage configuration initialization data. If a program name is specified, it is called when this controller description is created. The names of the source file and member containing configuration initialization data are passed to this program as parameters.

MSGQ

Specifies the qualified name of the message queue to which messages are sent. More information about using this parameter is in the Communications Management  book.

Single Values

***SYSVAL:** Messages are sent to the message queue defined in the system value QCFGMSGQ.

***SYSOPR:** Messages are sent to the system operator message queue (QSYS/QSYSOPR).

library-name/message-queue-name: Specify the library-qualified name of the message queue to which operational messages are sent.

TEXT Specifies the text that briefly describes the program and its function. More information on this parameter is in Commonly used parameters.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CRTCTLLWS

```
CRTCTLLWS  CTLD(MYCTLR)  TYPE(6050)  MODEL(1)
           RSRcname(CTL02) INZFILE(*LIBL/MYFILE) INZMBR(MBR2)
```

This command creates a 6050 Model 1 local work station controller description with the name MYCTLR, and a resource name of CTL02. The source member MBR2, in source file MYFILE, will contain configuration initialization data.

Error messages for CRTCTLLWS

*ESCAPE Messages

CPD2761

Model not valid for controller type.

CPD2787

Too many devices attached for controller type.

CPF26BB

Extended wireless controller member not changed.

CPF26BC

Extended wireless controller member not displayed.

CPF26BD

Entry for barcode group not removed from extended wireless controller member.

CPF26BE

Entry for PTC group not removed from extended wireless controller member.

CPF26BF

Program QZXCINZ terminated abnormally. See previous messages.

CPF26B3

Extended wireless line member not added.

CPF26B4

Extended wireless line member not changed.

CPF26B5

Extended wireless line member not displayed.

CPF26B8

Extended wireless controller member not added.

CPF2716

Controller description &1 not created.

CRTCTLNET (Create Controller Description (Network)) Command Description

CRTCTLNET Command syntax diagram

Purpose

The Create Controller Description (Network) (CRTCTLNET) command creates a controller description for a network controller. More information about using this command is in the Communications Configuration



book.

Required Parameter

CTLD Specifies the name of the controller description being created.

Optional Parameters

ONLINE

Specifies whether this object is automatically varied on at initial program load (IPL).

***YES:** The controller is automatically varied on at IPL.

***NO:** This controller is not automatically varied on at IPL.

LINE Specifies the name of the nonswitched lines to which this controller is attached. The line description must already exist.

DEV Specifies the names of up to 255 devices that are attached to this controller. The device descriptions must already exist.

CNNRSPTMR

Specifies the amount of time the system will wait before responding to an incoming connection request.

170: The system will wait 170 seconds before responding to an incoming connection request.

connection-response-timer: Specify the amount of time the system will wait before responding to a connection request. Valid values range from 1 to 3600 seconds.

NTBD Specifies the NetBIOS description to be used for this controller. The NetBIOS description must already exist.

***NONE:** This controller does not use the NetBIOS protocol

QNTBIBM: Use the IBM supplied NetBIOS description

NetBIOS-description-name: Specify a NetBIOS description.

AUT Specifies the authority given to users who do not have specific authority to the controller description network, who are not on an authorization list, and whose user group has no specific authority to the controller description network.

***LIBCRTAUT:** The authority for the object is the same as the create authority for QSYS. The create authority for QSYS can be displayed by using the Display Library Description (DSPLIBD) command. If the create authority is changed with the Change Library (CHGLIB) command, the new authority does not affect existing objects.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the controller description network.

***USE:** The user can perform basic operations on the controller description network, such as running a program or reading a file. The user cannot change the controller description network.

***USE** authority provides object operational authority, read authority, and execute authority.

***EXCLUDE:** The user cannot access the controller description network.

authorization-list-name: Specify the name of the authorization list used.

TEXT Specifies the text that briefly describes the program and its function. More information on this parameter is in Commonly used parameters.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CRTCTLNET

```
CRTCTLNET  CTLD(CTL0A)  LINE(LIN01)
```

This command creates a network controller description with the name CTL0A. An existing line, LIN01, is specified as the network line for the controller.

Error messages for CRTCTLNET

*ESCAPE Messages

CPF26BB

Extended wireless controller member not changed.

CPF26BC

Extended wireless controller member not displayed.

CPF26BD

Entry for barcode group not removed from extended wireless controller member.

CPF26BE

Entry for PTC group not removed from extended wireless controller member.

CPF26BF

Program QZXCINZ terminated abnormally. See previous messages.

CPF26B3

Extended wireless line member not added.

CPF26B4

Extended wireless line member not changed.

CPF26B5

Extended wireless line member not displayed.

CPF26B8

Extended wireless controller member not added.


CPF2716

Controller description &1 not created.

CRTCTLRWS (Create Controller Description (Remote Work Station)) Command Description

CRTCTLRWS Command syntax diagram

Purpose

The Create Controller Description (Remote Work Station) (CRTCTLRWS) command identifies a remote work station controller and describes its characteristics to the system. For more information about using this command, see the Communications Configuration  book.

Required Parameters

CTLD Specifies the name of the controller description being created.

TYPE Specifies the type of controller for this description.

3174: This description represents a 3174 controller.

3274: This description represents a 3274 controller.

5251: This description represents a 5251 controller.

5294: This description represents a 5294 controller.

5394: This description represents a 5394 controller.

5494: This description represents a 5494 controller.

5594: This description represents a 5594 controller.

MODEL

Specifies the model number of the controller represented by this description.

0: The controller for this model number is 3174 or 3274.

1: The controller for this model number is 5294, 5394, 5494, or 5594.

2: The controller for this model number is 5394 or 5494.

12: The controller for this model number is 5251 Model 12.

K01: The controller for this model number is 5294 Model K01, which is valid for systems supporting DBCS (double-byte character set).

LINKTYPE

Specifies the type of line to which this controller is attached.

***IDLC:** The controller is attached to an ISDN data link control (IDLC) line. This value can only be specified for 3174 controllers.

***LAN:** This controller is attached to an ethernet or token-ring local area network line. This value can only be specified for 3174 controllers.

***SDLC:** The controller is attached to an synchronous data link control (SDLC) line.

***X25:** This controller is attached to an X.25 line.

***NONE:** This controller is not attached to a line.

Optional Parameters

ONLINE

Specifies whether this object is automatically varied on at initial program load (IPL).

***YES:** The controller is automatically varied on at IPL.

***NO:** This controller is not automatically varied on at IPL.

SWITCHED

Specifies whether this controller is attached to a switched line. For an X.25 line, this parameter specifies whether the controller is attached to a switched virtual circuit (SVC).

***NO:** This controller is attached to a nonswitched line or permanent virtual circuit (PVC).

***YES:** This controller is attached to a switched line, switched virtual circuit (SVC), or a local area network (LAN) line.

SHM Specifies whether or not this controller is used for X.21 short-hold mode. To specify ***YES**, LINKTYPE(*SDLC) and SWITCHED(*YES) must also be specified.

***NO:** This controller is not used for X.21 short-hold mode.

***YES:** This controller is used for X.21 short-hold mode.

SNBU Specifies, for controllers attached to nonswitched lines only, whether the switched network backup (SNBU) feature is activated or deactivated. This feature lets the user bypass a broken nonswitched connection by establishing a switched connection. This parameter applies only if SWITCHED(*NO) and SNBU(*YES) are specified when the controller description is created.

Note: The Change Controller Description Remote Work Station (CHGCTLRWS) command must be used to actually activate the feature. This parameter is valid only when SWITCHED(*NO) is specified.

***NO:** The remote modem does not have the switched network backup (SNBU) feature.

***YES:** The remote modem has the switched network backup feature. To activate the feature when the nonswitched connection is broken, specify ACTSNBU(*YES) on the CHGCTLRWS command.

LINE Specifies the name of the nonswitched lines to which this controller is attached. The line description must already exist.

Note: For X.25 attachment, this parameter applies to controllers attached to permanent virtual circuits (PVC). The associated line must be varied off before this command is entered.

SWTLINLST

Specifies the names of the switched lines to which this controller attaches. The line descriptions must already exist. Up to 64 switched line names can be specified.

Note: The same line name can be used more than once. This parameter is valid only if SWITCHED(*YES), SNBU(*YES), LINKTYPE(*LAN), or LINKTYPE(*TRLAN) is specified.

DEV Specifies the names of the devices attached to this controller. The device descriptions must already exist.

The maximum number of devices that can be specified is 64, but varies for some types of controllers:

Controller

Maximum number of devices

5251	9
5294	8
5494	56
5594	56

CODE Specifies the character code used. The code can be either extended binary-coded decimal interchange code (*EBCDIC) or the American National Standard Code for Information Interchange (*ASCII).

***EBCDIC:** The extended binary-coded decimal interchange code (EBCDIC) character set code is used.

***ASCII:** The ASCII character set code is used.

DEVWAITMR

Specifies the device wait timeout value. This is used to limit the amount of time that a subsystem takes for the work station input/output to complete. The timeout value that is used for each device is taken from the controller to which it is attached at vary on time.

120: For the remote controller, the subsystem waits 120 seconds for the completion of the input/output of each work station attached to the controller.

device-wait-timer: Specify a value ranging from 2 through 600 seconds that the subsystem waits for the work station input/output to complete for all work stations attached to this controller.

MAXFRAME

Specifies the maximum frame (path information unit (PIU)) size that the controller can send or receive. This value is used to calculate request unit (RU) sizes. Since the maximum PIU size that the controller can send or receive is negotiated at exchange identifier time, the maximum PIU size used at run time may be different. This value matches the corresponding value on the host system.

***LINKTYPE:** If *LINKTYPE is specified, the system uses one of the following values (sizes in bytes):

- For 3174 controllers, the following values are used:

*SDLC - 265	*IDLC - 521
*X25 - 256	*LAN - 1994

- For 5394 controllers, the following values are used:

*SDLC - 517
*X25 - 512

Note:

A 5394 controller cannot be connected to local area network (*LAN).

maximum-frame-size: Specify the maximum frame size (PIU size) that can be used for this controller. The value specified for this parameter depends on the type of line and controller being used. The following values (measured in bytes) can be specified for this parameter:

- For 3174 controllers:

*SDLC	- 265
*X25	- 256, 265
*LAN	- 265 to 1994
*IDLC	- 265 to 1994

- For 5394 controllers:

*SDLC - 261, 517
*X25 - 256, 265, 512, 521

RMTLOCNAME

Specify the remote location name by which the controller is known to the local system.

LCLLOCNAME

Specifies the local location name.

***NETATR:** The local location name defined in the network attributes is used.

local-location-name: Specify a maximum of 8 characters for the local location name.

RMTNETID

Specifies the name of the remote network in which the adjacent control point resides. In general, the network identifier must be the same for all nodes in the network.

***NETATR:** The local network identifier defined in the network attributes is used as the remote network identifier.

***NONE:** No remote network identifier is used.

remote-network-ID: Specify a maximum of 8 characters for the remote network identifier.

EXCHID

Specifies the exchange identifier of this controller. The controller sends (exchanges) its identifier to another location when a connection is established. The 8-digit hexadecimal identifier contains three digits for the block number and five digits for the identifier of the specific controller.

Note:

Identifiers must be specified for controllers with LINKTYPE(*SDLC) and either SWITCHED(*YES) or SNBU(*YES). In all other cases the identifier is optional and is enforced only if specified.

For example, for the 5251 controller, the value is 020000xx, where 020 is the block number and 000xx is the controller identifier. The first 3 digits of the identifier are always 000, and xx represents the setting of the controller station address switches on the 5251 controller.

SSCPID

Specifies the system service control point (SSCP) of the host system.

050000000000: The default value is 050000000000.

system-service-control-point-identifier: Specify the system service control point identifier (SSCPID) as a 12-digit hexadecimal value.

INLCNN

Specifies the method used to make the initial connection on a switched line between the system and the remote controller. For X.25 lines, this parameter specifies the type of switched virtual circuit (SVC) connection that is made over the X.25 line.

***DIAL:** The connection is made by a call started from the local system.

For X.25, the line to which the controller attaches requires switched virtual circuits (SVCs) configured on the LGLCHLE parameter of type OUT or BOTH (*SVCOUT or *SVCBOTH) for the connection to be successful. If a call is received from the remote controller and all necessary conditions are met, the incoming call can be answered by the system. For X.25 lines, the line attached to the controller requires that switched virtual circuits (SVC) be configured on the LGLCHLE parameter of type IN or BOTH(*SVCIN or *SVCBOTH) for the connection to be successful.

***ANS:** The connection is made by the local system answering an incoming call from this controller.

DIALINIT

Specifies the method used to make the initial dial on a switched line between the system and the remote controller.

***LINKTYPE:** The type of dial connection initiated is specified on the LINKTYPE parameter. For LAN or SDLC short-hold mode connections, the default is to dial the connection immediately upon vary on of the controller description. For all other link types, the default is to delay the dial.

***IMMED:** The dial connection is initiated immediately upon vary on of the controller description.

***DELAY:** The dial connection is delayed until a job is initiated that requests the use of the remote controller resources.

CNNNBR

Specifies the telephone number to dial to connect to this controller.

***DC:** For X.21 circuit switched connections, a direct call is used to connect to the controller.

***ANY:** Calls are accepted from any network address.

connection-number: Specify a telephone number, an X.25 network address, or an X.21 connection number depending on the type of controller and the type of line to which it is attached.

ANSNBR

Specifies the X.25 network address from which to accept calls.

***CNNNBR:** Calls from the X.25 network address specified by the connection number (CNNNBR) parameter are accepted.

***ANY:** Calls are accepted from any X.25 network address.

CNNLSTOUT

Specifies, for ISDN switched connections, the name of a connection list object that contains the ISDN assigned numbers for a dial out operation to the ISDN.

CNNLSTOUTE

Specifies for ISDN switched connections, the entry name from the connection list that is used to make a call to the ISDN. The connection list must be specified on the CNNLSTOUT parameter.

IDLCWDWSIZ

Specifies the window size for transmission to, and reception from, the remote controller.

***LIND:** The window size specified in the line description is used.

IDLC-window-size: Specify the window size. Valid values range from 1 through 31.

IDLCFRMRTY

Specifies the maximum number of attempts to transmit a frame before an error is reported.

***LIND:** The controller specified in the line description is used.

IDLC-frame-retry: Specify the number of attempts. Valid values range from 0 through 100.

IDLCRSPTMR

Specifies the amount of time, in tenths of a second, to wait before retransmitting a frame if acknowledgement has not been received.

***LIND:** The controller specified in the line description is used.

IDLC-response-timer: Specify the amount of time to wait. Valid values range from 10 through 100 tenths of a second. For example, 10 seconds equals 100 tenths of a second.

IDLCCNNRTY

Specifies the number of times to attempt retransmission at connection time.

***LIND:** The controller specified in the line description is used.

***NOMAX:** There is no disconnect limit.

IDLC-connect-retry: Specify the number of attempts. Valid values range from 1 through 100.

PREDIALDLY

Specifies how long to wait (in 0.5 second intervals) before dialing.

6: The value of 6 provides a 3-second delay.

predial-delay: Specify a value ranging from 1 through 254 in 0.5-second intervals, or specify 0 to indicate no delay.

REDIALDLY

Specifies how long to wait (in 0.5 second intervals) before re-dialing when the call attempt is unsuccessful.

120: The default value of 120 provides a 60-second delay.

redial-delay: Specify a value ranging from 1 through 254 in 0.5-second intervals, or specify 0 to indicate no delay.

DIALRTY

Specifies the number of re-dial attempts made by the system before considering the dialing unsuccessful.

2: The LZ algorithm with the 12-bit code for repeated substrings in the data stream is used. These codes refer to entries in a common dictionary, created as the data flows between the sender and receiver. The LZ algorithms require storage and extra processing time. The LZ12 requires the most storage and processing time of the LZ algorithms; however, it compresses the data stream the most.

dial-retry: Specify a value ranging from 0 through 254 for the number of times to retry dialing.

SHMDSCLMT

Specifies the number of nonproductive responses (RR or RNR) that are required from the remote station before the connection can be suspended for this X.21 short-hold mode connection. This parameter is used only if SHM(*YES) is specified.

10: Ten nonproductive responses must be received before the connection can be suspended.

***NOMAX:** There is no disconnect limit.

SHM-disconnect-limit: Specify a value ranging from 1 through 254, indicating the number of nonproductive responses that must be received before the connection can be suspended.

SHMDSCTMR

Specifies the minimum length of time that the primary system maintains the connection to the remote system for this X.21 short-hold mode controller, in tenths of a second. This parameter is used only if SHM(*YES) is specified.

50: The primary system maintains the connection to the remote system for a minimum of 5 seconds.

SHM-disconnect-timer: Specify a value, ranging from 2 through 3000, indicating the minimum length of time, in tenths of a second, that the primary system maintains the connection to the remote system.

STNADR

Specifies the station address used when communicating with the controller.

Note:

This is the station address of the remote controller. Valid values range from 01 through FE. This is a required field for SDLC.

POLLPTY

Specifies whether this controller has priority when being polled.

***NO:** This controller does not have polling priority.

***YES:** This controller has polling priority.

POLLMT

Specifies the number of consecutive polls that are issued to the same controller when the poll results in receiving frames.

0: No consecutive polls are attempted.

poll-limit: Specify a value ranging from 1 through 4 for the number of consecutive polls.

OUTLMT

Specifies the number of times SDLC allows the consecutive transmission of the maximum number of frames to a station before allowing transmission to another station.

***POLLMT:** The value specified on the POLLMT parameter is used.

out-limit: Specify a value ranging from 0 through 4 for the number of consecutive transmissions.

CNNPOLLRTY

Specifies the number of times the connect poll is retried before reporting an error.

***CALC:** The number of retries is 7 if the controller is switched, and *NOMAX if the controller is nonswitched.

***NOMAX:** There is no disconnect limit.

connect-poll-retry: Specify a value for the number of retries. Valid values range from 0 through 65534.

NDMPOLLTMR

Specifies the interval for polling this controller when it is in normal disconnect mode (NDM).

***CALC:** The system determines the value to use.

NDM-poll-timer: Specify a value ranging from 1 through 3000 in 0.1-second intervals, or specify 0 to indicate no timer.

ADPTADR

Specifies the 12-character adapter address of the remote controller. This is the address to which the system sends data when it communicates with the remote controller. This value can be obtained from the remote controller's configuration record. Valid values range from hex 000000000001 through hex FFFFFFFF.

DSAP Specifies the logical address of the SNA destination service access point (DSAP) to which this system sends data when it communicates with the remote controller. This address allows the controller and the system to route the data that comes from this system. The value must match the value specified on the source service access point (SSAP) parameter in the remote controller's configuration record.

04: The destination SNA destination service access point is 04.

destination-service-access-point: Specify a hexadecimal value ranging from 04 through 9C, in increments of 4 (for example, 04, 08, 0C, 10) to represent the SNA destination service access point.

SSAP Specifies the source service access point. This is the logical address this system uses when it sends data to the remote controller. This address allows the remote controller and the system to route the data that comes from this system. It must match the value assigned to the destination service access point (DSAP) prompt in the remote controller's configuration record.

04: The SNA source service access point is 04.

source-service-access-point: Specify a hexadecimal value ranging from 04 through 9C, in increments of 4 (for example, 04, 08, 0C, 10) to represent the SNA source service access point.

LANFRMRTY

Specifies the number of times a frame is transmitted if there is no acknowledgement from the remote controller in the time period specified on the LANRSPTMR parameter. This value is used only after a successful connection has been made.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-frame-retry: Specify a value ranging from 0 through 254 for the number of times a frame is transmitted before an acknowledgement is received.

LANCNNRTY

Specifies the number of times a transmission is attempted before an acknowledgement is received. This value is used at connection time (unlike LANFRMRTY which is used after a connection has been made).

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-connection-retry: Specify a value ranging from 0 through 254 for the number of times the transmission is attempted before an acknowledgement is received.

LANRSPTMR

Specifies the length of time the system waits before an inoperative condition occurs on a link after a connection is made.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-response-timer: Specify a value ranging from 1 through 254 in 0.1-second intervals for the amount of time the system waits before an inoperative condition occurs.

LANCNNTMR

Specifies the length of time the system waits before an inoperative condition occurs on a link at connection time.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-connection-timer: Specify a value ranging from 1 through 254 in 0.1-second intervals for the amount of time the system waits before an inoperative condition occurs.

LANACKTMR

Specifies the length of time the system waits before sending an acknowledgement for received frames.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-acknowledgement-timer: Specify a value ranging from 1 through 254 in 0.1-second intervals, or specify 0 to indicate no delay. If 0 is specified for this parameter, 0 must also be specified for the LANACKFRQ parameter; if a nonzero value is specified for this parameter, a nonzero value must also be specified for the LANACKFRQ parameter.

LANINACTMR

Specifies the length of time in which to determine an inactive condition for the controller.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-inactivity-timer: Specify a value ranging from 1 through 255 in 0.1-second intervals for the length of time used to determine an inactive condition for the controller.

LANACKFRQ

Specifies the maximum number of frames that are received before an acknowledgement is sent to the controller.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-acknowledgement-frequency: Specify a value ranging from 0 through 127 for the number of frames received. If 0 is specified for this parameter, 0 must also be specified for the LANACKTMR parameter; if a nonzero value is specified for this parameter, a nonzero value must also be specified for the LANACKTMR parameter.

LANMAXOUT

Specifies the maximum number of frames that can be sent before an acknowledgement is received from the remote system.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-maximum-outstanding-frames: Specify a value ranging from 1 through 127 for the number of frames that can be sent before an acknowledgement is received.

LANACCPTY

Specifies the priority granted to the sending system for sending frames. The larger the number, the higher the priority.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-access-priority: Specify a value ranging from 0 through 3 to indicate how soon a frame can be sent on a local area network (LAN).

LANWDWSTP

Specifies whether to reduce the number of outstanding frames that can be sent before an acknowledgement is received from the remote system during network congestion. This parameter (LAN Window Step) also indicates the number of frames that must be successfully received before the number of outstanding frames can be incremented to the maximum allowable value.

***NONE:** The number of outstanding frames is not reduced during network congestion.

LAN-number-of-frames: Specify the number of outstanding frames to be reduced before an acknowledgement is received from the remote system.

NETLVL

Specifies the level of the X.25 network used to reach this controller. The level is specified by giving the year of the standard used by the X.25 network.

1980: 1980 standard is used.

1984: 1984 standard is used.

1988: The 1988 standard is used.

LINKPCL

Specifies the link level protocol used on the X.25 network to communicate with this controller.

***QLLC:** The qualified logical link control (QLLC) protocol is used.

***ELLC:** The enhanced logical link control (ELLC) protocol is used.

LGLCHLID

Specifies the logical channel ID which is used for the X.25 PVC to this controller.

Specify *xyy* where *x* is the X.25 logical channel group number assigned to this controller, and *yy* is the X.25 logical channel number assigned to this controller.

CNNPWD

Specifies the X.25 network password used for password exchange with the X.24 Call Request and Incoming Call packets (Call User Data field). This parameter is not valid for permanent virtual circuit (PVC) connections.

This value cannot exceed eight characters. If fewer than eight characters are specified, the field is padded with blanks. The password on incoming call requests must match this password, or no connection is allowed. Valid passwords consist of hexadecimal values ranging from 40 through FF. The keyboard available to the user can only support a subset of these characters.

Note:

This connection password is highly recommended for controllers that operate with the Enhanced Logical Link Control (ELLC) protocol LINKPCL(*ELLC) on switched virtual circuit (SVC) connections. This enhanced protocol supports reconnection of virtual circuits after network errors which disconnect the line with a clear signal; however, this reconnection is not allowed to proceed without the password validation procedure being used as a unique identifier for the controller.

SWTLINSLCT

Specifies the method that is used to select lines from an X.25 switched line list.

***FIRST:** The lines are selected in the order in which they are specified.

***CALC:** The system determines the value to use.

DFTPKTSIZE

Specifies the default packet size used by the X.25 network.

Element 1: Transmit Packet Size

***LIND:** The value specified in the line description is used as the controller.

transmit-packet-size: Specify a default packet size for transmission. The valid values for the packet size are 64, 128, 256, 512, 1024, 2048, and 4096.

Element 2: Receive Packet Size

***LIND:** The value specified in the line description is used as the controller.

***TRANSMIT:** The value specified as the default packet size for transmission is used as the default for reception.

receive-packet-size: Specify a default packet size for reception. The valid values for the packet size are 64, 128, 256, 512, 1024, 2048, and 4096.

DFTWDWSIZE

Specifies the default window size used by the X.25 network.

Element 1: Transmit Window Size

***LIND:** The value specified in the line description is used as the controller.

transmit-window-size: Specify the appropriate default window size. Valid values range from 1 through 7 for networks that use modulus-8 packet numbering. Valid values range from 1 through 15 for networks that use 128 packet numbering.

Element 2: Receive Window Size

***LIND:** The value specified in the line description is used as the controller.

***TRANSMIT:** The value specified as the default window size for transmission is used as the default for reception.

receive-window-size: Specify the appropriate default window size. Valid values range from 1 through 7 for networks that use modulus-8 packet numbering. Valid values range from 1 through 15 for networks that use 128 packet numbering.

USRGRPID

Specifies the closed user-group ID for contacting this station as provided by the network subscription. This parameter is not valid for permanent virtual circuit (PVC) connections. It valid only for SVC circuits outgoing call operations and is ignored for SVC incoming call connections.

RVSCRG

Specifies whether reverse charges are accepted or requested when contacting this controller.

***NONE:** No reverse charging for network tariff billing is accepted.

***REQUEST:** Charges are requested on outgoing call request packets.

***ACCEPT:** Reverse charging for network tariff billing is accepted on incoming requests.

***BOTH:** Both incoming and outgoing requests are accepted.

X25FRMRTY

Specifies the maximum number of times a frame is sent after the response timer ends when connected to this controller.

7: Rotation of the text is done 270 degrees clockwise from the 0 degree writing position.

X.25-frame-retry: Specify a value ranging from 0 through 21 for the number of attempts.

X25CNNRTY

Specifies the maximum number of times that a frame is sent after the connect response timer ends when connecting to this controller.

7: Rotation of the text is done 270 degrees clockwise from the 0 degree writing position.

X.25-connection-retry: Specify a value ranging from 1 through 21 for the number in 0.1-second intervals, or specify 0 to indicate no timer.

X25RSPTMR

Specifies the time allowed for a response to be returned when a frame is sent while connected to this controller.

100: The time allowed for response is ten seconds.

X.25-response-timer: Specify a value ranging from 1 through 2550 in 0.1-second intervals.

X25CNNTMR

Specifies the time allowed for a response to be returned when a frame is sent while connecting to this controller.

100: The time allowed for a response is ten seconds.

X.25-connection-timer: Specify a value ranging from 1 through 2550 in 0.1-second intervals.

X25DLYTMR

Specifies how often to try establishing a connection to the controller.

***CALC:** The system determines the value to use.

X.25-delayed-connection-timer: Specify a value ranging from 1 through 32767 in 0.1-second intervals. The system retries the connection indefinitely at the specified intervals.

X25ACKTMR

Specifies the time period to delay sending responses for received frames.

20: The time allowed for a response is ten seconds.

X.25-acknowledgement-timer: Specify a value ranging from 1 through 2550 in 0.1-second intervals.

X25INACTMR

Specifies the time period used to determine an inactive condition for the controller.

350: An inactive condition is determined after 35 seconds.

X.25-inactivity-timer: Specify a value ranging from 1 through 2550 in 0.1-second intervals.

USRFCL

Specifies a string of hexadecimal digits sent to the X.25 network to request additional services. The iSeries 400 allows up to 218 hexadecimal characters.

ALCRTYTMR

Specifies the length of time, in seconds, the system waits between attempts to establish an LU6.2 session.

180: The system waits 180 seconds.

1-9999: Specify a length of time in seconds. Valid values range from 1 through 9999.

AUTOCRTDEV

Specifies whether device descriptions can be automatically created for this controller description.

***ALL:** Automatic creation allowed for device descriptions.

***NONE:** Automatic creation not allowed for device descriptions.

SWTDSC

Specifies whether this controller should be disconnected when the system determines that the last device is no longer in use.

***YES:** The controller is disconnected.

***NO:** The controller is not disconnected.

CMNRCYLMT

Specifies the number of recovery attempts made by the system before an inquiry message is sent to the system operator. Also specifies the time (in minutes) that must elapse before the system sends an inquiry message to the system operator indicating that the recovery attempt count limit is reached.

Element 1: Maximum Recovery Limit

2: Two recovery attempts are made within the interval specified.

count-limit: Specify the number of recovery attempts to be made. Valid values range from 0 through 99.

Element 2: Recovery Time Interval

5: A 15-second time-out period is used.

time-interval: Specify the time interval (in minutes) at which the specified number of second-level recoveries are attempted. Valid values range from 0 through 120. If the value specified for *count-limit* is not 0, the value 0 specifies infinite recovery.

Other Single Value

***SYSVAL:** The recovery limits specified in the QCMNRCYLMT system value are used.

AUT

Specifies the authority given to users who do not have specific authority to the controller description, who are not on an authorization list, and whose user group has no specific authority to the controller description.

***LIBCRTAUT:** The authority for the object is the same as the create authority for QSYS. The create authority for QSYS can be displayed by using the Display Library Description (DSPLIBD) command. If the create authority is changed with the Change Library (CHGLIB) command, the new authority does not affect existing objects.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.


***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the controller description.

***USE:** The user can perform basic operations on the controller description, such as running a program or reading a file. The user cannot change the controller description. *USE authority provides object operational authority, read authority, and execute authority.

***EXCLUDE:** The user cannot access the controller description.

authorization-list-name: Specify the name of the authorization list used.

MSGQ

Specifies the qualified name of the message queue to which messages are sent. More information about using this parameter is in the Communications Management  book.

Single Values

***SYSVAL:** Messages are sent to the message queue defined in the system value QCFGMSGQ.

***SYSOPR:** Messages are sent to the system operator message queue (QSYS/QSYSOPR).

library-name/message-queue-name: Specify the library-qualified name of the message queue to which operational messages are sent.

TEXT Specifies the text that briefly describes the program and its function. More information on this parameter is in Commonly used parameters.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CRTCTLRWS

```
CRTCTLRWS  CTLD(CTL005)  TYPE(5294)  MODEL(1)
LINKTYPE(*SDLC)  SWITCHED(*YES)
EXCHID(04500003)  INLCNN(*ANS)  STNADR(03)
CNNNBR(5551234)  TEXT('Chicago branch')
```

This command creates a 5294 Model 1 remote controller description called CTL005. The controller is on a SDLC switched line at telephone number 555-1234. Connection to the controller is initiated by an incoming call to the iSeries 400.

Error messages for CRTCTLRWS

*ESCAPE Messages

CPF26BB

Extended wireless controller member not changed.

CPF26BC

Extended wireless controller member not displayed.

CPF26BD

Entry for barcode group not removed from extended wireless controller member.

CPF26BE

Entry for PTC group not removed from extended wireless controller member.

CPF26BF

Program QZXCINZ terminated abnormally. See previous messages.

CPF26B3

Extended wireless line member not added.

CPF26B4

Extended wireless line member not changed.

CPF26B5

Extended wireless line member not displayed.

CPF26B8

Extended wireless controller member not added.


CPF2716

Controller description &1 not created.

CRTCTLRTL (Create Controller Description (Retail)) Command Description

CRTCTLRTL Command syntax diagram

Purpose

The Create Controller Description (Retail) (CRTCTLRTL) command creates a controller description for a retail controller. More information about using this command is in the Communications Configuration  book.

Required Parameters

CTLD Specifies the name of the controller description being created.

TYPE Specifies the type of controller.

3651: This description represents a 3651 controller.

3684: This description represents a 3684 controller.

4680: This description represents a 4680 controller.

4684: This description represents a 4684 controller.

MODEL

Specifies the model number of the controller represented by this description. Specify 0 for this parameter.

LINKTYPE

Specifies the type of line to which this controller is attached.

***SDLC:** This controller is attached to a synchronous data link control (SDLC) line.

***X25:** This controller is attached to an X.25 line.

***LAN:** This controller is attached to an Ethernet or token-ring local area network line.

Optional Parameters

ONLINE

Specifies whether this object is automatically varied on at initial program load (IPL).

***YES:** The controller is automatically varied on at IPL.

***NO:** This controller is not automatically varied on at IPL.

SWITCHED

Specifies whether this controller is attached to a switched line.

***NO:** This controller is attached to a nonswitched line.

***YES:** This controller is attached to a switched line.

SNBU Specifies, for controllers attached to nonswitched lines only, whether the switched network backup (SNBU) feature is activated or deactivated. This feature lets the user bypass a broken

nonswitched connection by establishing a switched connection. This parameter applies only if SWITCHED(*NO) and SNBU(*YES) are specified when the controller description is created.

Note: The Change Controller Description (Retail) (CHGCTLRTL) command must be used to activate the feature. This parameter is valid only when SWITCHED(*NO) is specified.

***NO:** The remote modem does not have the switched network backup (SNBU) feature.

***YES:** The remote modem has the switched backup feature. To activate the feature when the nonswitched connection is broken, specify ACTSNBU(*YES) on the CHGCTLRTL command.

LINE Specifies the name of the nonswitched lines to which this controller is attached. The line description must already exist.

SWTLINLST

Specifies the names of the switched lines to which this controller attaches. The line descriptions must already exist. Up to 64 switched line names can be specified.

Note: The same line name can be used more than once. This parameter is valid only if SWITCHED(*YES) or SNBU(*YES) is specified.

DEV Specifies the names the devices attached to this controller. The device descriptions must already exist. The maximum number of devices that can be attached to this controller and active (varied on) is shown in the table below:

Table 1. Maximum Number of Device Descriptions that Can be Attached and Active

Controller Type	Maximum Attached	Maximum Active
3651	14	14
3684	2	2
4680	84	40
4684	254	16

CODE Specifies the character code used. The code can be either extended binary-coded decimal interchange code (*EBCDIC) or the American National Standard Code for Information Interchange (*ASCII).

***EBCDIC:** The extended binary-coded decimal interchange code (EBCDIC) character set code is used.

***ASCII:** The ASCII character set code is used.

MAXFRAME

Specifies the maximum frame (path information unit (PIU)) size that the controller can send or receive. This value is used to calculate request unit (RU) sizes. Since the maximum PIU size that the controller can send or receive is negotiated at exchange identifier time, the maximum PIU size used at run time may be different. This value matches the corresponding value on the host system.

***LINKTYPE:** The frame size is 521 bytes for *SDLC, 1024 bytes for *X25, and 1994 bytes for *LAN.

maximum-frame-size: Specify 521, 1033, or 1994 bytes as the maximum frame size for this controller. Specify 1024 only if linktype is *X25. Specify 1994 only if linktype is *LAN.

EXCHID

Specifies the exchange identifier of this controller. The controller sends (exchanges) its identifier to another location when a connection is established. The 8-digit hexadecimal identifier contains three digits for the block number and five digits for the identifier of the specific controller.

Note:

Identifiers must be specified for controllers with LINKTYPE(*SDLC) and either SWITCHED (*YES) or SNBU(*YES) specified. In all other cases the identifier is optional and is enforced only if specified.

SSCPID

Specifies the system service control point (SSCP) of the host system.

050000000000: The default value is 050000000000.

system-service-control-point-identifier: Specify the system service control point identifier (SSCPID) as a 12-digit hexadecimal value.

INLCNN

Specifies the method used to establish a connection with this controller.

***DIAL:** The connection is made by a call started from the local system.

For X.25, the line to which the controller attaches requires switched virtual circuits (SVCs) configured on the LGLCHLE parameter of type OUT or BOTH (*SVCOUT or *SVCBOTH) for the connection to be successful.

***ANS:** The connection is made by the local system answering an incoming call from this controller.

CNNNBR

Specifies the telephone number to dial to connect to this controller.

connection-number: Specify a telephone number or a connection number depending on the type of controller and the type of line to which it is attached.

ANSNBR

Specifies the X.25 network address from which to accept calls.

***CNNNBR:** Calls from the X.25 network address specified by the connection number (CNNNBR) parameter are accepted.

***ANY:** Calls are accepted from any X.25 network address.

PREDIALDLY

Specifies how long to wait (in 0.5 second intervals) before dialing.

6: The value of 6 provides a 3-second delay.

predial-delay: Specify a value ranging from 1 through 254 in 0.5-second intervals, or 0 to indicate no delay.

REDIALDLY

Specifies how long to wait (in 0.5 second intervals) before re-dialing when the call attempt is unsuccessful.

120: The default value of 120 provides a 60-second delay.

redial-delay: Specify a value ranging from 1 through 254 in 0.5-second intervals, or 0 to indicate no delay.

DIALRTY

Specifies the number of re-dial attempts made by the system before considering the dialing unsuccessful.

2: The LZ algorithm with the 12-bit code for repeated substrings in the data stream is used. These codes refer to entries in a common dictionary, created as the data flows between the sender and receiver. The LZ algorithms require storage and extra processing time. The LZ12 requires the most storage and processing time of the LZ algorithms; however, it compresses the data stream the most.

dial-retry: Specify a number ranging from 0 through 254 for the number of times to retry dialing.

SWTDSC

Specifies whether the switched connection to this controller is made inoperative when the last device is varied off.

***YES:** The switched connection is disconnected when the last device is varied off.

***NO:** The switched connection is not dropped when the last device is varied off.

STNADR

Specifies the station address used when communicating with the controller.

Note:

This is the station address of the controller. Valid values range from 01 through FE. This is a required field for SDLC.

POLLPTY

Specifies whether this controller has priority when being polled.

***NO:** This controller does not have polling priority.

***YES:** This controller has polling priority.

POLLMT

Specifies the number of consecutive polls that are issued to the same controller when the poll results in receiving frames.

0: The format of this tape is QIC3040, which is used for 1/4 inch minicartridge tapes that can hold up to 840 megabytes of data.

poll-limit: Specify a value ranging from 1 through 4 for the number of consecutive polls.

OUTLMT

Specifies the number of times SDLC allows the consecutive transmission of the maximum number of frames to a station before allowing transmission to another station.

***POLLMT:** The value specified on the POLLMT parameter is used.

out-limit: Specify a value ranging from 0 through 4 for the number of consecutive transmissions.

CNNPOLLRTY

Specifies the number of times to retry connecting to a controller before reporting an error.

***CALC:** The number of retries is 7 if the controller is switched, and *NOMAX if the controller is nonswitched.

***NOMAX:** There is no disconnect limit.

connect-poll-retry: Specify a value ranging from 0 through 65534 for the number of retries.

NDMPOLLTMR

Specifies the interval for polling this controller when it is in normal disconnect mode (NDM).

***CALC:** The system determines the value to use.

NDM-poll-timer: Specify a value ranging from 1 through 3000 in 0.1-second intervals, or 0 to indicate no timer.

ADPTADR

Specifies the 12-character adapter address of the remote controller. This is the address to which the system sends data when it communicates with the remote controller. This value can be obtained from the remote controller's configuration record. Valid values range from hex 000000000001 through hex FFFFFFFF.

DSAP Specifies the logical address of the SNA destination service access point (DSAP) to which this system sends data when it communicates with the remote controller. This address allows the controller and the system to route the data that comes from this system. The value must match the value specified on the source service access point (SSAP) parameter in the remote controller's configuration record.

04: The destination SNA destination service access point is 04.

destination-service-access-point: Specify a hexadecimal value ranging from 04 through 9C, in increments of 4 (for example, 04, 08, 0C, 10) to represent the SNA destination service access point.

SSAP Specifies the source service access point. This is the logical address this system uses when it sends data to the remote controller. This address allows the remote controller and the system to route the data that comes from this system. It must match the value assigned to the destination service access point (DSAP) prompt in the remote controller's configuration record.

04: The SNA source service access point is 04.

source-service-access-point: Specify a hexadecimal value ranging from 04 through 9C, in increments of 4 (for example, 04, 08, 0C, 10) to represent the SNA source service access point.

LANFRMRTY

Specifies the number of times a frame is transmitted if there is no acknowledgement * * from the remote controller in the time period specified on the LANRSPTMR parameter. This value is used only after a successful connection has been made.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-frame-retry: Specify a value ranging from 0 through 254 for the number of times a frame is transmitted before an acknowledgement is received.

LANCNRRTY

Specifies the number of times a transmission is attempted before an acknowledgement is received. This value is used at connection time (unlike LANFRMRTY which is used after a connection has been made).

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-connection-retry: Specify a value ranging from 0 through 254 for the number of times the transmission is attempted before an acknowledgement is received.

LANRSPTMR

Specifies the length of time the system waits before an inoperative condition occurs on a link after a connection is made.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-response-timer: Specify a value ranging from 1 through 254 in 0.1-second intervals for the amount of time the system waits before an inoperative condition occurs.

LANCNTMR

Specifies the length of time the system waits before an inoperative condition occurs on a link at connection time.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-connection-timer: Specify a value ranging from 1 through 254 in 0.1-second intervals for the amount of time the system waits before an inoperative condition occurs.

LANACKTMR

Specifies the length of time the system waits before sending an acknowledgement for received frames.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-acknowledgment-timer: Specify a value ranging from 1 through 254 in 0.1-second intervals, or specify 0 to indicate no delay. If 0 is specified for this parameter, 0 must also be specified for the LANACKFRQ parameter; if a nonzero value is specified for this parameter, a nonzero value must also be specified for the LANACKFRQ parameter.

LANINACTMR

Specifies the length of time in which to determine an inactive condition for the controller.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-inactivity-timer: Specify a value ranging from 1 through 255 in 0.1-second intervals for the length of time used to determine an inactive condition for the controller.

LANACKFRQ

Specifies the maximum number of frames that are received before an acknowledgment is sent to the controller.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-acknowledgment-frequency: Specify a value ranging from 0 through 127 for the number of frames received. If 0 is specified for this parameter, 0 must also be specified for the LANACKTMR parameter; if a nonzero value is specified for this parameter, a nonzero value must also be specified for the LANACKTMR parameter.

LANMAXOUT

Specifies the maximum number of frames that can be sent before an acknowledgment is received from the remote system.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-maximum-outstanding-frames: Specify a value ranging from 1 through 127 for the number of frames that can be sent before an acknowledgement is received.

LANACCPTY

Specifies the priority granted to the sending system for sending frames. The larger the number, the higher the priority.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-access-priority: Specify a value ranging from 0 through 3 to indicate how soon a frame can be sent on a local area network (LAN).

LANWDWSTP

Specifies whether to reduce to 1 the maximum number of frames outstanding to the remote system during network congestion. This parameter indicates the number of frames that must be successfully received by the remote system before the number of maximum outstanding frames can be increased by 1. The increase continues this way until the maximum number of outstanding frames reaches the value specified by the LAN maximum outstanding frames (LANMAXOUT) parameter.

***NONE:** The number of outstanding frames is not reduced during network congestion.

LAN-window-step: Specify a value from 1 to 127 for the number of frames that must be successfully received by the remote system before the maximum number of outstanding frames can be increased by 1.

NETLVL

Specifies the level of the X.25 network used to reach this controller. The level is specified by giving the year of the standard used by X.25 network.

1980: The 1980 Standard is used.

1984: The 1984 Standard is used.

1988: The 1988 standard is used.

LGLCHLID

Specifies the logical channel ID used for the X.25 permanent virtual circuit to this controller. The valid entry is in the format *xyy*, where:

x = the logical group number, derived from the network subscription

yy = the logical channel number, derived from the subscription

CNNPWD

Specifies the password used when connecting to this controller. This password for each controller can consist of any alphanumeric characters represented by the hexadecimal range from 40 through FF.

SWTLINSLCT

Specifies the method that is used to select lines from an X.25 switched line list.

***FIRST:** The lines are selected in the order in which they are specified.

***CALC:** The system determines the value to use.

DFTPKTSIZE

Specifies the default packet size used by the X.25 network.

Element 1: Transmit Packet Size

***LIND:** The value specified in the line description is used as the default packet size.

transmit-packet-size: Specify a default packet size for transmission. The valid values for the packet size are 64, 128, 256, 512, 1024, 2048, and 4096.

Element 2: Receive Packet Size

***LIND:** The value specified in the line description is used as the default packet size.

***TRANSMIT:** The value specified as the default packet size for transmission is used as the default for reception.

receive-packet-size: Specify a default packet size for reception. The valid values for the packet size are 64, 128, 256, 512, 1024, 2048, and 4096.

DFTWDWSIZE

Specifies the default window size for transmission and reception.

Element 1: Transmit Window Size

***LIND:** The value specified in the line description is used as the default window size.

transmit-window-size: Specify the appropriate default window size. Valid values range from 1 through 7 for networks that use modulus 8 packet numbering. Valid values range from 1 through 15 for networks that use 128 packet numbering.

Element 2: Receive Window Size

***LIND:** The value specified in the line description is used as the default window size.

***TRANSMIT:** The value specified as the default window size for transmission is used as the default for reception.

receive-window-size: Specify the appropriate default window size. Valid values range from 1 through 7 for networks that use modulus 8 packet numbering. Valid values range from 1 through 15 for networks that use 128 packet numbering.

USRGRPID

Specifies the closed user-group ID for contacting this X.25 switched virtual circuit (SVC) controller. Specify a value ranging from 0 through 99, as provided by the network subscription. This parameter is not valid for permanent virtual circuit (PVC) connections. It is valid only for SVC circuit outgoing call operations and is ignored for SVC incoming call connections.

RVSCRG

Specifies whether reverse charges are accepted or requested when contacting this controller.

***NONE**: No reverse charging for network tariff billing is accepted.

***REQUEST**: Charges are requested on outgoing call request packets.

***ACCEPT**: Reverse charging for network tariff billing is accepted on incoming requests.

***BOTH**: Both incoming and outgoing requests are accepted.

X25FRMRTY

Specifies the maximum number of times a frame is sent after the response timer ends when connected to this controller.

7: Rotation of the text is done 270 degrees clockwise from the 0 degree writing position.

X.25-frame-retry: Specify a value ranging from 0 through 21 for the number of times a frame is sent.

X25CNNRTY

Specifies the maximum number of times a frame is sent after the connect response timer ends when connecting to this controller.

7: Rotation of the text is done 270 degrees clockwise from the 0 degree writing position.

X.25-connection-retry: Specify a value ranging from 0 through 21 for the number of times a frame is sent.

X25RSPTMR

Specifies the time allowed for an acknowledgment to return when a frame is sent while connected to this controller.

100: Ten seconds is allowed for acknowledgment.

X.25-response-timer: Specify a value ranging from 1 through 2550 in 0.1-second intervals.

X25CNNTMR

Specifies the time allowed for an acknowledgment to be returned when a frame is sent while connecting to this controller.

100: The time allowed for acknowledgment is 10 seconds.

X.25-connection-timer: Specify a value ranging from 1 through 2550 in 0.1-second intervals.

X25DLYTMR

Specifies the time interval to try establishing a connection to the controller.

***CALC**: The system determines the value to use.

X.25-delayed-connection-timer: Specify a value ranging from 1 through 32767 in 0.1-second intervals. The system retries the connection indefinitely at the specified interval.

USRFCL

Specifies a string of hexadecimal digits sent to the X.25 network to request additional services. The iSeries 400 allows up to 218 hexadecimal characters.

CMNRCYLMT

Specifies the number of recovery attempts made by the system before an inquiry message is sent to the system operator. Also specifies the time (in minutes) that must elapse before the system sends an inquiry message to the system operator indicating that the recovery attempt count limit is reached.

Element 1: Maximum Recovery Limit

2: Two recovery attempts are made within the interval specified.

count-limit: Specify the number of second-level recovery attempts to be made. Valid values range from 0 through 99.

Element 2: Recovery Time Interval

5: A 15-second time-out period is used.

time-interval: Specify the time interval (in minutes) at which the specified number of second-level recoveries are attempted. Valid values range from 0 through 120. If the value specified for *count-limit* is not 0, the value 0 specifies infinite recovery.

Other Single Values

***SYSVAL:** The recovery limits specified in the QCMNRCYLMT system value are used.

AUT Specifies the authority given to users who do not have specific authority to the controller description, who are not on an authorization list, and whose user group has no specific authority to the controller description.

***LIBCRTAUT:** The authority for the object is the same as the create authority for QSYS. The create authority for QSYS can be displayed by using the Display Library Description (DSPLIBD) command. If the create authority is changed with the Change Library (CHGLIB) command, the new authority does not affect existing objects.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the controller description.

***USE:** The user can perform basic operations on the controller description, such as running a program or reading a file. The user cannot change the controller description. *USE authority provides object operational authority, read authority, and execute authority.

***EXCLUDE:** The user cannot access the controller description.

authorization-list-name: Specify the name of the authorization list used.

TEXT Specifies the text that briefly describes the program and its function. More information on this parameter is in Commonly used parameters.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CRTCTLRTL

```
CRTCTLRTL  CTLD(CTLR05)  TYPE(3651)  MODEL(0)
LINKTYPE(*SDLC)  SWITCHED(*YES)  SWTLINLST(SWITCHED1)
EXCHID(00500005)  INLCNN(*ANS)  STNADR(E1)
CNNNBR(2553217)
```


This command creates a 3651 Model 0 retail controller description called CTLR05. The controller is on a SDLC switched line at telephone number 255-3217. Connection to the controller is initiated by an incoming call to the iSeries 400.

Error messages for CRTCTLRTL

*ESCAPE Messages

CPF26BB

Extended wireless controller member not changed.

CPF26BC

Extended wireless controller member not displayed.

CPF26BD

Entry for barcode group not removed from extended wireless controller member.

CPF26BE

Entry for PTC group not removed from extended wireless controller member.

CPF26BF

Program QZXCINZ terminated abnormally. See previous messages.

CPF26B3

Extended wireless line member not added.

CPF26B4

Extended wireless line member not changed.

CPF26B5

Extended wireless line member not displayed.

CPF26B8

Extended wireless controller member not added.

CPF2716

Controller description &1 not created.

CRTCTLHOST (Create Controller Description (SNA Host)) Command Description

CRTCTLHOST Command syntax diagram

Purpose

The Create Controller Description (SNA Host) (CRTCTLHOST) command creates a controller description for an SNA host system. More information about using this command is in the Communications

Configuration  book.

Required Parameters

CTLD Specifies the name of the controller description being created.

LINKTYPE

Specifies the type of line to which this controller is attached.

***DLUR:** This controller is used for Dependent LU Requestor (DLUR) functions and has no line attached.

***FR:** This controller is attached to a frame relay line.

***IDLC:** This controller is attached to an ISDN data link control (IDLC) line.

***LAN:** This controller is attached to a DDI, Ethernet, or token-ring local area network (LAN) line.

***SDLC:** This controller is attached to a synchronous data link control (SDLC) line.

***X25:** This controller is attached to an X.25 line.

Optional Parameters

ONLINE

Specifies whether this object is automatically varied on at initial program load (IPL).

***YES:** The controller is automatically varied on at IPL.

***NO:** This controller is not automatically varied on at IPL.

SWITCHED

Specifies whether this controller is attached to a switched line, an X.25 switched virtual circuit (SVC), or a TRLAN line. *NO must be specified for APPC controllers attached to a TDLC line.

***NO:** This controller is attached to a nonswitched line or an X.25 permanent virtual circuit (PVC).

***YES:** This controller is attached to a switched line or an X.25 switched virtual circuit (SVC).

SHM Specifies whether this controller is for X.21 short-hold mode. If *YES is specified on this parameter, LINKTYPE(*SDLC) and SWITCHED(*YES) must also be specified.

***NO:** This controller is not used for X.21 short-hold mode.

***YES:** This controller is used for X.21 short-hold mode.

SNBU Specifies, for controllers supporting the switched network backup (SNBU) feature, whether the SNBU feature is activated or deactivated. Both the local and remote modems must support the SNBU feature to perform a valid activation.

***NO:** The remote modem does not have the switched network backup (SNBU) feature.

***YES:** The remote modem has the SNBU feature.

APPN Specifies whether the local system uses advanced peer-to-peer networking (APPN) functions when communicating with this controller. If APPN functions are used, the user must specify a remote control point name and a remote network identifier.

***YES:** The local system uses APPN functions.

***NO:** The local system does not use APPN functions.

LINE Specifies the name of the nonswitched lines to which this controller is attached. The line description must already exist.

SWTLINLST

Specifies the names of the switched lines to which this controller attaches. The line descriptions must already exist. Up to 64 switched line names can be specified.

DEV Specifies the names of the devices attached to this controller. Use this parameter only when the associated device descriptions have already been created. The maximum number of devices that can attach to this controller is 254.

CODE Specifies the character code used. The code can be either extended binary-coded decimal interchange code (*EBCDIC) or the American National Standard Code for Information Interchange (*ASCII).

***EBCDIC:** The extended binary-coded decimal interchange code (EBCDIC) character set code is used.

***ASCII:** The ASCII character set code is used.

MAXFRAME

Specifies the maximum frame (path information unit (PIU)) size that the controller can send or

receive. This value is used to calculate request unit (RU) sizes. Since the maximum PIU size that the controller can send or receive is negotiated at exchange identifier time, the maximum PIU size used at run time may be different. This value matches the corresponding value on the host system.

***LINKTYPE:** The following values are used:

*SDLC-521	*LAN-16393	*FR-1590
*IDLC-2048	*X25-1024	

maximum-frame: Specify the maximum frame size for the controller. The frame size that can be used depends on the type of line being used. Valid frame sizes for each link type are shown below.

Link Type

Frame Size (in bytes)

*FR	265 - 8182
*LAN	265 - 16393 (265 - 4444 for DDI LANs)
*IDLC	265 - 8196
*SDLC	265,521,1033,2057
*X25	256,265,512,521,1024,1033,2048,4096

RMTNETID

Specifies the name of the remote network.

***NETATR:** The RMTNETID value specified in the system network attributes is used.

***NONE:** No remote network identifier (ID) is used.

***ANY:** The system determines which remote network identifier is used.

remote-network-ID: Specify the remote network identifier.

RMTCPNAME

Specifies the name of the remote control point.

***ANY:** The system determines the name of the remote control point to use.

remote-control-point-name: Specify the remote control point name.

ADJLNKSTN

Specifies the name of the adjacent link station. This name is used by the system to identify which switched controller description on the iSeries 400 is used to establish a link to a host S/370 system. The adjacent link station name for the iSeries 400 must match the name provided by the host system during link activation.

***NONE:** No adjacent link station name is specified.

***ANY:** The system determines which adjacent link station is used.

adjacent-link-station-name: Specify the adjacent link station name.

LCLEXCHID

Specifies the number used to identify the local system to the remote system.

Note:

This parameter is necessary only if parallel connections are required between an iSeries 400 and an SNA host system.

***LIND:** The iSeries 400 system uses the exchange identifier specified in the line description on the EXCHID parameter associated with this controller description.

local-exchange-identifier: Specify a local exchange identifier. The first three digits of this 8-digit hexadecimal number identify the block number and the remaining five digits identify the system.

SSCPID

Specifies the system service control point (SSCP) of the host system.

Note:

The system service control point identifier (SSCPID) is a 12-digit hexadecimal value; the first 2 digits are hexadecimal 05. This parameter is required for SDLC switched and SNBU if APPN(*YES) and NODETYPE(*LENNODE) are specified, or if APPN(*NO) is specified but RMTCPNAME is not specified. This parameter must be specified if SHM(*YES) is also specified.

INLCNN

Specifies the method used to establish a connection with this controller.

***DIAL:** The connection is made by a call initiated from the iSeries 400.

For X.25 connection, the line attached to the controller requires switched virtual circuits (SVCs) configured on the LGLCHLE parameter of type OUT or BOTH(*SVCOUT or *SVCBOTH) for the connection to succeed.

***ANS:** The connection is made by the local system answering an incoming call from this controller.

DIALINIT

Specifies the method used to make the initial dial on a switched line between the system and the remote controller.

***LINKTYPE:** The type of dial connection initiated is specified on the LINKTYPE parameter. For LAN or SDLC short-hold mode connections, the default is to dial the connection immediately upon vary on of the controller description. For all other link types, the default is to delay the dial.

***IMMED:** The dial connection is initiated immediately upon vary on of the controller description.

***DELAY:** The dial connection is delayed until a job is initiated that requests the use of the remote controller resources.

CNNNBR

Specifies the telephone number to dial to connect to this controller.

***DC:** For X.21 circuit switched connections, a direct call is used to connect to the controller.

***ANY:** Calls are accepted from any network address.

connection-number: Specify the connection number used to call this controller. This could be a telephone number, an X.25 network address, or an X.21 connection number, depending on the type of controller and the type of line to which it is attached.

ANSNBR

Specifies the X.25 network address from which to accept calls.

***C>NNNBR:** Calls from the X.25 network address specified by the connection number (C>NNNBR) parameter are accepted.

***ANY:** Calls are accepted from any X.25 network address.

C>NNLSTOUT

Specifies, for ISDN switched connections, the name of a connection list object that contains the ISDN assigned numbers for a dial out operation to the ISDN.

C>NNLSTOUTE

Specifies the entry name from the connection list that is used to make a call to the ISDN. The connection list must be specified on the C>NNLSTOUT parameter.

IDLCWDWSIZ

Specifies the window size for transmission to and reception from the remote controllers.

***LIND:** The window size specified in the line description is used.

window-size: Specify the window size. Valid values range from 1 through 31.

IDLCFRMRTY

Specifies the maximum number of attempts to transmit before an error is reported.

***LIND:** The number of attempts specified in the line description is used.

IDLC-frame-retry: Specify the number of attempts. Valid values range from 0 through 100.

IDLCRSPTMR

Specifies the amount of time, in tenths of a second, to wait before retransmitting a frame if acknowledgement has not been received.

***LIND:** The time specified in the line description is used.

IDLC-response-timer: Specify an amount of time to wait before retransmitting an unacknowledged frame of data. Valid values range from 10 through 100 tenths of a second. For example, 10 seconds equals 100 tenths of a second.

IDLCCNNRTY

Specifies the number of times to attempt retransmission at connection time.

***LIND:** The number of attempts specified in the line description is used.

***NOMAX:** There is no disconnect limit.

IDLC-connect-retry: Specify the number of attempts. Valid values range from 1 through 100.

PREDIALDLY

Specifies how long to wait (in 0.5 second intervals) before dialing.

6: The value of 6 provides a 3-second delay.

predial-delay: Specify a value ranging from 1 through 254 in 0.5-second intervals, or specify 0 to indicate no delay.

REDIALDLY

Specifies how long to wait (in 0.5 second intervals) before re-dialing when the call attempt is unsuccessful.

120: The default value of 120 provides a 60-second delay.

redial-delay: Specify a value ranging from 1 through 254 in 0.5-second intervals, or specify 0 to indicate no delay.

DIALRTY

Specifies the number of re-dial attempts made by the system before considering the dialing unsuccessful.

2: The LZ algorithm with the 12-bit code for repeated substrings in the data stream is used. These codes refer to entries in a common dictionary, created as the data flows between the sender and receiver. The LZ algorithms require storage and extra processing time. The LZ12 requires the most storage and processing time of the LZ algorithms; however, it compresses the data stream the most.

dial-retry: Specify a value ranging from 0 through 254 for the number of dial attempts.

SWTDSC

Specifies whether the switched connection to this controller is disconnected when the last device in the host controller description becomes inactive.

***NO:** Specify *NO to keep this connection active even if the above conditions were met, or if the host system is configured to bring down the switched connection.

***YES:** The switched connection is disconnected when the last device is varied off.

DSCTMR

Specifies options for controlling the time (in seconds) before an inactive connection is dropped (Element 1), or the amount of time to delay the automatic disconnection (Element 2).

Note:

The DISCNT parameter of the GROUP macro instruction in the NCP/VTAM definition can be used if the host system is to determine the disconnect characteristics.

Element 1: Minimum Connect Timer

170: A connection is dropped when it has been inactive for 170 seconds.

disconnect-timer: Specify a time to wait before disconnecting. Valid values range from 0 through 65535 seconds.

Element 2: Disconnect Delay Timer

30: The disconnection is delayed for 30 seconds.

disconnect-delay-timer: Specify a value to delay link take down after the last session on the controller is terminated. Valid values range from 0 through 65535 seconds.

Note:

For objects migrated from V2R1M1 or previous systems, the disconnect delay timer has a value of zero. This value is interpreted by the system as 30 seconds.

STNADR

Specifies the station address used when communicating with the controller.

Note:

This is the station address of the local system. Valid values range from 01 through FE.

ADPTADR

Specifies the 12-character adapter address of the remote controller. This is the address to which the system sends data when it communicates with the remote controller. This value can be obtained from the remote controller's configuration record. Valid values range from hex 000000000001 through hex FFFFFFFF.

DSAP Specifies the logical address of the SNA destination service access point (DSAP) to which this

system sends data when it communicates with the remote controller. This address allows the controller and the system to route the data that comes from this system. The value must match the value specified on the source service access point (SSAP) parameter in the remote controller's configuration record.

04: The destination service access point is 04.

destination-service-access-point: Specify a hexadecimal value ranging from 04 through 9C, in increments of 4 (for example, 04, 08, 0C, 10) to represent the destination service access point.

SSAP Specifies the source service access point. This is the logical address this system uses when it sends data to the remote controller. This address allows the remote controller and the system to route the data that comes from this system. It must match the value assigned to the destination service access point (DSAP) prompt in the remote controller's configuration record.

04: The source service access point is 04.

source-service-access-point: Specify a hexadecimal value ranging from 04 through 9C, in increments of 4 (for example, 04, 08, 0C, 10) to represent the source service access point.

LANFRMRTY

Specifies the number of times a frame is transmitted if there is no acknowledgement from the remote controller in the time period specified on the LANRSPTMR parameter. This value is used only after a successful connection has been made.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-frame-retry: Specify a value ranging from 0 through 254 for the number of times a frame is transmitted before an acknowledgement is received.

LANCNNRTY

Specifies the number of times a transmission is attempted before an acknowledgement is received. This value is used at connection time (unlike LANFRMRTY which is used after a connection has been made).

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-connection-retry: Specify a value ranging from 0 through 254 for the number of times the transmission is attempted before an acknowledgement is received.

LANRSPTMR

Specifies the length of time the system waits before an inoperative condition occurs on a link after a connection is made.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-response-timer: Specify a value ranging from 1 through 254 in 0.1-second intervals for the amount of time the system waits before an inoperative condition occurs.

LANCNNTMR

Specifies the length of time the system waits before an inoperative condition occurs on a link at connection time.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-connection-timer: Specify a value ranging from 1 through 254 in 0.1-second intervals for the amount of time the system waits before an inoperative condition occurs.

LANACKTMR

Specifies the length of time the system waits before sending an acknowledgement for received frames.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-acknowledgement-timer: Specify a value ranging from 1 through 254 in 0.1-second intervals, or specify 0 to indicate no delay. If 0 is specified for this parameter, 0 must also be specified for

the LANACKFRQ parameter; if a non zero value is specified for this parameter, a non zero value must also be specified for the LANACKFRQ parameter.

LANINACTMR

Specifies the length of time in which to determine an inactive condition for the controller.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-inactivity-timer: Specify a value ranging from 1 through 255 in 0.1-second intervals for the length of time used to determine an inactive condition for the controller.

LANACKFRQ

Specifies the maximum number of frames that are received before an acknowledgement is sent to the controller.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-acknowledgement-frequency: Specify a value ranging from 0 through 127 for the number of frames received. If 0 is specified for this parameter, 0 must also be specified for the LANACKTMR parameter; if a non zero value is specified for this parameter, a non zero value must also be specified for the LANACKTMR parameter.

LANMAXOUT

Specifies the maximum number of frames that can be sent before an acknowledgement is received from the remote system.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-maximum-outstanding-frames: Specify a value ranging from 1 through 127 for the number of frames that can be sent before an acknowledgement is received.

LANACCPTY

Specifies the priority granted to the sending system for sending frames. The larger the number, the higher the priority.

***CALC:** The system calculates the value based on the type of line that is linked to the controller.

LAN-access-priority: Specify a value ranging from 0 through 3 to indicate how soon a frame can be sent on a local area network (LAN).

LANWDWSTP

Specifies whether to reduce the number of outstanding frames that can be sent before an acknowledgement is received from the remote system during network congestion. This parameter (LAN Window Step) also indicates the number of frames that must be successfully received before the number of outstanding frames can be incremented to the maximum allowable value.

***NONE:** The number of outstanding frames is not reduced during network congestion.

LAN-number-of-frames: Specify the number of outstanding frames to be reduced before an acknowledgement is received from the remote system.

NETLVL

Specifies the level of the X.25 network used to reach this controller. The level is specified by giving the year of the standard used by the X.25 network.

1980: The 1980 standard is used.

1984: The 1984 standard is used.

1988: The 1988 standard is used.

LINKPCL

Specifies the link level protocol used on the X.25 network to communicate with this controller.

***QLLC:** The QLLC protocol is used.

***ELLC:** The ELLC protocol is used.

LGLCHLID

Specifies the logical channel ID used for the X.25 PVC to this controller. Specify the logical channel ID. The valid entry is xyy. Where:

x = the logical group number derived
from user network subscription
yy = the logical channel number,
derived from user subscription

CNNPWD

Specifies, for X.25 switched virtual circuit (SVC) controllers, the password used when connecting to this controller.

SWTLINSLCT

Specifies the method that is used to select lines from an X.25 switched line list.

***FIRST:** The lines are selected in the order in which they are specified.

***CALC:** The system determines the value to use.

DFTPKTSIZE

Specifies the default packet size used by the X.25 network.

Element 1: Transmit Packet Size

***LIND:** The value specified in the line description is used as the default packet size.

transmit-packet-size: Specify a default packet size for transmission. The valid values for the packet size are 64, 128, 256, 512, 1024, 2048, and 4096.

Element 2: Receive Packet Size

***LIND:** The value specified in the line description is used as the default packet size.

***TRANSMIT:** The value specified as the default packet size for transmission is used as the default for reception.

receive-packet-size: Specify a default packet size for reception. The valid values for the packet size are 64, 128, 256, 512, 1024, 2048, and 4096.

DFTWDWSIZE

Specifies the default window size used by the X.25 network.

Element 1: Transmit Window Size

***LIND:** The value specified in the line description is used as the default window size.

transmit-window-size: Specify the appropriate default window size. Valid values range from 1 through 7 for networks that use modulus 8 packet numbering. Valid values range from 1 through 15 for networks that use 128 packet numbering.

Element 2: Receive Window Size

***LIND:** The value specified in the line description is used as the default window size.

***TRANSMIT:** The value specified as the default window size for transmission is used as the default for reception.

receive-window-size: Specify the appropriate default window size. Valid values range from 1 through 7 for networks that use modulus 8 packet numbering. Valid values range from 1 through 15 for networks that use 128 packet numbering.

USRGRPID

Specifies the closed user-group ID for contacting this X.25 switched virtual circuit (SVC) controller. Specify a value ranging from 0 through 99, as provided by the network subscription. This parameter is not valid for permanent virtual circuit (PVC) connections. It is valid only for SVC circuit outgoing call operations and is ignored for SVC incoming call connections.

RVSCRG

Specifies whether reverse charges are accepted or requested when contacting this controller.

***NONE:** No reverse charging for network tariff billing is accepted.

***REQUEST:** Charges are requested on outgoing call request packets.

***ACCEPT:** Reverse charging for network tariff billing is accepted on incoming requests.

***BOTH:** Both incoming and outgoing requests are accepted.

X25FRMRTY

Specifies the maximum number of times that a link protocol data unit (LPDU) is sent after the response timer ends when connected to this controller.

7: Rotation of the text is done 270 degrees clockwise from the 0 degree writing position.

X.25-frame-retry: Specify a value ranging from 0 through 21 for the number of times a frame is sent.

X25RSPTMR

Specifies the time allowed to return an acknowledgement when a link protocol data unit (LPDU) is sent while connected to this controller.

300: The time allowed for acknowledgement is 30 seconds.

X.25-response-timer: Specify a value ranging from 1 through 2550 in 0.1-second intervals.

X25ACKTMR

Specifies the time period to delay sending acknowledgements for received LPDU.

20: Two seconds are allowed for acknowledgement.

X.25-acknowledgement-timer: Specify a value ranging from 1 through 2550 in 0.1-second intervals, or specify 0 to indicate no delay.

X25INACTMR

Specifies the time period in which to determine an inactive condition for the controller.

1050: An inactive condition is detected after 105 seconds.

X.25-inactivity-timer: Specify a value ranging from 1 through 2550 in 0.1-second intervals.

USRFCL

Specifies a string of hexadecimal digits sent to the X.25 network to request additional services. The iSeries 400 allows up to 218 hexadecimal characters.

CPSSN

Specifies whether this controller supports control-point to control-point (CP to CP) sessions.

***YES:** This controller supports CP to CP sessions.

***NO:** This controller does not support CP to CP sessions.

NODETYPE

Specifies the type of APPN node this controller represents.

***ENDNODE:** This node is an end node in an APPN network.

***LENNODE:** This node is a low-entry networking node in an APPN network.

***NETNODE:** This node is a network node in an APPN network.

***CALC:** The system determines the value to use.

BEXROLE

Specifies the role of the local system in an APPN network for the remote controller being configured. This parameter is only used when the local system has enabled the branch extender function via the NODETYPE parameter in the network attributes being set to *BEXNODE.

***NETNODE:** The local system takes the role of a network node for the remote controller.

***ENDNODE:** The local system takes the role of an end node for the remote controller.

HPR Specifies whether the local system can use APPN high-performance routing (HPR) when communicating with this controller. The controller description must specify APPN(*YES) to enable HPR. If HPR(*YES) is specified, the value of the MAXFRAME parameter of the line specified by the switched line list must be greater than or equal to 768, otherwise HPR will not be enabled over this connection. See the APPC, APPN, and HPR topic in the Information Center for more information.

***YES:** The local system can use HPR, and HPR flows can proceed over the link defined by this controller.

***NO:** The local system cannot use HPR, and HPR flows cannot proceed over the link defined by this controller.

HPRPHTSWT

Specifies whether an attempt is made to switch paths of HPR connections associated with this controller at the time the controller is varied off. If a path switch is not attempted or if there are no other available paths, jobs associated with the HPR connections will be ended. See the APPC, APPN, and HPR topic in the Information Center for more information.

***NO:** When this controller is varied off path switching will not be done for HPR connections associated with this controller. Jobs associated with HPR connections will be ended.

***YES:** When this controller is varied off an attempt to switch paths of HPR connections associated with this controller will be made.

TMSGRPNBR

Specifies the APPN transmission group number for this controller.

1: The transmission group number is one.

***CALC:** The system determines the value to use.

APPN-transmission-group-number: Specify a value ranging from 1 through 20 for the transmission group number.

MINSWTSTS

Specifies, for the switched connection, the minimum status that APPN requires for a controller to be considered available for routing.

***VRYONPND:** APPN considers the controller available for routing if the status is vary on pending, varied on, or active.

***VRYON:** Indicates that APPN considers the controller available for routing only if the status is varied on or active.

AUTOCRTDEV

Specifies which devices are automatically created.

***ALL:** All devices that can be automatically created for this controller, except APPC devices are automatically created.

***DEVINIT:** Only session printer and display devices started by the SNA host controller (device-initiated) are automatically created.

***NONE:** No devices are automatically created.

AUTODLTDEV

Specifies the number of minutes an automatically created device can remain in an idle state (when there are no active conversations on that device). When the time expires, the system automatically varies off and deletes the device description.

1440: The system will automatically vary off and delete the automatically-configured idle device descriptions after 1440 minutes (24 hours).

***NO:** The system will not automatically vary off and delete the automatically-configured idle device descriptions.

wait-time: Specify the number of minutes to wait before deleting the automatically-configured idle device descriptions for this controller. Valid values range from 1 to 10000.

USRDFN1

Specifies the first of the three user-defined fields. This field is used to describe unique characteristics of the line that is controlled. This parameter is valid only if APPN* support is used on the system.

***LIND:** The user-defined value specified in the line description is used.

user-defined-1: Specify a value ranging from 0 through 255.

USRDFN2

Specifies the second of the three user-defined fields. This field is used to describe unique characteristics of the line that is controlled. This parameter is valid only if APPN* support is used on the system.

***LIND:** The user-defined value specified in the line description is used.

user-defined-2: Specify a value ranging from 0 through 255.

USRDFN3

Specifies the third of the three user-defined fields. This field is used to describe unique characteristics of the line that is controlled. This parameter is valid only if APPN is used on the system.

***LIND:** The user-defined value specified in the line description is used.

user-defined-3: Specify a value ranging from 0 through 255.

CMNRCYLMT

Specifies the number of recovery attempts made by the system before an inquiry message is sent to the system operator. Also specifies the time (in minutes) that must elapse before the system sends an inquiry message to the system operator indicating that the recovery attempt count limit is reached.

Element 1: Maximum Recovery Limit

2: Two recovery attempts are made within the interval specified.

count-limit: Specify the number of second-level recovery attempts to be made. Valid values range from 0 through 99.

Element 2: Recovery Time Interval

5: A 15-second time-out period is used.

time-interval: Specify the time interval (in minutes) at which the specified number of second-level recoveries are attempted. Valid values range from 0 through 120. If the value specified for *count-limit* is not 0, the value 0 specifies infinite recovery.

Other Single Value

***SYSVAL:** The recovery limits specified in the QCMNRCYLMT system value are used.

PRIDLUS

Specifies the primary Dependent LU Server (DLUS) name and network ID.

The name is in the format of XXXXXXXX YYYYYYYY the prefix being the CP name and the suffix being the Network ID of the APPN network (subnet) that the remote DLUS resides in. The end

user can define only the CP name of a DLUS residing in the same network as the iSeries 400. The default is the local network ID specified in the network attributes.

The network qualified CP name of the remote DLUS system services control point (SSCP) that the iSeries 400 DLUR host controller prefers to communicate with. If this parameter is filled in and the iSeries 400 DLUR controller is configured as Initial Connection *dial, the iSeries 400 sends an activation request to this DLUS first.

The default is *NONE, but if Initial Connection is *DIAL INLCNN(*DIAL), then this parameter becomes a required parameter.

***NONE:** There is no primary dependent LU server.

Element 1: Primary DLUS name

primary-DLUS-name: Specify the name of the primary dependent LU server.

Element 2: Network ID

***NETATR:** The network ID from the local network attributes is used.

network-ID: Specify the network ID of the dependent LU server.

BKUDLUS

Specifies the backup Dependent LU Server (DLUS) name and network ID.

The name should be in the format of XXXXXXXX YYYYYYYY the prefix being the CP name and the suffix being the Network ID of the APPN network (subnet) that the remote DLUS resides in. The end user can define only the CP name of a DLUS residing in the same network as the iSeries 400. The default is the local network ID specified in the network attributes.

The network qualified CP name of the remote DLUS (SSCP) the iSeries 400 Dependent LU Requestor (DLUR) host controller will communicate with in the absence of the primary DLUS node. If this parameter is filled in and the iSeries 400 DLUR controller is configured as INLCNN(*DIAL), the iSeries 400 sends an activation request to this DLUS only after trying the primary DLUS first.

***NONE:** There is no backup dependent LU server.

Element 1: Backup DLUS name

backup-DLUS-name: Specify the name of the backup dependent LU server.

Element 2: Network ID

***NETATR:** The network ID from the local network attributes is used.

network-ID: Specify the network ID of the backup dependent LU server.

DEPPUNAME

Specifies the dependent location name used for DLUR, providing additional security for the connection.

If this name is filled in, an activation request (SNA ACTPU) from a DLUS node must reference this name or it will be rejected.

When the iSeries 400 DLUR node initiates a session with the remote DLUS node (INLCNN(*DIAL)), the PU name will be sent to the DLUS and it will return that name on ACTPU.

If the remote DLUS node initiates a session to the iSeries 400 DLUR host controller via activation of pre-defined definitions on the DLUS node, there will have to be close coordination of the PU Name definitions on both systems.

If this parameter is not filled in, then checking is done on the local exchange ID and remote CP name parameters of the controller.

***NONE:** No location name is defined.

'dependent-location-name': Specify the dependent location name used for DLUR applications.

ACTTMR

This timer is used when the iSeries 400 attempts to activate a session to the remote DLUS node (initial connection *dial). It is the amount of time the system will wait for an answer from the remote DLUS.

This parameter is used in conjunction with recovery limits count and timer interval. For each count, an activation request (timed by the activation timer) is requested. Between attempts, the system waits for the timer interval before a new activation is attempted (assuming the system times out before hearing back or receiving a Retry error message).

The three parameters on the attempts to the primary DLUS are used and, once the count limit is exceeded, the system resets and tries the same retry limit count to the backup DLUS (if configured). Once the retry limit count is exhausted to all configured DLUS nodes, an error message is issued to the QSYSOPR message log with options to retry the whole activation sequence again.

170: The activate time of 170 seconds is used.

activation-timer: Specify, in seconds, a value ranging from 30 through 2550.

RECNTMR

This timer is used when a session outage occurs to the remote DLUS node. It is the amount of time the iSeries 400 DLUR support waits for the DLUS node to send an activation request back to the iSeries 400. Once the timer expires, the iSeries 400 does the following:

If the iSeries 400 DLUR host controller is configured to INLCNN(*DIAL):

1. The DLUR support makes a one time attempt to activate a session to the DLUS node the system was connected to at the time of session outage.
2. If that attempt fails, an error message is displayed in the QSYSOPR message log with retry option. If retry is taken, then the activation request is sent through the configured primary/backup DLUS again.

If the iSeries 400 DLUR host controller is configured to INLCNN(*ANS):

1. The DLUR controller waits for an activation attempt from any DLUS node.

170: The default value of 170 is used.

reconnect-timer: Specify, in seconds, a value ranging from 1 through 2550.

AUT

Specifies the authority given to users who do not have specific authority to the controller description, who are not on an authorization list, and whose user group has no specific authority to the controller description.

***LIBCRTAUT**: The authority for the object is the same as the create authority for QSYS. The create authority for QSYS can be displayed by using the Display Library Description (DSPLIBD) command. If the create authority is changed with the Change Library (CHGLIB) command, the new authority does not affect existing objects.

***CHANGE**: The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***ALL**: The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the controller description.

***USE:** The user can perform basic operations on the controller description, such as running a program or reading a file. The user cannot change the controller description. *USE authority provides object operational authority, read authority, and execute authority.

***EXCLUDE:** The user cannot access the controller description.

authorization-list-name: Specify the name of the authorization list used.

RECONTACT

Specifies whether to send a re-contact request to a remote system when the system is varied off.


Note:

This parameter is valid only for X.25 and SDLC leased lines (if *X25 or *SDLC is specified on the LINKTYPE parameter and *NO is specified on the SWITCHED parameter).

***YES:** A request for re-contact with the remote system is sent. When this value is specified, a status of pending is shown for the remote system.

***NO:** A request for re-contact with the remote system is not sent. When this value is specified, a status of inactive is shown for the remote system.

MSGQ

Specifies the qualified name of the message queue to which messages are sent. More information about using this parameter is in the Communications Management  book.

Single Values

***SYSVAL:** Messages are sent to the message queue defined in the system value QCFGMSGQ.

***SYSOPR:** Messages are sent to the system operator message queue (QSYS/QSYSOPR).

library-name/message-queue-name: Specify the library-qualified name of the message queue to which operational messages are sent.

TEXT Specifies the text that briefly describes the program and its function. More information on this parameter is in Commonly used parameters.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CRTCTLHOST

```
CRTCTLHOST  CTLD(HOST1)  LINKTYPE(*LAN)
SWTLINLST(LAN1)  RMTCPNAME(CPX)
ADPTADR(0560000000011)
```

This command creates a host controller on a local area network.

Error messages for CRTCTLHOST

*ESCAPE Messages

CPF26BB

Extended wireless controller member not changed.

CPF26BC

Extended wireless controller member not displayed.

CPF26BD

Entry for barcode group not removed from extended wireless controller member.

CPF26BE

Entry for PTC group not removed from extended wireless controller member.

CPF26BF

Program QZXCINZ terminated abnormally. See previous messages.

CPF26B3

Extended wireless line member not added.

CPF26B4

Extended wireless line member not changed.

CPF26B5

Extended wireless line member not displayed.

CPF26B8

Extended wireless controller member not added.

CPF2716

Controller description &1 not created.

CRTCTLTAP (Create Controller Description (Tape)) Command Description

CRTCTLTAP Command syntax diagram

Purpose

The Create Controller Description (Tape) (CRTCTLTAP) command creates a controller description for a tape device.

Required Parameters

CTLD Specifies the name of the controller description being created.

TYPE Specifies the type of device this description represents.

3422: The controller is for a 3422 tape device.

3430: The controller is for a 3430 tape device.

3480: The controller is for a 3480 tape device.

3490: The controller is for a 3490 tape device.

MODEL

Specifies the model number of the controller represented by this description. Valid models for this parameter include A01, A11, A22, or *ANY.

RSRCNAME

Specifies the resource name that describes the automatic call unit port.

Note:

Use the WRKHDWPRD command to determine the resource name.

Optional Parameters

ONLINE

Specifies whether this object is automatically varied on at initial program load (IPL).

***YES:** The controller is automatically varied on at IPL.

***NO:** This controller is not automatically varied on at IPL.

DEV Specify the names of the devices that are attached to this controller (the device descriptions must already exist). The number of devices that can be specified for each controller is shown in the following table.

Controller	Maximum Number of Devices
3422, 3430	4
3480, 3490	8

AUTOCFG

Specifies whether this controller is automatically configured at IPL.

***NO:** This controller is not automatically configured at IPL.

***YES:** This controller is automatically configured at IPL.

AUT Specifies the authority given to users who do not have specific authority to the controller description, who are not on an authorization list, and whose user group has no specific authority to the controller description.

***LIBCRTAUT:** The authority for the object is the same as the create authority for QSYS. The create authority for QSYS can be displayed by using the Display Library Description (DSPLIBD) command. If the create authority is changed with the Change Library (CHGLIB) command, the new authority does not affect existing objects.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the controller description.

***USE:** The user can perform basic operations on the controller description, such as running a program or reading a file. The user cannot change the controller description. *USE authority provides object operational authority, read authority, and execute authority.

***EXCLUDE:** The user cannot access the controller description.

authorization-list-name: Specify the name of the authorization list used.

TEXT Specifies the text that briefly describes the program and its function. More information on this parameter is in Commonly used parameters.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CRTCTLTAP

```
CRTCTLTAP CTLD(TAP01) TYPE(3422) MODEL(A01)
          RSRNAME(TAP01)
```

This command creates a controller description named TAP01 for a 3422 tape controller.

Error messages for CRTCTLTAP

*ESCAPE Messages

CPF26BB

Extended wireless controller member not changed.

CPF26BC

Extended wireless controller member not displayed.

CPF26BD

Entry for barcode group not removed from extended wireless controller member.

CPF26BE

Entry for PTC group not removed from extended wireless controller member.

CPF26BF

Program QZXCINZ terminated abnormally. See previous messages.

CPF26B3

Extended wireless line member not added.

CPF26B4

Extended wireless line member not changed.

CPF26B5

Extended wireless line member not displayed.

CPF26B8

Extended wireless controller member not added.


CPF2716

Controller description &1 not created.

CRTCTLVWS (Create Controller Description (Virtual Work Station)) Command Description

CRTCTLVWS Command syntax diagram

Purpose

The Create Controller Description (Virtual Work Station) (CRTCTLVWS) command creates a controller description for a virtual work station (pass-through) controller. More information about using this command is in the Communications Configuration  book.

Required Parameter

CTLD Specifies the name of the controller description being created.

Optional Parameters

ONLINE

Specifies whether this object is automatically varied on at initial program load (IPL).

***YES:** The controller is automatically varied on at IPL.

***NO:** This controller is not automatically varied on at IPL.

DEV Specifies the names of the virtual devices attached to this controller.

DEVWAITTMR

Specifies the device wait timer value. This is used to limit the amount of time that a subsystem

takes for the workstation input/output to complete. The timer value that is used for each device is taken from the controller that it is attached to at vary on time.

A change in the DEVWAITTMR parameter value takes effect for attached devices when they are next varied on.

20: For virtual controllers, the subsystem waits a maximum of 20 seconds for the completion of the input/output of each workstation attached to this controller.

device-wait-timer: Specify a value ranging from 2 through 120 that specifies the maximum number of seconds that the subsystem waits for workstation input/output to complete for all workstations attached to this controller.

Note:

Configure the device wait timer with caution, taking the following under consideration:

- If a value lower than 20 is specified and the communication connections are slow, then timeout errors can occur.
- If a larger value is specified, performance degradation can occur in the interactive subsystem.

AUT Specifies the authority given to users who do not have specific authority to the controller description, who are not on an authorization list, and whose user group has no specific authority to the controller description.

***LIBCRTAUT:** The authority for the object is the same as the create authority for QSYS. The create authority for QSYS can be displayed by using the Display Library Description (DSPLIBD) command. If the create authority is changed with the Change Library (CHGLIB) command, the new authority does not affect existing objects.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.


***USE:** The user can perform basic operations on the controller description, such as running a program or reading a file. The user cannot change the controller description. *USE authority provides object operational authority, read authority, and execute authority.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the controller description.

***EXCLUDE:** The user cannot access the controller description.

authorization-list-name: Specify the name of the authorization list used.

MSGQ

Specifies the qualified name of the message queue to which messages are sent. More information about using this parameter is in the Communications Management  book.

Single Values

***SYSVAL:** Messages are sent to the message queue defined in the system value QCFGMSGQ.

***SYSOPR:** Messages are sent to the system operator message queue (QSYS/QSYSOPR).

library-name/message-queue-name: Specify the library-qualified name of the message queue to which operational messages are sent.

TEXT Specifies the text that briefly describes the program and its function. More information on this parameter is in Commonly used parameters.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CRTCTLVWS

```
CRTCTLVWS  CTLD(VRTCTL325)
           TEXT('S/325 virtual controller')
```

This command creates a controller description named VRTCTL325.

Error messages for CRTCTLVWS

*ESCAPE Messages

CPF26BB

Extended wireless controller member not changed.

CPF26BC

Extended wireless controller member not displayed.

CPF26BD

Entry for barcode group not removed from extended wireless controller member.

CPF26BE

Entry for PTC group not removed from extended wireless controller member.

CPF26BF

Program QZXCINZ terminated abnormally. See previous messages.

CPF26B3

Extended wireless line member not added.

CPF26B4

Extended wireless line member not changed.

CPF26B5

Extended wireless line member not displayed.

CPF26B8

Extended wireless controller member not added.

CPF2716

Controller description &1 not created.

CRTDTAARA (Create Data Area) Command Description

CRTDTAARA Command syntax diagram

Purpose

The Create Data Area (CRTDTAARA) command creates a data area and stores it in a specified library. It also specifies the attributes of the data. The data area can optionally be initialized to a specific value.

Data areas (which are a type of operating system object) are used to communicate and store data used by several programs either within a job or between jobs. A program can use the value of a data area by using the Retrieve Data Area (RTVDTAARA) command.

If a data area is not used by more than one job at a time, it can be explicitly allocated to the appropriate job. If a data area is used by two or more jobs at the same time, it is protected from simultaneous changes occurring from different jobs. A data area is changed by using the Change Data Area (CHGDTAARA) command. The system does not allow two CHGDTAARA commands to change the same data area at the same time.

A data area is updated in auxiliary storage any time the data area is changed. This ensures that the changes are not lost in the event of a program or system failure.

The Create Data Area (CRTDTAARA) command can optionally create a distributed data management (DDM) data area. This is done by specifying *DDM on the TYPE parameter. The DDM data area is used as a reference data area by programs to access data areas located on a remote (target) system in the DDM network. Programs on the local (source) system refer to a remote data area by the DDM data area's name, not by the remote data area's name. (The DDM data area name, however, can be the same as the remote data area name.)

The DDM data area (on the source system) contains the name of the remote data area and the name of the remote (target) system on which the remote data area is located.

The DDM data area can be used with the RTVDTAARA and CHGDTAARA commands to retrieve and update data areas on remote systems.

Restrictions:

1. To use this command, the user must have object operational and add authority for the library in which the data area is placed.
2. This command is conditionally threadsafe. The following restrictions apply:
 - a. Creating DDM data areas in a job that allows multiple threads is not threadsafe.
 - b. Creating DDM data areas will fail when more than one thread is active in a job.

Required Parameters

DTAARA

Specifies the qualified name of the data area being created. The name of the data area can be qualified by one of the following library values:

***CURLIB:** The data area is created in the current library for the job. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library where the data area is created.

data-area-name: Specify the name of the data area being created.

TYPE Specifies the type of value contained in the data area being created. The data area can contain a character value, a decimal value, a logical one (1) or zero (0), or a Distributed Data Management (DDM) data area can be created.

***DEC:** The data area contains a decimal value.

***CHAR:** The data area contains a character string value.

***LGL:** The data area contains a logical value of either one (1) or zero (0) that can be used to represent two opposing conditions such as on/off, true/false, or yes/no.

***DDM:** The data area being created is a DDM data area. The data area contains the name of the remote data area accessed and the name of the remote (target) system that the data area is located on.

Optional Parameters

LEN Specifies the length of the data area being created. If it is a decimal data area, the number of decimal digits to the right of the decimal point can be optionally specified. The type of data area (specified by the TYPE parameter) determines the maximum length that its value can have and

the default length that is assumed if LEN is not specified. The maximum lengths and the defaults for each of the three types are described in Table 1, at the end of this description.

Note:

For character types, the default length is the same as the length of the initial value, if one is specified in the VALUE parameter.

Element 1: Value Length

length: Specify the maximum length of the value in this data area. Valid values range from 1 through 2000.

Element 2: Number of Decimal Positions

decimal-positions: Specify the number of decimal positions that the value in this data area can have. This option is valid only for decimal data areas. The length of the value in the data area includes the number of decimal positions in the value. The maximum length of the decimal value is 24 digits, of which no more than 9 can be to the right of the decimal point. The total length of the data area in CL programs cannot exceed 15 digits. If TYPE(*DEC) is specified and the number of decimal positions is not specified, a value of 0 is assumed. Valid values range from 0 through 9.

VALUE

Specifies the beginning value that is assigned to the data area when it is created. The beginning value must be of the type specified by the TYPE parameter. If no beginning value is specified, a character data area is initialized to blanks, a decimal data area is initialized to a value of 0, and a logical data area is initialized to '0'.

RMTDTAARA

Specifies the name of the remote data area on the target system. The data area does not need to exist when the DDM data area is created.

The name of the data area can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be used.

remote-data-area-name: Specify up to 10 characters for a data area name that identifies the remote data area accessed.

- If *LIBL (the default library qualifier) is specified or assumed, the library list in the called job on the target system is searched to locate the data area.
- If *CURLIB is specified, the current library in the called job on the target system is searched to locate the data area.

RMTLOCNAME

Specifies the name of the remote location that is used with this object.

Note:

Multiple DDM data areas can use the same remote location for the target system. The remote locations used must point to iSeries 400 computers that are at a release of OS/400 that supports remote data areas.

remote-location-name: Specify the name of the remote location that is associated with the target system. The remote location, which is used in accessing the target system, does not need to exist when the DDM data area is created but must exist when the DDM data area is accessed.

DEV Specifies the name of the APPC device description on the source system that is used with this DDM data area. The device description does not need to exist when the DDM data area is created.

***LOC:** The device associated with the remote location is used. If several devices are associated with the remote location, the system determines which device is used.

device-name: Specify the name of a communications device associated with the remote location. If the device name is not valid for the remote location, a message is sent when the program device entry is acquired.

LCLLOCNAME

Specifies the local location name.

***LOC:** The device associated with the remote location is used. If several devices are associated with the remote location, the system determines which device is used.

***NETATR:** The LCLLOCNAME value specified in the system network attributes is used.

local-location-name: Specify the name of the local location that is associated with the remote location. The local location name is specified only if the user indicates a specific local location for the remote location. If the local location name is not valid for the remote location, an escape message is sent when the DDM data area is accessed.

MODE Specifies the mode name that is used with the remote location name to communicate with the target system.

***NETATR:** The mode name specified in the network attributes is used.

mode-name: Specify the name of the mode that is used. If the mode name is not valid for any combination of remote location and local location, an escape message is sent when the DDM data area is accessed.

RMTNETID

Specifies the remote network identifier (ID) in which the remote location resides that is used to communicate with the target system.

***LOC:** The remote network ID associated with the remote location is used. If several remote network IDs are associated with the remote location, the system determines which remote network ID is used.

***NETATR:** The RMTNETID value specified in the system network attributes is used.

***NONE:** No remote network ID is used.

remote-network-ID: Specify the remote network ID that is associated with the remote location. The remote network ID is specified only if the user indicates a specific remote network ID for the remote location. If the remote network ID is not valid for the remote location, an escape message is sent when the DDM data area is accessed.

AUT Specifies the authority being given to the users who do not have specific authority to the data area, who are not on an authorization list, and whose user group has no specific authority to the object.

***LIBCRTAUT:** The public authority for the data area is taken from the value on the CRTAUT parameter of the target library. (The target library is the library that is to contain the data area. The public authority is determined when the data area is created. If the CRTAUT value for the library changes after the data area is created, the new value does not affect any existing objects.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change the object and perform basic functions on the object. Change authority provides object operational authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL:** The user can perform all operations on the object except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user can also change ownership of the data area.

***USE:** The user performs basic operations on the data area, such as running a program or displaying the contents of a file. The user cannot change the data area. *USE authority provides object operational authority, read authority, and execute authority.

***EXCLUDE:** The user cannot access the data area.

authorization-list-name: Specify the name of the authorization list used.

TEXT Specifies text that briefly describes the data area.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Table 1. Data Area Lengths

Type	Maximum Length	Default Length
Decimal	24 digits, 9 decimal positions	15 digits, 5 decimal positions
Character	2000 characters	32 characters
Logical	1 character	1 character

Examples for CRTDTAARA

Example 1: Creating a Data Area with a Value of Zero

```
CRTDTAARA DTAARA(TOTSALES) TYPE(*DEC) LEN(15 2)
VALUE(0) TEXT('Total sales accumulator')
```

This command creates a data area named TOTSALES and stores it in the current library specified for the job. TOTSALES has the following data attributes: it is a 15-position numeric data area with two decimal positions and with an initial value of 0.

Example 2: Creating a Data Area Initialized to Blanks

```
CRTDTAARA DTAARA(CUSTOMER) TYPE(*CHAR) LEN(148)
TEXT('Customer name area')
```

This command creates the data area named CUSTOMER. It can contain as many as 148 characters in the character string. Because no initial value is specified, the data area is initialized to blanks.

The following example describes the creation of a DDM data area.

Example 3: Creating a DDM Data Area to Access a Data Area at Another iSeries 400

```
CRTDTAARA DTAARA(SOURCE/SALES) TYPE(*DDM)
RMTDTAARA(REMOTE/SALES) RMTLOCNAME(NEWYORK)
```

This command creates a DDM data area named SALES, and stores it in the SOURCE library on the source system. This DDM data area uses the remote location named NEWYORK to access a remote data area named SALES stored in the REMOTE library on an iSeries 400 in New York.

Error messages for CRTDTAARA

***ESCAPE Messages**

CPF1008

Data area &2 not created.

CPF1015

Data area &1 in &2 not found.

CPF1021

Library &1 not found for data area &2.

CPF1022

No authority to library &1 data area &2.

CPF1023

Data area &1 exists in &2.

CPF1024

TYPE and VALUE parameters not compatible.

CPF1025

LEN and VALUE parameters not compatible.

CPF1026

VALUE parameter must be '0' or '1'.

CPF1047

Length not valid for data area &1 in &2

CPF1062

Null string not valid as character value.

CPF1092

Cannot create data area &2 in library &1.

CPF180B

Function &1 not allowed.

CPF9802

Not authorized to object &2 in &3.

CRTDTAQ (Create Data Queue) Command Description

CRTDTAQ Command syntax diagram

Purpose

The Create Data Queue (CRTDTAQ) command creates a data queue and stores it in a specified library.

Data queues, which are a type of OS/400 system object, are used to communicate and store data used by several programs either within a job or between jobs. Multiple jobs can send or receive data from a single queue.

For more information about data queues on output queues, see the Printer Device Programming  book.

The Create Data Queue (CRTDTAQ) command optionally creates a distributed data management (DDM) data queue when TYPE(*DDM) is specified. The DDM data queue is used as a reference data queue by programs to access data queues located on a remote (target) system in the DDM network. Programs on the local (source) system refer to a remote data queue by the DDM data queue's name, not by the remote data queue's name. The DDM data queue name, however, can be the same as the remote data queue name.

The DDM data queue on the source system contains the name of the remote data queue and the name of the remote (target) system on which the remote data queue is located.

Restriction: Users of this command must have add authority for the library where the data queue is located, object operational and add authority to the sending data queue, and use authority to the receiving data queue.

Required Parameters

DTAQ Specifies the qualified name of the data queue being created.

The name of the data queue can be qualified by one of the following library values:

***CURLIB:** The data queue is created in the current library for the job. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library where the data queue is created.

data-queue-name: Specify the name of the data queue being created.

MAXLEN

Specifies the maximum length of the entry that is sent to the data queue. Valid values range from 1 through 64512.

Notes:

1. If the data queue is associated with an output queue, the maximum length value should be at least 128.
2. This parameter is valid only when TYPE(*STD) is specified.

Optional Parameters

TYPE Specifies the type of data queue to be created. A standard data queue or a distributed data management (DDM) data queue can be created.

***STD:** A standard data queue is created.

***DDM:** A DDM data queue is created. The data queue contains the name of the remote data queue accessed and the name of the remote (target) system that the data queue is located on.

FORCE

Specifies whether the data queue entries sent to or received by this data queue are forced to auxiliary storage.

Note: This parameter is valid only when TYPE(*STD) is specified.

***NO:** Send and receive operations are not immediately forced to auxiliary storage.

***YES:** Send and receive operations are immediately forced to auxiliary storage. This ensures that the changes are not lost if a system failure occurs. This requires additional system overhead.

SEQ Specifies the sequence in which entries are received from the data queue.

Notes:

1. If the data queue is associated with an output queue, the sequence value should be ***FIFO** or ***LIFO**.
2. This parameter is valid only when **TYPE(*STD)** is specified.

***FIFO:** Data queue entries are received in a first-in first-out sequence.

***LIFO:** Data queues entries are received in a last-in first-out sequence.

***KEYED:** Data queues entries are received by key. A key is a prefix added to an entry by its sender.

KEYLEN

Specifies the number of characters in the key. Valid values range from 1 through 256.

Note: This parameter is valid only when **SEQ(*KEYED)** and **TYPE(*STD)** are specified.

SENDERID

Specifies whether a sender ID is attached to each message sent to the data queue. The ID contains the qualified job name and the sender's current user profile.

Note: This parameter is valid only when **TYPE(*STD)** is specified.

***NO:** Messages sent do not include the sender ID.

***YES:** Messages sent include the sender ID.

SIZE Specifies the amount of storage allocated for the data queue. Parameter elements consist of the maximum number of entries and the initial number of entries for the data queue.

Note: This parameter is valid only when **TYPE(*STD)** is specified.

Element 1: Maximum Number of Entries

One of the following is used to specify the maximum number of entries that can be added to the data queue.

➤ ***MAX16MB:** The system will calculate the maximum number of entries that can be added to the data queue and will be allowed to grow to a maximum size of approximately 16 megabytes (MB). One megabyte equals 1,048,576 bytes. This value with an initial number of entries of 16 provides compatibility with releases of the operating system earlier than Version 4 Release 5 Modification 0 (V4R5M0). ⚡

***MAX2GB:** The system will calculate the maximum number of entries that can be added to the data queue. The data queue will be allowed to grow to a maximum size of approximately 2 gigabytes (GB). One gigabyte equals 1,073,741,824 bytes.

number-of-entries: The data queue will be allowed to hold at least this number of entries. Based on the extend size used by the machine, the maximum number of data queue entries may be slightly higher than the specified value. The value specified must be greater than 0.

Element 2: Initial Number of Entries

Specifies the amount of storage that will initially be allocated to the data queue. The queue will be created to hold the initial number of entries of the maximum entry length.

16: Initially, storage is allocated to hold 16 entries of the maximum entry length.

initial-number-of-entries: Specify the value for the initial number of entries that the data queue can hold. The value must be greater than 0.

AUTORCL

Specifies whether the storage allocated for the data queue is automatically reclaimed when the data queue is empty.

Note: This parameter is valid only when TYPE(*STD) is specified.

***NO:** The storage allocated for the data queue is not reclaimed when the data queue is empty.

***YES:** The storage allocated for the data queue is reclaimed when the data queue is empty. Storage for the Initial Number of Entries value will remain allocated.

RMTDTAQ

Specifies the name of the remote data queue on the target system. The data queue does not need to exist when the DDM data queue is created.

The name of the data queue can be qualified by one of the following library values:

The name of the data queue can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

remote-data-queue-name: Specify the name of the data queue that identifies the remote data queue accessed. The name cannot exceed 10 characters.

- If *LIBL (the default library qualifier) is specified or assumed, the library list in the called job on the target system is searched to locate the data queue.
- If *CURLIB is specified, the current library in the called job on the target system is searched to locate the data queue.

RMTLOCNAME

Specifies the name of the remote location that is used with this object.

Note:

Multiple DDM data queues can use the same remote location for the target system. The remote locations used must point to iSeries 400 that are at a release of OS/400 that supports remote data queues.

remote-location-name: Specify the name of the remote location that is associated with the target system. The remote location, which is used in accessing the target system, does not need to exist when the DDM data queue is created but must exist when the DDM data queue is accessed.

DEV Specifies the name of the APPC device description on the source system that is used with this DDM data queue. The device description does not need to exist when the DDM data queue is created.

***LOC**: The device associated with the remote location is used. If several devices are associated with the remote location, the system determines which device is used.

device-name: Specify the name of a communications device associated with the remote location. If the device name is not valid for the remote location, a message is sent when the program device entry is required.

LCLLOCNAME

Specifies the local location name.

***LOC**: The device associated with the remote location is used. If several devices are associated with the remote location, the system determines which device is used.

***NETATR**: The LCLLOCNAME value specified in the system network attributes is used.

local-location-name: Specify the name of the local location that is associated with the remote location. The local location name is specified only if the user indicates a specific local location for the remote location. If the local location name is not valid for the remote location, an escape message is sent when the DDM data queue is accessed.

MODE Specifies the mode name that is used with the remote location name to communicate with the target system.

***NETATR**: The mode name specified in the network attributes is used.

mode-name: Specify the name of the mode that is used to communicate with the remote system. If the mode name is not valid for any combination of remote location and local location, an escape message is sent when the DDM data queue is accessed.

RMTNETID

Specifies the remote network identifier (ID) in which the remote location resides that is used to communicate with the target system.

***LOC**: The remote network ID associated with the remote location is used. If several remote network IDs are associated with the remote location, the system determines which remote network ID is used.

***NETATR**: The RMTNETID value specified in the system network attributes is used.

***NONE**: No remote network ID is used.

remote-network-ID: Specify the remote network ID that is associated with the remote location. The remote network ID is specified only if the user indicates a specific remote network ID for the remote location. If the remote network ID is not valid for the remote location, an escape message is sent when the DDM data queue is accessed.

AUT Specifies the authority given to users who do not have specific authority to the data queue, who are not on an authorization list, and whose user group has no specific authority to the data queue.

***LIBCRTAUT:** The public authority for the data queue is taken from the value on the CRTAUT parameter of the target library (the library that is to contain the data queue). The public authority is determined when the data queue is created. If the CRTAUT value for the library changes after the data queue is created, the new value does not affect any existing objects.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove user IDs.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the data queue.

***USE:** The user can perform basic operations on the data queue, such as running a program or reading a file. The user cannot change the data queue. *USE authority provides object operational authority, read authority, and execute authority.

***EXCLUDE:** The user cannot access the data queue.

authorization-list-name: Specify the name of the authorization list used.

TEXT Specifies the text that briefly describes the data queue. More information on this parameter is in Commonly used parameters.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Examples for CRTDTAQ

Example 1: Creating a Standard Data Queue

```
CRTDTAQ DTAQ(DEPTADTA) MAXLEN(100) AUT(*EXCLUDE)
TEXT('Special data + files for DEPTA')
```

This command creates a data queue named DEPTADTA and puts it in the current library; the maximum length entry is 100. Because AUT(*EXCLUDE) is specified, the data queue can be used and controlled only by the user who created the queue and by users who have been given specific authority. Users in Department A can be given authority to use this data queue by using the Grant Object Authority (GTROBJAUT) command.

Example 2: Creating a DDM Data Queue to Access a Data Queue at Another iSeries 400

```
CRTDTAQ DTAQ(SOURCE/SALES) TYPE(*DDM)
RMTDTAQ(REMOTE/SALES) RMTLOCNAME(NEWYORK)
```

This command creates a DDM data queue named SALES and stores it in the SOURCE library on the source system. This DDM data queue uses the remote location named NEWYORK to access a remote data queue named SALES stored in the REMOTE library on an iSeries 400 in New York.

Example 3: Creating a Data Queue Specifying Size Attributes and Automatic Reclaim

```
CRTDTAQ DTAQ(MYLIB/MYDTAQ) MAXLEN(80)
SIZE(*MAX2GB 100) AUTORCL(*YES)
```

This command creates a data queue named MYDTAQ and stores it in the MYLIB library. The maximum entry length is 80 bytes and the queue entries are received in a first-in-first-out (FIFO) sequence. The data

queue will initially have storage allocated to hold 100 entries. The data queue can grow to a maximum size of approximately 2 gigabytes. If all queue entries are received, storage for the data queue will be automatically reclaimed.

Error messages for CRTDTAQ

***ESCAPE Messages**

CPF2105

Object &1 in &2 type *&3 not found.

CPF2108

Object &1 type *&3 not added to library &2.

CPF2109

NEWOBJ must be *SAME when OBJ parameter is *ALL or generic name.

CPF2110

Library &1 not found.

CPF2113

Cannot allocate library &1.

CPF2116

DATA(*YES) specified and *ALL or *FILE not in OBJTYPE list.

CPF2122

Storage limit exceeded for user profile &1.

CPF2123

No objects of specified name or type exist in library &2.

CPF2130

&1 objects duplicated. &2 objects not duplicated.

CPF2151

Operation failed for &2 in &1 type *&3.

CPF2152

Objects of type *&1 cannot be created into QTEMP.

CPF2162

Duplication of all objects in library &1 not allowed.

CPF2176

Library &1 damaged.

CPF2182

Not authorized to library &1.

CPF2185

TOLIB or NEWOBJ parameters not correct

CPF2186

Object &1 cannot be created into library &2.

CPF2283

Authorization list &1 does not exist.

CPF327E

Alternative name for file &1 not allowed.

CPF6565

User profile storage limit exceeded.

CPF9810

Library &1 not found.

CPF9820

Not authorized to use library &1.

CPF9827

Object &1 cannot be created or moved into &2.

CPF9830

Cannot assign library &1.

CPF9870

Object &2 type *&5 already exists in library &3.

CRTIGCDCT (Create DBCS Conversion Dictionary) Command Description

CRTIGCDCT Command syntax diagram

Purpose

The Create DBCS Conversion Dictionary (CRTIGCDCT) command creates the specified double-byte character set (DBCS) conversion dictionary and stores it in the specified library. The dictionary contains alphameric entries and their related words. The system refers to DBCS conversion dictionaries when doing DBCS conversion.

Required Parameter

IGCDCT

Specifies the qualified name of the DBCS conversion dictionary being created and the library in which it is stored.

The name of the DBCS conversion dictionary can be qualified by one of the following library values:

***CURLIB:** The DBCS conversion dictionary is created in the current library for the job. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library where the DBCS conversion dictionary is created.

dictionary-name: Specify the name of the dictionary being created.

Note:

A DBCS conversion dictionary created by the user can have any name, but is used for doing DBCS conversion only if it is named QUSRIGCDCT.

Optional Parameters

AUT Specifies the authority given to users who do not have specific authority to the DBCS conversion dictionary, who are not on an authorization list, and whose user group has no specific authority to the DBCS conversion dictionary. More information on this parameter is in Commonly used parameters.

***LIBCRTAUT:** The public authority for the DBCS conversion dictionary is taken from the value on the CRTAUT parameter of the target library (the library that is to contain the DBCS conversion dictionary). The public authority is determined when the DBCS conversion dictionary is created. If the CRTAUT value for the library changes after the DBCS conversion dictionary is created, the new value does not affect any existing objects.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the DBCS conversion dictionary.

***USE:** The user can perform basic operations on the DBCS conversion dictionary, such as running a program or reading a file. The user cannot change the DBCS conversion dictionary. *USE authority provides object operational authority, read authority, and execute authority.

***EXCLUDE:** The user cannot access the DBCS conversion dictionary.

authorization-list-name: Specify the name of the authorization list used.

TEXT Specifies the text that briefly describes the dictionary. More information on this parameter is in Commonly used parameters.

***BLANK:** No text is specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CRTIGCDCT

```
CRTIGCDCT  IGCDC(DBCSLIB/QUSRIGCDCT)
```

This command creates a DBCS conversion dictionary named QUSRIGCDCT, which is stored in the library DBCSLIB.

Error messages for CRTIGCDCT

*ESCAPE Messages

CPF8431

DBCS conversion dictionary &2 not created in library &3.

CRTDEVAPPC (Create Device Description (APPC)) Command Description

CRTDEVAPPC Command syntax diagram

Purpose

The Create Device Description (APPC) (CRTDEVAPPC) command creates a device description for an advanced program-to-program communications (APPC) device. More information about using this

command is in the Communications Configuration  book.

Required Parameters

DEV D Specifies the name of the device description being created.

RMTLOCNAME

Specifies the name of the remote location. The name can contain characters A through Z, 0 through 9, \$, #, or @, but the first character cannot be 0 through 9.

Optional Parameters

ONLINE

Specifies whether this object is automatically varied on at initial program load (IPL).

***YES:** The device is automatically varied on at IPL.

***NO:** This device is not automatically varied on at IPL.

LCLLOCNAME

Specifies the local location name.

Note:

The name cannot be the same as that specified for the RMTLOCNAME parameter. The combination of the LCLLOCNAME and RMTLOCNAME names must be unique for each device description attached to the same controller.

***NETATR:** The LCLLOCNAME value specified in the system network attributes is used.

local-location-name: Specify the name (up to eight characters) by which the local system is known to the remote device. The name can contain characters A through Z, 0 through 9, \$, #, or @, but the first character cannot be 0 through 9.

RMTNETID

Specifies the name of the remote network.

***NETATR:** The RMTNETID value specified in the system network attributes is used.

***NONE:** No remote network identifier (ID) is used.

remote-network-ID: Specify the remote network ID. The name can contain characters A through Z, 0 through 9, \$, #, or @, but the first character cannot be 0 through 9.


CTL Specifies the name of the controller description to which this object is attached.

MODE Specifies the names of the modes that define the sessions on this device.

***NETATR:** The mode name specified in the network attributes is used.

mode-name: Specify no more than eight characters to specify a mode name for this device. The name may contain characters A through Z, 0 through 9, \$, #, and @. The first character may not be 0 through 9. The mode name cannot be CPSVCMG or SNASVCMG; these mode names are reserved for system use. Up to 14 mode names can be specified. When APPN(*YES) and LOCADR(00) are specified on the device, no modes should be added to the device description. APPN will automatically add the modes.

➤ MSGQ

Specifies the name of the message queue to which messages are sent. More information about using this parameter is in the Communications Management  book.

***CTLD:** Messages are sent to the message queue defined in the attached controller. The message queue is determined when the device is varied on.

***SYSOPR:** Messages are sent to the system operator message queue (QSYS/QSYSOPR).

message-queue-name: Specify the name of the message queue to which messages are sent.

The name of the message queue can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched. <<

LOCADR

Specifies the local location address. Specify a 2-character hexadecimal value ranging from 00 through FF.

00: The 00 value is used.

local-address: Specify the address of the location of the APPC device.

APPN This parameter specifies whether networking is used.

***YES:** Networking is used and dynamic definition of resources is allowable.

***NO:** Networking is not used. Mode names cannot be added to the device while in vary on status.

SNGSSN

Specifies whether a single session using this device description will be used between the local and remote locations.

***NO:** Multiple sessions are used. LOCADR(00) must be specified when SNGSSN(*NO) is specified.

Element 1: Single-Session Device Description

***YES:** This device description uses single sessions.

Element 2: Number of Single-Session Conversations

10: The number of single session conversations allowed for this device description is ten.

number-of-conversations: Specify the number of conversations allowed for a single session of this device description. Valid values range from 1 through 512.

LCLCTLSSN

Specifies whether single sessions are locally or remotely controlled. *YES is valid only if SNGSSN parameter was specified as *YES.

***NO:** The single session is remotely controlled.

***YES:** The single session is locally controlled.

PREESTSSN

Specifies whether the single session is established automatically when the mode is started with the remote location. The value of *YES is valid only if SNGSSN(*YES) and LCLCTLSSN(*YES) are both specified.

***NO:** The session is not automatically established when the mode is started.

***YES:** The session is automatically established when the mode is started.

LOCPWD

Specifies the password used to validate the session establishment request.

***NONE:** No password is used.

location-password: Specify the password to validate the session establishment request. An even number of hexadecimal characters must be specified. Up to 16 characters can be entered.

For example, a password consisting of the letter A would be input as C1, and an integer one would be input as F1 on the LOCPWD parameter.

SECURELOC

Specifies how security information is handled for program start requests received from remote systems. The value is sent to the remote system when sessions are established. It is used in determining how allocate or evoke requests should be built. The value only applies to conversations started with the SECURITY(SAME) level of security.

***NO**: The remote system is not a secure location. Security validation done by the remote system is not accepted. SECURITY(SAME) conversations are treated as SECURITY(NONE). No security information will be sent with allocate or evoke requests.

***YES**: The remote system is a secure location and the local system will accept security validation done by remote systems. For SECURITY(SAME) conversations, the local system allows the remote system to verify user passwords. On the remote system, user IDs are retrieved from the operating system. The user IDs are then sent with an already verified indicator in the allocate or evoke requests.

***VFYENCPWD**: The remote system is not a secure location. For SECURITY(SAME) conversations, the remote system is not allowed to send the already verified indicator. On the remote system, user IDs and passwords are retrieved from the operating system. Passwords are then encrypted and sent with the user IDs in the allocate or evoke requests, to be verified by the local system. This value should only be used if the remote system is using OS/400 V3R2M0 or later. If the remote system does not support password protection then session establishment will not be allowed. For remote systems that support password protection, but do not support verification of encrypted passwords (VFYENCPWD), conversations will be treated as SECURITY(NONE).

AUT Specifies the authority given to users who do not have specific authority to the device description, who are not on an authorization list, and whose user group has no specific authority to the device description.

***LIBCRTAUT**: The authority for the object is the same as the create authority for QSYS. The create authority for QSYS can be displayed by using the Display Library Description (DSPLIBD) command. If the create authority is changed with the Change Library (CHGLIB) command, the new authority does not affect existing objects.

***CHANGE**: The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***ALL**: The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the device description.

***USE**: The user can perform basic operations on the device description, such as running a program or reading a file. The user cannot change the device description. *USE authority provides object operational authority, read authority, and execute authority.

***EXCLUDE**: The user cannot access the device description.

authorization-list-name: Specify the name of the authorization list used.

TEXT Specifies the text that briefly describes the device file. More information on this parameter is in Commonly used parameters.

***BLANK**: Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CRTDEVAPPC

```
CRTDEVAPPC  DEVD(APPC1)  LOCADR(00)
            RMTLOCNAME(CHICAGO)  CTL(CTLAPPC01)  SNGSSN(*YES)
```

This command creates a device description for an APPC communications device named APPC1. The device has a location address of X'00' and is in Chicago, attached to controller CTLAPPC01. This device is limited to one session at a time.

Error messages for CRTDEVAPPC

*ESCAPE Messages

CPF261A

Device description &1 not created due to errors.

CPF2654

Device description &1 created but possibly not usable.

CPF34D7

Output queue &1 in &2 not changed due to errors.

CRTDEVASP (Create Device Description (ASP)) Command Description

CRTDEVASP Command syntax diagram

Purpose

The Create Device Description (ASP) (CRTDEVASP) command creates a device description for an auxiliary storage pool (ASP) device.

Required Parameters

DEVD Specifies the name of the device description being created.

RSRCNAME

Specifies the resource name that identifies the auxiliary storage pool (ASP) by which a collection of disks is known.

Optional Parameters

➤ RDB

Specifies the relational database(RDB) name to associate with the auxiliary storage pool(ASP) device.

***GEN:** The RDB name will be generated by the operating system after a successful vary on of the device. If the device is the primary ASP of an ASP group, the RDB name will be the same as the device name. If the ASP device is a secondary ASP or user-defined file system (UDFS) ASP the RDB name will be set to blanks.

relational-database-name: Specify the RDB name to associate with the ASP device. The specified RDB name will not be used if the ASP device description is a secondary ASP or UDFS ASP. If the ASP device description is the primary ASP of an ASP group when the ASP group is varied on, the specified RDB name will become the name by which the relational database is known on this system and other systems which connect to this system.

MSGQ

Specifies the name of the message queue to which messages are sent.

***SYSOPR:** Messages are sent to the system operator message queue (QSYS/QSYSOPR).

message-queue-name: Specify the name of the message queue to which operational messages are sent.

The name of the message queue can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched. <<

AUT Specifies the authority given to users who do not have specific authority to the object, who are not on the authorization list, or whose user group has no specific authority to the object.

***LIBCRTAUT:** The authority for the object is the same as the create authority for QSYS. The create authority for QSYS can be displayed by using the Display Library Description (DSPLIBD) command. If the create authority is changed with the Change Library (CHGLIB) command, the new authority does not affect existing objects.

***USE:** The user can perform basic operations on the device description, such as running a program or reading a file. The user cannot change the device description. *USE authority provides object operational authority, read authority, and execute authority.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the device description.

***EXCLUDE:** The user cannot access the device description.

authorization-list-name: Specify the name of the authorization list used.

TEXT Specifies text that briefly describes the device description.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

>> Examples for CRTDEVASP

Example 1: Create an independent ASP device

```
CRTDEVASP DEVD(COMPANY1) RSRNAME(COMPANY1)
```

This command creates a device description for an independent ASP named COMPANY1. The resource name for the device description is also named COMPANY1. Operational messages for independent ASP COMPANY1 will be sent to message queue QSYSOPR in library QSYS.

Example 2: Create a Primary ASP Device

```
CRTDEVASP DEVD(WAREHOUSE2) RSRcname(WAREHOUSE2)
          RDB(WAREHOUSE_NUMBER_2)
          MSGQ(INVENTORY/WH2)
```

This command creates a device description for a primary ASP named WAREHOUSE2. The resource name for the device description is also named WAREHOUSE2. The relational database (RDB) name that will be associated with the ASP group when this primary ASP device is varied on is WAREHOUSE_NUMBER_2. Operational messages for independent ASP WAREHOUSE2 will be sent to message queue WH2 in library INVENTORY.



Error messages for CRTDEVASP

*ESCAPE Messages

CPF261A

Device description &1 not created due to errors.

CRTDEVASC (Create Device Description (Async)) Command Description

CRTDEVASC Command syntax diagram

Purpose

The Create Device Description (Async) (CRTDEVASC) command creates a device description for an asynchronous device. More information about using this command is in the Communications Configuration



book.

Required Parameters

DEVD Specifies the name of the device description being created.

RMTLOCNAME

Specifies the remote location name of the system with which this object communicates.

***NONE:** The remote location is not specified.

remote-location-name: Specify the full name of a remote location.

Optional Parameters

ONLINE

Specifies whether this object is automatically varied on at initial program load (IPL).

***YES:** The device is automatically varied on at IPL.

***NO:** This device is not automatically varied on at IPL.

CTL Specifies the name of the controller description to which this object is attached.

AUT Specifies the authority given to users who do not have specific authority to the device description, who are not on an authorization list, and whose user group has no specific authority to the device description.

***LIBCRTAUT:** The authority for the object is the same as the create authority for QSYS. The create authority for QSYS can be displayed by using the Display Library Description (DSPLIBD) command. If the create authority is changed with the Change Library (CHGLIB) command, the new authority does not affect existing objects.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the device description.

***USE:** The user can perform basic operations on the device description, such as running a program or reading a file. The user cannot change the device description. *USE authority provides object operational authority, read authority, and execute authority.

***EXCLUDE:** The user cannot access the device description.

authorization-list-name: Specify the name of the authorization list used.

TEXT Specifies the text that briefly describes the device file. More information on this parameter is in Commonly used parameters.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CRTDEVASC

```
CRTDEVASC  DEVD(ASC001)  RMTLOCNAME(NYC)
           CTL(CTLASCNYC)
```

This command creates an asynchronous communications device. The device is located in New York City and is attached to controller CTLASCNYC.

Error messages for CRTDEVASC

*ESCAPE Messages

CPF261A

Device description &1 not created due to errors.

CRTDEVBSC (Create Device Description (BSC)) Command Description

CRTDEVBSC Command syntax diagram

Purpose

The Create Device Description (BSC) (CRTDEVBSC) command creates a device description for binary synchronous communications (BSC). More information about using this command is in the

Communications Configuration  book.

Required Parameters

DEVD Specifies the name of the device description being created.

LOCADR

Specifies the local location address. Specify a 2-character hexadecimal value ranging from 00 through FE.

RMTLOCNAME

Specifies the remote location name of the system with which this object communicates.

Optional Parameters

ONLINE

Specifies whether this object is automatically varied on at initial program load (IPL).

***YES:** The device is automatically varied on at IPL.

***NO:** This device is not automatically varied on at IPL.

CTL Specifies the name of the controller description to which this object is attached.

CNN Specifies the type of line connection used.

***PP:** A point-to-point line is used.

***MPTRIB:** A multipoint tributary line is used.

APPTYPE

Specifies the application type being used.

***BSCEL:** The application type is Binary Synchronous Communications Equivalence Link (BSCEL). Specify this value to use the intersystem communications function (ICF) support to communicate with other BSC systems or devices. *PGM must be specified on the APPTYPE parameter for the CRTCTLBSC command.

***RJE:** The application type is the BSC Remote Job Entry (RJE). *RJE must be specified on the APPTYPE parameter for the CRTCTLBSC command.

***EML:** The application type is 3270 device emulation, using the 3270 Device Emulation Utility, or the 3270 program interface support provided in the System/38 environment. *EML must be specified on the APPTYPE parameter for the CRTCTLBSC command.

***BSC38:** The application type is a System/38 environment program. This parameter is specified for a device that communicates with other BSC systems or devices when the application uses a BSC device file or a mixed device file in the System/38 environment. *PGM must be specified on the APPTYPE parameter for the CRTCTLBSC command.

***RPGT:** The application uses RPGII with binary synchronous communications adapter (BSCA) devices and telecommunication specifications. *PGM must be specified on the APPTYPE parameter for the CRTCTLBSC command.

Note:

This value can also be specified when the application uses ICF support, but does not need Evoke capability or program start request capability. If this value is specified, the value of the RMTBSCEL parameter is automatically set to *NO. If the application uses ICF, make sure there is no requirement for Evoke or program start request support before trying to use this value, or unpredictable results can occur.

CTNWIN

Specifies which BSC station is primary and which is secondary, in order to resolve contention for BSC point-to-point and multipoint lines.

***SEC:** The local iSeries 400 is the secondary station, which stops when the other station needs the line.

***PRI:** The local iSeries 400 is the primary station.

BLOCK

Specifies whether the system or the user blocks and deblocks transmitted records.

Note:

This parameter is valid only when APPTYPE(*BSCCEL) or APPTYPE(*RPGT) is specified.

With this parameter, one of the following conditions of record formatting can be specified:

No blocking/deblocking: The record format described in the data description specifications (DDS) is the format for both the record and the block.

User blocking/deblocking: The user must provide the BSC controls needed to describe the record format to the system.

System blocking of fixed-length records: The system uses fixed-length records, and blocks and deblocks records accordingly.

If the user specifies a parameter value other than *NONE or *USER, records are blocked as required by the system for output and deblocked on input. Blocking can be done with or without record separator characters. If TRNSPY(*YES) is specified, the records can be blocked without record separator characters by specifying BLOCK(*NOSEP), or the records can be transmitted one record at a time by specifying BLOCK(*NONE). By specifying BLOCK(*USER), records can be blocked to include the BSC transparency controls. If TRNSPY(*NO) is specified, all blocking options are valid.

Up to 512 records can be blocked for transmitting. When the system blocks and deblocks the records, record separator characters and control characters are not passed to the program as data.


***NONE:** No blocking or deblocking is done by the system.

***ITB:** The records are blocked or deblocked, based on the location of an ITB (intermediate text block) control character. For input files, a record is delimited by locating the next ITB character, an ETX (end-of-text), or ETB (end-of-transmission block) character. For output files, an ITB character is inserted after each record. If the ITB is the last character of the block, it is replaced by an ETX or an ETB character.

***IRS:** The records are blocked or deblocked, based on the location of an interrecord separator (IRS) character. For input files, a record is delimited by locating the next IRS character. For output files, an IRS character is inserted after the record.

***NOSEP:** No record separator character is in the transmission block sent to or received from the device. The system blocks and deblocks the records by a fixed record length, as specified in the DDS format specifications, or record length in an RPGII telecommunications program.

***USER:** The program provides all the control characters (including record separator characters, binary synchronous communications (BSC) framing characters, and transparency characters) necessary to send records. More information about the device and binary synchronous communications equivalence link (BSCCEL) support characteristics is in the BSC Equivalence Link

Programming  book.

***SEP:** Records are blocked or deblocked based on the location of a user-specified record separator character. For input files, a record is delimited by locating the next record separator character. For output files, a record separator character is inserted after the record.

If this option is selected, an option must also be specified on the SEPCHAR parameter.

SEPCHAR

Specifies a unique 1-byte record separator character. The record separator character must be specified as two hexadecimal characters.

'1E': The record separator character is '1E'.

Note: This parameter is valid only when APPTYPE(*BSCEL) or APPTYPE(*RPGT) is specified.

record-separator-character: Specify a record separator that **IS NOT** in the following list of BSC control characters.

EBCDIC

BSC Control

X'01' SOH (Start of header)
X'02' STX (Start of text)
X'03' ETX (End of text)
X'10' DLE (Data link escape)
X'1D' IGS (Interchange group separator)
X'1F' ITB (Intermediate text block)
X'26' ETB (End-of-transmission block)
X'2D' ENQ (Enquiry)
X'32' SYN (Synchronization)
X'37' EOT (End of transmission)
X'3D' NAK (Negative acknowledgment)

RMTBSCEL

Specifies the type of BSCEL session with the remote system.

***NO**: The remote system or device cannot recognize BSCEL commands and BSCEL online messages, but ICF support is desired.

***YES**: The remote system can recognize BSCEL start and end commands, and BSCEL online messages.

Note: This parameter is valid only when APPTYPE(*BSCEL) or APPTYPE(*RPGT) is specified.

RCDLEN

Specifies the maximum record length allowed when communicating with this device. The maximum value for this parameter is 8192. The value must not exceed the block length value for this device and must not exceed the buffer size specified on the line description (MAXBUFFER) to which this device is attached.

512: The record length is 512.

Note: This parameter is valid only when APPTYPE(*BSCEL) or APPTYPE(*RPGT) is specified.

record-length: Specify a value (in bytes) that is at least the size of the largest record to be sent. Valid values range from 1 through 8192.

BLKLEN

Specifies the maximum block length allowed when communicating with this device. The maximum value for this parameter is 8192. This value must not exceed the buffer size specified on the line description (MAXBUFFER) to which this device is attached.

512: The block length is 512.

Note: This parameter is valid only when APPTYPE(*BSCSEL) or APPTYPE(*RPGT) is specified.

block-length: Specify the maximum block length (in bytes) of records sent. The value must be at least the size of the largest record sent. Valid values range from 1 through 32767.

TRNSPY

Specifies whether text transparency is used when sending records. Text transparency permits the transmission of all 256 EBCDIC character codes. Use this feature when transmitting packed or binary data fields. The TRNSPY parameter is ignored if BLOCK(*USER) is specified. TRNSPY(*YES) cannot be specified if TRUNC(*YES) or DTACPR(*YES) is specified.

***NO:** Text transparency is not used.

***YES:** Text transparency is used that permits the transmission of all 256 EBCDIC character codes. *YES is a valid value only when BLOCK(*NONE), BLOCK(*NOSEP), or BLOCK(*USER) is specified. TRNSPY(*YES) is invalid if the line description specifies CODE(*ASCII).

Note: This parameter is valid only when APPTYPE(*BSCSEL) or APPTYPE(*RPGT) is specified.

DTACPR

Specifies whether data compression is performed.

Note: DTACPR(*YES) cannot be specified if TRNSPY(*YES) or TRUNC(*YES) is specified.

***NO:** No data compression or decompression occurs.

Note: This parameter is valid only when APPTYPE(*BSCSEL) or APPTYPE(*RPGT) is specified.

***YES:** Data is compressed for output and decompressed for input.

TRUNC

Specifies whether trailing blanks are removed from output records. TRUNC(*YES) cannot be specified if BLOCK(*NOSEP), TRNSPY(*YES), or DTACPR(*YES) is specified. If BLOCK(*USER) is specified, the TRUNC parameter is ignored and trailing blanks are always removed from output records.

Note: This parameter is valid only when APPTYPE(*BSCSEL) or APPTYPE(*RPGT) is specified.

***NO:** Trailing blanks are not removed from output records.

***YES:** Trailing blanks are removed from output records.

GRPSEP

Specifies a separator for groups of data, such as data sets and documents.

Note:

This parameter is valid only when APPTYPE(*BSCEL) or APPTYPE(*RPGT) is specified.

***EOT:** An end of transmission (EOT) control character is used.

***OFCSYS:** A transmission block ending with an end of text (ETX) control character is used.

***DEV3740:** A null record (STX ETX) is used.

EMLDEV

Specifies the type of 3270 device being emulated. This parameter is valid only if *EML was specified on the APPTYPE parameter when the device was created. The change requested by this command becomes effective the next time either the Start 3270 Display Emulation (STREML3270) command or the Start Print Emulation (STRPRTEML) command accesses the device.

3278: This device description is used to emulate a 3278 display device.

3284: This device description is used to emulate a 3284 printer device.

3286: This device description is used to emulate a 3286 printer device.

3287: This device description is used to emulate a 3287 printer device.

3288: This device description is used to emulate a 3288 printer device.

3289: This device description is used to emulate a 3289 printer device.

EMLKBD

Specifies, only for 3270 device emulation applications, the type of 3278 display keyboard to be emulated. The specified value is used if EMLDEV(3278) was specified.

***UPPER:** A 3270 display device keyboard is emulated with uppercase characters only.

***LOWER:** A 3270 display device keyboard is emulated with uppercase and lowercase characters.

EMLNUMLCK

Specifies, only for 3270 device emulation applications, whether the numeric shift lock is set automatically for numeric input fields received from the host system. This parameter is for data entry keyboards only.

***NO:** 3270 emulation allows any data to be typed in the numeric input fields.

***YES:** 3270 emulation allows only numeric data to be typed in the numeric input fields. Numeric data that can be typed include the characters 0 through 9, and symbols + , - , . and blank.

EMLWRKSTN

Specifies, only for 3270 device emulation applications, the device address of the emulation work station associated with an emulation device with a real display or printer device. The device address is reserved for use exclusively by that work station. If no device or *ANY is specified, any work station can use the emulation device.

***ANY:** Any work station can use the emulation device.

emulation-work-station: Specify the device address for the work station using this emulation device.

AUT

Specifies the authority given to users who do not have specific authority to the device description, who are not on an authorization list, and whose user group has no specific authority to the device description.

***LIBCRTAUT:** The authority for the object is the same as the create authority for QSYS. The create authority for QSYS can be displayed by using the Display Library Description (DSPLIBD) command. If the create authority is changed with the Change Library (CHGLIB) command, the new authority does not affect existing objects.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the device description.

***USE:** The user can perform basic operations on the device description, such as running a program or reading a file. The user cannot change the device description. *USE authority provides object operational authority, read authority, and execute authority.

***EXCLUDE:** The user cannot access the device description.

authorization-list-name: Specify the name of the authorization list used.

TEXT Specifies the text that briefly describes the device file. More information on this parameter is in Commonly used parameters.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CRTDEVBSC

```
CRTDEVBSC  DEVD(BSC001)  LOCADR(27)
           RMTLOCNAME(BSC001LC)  CTL(CTLBSC001)  CNN(*PP)
           APPTYPE(*RJE)
```

This command creates a binary synchronous communications device named BSC001. Its address is X'27' and it is attached to the controller CTLBSC001. The connection type of the device is *PP and it uses the RJE application.

Error messages for CRTDEVBSC

*ESCAPE Messages

CPF261A

Device description &1 not created due to errors.

CRTDEVCRP (Create Device Description (Crypto)) Command Description

CRTDEVCRP Command syntax diagram

Purpose

The Create Device Description (Crypto) (CRTDEVCRP) command creates a device description for a cryptographic device.

Required Parameters

DEVD Specifies the name of the device description being created.

RSRCNAME

Specifies the resource name that identifies the hardware that the description represents.

resource-name: Specify the name that identifies the optical device hardware on the system.

Note:

Use the Work with Hardware Resources (WRKHDWRSC) command with TYPE(*CRP) specified to determine the resource name.

Optional Parameters


ONLINE

Specifies whether this object is automatically varied on at initial program load (IPL).

***NO**: This device description is not automatically varied on at IPL.

***YES**: The device is automatically varied on at IPL.

» MSGQ

Specifies the name of the message queue to which messages are sent. More information about using this parameter is in the Communications Management  book.

***SYSVAL**: Messages are sent to the message queue specified in the system value QCFGMSGQ.

***SYSOPR**: Messages are sent to the QSYSOPR message queue in library QSYS.

message-queue-name: Specify the name of the message queue to which operational messages are sent.

The name of the message queue can be qualified by one of the following library values:

***LIBL**: All libraries in the job's library list are searched until the first match is found.

***CURLIB**: The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched. «

PKAKEYFILE

Specifies the PKA key store database file to use with this device.

The possible library values are:

***LIBL**: The library list is used to locate the key store database file.

***CURLIB**: The current library for the job is used to locate the key store database file. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library where the key store database file is located.

PKA-key-store-file-name: Specify the name of the key store database file to use with this device.

DESKEYFILE

Specifies the DES key store database file to use with this device.

The possible library values are:

***LIBL:** The library list is used to locate the key store database file.

***CURLIB:** The current library for the job is used to locate the key store database file. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library where the key store database file is located.

DES-key-store-file-name: Specify the name of the key store database file to use with this device.

AUT Specifies the authority given to users who do not have specific authority to the device description, who are not on an authorization list, and whose user group has no specific authority to the device description.

***USE:** The user can perform basic operations on the device description, such as running a program or reading a file. The user cannot change the device description. *USE authority provides object operational authority, read authority, and execute authority.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the device description.

***EXCLUDE:** The user cannot access the device description.

***LIBCRTAUT:** The authority for the object is the same as the create authority for QSYS. The create authority for QSYS can be displayed by using the Display Library Description (DSPLIBD) command. If the create authority is changed with the Change Library (CHGLIB) command, the new authority does not affect existing objects.

authorization-list-name: Specify the name of the authorization list used.

TEXT Specifies the text that briefly describes the device description. More information on this parameter is in Commonly used parameters.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CRTDEVCRP

```
CRTDEVCRP  DEVD(CRP01)  RSRNAME(CRP01)
```

This command creates a device description for a cryptographic device that is named CRP01. The device type is determined from the resource name.

Error messages for CRTDEVCRP


*ESCAPE Messages

None.

CRTDEVDKT (Create Device Description (Diskette)) Command Description

CRTDEVDKT Command syntax diagram

Purpose

The Create Device Description (Diskette) (CRTDEVDKT) command creates a device description for a diskette device. More information about using this command is in the Local Device Configuration  book.

Required Parameters

DEV Specifies the name of the device description being created.

TYPE Specifies the type of device this description represents.

6131: The device type is 6131.

6132: The device type is 6132.

6133: The device type is 6133.

9331: The device type is 9331.

MODEL

Specifies the model number of the device for this description.

0000: This model number is for a 6131, 6132, or 6133 device type.

0001: This model number is for a 9331 device type only.

0002: This model number is for a 9331 device type only.

0011: This model number is for a 9331 device type only.

0012: This model number is for a 9331 device type only.

RSRCNAME

Specifies the resource name that describes the automatic call unit port.

Note:

Use the Work with Hardware Resources (WRKHDWRSC) command with *STG specified on the TYPE parameter to determine the resource name.

Optional Parameters

ONLINE

Specifies whether this object is automatically varied on at initial program load (IPL).

***YES:** The device is automatically varied on at IPL.

***NO:** This device is not automatically varied on at IPL.

AUT

Specifies the authority given to users who do not have specific authority to the device description, who are not on an authorization list, and whose user group has no specific authority to the device description.

***LIBCRTAUT:** The authority for the object is the same as the create authority for QSYS. The create authority for QSYS can be displayed by using the Display Library Description (DSPLIBD) command. If the create authority is changed with the Change Library (CHGLIB) command, the new authority does not affect existing objects.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the device description.

***USE:** The user can perform basic operations on the device description, such as running a program or reading a file. The user cannot change the device description. *USE authority provides object operational authority, read authority, and execute authority.

***EXCLUDE:** The user cannot access the device description.

authorization-list-name: Specify the name of the authorization list used.

TEXT Specifies the text that briefly describes the device file. More information on this parameter is in Commonly used parameters.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CRTDEVDKT

```
CRTDEVDKT  DEVD(DKT01)  TYPE(9331)  MODEL(0002)
           RSRNAME(DKT01)
```

This command creates a device description for a 9331 Model 0002 diskette drive. The system resources manager (SRM) has assigned a resource name of DKT01.

Error messages for CRTDEVDKT

*ESCAPE Messages



CPF261A



Device description &1 not created due to errors.

CRTDEVDSP (Create Device Description (Display)) Command Description

CRTDEVDSP Command syntax diagram

Purpose

The Create Device Description (Display) (CRTDEVDSP) command creates a device description for a display device. More information about using this command is in the Local Device Configuration  book for local display stations and in the Communications Configuration  book for remote and virtual display stations.

Restriction: If the display device is created as a shared-port device (*CALC is specified on TYPE parameter and/or the LINESPEED, WORDLEN, and PARITY parameters), the device cannot be changed (with the CHGDEVDSP command) to a nonshared-port device. Conversely, if the device is created as a non-port shared device, the device cannot be changed to a shared-port device. Additional information on sharing ports is in the Communications Configuration  book and the Local Device Configuration  book.

Required Parameters

DEVVD Specifies the name of the device description being created.

DEVCLS

Specifies the device class for this display station.

***LCL:** This device description is for a display station connected to a local work station controller.

***RMT:** This device description is for a display station connected to a remote work station controller.

***VRT:** This device description is for a virtual display station. Through a virtual display station, users can access (pass through to) their own system from a remote system. A virtual display station allows the remote system or a personal computer to emulate the interface of the user's own system.

***SNPT:** This device description is for a display station connected to an SNA pass-through advanced program-to-program communications (APPC) controller. SNA pass-through support allows the user to connect this display station with host logical unit (LU) types 0 through 3 applications.

TYPE Specifies the type of device this description represents.

***CALC:** The system determines the value to use.

device-type: Specify one of the following 4-character type codes that describes this type of device.

- 3179
- 3180
- 3196
- 3197
- 3277
- 3278
- 3279
- 3476
- 3477
- 3486
- 3487
- 5150 (any display station attached by a TDLC link)
- 5251
- 5291
- 5292
- 5555 (on systems supporting DBCS (double-byte character set))
- *NVT (TCP/IP TELNET Network Virtual Terminal)

The following type codes are valid for ASCII devices:

- 3101
- 3151
- 3161
- 3162
- 3163
- 3164
- D220 (Data General Dasher** D220)
- T910 (TeleVideo** 910)
- T925 (TeleVideo 925)

- T955 (TeleVideo 955)
- V100 (DEC** VT-100)
- V220 (DEC VT-220)
- W30 (Wyse** WY30**)
- W50 (Wyse WY50**)
- W60 (Wyse WY60**)
- *CALC

Note:

The value *CALC allows ASCII devices to share a port. ASCII port sharing allows a port to be used by different ASCII device types with different parameters without being manually reconfigured.

The DEC VT-100 can be configured with a device class of *VRT.

MODEL

Specifies the model number of the device for this description. Specify one of the following model numbers for the device.

Type	Model
3179	2
3180	2
3196	A1, A2, B1, B2
3197	C1, C2, D1, D2, W1, W2
3277	0, *DHCF
3278	0, 4, 5, *DHCF
3279	0, 5, *DHCF
3476	EA, EC
3477	FA, FC, FD, FE, FG, and FW
3486	BA
3487	HA, HC, HG, and HW
5150	1, 2, 3, A1
5251	11
5291	1, 2
5292	1 Color
5292	2 Graphics
5555	B01, E01, C01, F01, G01, G02
*NVT	0000

For ASCII devices only:

***ASCII:** Specify this value if the model number cannot be easily determined for this display station. The system assigns a model number (if the device has a model number). The model number

(number assigned by the system) may not be the actual model number of the user's display station. It is recommended that the user determine the display station's model number if at all possible, and enter that number.

The possible choices for device model for each device type are as follows:

Type Model

3101 23

3151 11(*ASCII), 31, 41

3161 11(*ASCII), 12

3162 11(*ASCII), 12, 31, 32

3163 11(*ASCII), 12

3164 11(*ASCII), 12

Type Model

D220 (Data General Dasher D220)

*ASCII

T910 (TeleVideo 910)

*ASCII

T925 (TeleVideo 925)

*ASCII

T955 (TeleVideo 955)

*ASCII

V100 (DEC VT-100)

*ASCII

V220 (DEC VT-220)

*ASCII

W30 (Wyse WY30)

*ASCII

W50 (Wyse WY50)

*ASCII

W60 (Wyse WY60)

*ASCII

***CALC**

*ASCII

Optional Parameters

EMLDEV

Specifies the twinaxial display emulation used by an IBM 3151 or IBM 3162 display. The available emulations are 3196A2, which permits an 80-column display, and 3197D2, which permits a 132-column display.

Note:

3197D2 emulation for an IBM 3151 requires the installation of a "cartridge for expansion" in addition to the appropriate setting of this parameter.

***TYPE:** The default value for this parameter is 3196A2.

3196A2: An 80-column display results.

3197D2: A 132-column display results.

PORT Specifies, for local display stations, the port number for this device. Valid values range from 0 through 17.

For twinaxial devices: Valid values range from 0 through 7.

For display stations attached to the ASCII work station controller: Valid values range from 0 through 17 and indicate the port of the ASCII work station controller to which this display station is attached. Without the 12-port expansion feature, only ports 0 through 5 are valid. With the 12-port expansion feature, ports 6 through 17 are added.

SWTSET

Specifies for local twinaxial display stations the switch setting or device address for this device. Valid values range from 0 through 6.

SHRSSNBR

Specifies the shared session number for a twinaxial display station.

Note:

Displays that share session addresses can be attached only to the 6050, 2661, 9146 or the 915A local work station controllers, or to the 5494 remote work station controller. This is valid only for 3486 and 3487 device types.

0: The shared session number is 0.

1: The shared session number is 1.

2: The shared session number is 2.

3: The shared session number is 3.

LOCADR

Specifies the local location address. Specify a 2-character hexadecimal value ranging from 00 through FE. The type of controller to which the device is being attached determines which values are valid.

Controller

Valid Values

5494 00-37

5394 00-14

5294 00-1B

5251 00, 02-09

4702 02-FE

4701 02-FE

4684 02-FE

4680 02-54

3274 02-41
3174 02-41
FBSS 02-FE
SNA Host
01-FE

EMLASCII

Specifies, for ASCII devices, whether the device being configured is emulating a supported ASCII device type (TYPE parameter). When an ASCII device is configured, choices for the following parameters are restricted to the valid range for that device:

ATTACH
LINESPEED
WORDLEN
PARITY
STOPBITS

These restrictions may not apply to ASCII devices emulating supported ASCII device types because the emulating device may have a wider range of choices for these parameters than the emulated ASCII device.

When EMLASCII(*YES) is specified, these parameter restrictions are not enforced. The user is allowed to enter the full range of values for these parameters, but is also responsible for verifying that the values selected are valid for the device being configured.

***NO:** The device being configured is one of the supported ASCII device types (TYPE parameter), and the device-specific restrictions for the physical attachment, line speed, word length, and stop bits parameters are enforced.

***YES:** The device being configured is emulating one of the supported ASCII device types (TYPE parameter), and the device-specific restrictions for the physical attachment, line speed, word length, and stop bits parameters are not enforced.

ATTACH

Specifies the physical attachment of the display station to the ASCII work station controller. This is a required parameter for displays attached to an ASCII work station controller.

***EIA422:** The EIA-422 attachment (valid only for models 3101, 3151, 3161, 3162, 3163, and 3164) is used.

***DIRECT:** The EIA-232 direct attachment is used.

***MODEM:** The EIA-232 modem attachment is used.

***PTT:** The Post Telephone and Telegraph (PTT) attachment is used.

***WIRE3:** The EIA-232 3-wire attachment is used.

***WIRE4:** The EIA-232 4-wire attachment is used.

ONLINE

Specifies whether this object is automatically varied on at initial program load (IPL).

Note:

This parameter is ignored when specified on the console or alternate console description.

***YES:** The device is automatically varied on at IPL.

***NO:** This device is not automatically varied on at IPL.

CTL Specifies the name of the controller description to which this object is attached.

KBDTYPE

Specifies the country or region keyboard language identifier for this display station.

Notes:

1. When DEVCLS(*RMT) is specified and when TYPE(3277), TYPE(3278), or TYPE(3279) is specified, the following values can be specified: *SYSVAL, AGI, ALI, BGB, BLI, CAI, CSB, DMI, FNI, FAI, HNB, IRB, ITI, JPB, MKB, NWI, PLB, PRI, RMB, RUB, SKB, SPI, SQB, SSI, SWI, TRB, USB, USI, or YGI. Otherwise, this parameter is not valid when DEVCLS(*RMT) is specified.
2. When TYPE(3486) or TYPE(3487) is specified, the following values can be specified: *SYSVAL, AGB, AGI, ALI, BGB, BLI, CAB, CAI, CLB, CSB, DMB, DMI, FAB, FAI, FNB, FNI, GNB (or GKB), HNB, ICB, ICI, IRB, ITB, ITI, JPB, KAB, MKB, NCB, NEB, NEI, NWB, PLB, PRB, PRI, RMB, RUB, SFI, SGI, SKB, SPB, SPI, SQB, SSB, SSI, SWB, SWI, TKB, TRB, UKB, UKI, USB, USI, or YGI.
3. This parameter is optional for the combination of DEVCLS(*LCL) and TYPE(5150).

***SYSVAL:** The system uses the QKBDTYPE system value.

keyboard-language-type: Specify the 3-character country or region identifier (used for EBCDIC and ASCII) for this display station.

The following two tables can be used to confirm the appropriate value for this parameter, or to determine which ASCII display devices can be used with a specified language.

- The Keyboard Mapping table shows valid country or region identifiers, the language represented by each identifier, and the ASCII device groups, if applicable, for each language.
- The ASCII Displays and Device Groups table shows the valid display devices and their associated ASCII device groups.

For example, assume a user wants to create a 3101 display device. The ASCII Displays and Device Groups table shows that a 3101 display supports ASCII device group A. The Keyboard Mapping table shows that the valid language identifiers that can be used with device group A include AGB, AGI, CAB, CAI, FAB, FAI, ITB, ITI, UKB, UKI, USB, and USI.

The following keyboards can be specified by ASCII displays only if a customizing object is also used: ALI, BGB, CSB, HNB, MKB, PLB, RMB, RUB, SKB, SQB, TRB, and YGI.

Table 1. Keyboard Mapping

Language/Country or Region	Identifier	ASCII Device Group
Albania	ALI	
Albania Euro Currency	ALM	
Arabic X/Basic	CLB	D
Arabic X/Basic Euro Currency	CLE	
Austria/Germany	AGB	A, B
Austria/Germany Euro Currency	AGE	

Language/Country or Region	Identifier	ASCII Device Group
Austria/Germany Multinational	AGI	A, B
Austria/Germany Multinational Euro Currency	AGM	
Belgium Multinational	BLI	B
Belgium Multinational Euro Currency	BLM	
Brazilian Portuguese	BRB	
Brazilian Portuguese Euro Currency	BRE	
Bulgaria	BGB	
Bulgaria Euro Currency	BGE	
Canadian French	CAB	A, B
Canadian French Multinational	CAI	A, B
Canadian French Multinational Euro Currency	CAM	
Chinese (Simplified)	RCB	
Chinese (Traditional)	TAB	
Croatia	YGI	
Croatia Euro Currency	YGM	
Cyrillic	CYB	
Czech Republic	CSB	
Czech Republic Euro Currency	CSE	
Denmark	DMB	B
Denmark Euro Currency	DME	
Denmark Multinational	DMI	B
Denmark Multinational Euro Currency	DMM	
Estonia	ESB	
Finland/Sweden	FNB	B
Finland/Sweden Euro Currency	FNE	
Finland/Sweden Multinational	FNI	B
Finland/Sweden Multinational Euro Currency	FNM	
France (Azerty)	FAB	A, B
France (Azerty) Euro Currency	FAE	
France (Azerty) Multinational	FAI	A, B
France (Azerty) Multinational Euro Currency	FAM	
France (Qwerty)	FQB	
France (Qwerty) Multinational	FQI	
Greece ¹	GNB ¹	
Greece Euro Currency	GNE	
Hebrew	NCB	D
Hebrew Euro Currency	NCE	
Hindi	HIB	
Hungary	HNB	
Hungary Euro Currency	HNB	
Iceland	ICB	
Iceland Euro Currency	ICE	
Iceland Multinational	ICI	
Iceland Multinational Euro Currency	ICM	
International	INB	
International Multinational	INI	
Iran (Farsi)	IRB	
Italy	ITB	A, B
Italy Euro Currency	ITE	
Italy Multinational	ITI	A, B
Italy Multinational Euro Currency	ITM	

Language/Country or Region	Identifier	ASCII Device Group
Japan English	JEB	
Japan English Multinational	JEI	
Japan Kanji (for PS/55 and 5295 display stations)	JKB	
Japan Latin Extended	JPB	
Japan Latin Extended Euro Currency	JPE	
Japan United States Basic	JUB	
Japan Katakana (for 5251, 5291, 5292, and 3180 Katakana display stations)	KAB	
Japan Katakana Euro Currency (for 5251, 5291, 5292, and 3180 Katakana display stations)	KAE	
Korea	KOB	
Latin-2/ROECE	ROB	
Latin-2/ROECE Euro Currency	ROE	
Latvia	LVB	
Lithuania	LTB	
FYR Macedonia (Former Yugoslav Republic)	MKB	
FYR Macedonia Euro Currency (Former Yugoslav Republic)	MKE	
Netherlands	NEB	
Netherlands Euro Currency	NEE	
Netherlands Multinational	NEI	
Netherlands Multinational Euro Currency	NEM	
Norway	NWB	B
Norway Euro Currency	NWE	
Norway Multinational	NWI	B
Norway Multinational Euro Currency	NWM	
Poland	PLB	
Poland Euro Currency	PLE	
Portugal	PRB	B
Portugal Euro Currency	PRE	
Portugal Multinational	PRI	B
Portugal Multinational Euro Currency	PRM	
Romania	RMB	
Romania Euro Currency	RME	
Russia	RUB	
Russia Euro Currency	RUE	
Serbia (Cyrillic)	SQB	
Serbia (Cyrillic) Euro Currency	SQE	
Serbia (Latin)	YGI	
Serbia (Latin) Euro Currency	YGM	
Slovakia	SKB	
Slovakia Euro Currency	SKE	
Slovenia	YGI	
Slovenia Euro Currency	YGM	
Spain	SPB	B
Spain Euro Currency	SPE	
Spain Multinational	SPI	B
Spain Multinational Euro Currency	SPM	
Spanish Speaking	SSB	B
Spanish Speaking Euro Currency	SSE	

Language/Country or Region	Identifier	ASCII Device Group
Spanish Speaking Multinational Euro Currency	SSM	
Sweden	SWB	B
Sweden Euro Currency	SWE	
Sweden Multinational	SWI	B
Sweden Multinational Euro Currency	SWM	
Switzerland/French Multinational	SFI	B
Switzerland/French Multinational Euro Currency	SFM	
Switzerland/German Multinational	SGI	B
Switzerland/German Multinational Euro Currency	SGM	
Thai	THB	
Thai Euro Currency	THE	
Turkey (Qwerty)	TKB	
Turkey (Qwerty) Euro Currency	TKE	
Turkey (F)	TRB	
Turkey (F) Euro Currency	TRE	
Ukraine	UAB	
Ukraine Euro Currency	UAE	
United Kingdom	UKB	A, B
United Kingdom Euro Currency	UKE	
United Kingdom Multinational	UKI	A, B
United Kingdom Multinational Euro Currency	UKM	
United States/Canada	USB	A, B, C
United States/Canada Euro Currency	USE	
United States/Canada Multinational	USI	A, B, C
United States/Canada Multinational Euro Currency	USM	
Urdu	PKB	
Urdu Euro Currency	PKE	
Vietnam	VNB	
Vietnam Euro Currency	VNB	
Languages of the former Yugoslavia	YGI	
Languages of the former Yugoslavia Euro Currency	YGM	

Note:

¹ The GNB code is the current identifier for Greece. The GKB code was used prior to V2R1, and continues to be supported, but provides fewer characters than the recommended GNB code.

Table 2. ASCII Displays and Device Groups

ASCII Display	ASCII Device Group
3101	A
3151	B
3161	B
3162	B
3163	B
3164	B
D220 (Data General Dasher** D220)	C
T910 (TeleVideo** 910)	C

ASCII Display		ASCII Device Group
T925	(TeleVideo 925)	C
T955	(TeleVideo 955)	C
V100	(DEC** VT-100)	C
V220	(DEC VT-220)	C, D
W30	(Wyse** WY30**)	C
W50	(Wyse WY50**)	C
W60	(Wyse WY60**)	C

DROP Specifies, for remote display stations, whether the line is disconnected by the system when all display stations on the line are no longer in use. When multiple display stations are attached to the same controller, the line is disconnected only if: (1) the device description for this device specifies DROP (*YES), or DROP (*YES) is specified on the SIGNOFF command when the user signs off the device; (2) all of the other display stations connected to the controller have signed off or are not in use; and (3) all printers attached to the controller are not in use.

The value specified in the device description can be overridden by a user signing off at the device if the DROP parameter on the SIGNOFF command is used.

***YES:** The switched line to the controller to which this device is attached is disconnected when this device and all other attached devices are no longer in use.

***NO:** The switched line is not disconnected from the controller when all of its attached devices are no longer in use.

CHRID

Specifies the character identifier (graphic character set and code page) that a work station display device supports. When a display file that was created with the CHRID DDS keyword is used with the device, the system converts data sent to and received from the device to ensure that the correct characters are shown and that the correct hexadecimal byte values are returned to the application program. More information about display file CHRID processing and the translation tables that are used to convert data sent to and received from the display are in the Application

Display Programming  book.

The CHRID value specified must be based on the attributes of the display device. The Character Identifier Values for Display Devices (CHRID Parameter) table at the end of this parameter description shows CHRID values that are appropriate for each work station display keyboard type. For some display devices, it is not necessary to specify the KBDTYPE parameter, but the KBDTYPE value for the equivalent keyboard can be used to determine the CHRID value for the device.

All characters included in the graphic character sets listed for the *Limited CHRID* values can be entered at the keyboard or displayed by the device. All characters associated with the *Full CHRID* values can be entered at the display station (including the use of hexadecimal representations), but the device may not be able to display all the characters.

Values shown in the *Limited CHRID* column must be used for 5291 and 5292 display stations; all other display stations must use the value shown in the *Full CHRID* column. All display stations that are to use the OfficeVision licensed program, including 5291 and 5292 display stations, must use the value in the *Full CHRID* column.

Note:

When using keyboard type values (KBDTYPE parameter) for devices that support both single-byte and double-byte data (JKB, KOB, RCB, and TAB), the CHRID values listed are for single-byte data only.

***KBDTYPE:** The system determines the best graphic character set and code page for the keyboard specified on the KBDTYPE parameter.

***SYSVAL:** The system determines the graphic character set and code page values for the command parameters from the QCHRID system values.

Element 1: Character Set

graphic-character-set: Specify the graphic character set values that match the attributes of the display device. Valid values range from 1 through 32767.

Element 2: Code Page

code-page: Specify the code page set values that match the attributes of the display device. Valid values range from 1 through 32767.

Table 3. Character Identifier Values for Display Devices (CHRID Parameter)

Language/ Country or Region	Country or Region Keyboard Language Identifier (KBDTYPE)	Limited CHRID	Full CHRID
International and US ASCII	INB	103 038	697 500
Multinational (Latin-1)	ALI AGI BLI CAI DMI FAI FNI FQI ICI INI ITI JEI NEI NWI PRI SFI SGI SPI SSI SWI UKI USI		697 500
Multinational (Latin-1) Euro Currency	ALM AGM BLM CAM DMM FAM FNM ICM ITM NEM NWM PRM SFM SGM SPM SSM SWM UKM USM		695 1148
Euro Currency	BRE NEE PRE USE		695 1140
Euro Currency	DME NWE		695 1142
Euro Currency	FNE SWE		695 1143
Euro Currency	SSE SPE		695 1145
Albania	ALI		697 500
Arabic	CLB CLE		235 420
Austria/ Germany	AGB	265 273	697 273
Austria/ Germany Euro Currency	AGE		695 1141
Belgium Multinational	BLI		697 500
Brazilian Portuguese	BRB		697 037
Bulgaria	BGB		1150 1025
Bulgaria Euro Currency	BGE		1150 1154
Canada/French	CAB CAE	277 260	341 260
Catalan	SPB		697 284
Chinese (Simplified)	RCB		1174 836
Chinese (Traditional)	TAB		101 037
Croatia	YGI		959 870
Croatia Euro Currency	YGM		959 1153
Cyrillic	CYB		960 880
Czech Republic	CSB		959 870
Czech Republic Euro Currency	CSE		959 1153

Language/ Country or Region	Country or Region Keyboard Language Identifier (KDBTYPE)	Limited CHRID	Full CHRID
Denmark/ Norway	DMB NWB	281 277	697 277
Estonia	ESB		1307 1122
Finland/Sweden	FNB SWB	285 278	697 278
France	FAB (Azerty) FQB (Qwerty)	288 297	697 297
France Euro Currency	FAE		695 1147
Greece	GKB GNB GNE		925 875
Hebrew	NCB NCE		941 424
Hindi	HIB		1467 1137
Hungary	HNB		959 870
Hungary Euro Currency	HNE		959 1153
Iceland	ICB		697 871
Iceland Euro Currency	ICE		695 1149
Iran (Farsi)	IRB		1219 1097
Italy	ITB	293 280	697 280
Italy Euro Currency	ITE		695 1144
Japan/English	JEB	297 281	697 281
Japan/Latin	JPB		1172 1027
Japan/Latin Euro Currency	JPE		1172 1399
Japan/Kanji	JKB (For Personal System/55*, 5295 and 3477-J display stations)		1172 290
Japan/Katakana	KAB KAE (For 5251, 5291, 5292, and 3180 Katakana display stations)		332 290
Japan/United States Basic	JUB		697 037
Korean	KOB		1173 833
Lao People's Democratic Republic / Euro Currency	LAB LAE		1341 1132
Latin 2	ROB		959 870
Latin 2 Euro Currency	ROE		959 1153
Latvia	LVB		1305 1112
Lithuania	LTB		1305 1112
FYR Macedonia (Former Yugoslav Republic)	MKB		1150 1025
FYR Macedonia (Former Yugoslav Republic) Euro Currency	MKE		1150 1154
Netherlands	NEB		697 037
Norway	NWB	281 277	697 277
Poland	PLB		959 870
Poland Euro Currency	PLE		959 1153
Portugal	PRB	301 037	697 037
Romania	RMB		959 870
Romania Euro Currency	RME		959 1153
Russia	RUB		1150 1025
Russia Euro Currency	RUE		1150 1154
Serbia (Cyrillic)	SQB		1150 1025
Serbia (Cyrillic) Euro Currency	SQE		1150 1154

Language/ Country or Region	Country or Region Keyboard Language Identifier (KDBTYPE)	Limited CHRID	Full CHRID
Serbia (Latin)	YGI		959 870
Serbia (Latin) Euro Currency	YGM		959 1153
Slovakia	SKB		959 870
Slovakia Euro Currency	SKE		959 1153
Slovenia	YGI		959 870
Slovenia Euro Currency	YGM		959 1153
Spain	SPB	305 284	697 284
Spanish Speaking	SSB	309 284	697 284
Sweden	SWB	285 278	697 278
Switzerland/ French Multinational	SFI		697 500
Switzerland/ German Multinational	SGI		697 500
Thai	THB		1176 838
Thai Euro Currency	THE		1176 1160
Turkey	TKB (Qwerty) TRB (F)		1152 1026
Turkey Euro Currency	TKE (Qwerty) TRE (F)		1152 1155
Ukraine	UAB		1326 1123
Ukraine Euro Currency	UAE		1326 1158
United Kingdom/ English	UKB	313 285	697 285
United Kingdom/ English Euro Currency	UKE		695 1146
United States/ English	USB	101 037	697 037
Urdu / Euro Currency	PKB PKE		1160 918
Vietnam	VNB		1336 1130
Vietnam Euro Currency	VNE		1336 1164
Languages of the former Yugoslavia	YGI		959 870
Languages of the former Yugoslavia Euro Currency	YGM		959 1153

ALWBLN

Specifies whether the (program controlled) blinking cursor is used. For 3179, 3180, 3196, 3197, 3476, 3477, 3486, 3487, 5251, 5291, and 5292 display devices, allowing the cursor to blink may distract the operator.

***YES:** Allows the cursor to blink for the 3179, 3180, 3196, 3197, 3476, 3477, 3486, 3487, 5251, 5252, 5291, and 5292 display devices.

***NO:** The blinking cursor is suppressed.

Note:

For displays that have the capability of changing the blinking cursor attribute using the keyboard setup feature, the value for ALWBLN in the device description can be overridden.

AUXDEV

Specifies the device type and address of an additional device (if any) that is attached to the IEEE-488 port on the 5292 Model 2 device (or a PS/2 emulating a 5292 Model 2 graphics display). Up to 31 plotters can be attached to the same IEEE-488 AUXDEV port on the 5292 Model 2, but they must have different IEEE-488 addresses.

Element 1: Auxiliary Device Types

auxiliary-device-type: Specify the auxiliary device (IBM plotter) that is attached. Valid plotters include the following:

7371	6180	6184	6186-1
7372	6182	6185	6186-2

Element 2: Auxiliary Device Address

auxiliary-device-address: Specify the address ranging from 1 through 31 of the auxiliary device (plotter). Each plotter must have a unique address.

OUTQ Specifies the qualified name of the output queue used by this user. The output queue must already exist.

***DEV**: The output queue specified on the PRTDEV parameter is used.

The name of the output queue can be qualified by one of the following library values:

***LIBL**: All libraries in the job's library list are searched until the first match is found.

***CURLIB**: The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

output-queue-name: Specify the name of the output queue.

PRTDEV

Specifies the name of the default printer device for this workstation. If the printer file being used to create the output specifies to spool the file, the spooled file is placed on the device's output queue, which is named the same as the device.

Note:

This assumes the defaults are specified on the OUTQ parameter for the printer file, job description, user profile and workstation.

***SYSVAL**: The value specified in the system value QPRTDEV is used.

printer-device-name: Specify the name of a printer that is used to print the output for this user.

PRINTER

Specifies, for a remote display station, the device name of the printer associated with the display device. The device description of the work station printer named in this parameter must have already been created and must currently exist on the system. Both the printer and display station must be attached to the same controller. The relationship created by this parameter is used when a related printer (PRINT keyword in DDS) is referred to in a device file used to access this display station.

PRTFILE

Specifies an alternative printer device file used for processing the Print key on this display station. The name of the printer file can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

QSYSVRT: If a file name is not specified, the precompiler printout is directed to the IBM-supplied printer file QSYSVRT.

print-file-name: Specify the name of the printer device file that performs Print key processing for this display station.

MAXLENRU

Specifies the maximum request unit (RU) length (in bytes) allowed.

***CALC:** The system determines the value to use.

maximum-length-request-unit: Specify the maximum length for incoming request units. Values 241 and 256 are valid only for X.25 devices.

INACTTMR

Specifies an inactivity timer (time-out) value for display devices. This parameter also specifies what happens when the time-out value is exceeded, dependent on other attributes of the device:

- For display stations attached to an ASCII work station controller, the user's job is canceled when the display station is inactive (no data is sent or received) for a period of time that exceeds the time-out value. The display station is automatically varied off and on again, resulting in a new sign-on display.
- For display devices connected using SNA pass-through (SNPT) support, the user is informed by a message to QSYSOPR and the session is ended when the amount of time that the device is not bound to a host application exceeds the time-out value. The user must reestablish the connection and session.
- For display devices with an application type value of *APPINIT, *DEVINIT, or *NRF, the session is ended when the device is inactive (the file opened against the device is closed and no additional requests to open files are received for the device) for a period of time that exceeds the time-out value.

Note:

This timer is not used by devices allocated to a subsystem (normal interactive use) because the subsystem always has a file open for the device. The timer is used by batch jobs that open and close files for the device.

For a Post Telephone and Telegraph (*PTT) attachment, the valid values are *SEC15, *SEC30, and from 1 through 10 minutes. The default of *ATTACH maps to *SEC30 (30 seconds).

For a connection using SNA pass-through (*SNPT) device class support, the default of *ATTACH maps to *NOMAX.

For a device with an application type value of *APPINIT, *CLTSSN, *DEVINIT, or *NRF, the default of *ATTACH maps to 1 minute.

For all other attachments, valid values range from 1 through 30 minutes. The default of *ATTACH has a value of *NOMAX.

***ATTACH:** This value varies by the value specified on the physical attachment (ATTACH) parameter and certain values on the application type (APPTYPE) and device class (DEVCLS) parameters.

***NOMAX:** Maximum inactivity time is not tracked.

***SEC15:** A 15-second time-out period is used.

***SEC30:** A 30-second time-out period is used.

inactivity-timer: Specify a time-out value.

APPTYPE

Specifies the application type being used.

***NONE:** The device is not used for any application.

***NRF:** The device is used for the Network Routing Facility application.

***CTLSSN:** The device controls the sessions with *DEVINIT devices.

***DEVINIT:** The device starts (initiates) the session.

***APPINIT:** The application program starts (initiates) the session.

LINESPEED

Specifies, for display stations attached to the ASCII work station controller, the line speed (in bits per second) used to communicate over the interface (attachment) between the ASCII work station controller and the display station.

***TYPE:** The system uses the suggested setting for this device type. If *CALC is specified on the TYPE parameter, *TYPE defaults to 1200.

***CALC:** The system determines the value to use.

line-speed: Specify a line speed.

WORDLEN

Specifies, for display stations attached to an ASCII work station controller, the word length (in bits per character) used to communicate with this display station. All display stations support both 7-bit and 8-bit word lengths except for the 3101 and the D220, which only supports 7-bit word lengths.

For modem and PTT attachments (ATTACH(*MODEM) or ATTACH(*PTT)), the word length specified must be the word length selected for the modem.

***TYPE:** The system uses the suggested setting for this display station. The value *TYPE specifies 8-bit word lengths for all displays stations, except for the 3101 and the D220 for which 7-bit word lengths are specified.

Note:

If *CALC is specified on the TYPE parameter, WORDLEN(*TYPE) defaults to eight.

***CALC:** The system determines the value to use.

7: 7-bit word lengths are used.

8: 8-bit word lengths are used.

PARITY

Specifies, for display stations attached to an ASCII work station controller, the type of parity used to communicate with this display station. *TYPE specifies *EVEN for all display stations except for D220; *TYPE specifies *MARK for the D220.

For modem and PTT attachments (ATTACH(*MODEM) or ATTACH(*PTT)), the parity specified must be the parity selected for the modem. *TYPE specifies *EVEN parity for all display stations except the D220. For the D220, *TYPE specifies *MARK. If *CALC is specified on the TYPE parameter, PARITY(*TYPE) defaults to even parity.

***TYPE:** The system uses the suggested setting for this display station.

***EVEN:** Even parity is used.

***MARK:** Mark parity is used.

***NONE:** No parity bit is used.

***ODD:** Odd parity is used.

***SPACE:** Space parity is used.

***CALC:** The system determines the value to use.

STOPBITS

Specifies, for display stations attached to an ASCII work station controller, the number of stop bits used to communicate with this display station. All display stations support both 1 and 2 stop bits except for the DEC VT-100, which only supports 2, and the D220, which supports only 1. *TYPE specifies 1 stop bit for all display stations except DEC VT-100 (which is 2). For modem and PTT attachments (ATTACH(*MODEM) or ATTACH(*PTT)), the stop bits specified must be the stop bits selected for the modem. If *CALC is specified on the TYPE parameter but not on the LINESPEED parameter, STOPBITS(*TYPE) defaults to one.

***TYPE:** The system uses the suggested setting for this display station.

1: One stop bit is used.

2: The page width is 132 printed characters per line.

MAXOUT

Specifies the maximum number of frames that are sent sequentially to a remote system before the remote system (the 5150 work station) must respond.

This parameter is valid only if TYPE(5150) MODEL(A1) is specified.

7: Rotation of the text is done 270 degrees clockwise from the 0 degree writing position.

maximum-outstanding-frames: Specify a value ranging from 1 through 7 for the maximum number of frames sent before the remote system must respond.

IDLTMTR

Specifies the time (in 0.1 second intervals) that the system waits for a response. If no response is received, error recovery procedures are started. This parameter is valid only if TYPE(5150) MODEL(A1) is specified.

40: The system waits 4.0 seconds.

idle-timer: Specify a value ranging from 10 through 250 in 0.1-second intervals.

NRMPOLLTMR

Specifies the interval (in 0.1 second intervals) for polling this device when it is in normal response mode (NRM).

3: Normal response mode polling is done at 0.3-second intervals.

NRM-poll-timer: Specify a value ranging from 2 through 100 in 0.1-second intervals.

This parameter is valid only if TYPE(5150) MODEL(A1) is specified.

FRAMERTY

Specifies the number of retries for an unanswered command frame or unacknowledged information frame. This parameter is valid only if TYPE(5150) MODEL(A1) is specified.

15: The default value is 15 retries.

frame-retry: Specify a value ranging from 5 through 64 for the number of retries.

WSCST

Specifies the qualified name of a work station customizing object to be created.

***NONE**: No work station customizing object is specified.

The name of the work station customizing object can be qualified by one of the following library values:

***LIBL**: All libraries in the job's library list are searched until the first match is found.

***CURLIB**: The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

work-station-customizing-object: Specify the work station customizing object.

Note:

If a work station customizing object is specified for the WSCST parameter, all country or region keyboard identifiers are valid for ASCII devices except for the following: FQB, FQI, INB, INI, JEB, JEI, JKB, JUB, KAB, KOB, RCB, and TAB. See the Keyboard Mapping table for a list of the country or region keyboard identifiers.

RMTLOCNAME

Specifies the remote location name of the system with which this object communicates.

Note:

This parameter is required for APPTYPE(*APPINIT) devices. The remote location name for APPTYPE(*APPINIT) devices is the VTAM/NCP (Virtual Telecommunications Access Method/Network Control Program) name of the physical device.

LCLLOCNAME

Specifies the local location name. When this parameter is specified with APPTYPE(*CTLSSN) or APPTYPE(*APPINIT), the remote location name is the name of the independent logical unit (LU) in the network control program (NCP).

***NETATR**: The LCLLOCNAME value specified in the system network attributes is used.

local-location-name: Specify the local location name.

RMTNETID

Specifies the name of the remote network identifier (ID). This parameter can be specified for APPTYPE(*APPINIT) devices.

***NETATR:** The RMTNETID value specified in the system network attributes is used.

***NONE:** No remote network identifier (ID) is used.

remote-network-ID: Specify the name of the remote network identifier.

IGCFEAT

Specifies which double-byte character set (DBCS) table is used in DBCS feature code format expressing device features and the last code point value. The table at the end of this parameter description shows valid device features and last code point values for DBCS-capable devices.

Note: This parameter is valid for DBCS-capable devices only.

Element 1: Features of the DBCS-Capable Device

device-features: Specify the device character resolution, language, and relative buffer size device features using the format SSSSLR, where:

SSSS =

The resolution (number of matrix points used to create) of the character. For example, 2424 would be 24 matrix points of height and 24 matrix points of width available to formulate the character.

L = The language code. The 4 language codes currently supported are:

J = Japanese

K = Korean

C = Traditional Chinese (or Taiwan)

S = Simplified Chinese

R = The relative buffer size. The valid values are: 0, 1, 2, and 4.

Element 2: Last Code Point

last-code-point: Specify the 4-digit code point of the last double-byte character. This value can be blank.

Table 4. DBCS-Capable Display Device Features (IGCFEAT Parameter)

Type of Physical Work Station	Type-Model	Device Feature/ Last Code Point
Japanese Display Stations		
5295-001 Display Station	5555-B01	2424J4 55FE
5295-002 Display Station	5555-B01	2424J4 68FE
InfoWindow 3477-J Display Station	5555-B01, C01	2424J4 68FE
Personal System/55* running 5250PC	5555-B01	2424J4 68FE
Personal System/55 running graphics-capable 5250PC	5555-G01	2424J4 68FE
Personal System/55 running graphics-capable 5250PC	5555-G02	2424J4 68FE
Personal System/55 running 5250PC/2	5555-E01	2424J0
Personal System/55 running Client Access/400 by OS/400 System	5555-B01	2424J0
3270-type Display Stations*	3279-0	2424J0
Korean Display Stations		
5250-Type Display Stations	5555-B01	2424K0

Type of Physical Work Station	Type-Model	Device Feature/ Last Code Point
3270-type Display Stations*	3279-0	2424K0
Traditional Chinese Display Stations		
5250-Type Display Stations	5555-B01	2424C0
3270-type Display Stations*	3279-0	2424C0
Simplified Chinese Display Stations		
5250-Type Display Stations	5555-B01	2424S0
3270-type Display Stations*	3279-0	2424S0

ACTTMR

Specifies, for switched lines, the amount of time (in seconds) that the SNA pass-through support waits for the device to respond to the activation request from the host iSeries 400. If the device does not respond within this time, it is considered not available.

170: Specifies the activate time of 170 seconds.

activation-timer: Specify a number ranging from 1 through 2550 indicating the number of seconds before the device is considered not available.

SNPTDEV

Specifies the name of the associated SNA pass-through device that is attached to a host or advanced program-to-program communications (APPC) controller.

***NONE:** No name is specified.

associated-device-name: Specify the name of a device that is attached to a host or an APPC controller that is associated with this device.

SNPTGRP

Specifies the name configured for a group of host devices in a configuration list. This indicates that this device is associated with any one of the devices in that group which is available.

***NONE:** No name is specified.

group-name: Specify the name configured for a group of host devices that must be associated with this device.

LOGON

Specifies the sign-on (logon) text. This parameter is allowed when DEVCLS(*SNPT) or APPTYPE(*NRF) is specified. APPTYPE(*NRF) specifies the logon string that is sent to the host system when a request is made to establish a session. DEVCLS(*SNPT) specifies the sign-on text that is sent to the host system after starting SNA pass-through support.

Specifies the logon string that is sent to the system services control point (SSCP) on the host network when the file is opened.

***NONE:** No text is sent to the host system.

host-logon-command: Specify text that is sent to the host system. The text must be enclosed in apostrophes if it contains blanks or other special characters. All apostrophes within the text must be represented by two apostrophes. A maximum of 256 characters can be specified.

DEPLOCNAME

Specifies the dependent local location name used for dependent LU requestor (DLUR), providing additional security for the connection. If this name is filled in, an activation request (SNA ACTLU) from a dependent LU server (DLUS) node must reference this name or it is rejected.

Remote DLUS nodes may optionally accept unsolicited reply PSIDs (Product Set IDs) from the iSeries 400 for auto-definition of LUs at the DLUS node. If so, then this name is sent to the DLUS node in the reply PSID and it is returned on the ACTLU request.

If unsolicited reply PSIDs are not supported by the DLUS node, then there will have to be close coordination of the PU name definitions on both systems.

***NONE:** No location name is defined.

dependent-location-name: Specify the dependent location name used for DLUR applications.

AUT Specifies the authority given to users who do not have specific authority to the device description, who are not on an authorization list, and whose user group has no specific authority to the device description.

***LIBCRTAUT:** The authority for the object is the same as the create authority for QSYS. The create authority for QSYS can be displayed by using the Display Library Description (DSPLIBD) command. If the create authority is changed with the Change Library (CHGLIB) command, the new authority does not affect existing objects.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the device description.

***USE:** The user can perform basic operations on the device description, such as running a program or reading a file. The user cannot change the device description. *USE authority provides object operational authority, read authority, and execute authority.

***EXCLUDE:** The user cannot access the device description.

authorization-list-name: Specify the name of the authorization list used.

TEXT Specifies the text that briefly describes the device file. More information on this parameter is in Commonly used parameters.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CRTDEVDSPP

```
CRTDEVDSPP  DEVD(DSP4)  TYPE(3180)  MODEL(2)
             DEVCLS(*LCL) PORT(0)  SWTSET(4)  CTL(CTL01)
             KBDBTYPE(USB)
```

This command creates a 3180 Model 2 local device description called DSP4. The display station is located on port 0 of the local work station controller CTL01. The device has an address of 4, with a United States/Canadian keyboard.

Error messages for CRTDEVDSPP

*ESCAPE Messages

CPF261A

Device description &1 not created due to errors.


CPF2631

Device type &2 not valid.

CRTDEVFNC (Create Device Description (Finance)) Command Description

CRTDEVFNC Command syntax diagram

Purpose

The Create Device Description (Finance) (CRTDEVFNC) command creates a device description for a finance device. More information on this command is in the Communications Configuration  book.

Required Parameters

DEV Specifies the name of the device description being created.

TYPE Specifies the type of device this description represents.

***FNCICF:** This device is an intersystem communications function (ICF) finance device. Specify this value when using ICF finance communications. Actual device numbers (3624, 3694, or 4704) are not specified when using the ICF file interface.

3624: The device is a consumer transaction facility.

3694: The device is a document processor.

4704: The device is a finance display station.

LOCADR

Specifies the local location address. Specify a 2-character hexadecimal value ranging from 01 through FF.

Controllers and valid numbers of attachable devices are as follows:

3694 01-04

4701 01-FF

4702 01-FF

4730 01-03

4731 01-02

4732 01-02

4736 01-02

***FBSS**
01-FF

Note:

The value 01 is only valid for ICF finance communications when TYPE(*FNCICF) is specified.

Optional Parameters

RMTLOCNAME

Specifies the remote location name of the system with which this object communicates.

ONLINE

Specifies whether this object is automatically varied on at initial program load (IPL).

***YES:** The device is automatically varied on at IPL.

***NO:** This device is not automatically varied on at IPL.

CTL Specifies the name of the controller description to which this object is attached.

MAXLENRU

Specifies the default maximum request unit (RU) length that can be sent or received by the local systems if the maximum size is not specified in the bind.

***CALC:** The system determines the value to use.

maximum-length-request-unit: Specify a value ranging from 8 to 4096 bytes for the maximum size of the request unit.

DEVCLS

Specifies the device class for this device.

***NONE:** This device description does not use SNA pass-through support.

***SNPT:** This device description is for a display station connected to an SNA pass-through advanced program-to-program communications (APPC) controller. SNA pass-through support allows the user to connect this display station with host logical unit (LU) types 0 through 3 applications.

INACTTMR

Specifies an inactivity timer (time-out) value. This parameter also specifies what happens when the time-out value is exceeded, dependent on other attributes of the device:

- For devices connected using SNA pass-through (SNPT) support, the user is informed by a message to QSYSOPR and the session is ended when the amount of time that the device is not bound to a host application exceeds the time-out value. The user must reestablish the connection and session.
- For all other attachments, valid values range from 1 through 30 minutes.

Note:

This timer is not used by devices allocated to a subsystem (normal interactive use) because the subsystem always has a file open for the device. The timer is used by batch jobs that open and close files for the device.

***NOMAX:** Maximum inactivity time is not tracked.

***SEC15:** A 15-second time-out period is used.

***SEC30:** A 30-second time-out period is used.

inactivity-timer: Specify a time-out value in minutes.

ACTTMR

Specifies, for switched connections, the amount of time that the SNA pass-through support waits for the device to respond to the activation request from the host iSeries 400. If the device does not respond within this time, it is considered not available.

This parameter is valid only when *SNPT is specified for the DEVCLS parameter.

170: Specifies the activate time of 170 seconds.

activation-timer: Specify a number ranging from 1 through 2550 indicating the number of seconds before the device is considered not available.

SNPTDEV

Specifies the name of the associated SNA pass-through device that is attached to a host or advanced program-to-program communications (APPC) controller.

This parameter is valid only when *SNPT is specified for the DEVCLS parameter.

***NONE:** No name is specified.

associated-device-name: Specify the name of a device that is attached to a host or an APPC controller that is associated with this device.

SNPTGRP

Specifies the name configured for a group of host devices in a configuration list (see CRTCFGL command). This indicates that this device is tied to any one of the devices in that group which is available.

This parameter is valid only when *SNPT is specified for the DEVCLS parameter.

***NONE**: No name is specified.

group-device-name: Specify the name configured for a group of host devices that must be associated with this device.

AUT Specifies the authority given to users who do not have specific authority to the device description, who are not on an authorization list, and whose user group has no specific authority to the device description.

***LIBCRTAUT**: The authority for the object is the same as the create authority for QSYS. The create authority for QSYS can be displayed by using the Display Library Description (DSPLIBD) command. If the create authority is changed with the Change Library (CHGLIB) command, the new authority does not affect existing objects.

***CHANGE**: The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***ALL**: The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the device description.

***USE**: The user can perform basic operations on the device description, such as running a program or reading a file. The user cannot change the device description. *USE authority provides object operational authority, read authority, and execute authority.

***EXCLUDE**: The user cannot access the device description.

authorization-list-name: Specify the name of the authorization list used.

TEXT Specifies the text that briefly describes the device file. More information on this parameter is in Commonly used parameters.

***BLANK**: Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Examples for CHGDEVFNC

Example 1: Changing a Finance Device Description

```
CHGDEVFNC  DEVD(FNCDSP1)  ONLINE(*YES)
```

This command changes the device description for the finance device FNCDSP1 so that the device will be varied on at IPL.

Example 2: Creating a Finance Device Description

```
CRTDEVFNC  DEVD(FNCDSP1)  TYPE(*FNCICF)  LOCADR(01)  
           CTL(FNCCTL1)
```

This command creates a finance device description named FNCDSP1. This is an ICF finance device with an address of X'01'. It is attached to the finance controller FNCCTL1.

Error messages for CRTDEVFNC

*ESCAPE Messages

CPF261A

Device description &1 not created due to errors.

CPF2631

Device type &2 not valid.

CRTDEVINTR (Create Device Description (Intrasystem)) Command Description

CRTDEVINTR Command syntax diagram

Purpose

The Create Device Description (Intrasystem) (CRTDEVINTR) command creates an intrasystem device description, which allows two programs running on the same system to communicate with each other.

Required Parameters

DEV Specifies the name of the device description being created.

RMTLOCNAME

Specifies the remote location name of the system with which this object communicates.

Optional Parameters

ONLINE

Specifies whether this object is automatically varied on at initial program load (IPL).

***YES:** The device is automatically varied on at IPL.

***NO:** This device is not automatically varied on at IPL.

AUT

Specifies the authority given to users who do not have specific authority to the device description, who are not on an authorization list, and whose user group has no specific authority to the device description.

***LIBCRTAUT:** The authority for the object is the same as the create authority for QSYS. The create authority for QSYS can be displayed by using the Display Library Description (DSPLIBD) command. If the create authority is changed with the Change Library (CHGLIB) command, the new authority does not affect existing objects.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the device description.

***USE:** The user can perform basic operations on the device description, such as running a program or reading a file. The user cannot change the device description. *USE authority provides object operational authority, read authority, and execute authority.

***EXCLUDE:** The user cannot access the device description.

authorization-list-name: Specify the name of the authorization list used.

TEXT Specifies the text that briefly describes the device file. More information on this parameter is in Commonly used parameters.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CRTDEVINTR

```
CRTDEVINTR  DEVD(INTRALOC)  RMTLOCNAME(INTRARMT)
```

This command creates a device description named INTRALOC for intrasystem communications with a remote location named INTRARMT.

Error messages for CRTDEVINTR

*ESCAPE Messages

CPF261A

Device description &1 not created due to errors.

CRTDEVMLB (Create Device Description (Media Library)) Command Description

CRTDEVMLB Command syntax diagram


Purpose

The Create Device Description (Media Library) (CRTDEVMLB) command creates a device description for a media library device.

Restriction: You must have *IOSYSCFG special authority to use this command.

Initially, all tape drive resources associated with this device description are allocated for use by this system. To change the allocation of drive resources within a tape library, use the Work with Media Library Status (WRKMLBSTS) command or the Vary Configuration (VRYCFG) command.

Note: Allocating drives is only allowed when DEVCLS(*TAP) is specified.

More information about using this command is in the Local Device Configuration  book.

Required Parameters

DEVD Specifies the name of the device description being created.

DEVCLS

Specifies the class of the media library being created.

***OPT:** The device is an optical media library.

***TAP:** The device is a tape media library.

RSRCNAME

Specifies the resource name that identifies the hardware that the description represents. A resource name must be provided before the device can be varied on.

***NONE:** No resource name is specified at this time.

resource-name: Specify the name that identifies the media library device hardware on the system.

Note: Use the Work with Hardware Resources (WRKHDWRSC) command with TYPE(*STG) specified to determine the resource name.

Optional Parameters

TYPE Specifies the type of device that this description represents.

Note: The device type is used to support prompting of this command; the value is not saved as part of the device description.

***RSRCNAME:** The device type is determined from the resource name parameter.

Any of the following device types, listed in numeric order, are valid:

3494

3495

3570

3590

3995

9427

9429

Note: Device type 3995 is valid only when DEVCLS(*OPT) is specified.

ONLINE

Specifies whether this object is automatically varied on at initial program load (IPL).

***YES:** The device is automatically varied on at IPL.

***NO:** This device is not automatically varied on at IPL.

UNLOADWAIT

Specifies the amount of time the system waits for another request to use the mounted volume before unloading the volume if there are outstanding requests for an available drive.

Note: This parameter is valid only when DEVCLS(*OPT) is specified.

***SYSGEN:** The system default value is used.

unload-wait-time: Specify the number of seconds to wait. Valid values range from 1 through 120.

MAXDEVTIME

Specifies the maximum number of minutes a volume can remain mounted in an internal device if there are requests for other volumes.

Note: This parameter is valid only when DEVCLS(*OPT) is specified.

***SYSGEN:** The system default value is used. This allows a maximum device wait time to be specified for each library device user rather than the same value for each user of the library device.

max-device-time: Specify the number of minutes the volume can remain mounted. Valid values range from 1 through 60.

RSCALCPTY

Specifies the resource allocation priority.

Note: This parameter is valid only when DEVCLS(*TAP) is specified.

***JOB:** The priority of the job is used as the resource allocation priority.

resource-allocation-priority: Specify the priority this job is given when requesting a resource. Valid values range from 1 (highest) through 99 (lowest).

INLMNTWAIT

Specifies the maximum amount of time a request will wait for allocation of a tape resource for the initial mount.

Note: This parameter is valid only when DEVCLS(*TAP) is specified.

***JOB:** The allocation wait time is determined by the default wait time attribute of the job requesting the allocation, rounded up to the nearest minute.

***IMMED:** The request will not wait for a tape resource to become available.

***NOMAX:** The request will wait until a tape resource is available.

initial-mount-wait-time: Specify the number of minutes a request will wait for allocation of a tape resource. Valid values range from 1 through 600 minutes.

EOVMNTWAIT

Specifies the maximum amount of time a request will wait for allocation of a tape resource for the end of volume mount.

Note: This parameter is valid only when DEVCLS(*TAP) is specified.

***JOB:** The allocation wait time is determined by the default wait time attribute of the job requesting the allocation, rounded up to the nearest minute.

***IMMED:** The request will not wait for a tape resource to become available.

***NOMAX:** The request will wait until a tape resource is available.

end-of-volume-mount-wait-time: Specify the number of minutes a request will wait for allocation of a tape resource. Valid values range from 1 through 600 minutes.

GENCTGID

Specifies how the cartridge identifiers are assigned to each volume for tape libraries without bar code readers.

***VOLID:** The volume identifier is used as the cartridge identifier. Cartridge identifiers can be assigned by mounting each volume and reading the volume identifier.

***SYSGEN:** The system generates the cartridge identifiers for each volume. If system-generated identifiers are used, tape operations must use the generated cartridge identifiers. The cartridge identifiers are assigned sequentially in the form GEN01, GEN02, GEN03, and so on.

ROBOTDEV

Specifies the name of the device description representing the robot for library devices with separate robots.

Note: This parameter is only valid when DEVCLS(*TAP) is specified.

***NONE:** No robot device description is specified at this time.

robot-device-description: The specified device description is used. A maximum of 2 robot device descriptions can be specified.

▶ ROBOTHOST

Specifies the TCP/IP host name or Internet address of the robotic library manager. A maximum of 2 robot library managers can be specified.

Note: This parameter is only valid when DEVCLS(*TAP) is specified.

Note: The host name specified on the ROBOTHOST parameter may fail to communicate with the 3494 tape media library device when the system is in a restricted state. When the system is in restricted state, only one TCP/IP interface is allowed to be active on the system. It is possible that the interface brought up to communicate with the MLB device is not one which is able to communicate with the configured Domain Name Server(s). When running in restricted state, store a mapping between the host name and the IP address in the local host table by using the CFGTCP option 10 or ADDTCPHTE command.

***NONE:** No robotic host is specified at this time.

host-name: The specified name of the robotic library manager. The user can may enter the robot host name by entering the robot host name or the domain qualified robot host name. The domain qualified robot host name allows input of 255 bytes.

host-internet-address: The specified address of the TCP/IP interface. The internet address must be of the form ddd.ddd.ddd.ddd where ddd is a decimal number ranging from 0 to 255. This decimal number should not contain leading zeros. If the internet address is entered from a command line, the address must be enclosed in apostrophes.

LCLINTNETA

Specifies the local internet address of the interface that is connecting to the robot library manager. This is the interface the operating system will start when TCP/IP needs to be started to use the tape media library.

Note: This parameter is only valid when DEVCLS(*TAP) is specified.

***NONE:** No TCP/IP address is specified at this time.

local-ip-address: Specify the local internet address to be started. The internet address must be of the form nnn.nnn.nnn.nnn, where nnn is a decimal number ranging from 0 through 255. This decimal number should not contain leading zeros. If the local internet address is entered from a command line, the address must be enclosed in apostrophes. <<

>> MSGQ

Specifies the name of the message queue to which messages are sent.

***SYSOPR:** Messages are sent to the system operator message queue (QSYS/QSYSOPR).

message-queue-name: Specify the name of the message queue to which operational messages are sent.

The name of the message queue can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.



AUT Specifies the authority given to users who do not have specific authority to the device description, who are not on an authorization list, and whose user group has no specific authority to the device description.

***LIBCRTAUT:** The authority for the object is the same as the create authority for QSYS. The create authority for QSYS can be displayed by using the Display Library Description (DSPLIBD) command. If the create authority is changed with the Change Library (CHGLIB) command, the new authority does not affect existing objects.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the device description.

***USE:** The user can perform basic operations on the device description, such as running a program or reading a file. The user cannot change the device description. *USE authority provides object operational authority, read authority, and execute authority.

***EXCLUDE:** The user cannot access the device description.

authorization-list-name: Specify the name of the authorization list used.

TEXT Specifies the text that briefly describes the device. More information on this parameter is in *Commonly used parameters*.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CRTDEVMLB

```
CRTDEVMLB  DEVD(LIB01)  DEVCLS(*OPT)  RSRNAME(LIB01)
           ONLINE(*YES)
```

This command creates a device description for a media library device named LIB01. The library is an optical library and the physical resource name is LIB01. The device description is varied on at IPL.

Error messages for CRTDEVMLB

*ESCAPE Messages

CPF67B0

Tape device &7 not in a library device


CPF67D1

Library device description not created

CRTDEVNET (Create Device Description (Network)) Command Description

CRTDEVNET Command syntax diagram

Purpose

The Create Device Description (Network) (CRTDEVNET) command creates a device description for a network device. More information about using this command is in the *Communications Configuration*  book.

Required Parameters

DEVD Specifies the name of the device description being created.

TYPE Specifies the type of network associated with this device.

***TCPIP:** This device is attached to a Transmission Control Protocol/Internet Protocol (TCP/IP) network.

***USRDFN:** This device is attached to a network that is supported by a program using the user-defined communications Applications Programming Interface.

***TEL:** This device is attached to a telephony network and is used in conjunction with the sockets AF_TELEPHONY address family.

Optional Parameters

ONLINE

Specifies whether this object is automatically varied on at initial program load (IPL).

***YES:** The device is automatically varied on at IPL.

***NO:** This device is not automatically varied on at IPL.

CTL Specifies the name of the controller description to which this object is attached.

AUT Specifies the authority given to users who do not have specific authority to the device description, who are not on an authorization list, and whose user group has no specific authority to the device description.

***LIBCRTAUT:** The authority for the object is the same as the create authority for QSYS. The create authority for QSYS can be displayed by using the Display Library Description (DSPLIBD) command. If the create authority is changed with the Change Library (CHGLIB) command, the new authority does not affect existing objects.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the device description.

***USE:** The user can perform basic operations on the device description, such as running a program or reading a file. The user cannot change the device description. *USE authority provides object operational authority, read authority, and execute authority.

***EXCLUDE:** The user cannot access the device description.

authorization-list-name: Specify the name of the authorization list used.

TEXT Specifies the text that briefly describes the device file. More information on this parameter is in Commonly used parameters.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CRTDEVNET

```
CRTDEVNET DEVD(NETDEV02) TYPE(*TCP/IP)
```

This command creates a device description for a network device named NETDEV02.

Error messages for CRTDEVNET

*ESCAPE Messages


CPF261A

Device description &1 not created due to errors.

CRTDEVOPT (Create Device Description (Optical)) Command Description

CRTDEVOPT Command syntax diagram

Purpose

The Create Device Description (Optical) (CRTDEVOPT) command creates a device description for an optical device. More information about using this command is in the Local Device Configuration  book.

Required Parameters

DEV Specifies the name of the device description being created.

RSRCNAME

Specifies the resource name that identifies the hardware that the description represents.

***NONE:** No resource name is specified. A resource name must be provided before the device can be varied on.

>> *VRT: The resource name will be generated by the operating system at the time the device description is created. The resource name will represent virtual (not physical) hardware.

Note: There can be at most one active virtual optical device on the system.



resource-name: Specify the name that identifies the optical device hardware on the system.

Note: Use the Work with Hardware Resources (WRKHDWRSC) command with TYPE(*STG) specified to determine the resource name.

Optional Parameters

TYPE Specifies the type of device that this description represents.

***RSRCNAME:** The device type is determined from the resource name (RSRCNAME) parameter.


6320: The device type is a compact disc with read-only memory (CD-ROM).

>> 6321: The device type is a CD-ROM drive.

632A: The device type is a generic (Non-IBM) optical drive.

632B: The device type is a virtual optical device.

6330: The device type is a DVD-RAM drive.

6336: The device type is a DVD-ROM drive. 

ONLINE

Specifies whether this object is automatically varied on at initial program load (IPL).

***YES:** The device is automatically varied on at IPL.

***NO:** This device is not automatically varied on at IPL.

» MSGQ

Specifies the name of the message queue to which messages are sent.

***SYSOPR:** Messages are sent to the system operator message queue (QSYS/QSYSOPR).

message-queue-name: Specify the name of the message queue to which operational messages are sent.

The name of the message queue can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched. «

AUT Specifies the authority given to users who do not have specific authority to the device description, who are not on an authorization list, and whose user group has no specific authority to the device description.

***LIBCRTAUT:** The authority for the object is the same as the create authority for QSYS. The create authority for QSYS can be displayed by using the Display Library Description (DSPLIBD) command. If the create authority is changed with the Change Library (CHGLIB) command, the new authority does not affect existing objects.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the device description.

***USE:** The user can perform basic operations on the device description, such as running a program or reading a file. The user cannot change the device description. *USE authority provides object operational authority, read authority, and execute authority.

***EXCLUDE:** The user cannot access the device description.

authorization-list-name: Specify the name of the authorization list used.

TEXT Specifies the text that briefly describes the device description. More information on this parameter is in Commonly used parameters.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Examples for CRTDEVOPT »

Example 1: Create an Optical Device Description
CRTDEVOPT DEVD(OPT01) RSRCTYPE(*OPT01) TYPE(*RSRCTYPE)

This command creates a device description for an optical device that is named OPT01. The device type is determined from the resource name.

Example 2: Create a Virtual Optical Device Description
CRTDEVOPT DEVD(VRTOPT01) RSRCTYPE(*VRT) TYPE(*RSRCTYPE)

This command creates a device description for a virtual optical device that is named VRTOPT01. The device type is determined from the resource name. All virtual optical devices will be assigned a **TYPE** value of 632B.



Error messages for CRTDEVOPT

*ESCAPE Messages



» CPF261A

Device description &1 not created due to errors. <<

CRTDEVPRT (Create Device Description (Printer)) Command Description

CRTDEVPRT Command syntax diagram

Purpose

The Create Device Description (Printer) (CRTDEVPRT) command creates a device description for a printer device. More information on this command is in the Local Device Configuration  book for local printers and the Communications Configuration  book for remote and virtual printers.

Required Parameters

DEV Specifies the name of the device description being created.

DEVCLS

Specifies the device class for the printer.

***LCL**: The device description is for a printer connected to a local work station controller.

***RMT**: The device description is for a printer connected to a remote work station controller.

***VRT**: The device description is for a virtual printer.

***SNPT**: This device description is for a display station connected to an SNA pass-through advanced program-to-program communications (APPC) controller. SNA pass-through support allows the user to connect this display station with host logical unit (LU) types 0 through 3 applications.

***LAN**: The device description is for a printer connected directly to a local area network (LAN).

TYPE Specifies the type of device the description represents. Specify one of the following 4-character type codes that describes the type of device.

Note:

*IPDS printers are described by a 5-character type code.

- 3287
- 3812
- 3900
- 4214
- 4234
- 4245

- 5219
- 5224
- 5225
- 5256
- 5262
- 5553 (DBCS-capable printer)
- 5583 (DBCS-capable printer)
- 6252
- *IPDS (includes all of the following printers: 3812, 3816, 3820, 3825, 3827, 3829, 3835, 3900, 3916, 3930, 3935, 4224, 4230, and 4234)

The following 4-character type codes are valid for ASCII:

Type	Description
4019	IBM 4019 LaserPrinter
4201	IBM Proprinter* II, IBM Proprinter III
4202	IBM Proprinter XL, IBM Proprinter II XL, IBM Proprinter III XL
4207	IBM Proprinter X24, IBM Proprinter X24E
4208	IBM Proprinter XL24, IBM Proprinter XL24E
4216	IBM Personal Pageprinter
4224	IBM 4224 Printer
4234	IBM 4234 Printer
5204	IBM Quickwriter*
6252	IBM Impact Writer

MODEL

Specifies the model number of the device. This number indicates to the system the operational characteristics of the device. Specify one of the following model numbers (ranging 1 through 4 characters) that matches the device.

Type	Model
3287	0
3812	1
4214	2
4234	2
4245	T12 or T20
5219	D1 or D2
5224	1 or 2
5225	1, 2, 3, or 4
5256	1, 2, or 3
5262	1
5553	B01

5583 200
6252 T08
*IPDS 0

For ASCII devices only:

***ASCII:** This value is used if the model number cannot be easily determined for the printer. The system assigns a model number (if the device has a model number). The model number assigned by the system may not be the actual model number for the printer. It is recommended that the user determine the model number of the printer if at all possible; and enter that number.

Note: *ASCII printers are described by 1 to 6 characters.

The possible choices for model numbers associated with the device type are as follows:

Type	Model
4019	1(*ASCII) IBM 4019 LaserPrinter
4201	2(*ASCII) IBM Proprinter II 3(*ASCII) IBM Proprinter III
4202	1(*ASCII) IBM Proprinter XL 2(*ASCII) IBM Proprinter II XL 3(*ASCII) IBM Proprinter III XL
4207	1(*ASCII) IBM Proprinter X24 2(*ASCII) IBM Proprinter X24E
4208	1(*ASCII) IBM Proprinter XL24 2(*ASCII) IBM Proprinter XL24E
4216	10(*ASCII) IBM Personal Pageprinter
4224	301(*ASCII), 302, 3E3
4234	13(*ASCII)
5204	1(*ASCII) IBM Quickwriter
6252	(*ASCII) AS8

Optional Parameters

SWTLINLST

Specifies the name of the switched lines to which a 3812 printer is associated when DEVCLS(*LAN) and LANATTACH(*LEXLINK) or LANATTACH(*USRDFN) is specified. The types of switched lines this printer may associate with are: frame relay direct, Token-Ring, Ethernet IEEE 802.3, and Ethernet with all standards specified. A maximum of 8 switched lines can be specified.

ADPTADR

Specifies the 12-character hexadecimal LAN address of the remote printer when DEVCLS(*LAN) and LANATTACH(*LEXLINK) or LANATTACH(*USRDFN) is specified. Valid values range from 000000000001 through FFFFFFFF00FE.

LANATTACH

Specifies the attachment of printer when DEVCLS(*LAN) is specified.

***LEXLINK:** Attach to lexlink.

***IP:** Attach to TCP/IP.

***USRDFN:** Attach to user-defined, either lexlink or TCP/IP.

ADPTTYPE

Specifies the type of LAN printer adapter to be used when DEVCLS(*LAN) and LANATTACH(*LEXLINK) or LANATTACH(*USRDFN) is specified.

***INTERNAL:** The printer has an internal LAN adapter.

***EXTERNAL:** The printer has an external LAN adapter.

ADPTCNNTYP

Specifies the type of ports supported by the external LAN printer adapter when DEVCLS(*LAN) and ADPTTYPE(*EXTERNAL) are specified.

***PARALLEL:** The LAN printer adapter supports one or more parallel ports.

***SERIAL:** The LAN printer adapter supports one or more serial ports.

Note:

This parameter is ignored when ADPTTYPE(*INTERNAL) is specified.

EMLDEV

Specifies the twinaxial printer that the ASCII printer emulates. This is a required parameter for ASCII device types.

3812: The 3812 printer is emulated. This value is valid for the 4019, 4216, and 5204 printers.

5219: The 5219 printer is emulated. This value is valid for all printers except 4201, 4202, and 4234.

5224: The 5224 printer is emulated. This value is valid for all printers.

5256: The 5256 printer is emulated. This value is valid for all printers.

AFP

Specifies whether the printer is capable of advanced function printing (AFP) functions. This parameter is used only if *LCL or *RMT or *LAN is specified on the DEVCLS parameter, and *IPDS is specified on the TYPE parameter.

Most IPDS printers can be configured with AFP(*YES) or AFP(*NO). Most non-IPDS printers can be configured only with AFP(*NO).

Note:

If AFP(*YES) is specified, the Print Services Facility/400 feature must be installed on the system.

***NO:** The printer does not use advanced function printing support.

***YES:** The printer uses advanced function printing support.

AFPATTACH

Specifies the type of attachment used for AFP printers. This parameter is used only if AFP(*YES) is specified.

***WSC:** 3812 or 3816 printers are attached to a local or remote work station controller.

***APPC:** 3820, 3827, 3825, or 3835 printers are attached to a synchronous data link control (SDLC) or token-ring network using advanced program-to-program communications (APPC) or advanced peer-to-peer networking (APPN).

PORT

➤ Specifies the port number for the device. Valid values range from 0 through 65535. Some printer devices may further restrict the valid value range.

For printers attached to a TCP/IP network, where DEVCLS(*LAN), TYPE(3812), and LANATTACH(*IP) are specified:

Note:

If the device supports the Simple Network Management Protocol (SNMP), SYSDRVPGM(*IBMSNMPDRV), or the HP Printer Job Language (PJL), SYSDRVPGM(*IBMPJLDRV), refer to the device's documentation, or contact the device manufacturer to determine the port number.

If the device supports the Internet Printing Protocol (IPP), SYSDRVPGM(*IBMIPPDRV), the well known port number is 631.

For twinaxial devices: Valid values range from 0 through 7.

For printers attached to the ASCII workstation controller: Valid values range from 0 through 17 and indicate to which port of the ASCII work station controller the printer is attached. Without the 12-port expansion feature, only ports 0 through 5 are valid. With the 12-port expansion feature, ports 6 through 17 are added.

For printers attached to a LAN, where DEVCLS(*LAN), TYPE(3812), and LANATTACH(*LEXLINK) or LANATTACH(*USRDFN):

Note:

If ADPTTYPE(*EXTERNAL) is specified, the port number value indicates which parallel or serial port to use, if there is more than one port on the external LAN adapter. Valid values range from 0 through 17.

If ADPTTYPE(*INTERNAL) is specified, the port number is not required.



SWTSET

Specifies, for local twinaxial printers, the switch setting or device address for the device. Valid values range from 0 through 6.

LOCADR

Specifies the local location address. Specify a 2-character hexadecimal value ranging from 00 through FE. The type of controller to which the device is being attached determines which values are valid.

Controller

Valid Values

5494	00-37
5394	00-14
5294	00-1B
5251	00, 02-09
4702	02-FE
4701	02-FE
4684	02-FE

4680 02-54

3274 02-41

3174 02-41

FBSS 02-FE

SNA Host
01-FE

AUXPRT

Specifies, for ASCII printers, whether the printer description is for an auxiliary printer. An auxiliary printer is attached to an ASCII display station, instead of being physically attached to the ASCII work station controller. All data sent to the printer passes through the display station. The user must have the display station power on before the printer can be used. This is a required parameter for ASCII printers.

***YES:** The printer is attached to the auxiliary port of an ASCII display station.

Note:

If AUXPRT(*YES) is specified, the following parameters must match those specified for the ASCII display station that the printer is attached to:

ATTACH
LINESPEED
WORDLEN
PARITY
STOPBITS

***NO:** The printer is physically attached to the ASCII work station controller.

EMLASCII

Specifies, for ASCII devices, whether the device being configured is emulating a supported ASCII device type (TYPE parameter). When an ASCII device is configured, choices for the following parameters are restricted to the valid range for that device:

ATTACH
LINESPEED
WORDLEN
PARITY
STOPBITS

These restrictions may not apply to ASCII devices emulating supported ASCII device types because the emulating device may have a wider range of choices for these parameters than the emulated ASCII device.

When EMLASCII(*YES) is specified, these parameter restrictions are not enforced. The user is allowed to enter the full range of values for these parameters, but is also responsible for verifying that the values selected are valid for the device being configured.

***NO:** The device being configured is one of the supported ASCII device types (identified by the TYPE parameter). Therefore, the device-specific restrictions for the physical attachment, line speed, word length, and stop bits parameters are enforced.

***YES:** The device being configured is emulating one of the supported ASCII device types (identified by the TYPE parameter), and the device-specific restrictions for the physical attachment, line speed, word length, and stop bits parameters are not enforced.

ATTACH

Specifies, for ASCII printers, the physical attachment of the printer to the ASCII work station controller:

- If AXPRT(*YES) is specified, then the printer is an auxiliary printer, and the physical attachment specified is the attachment between the ASCII display station and the ASCII work station controller.
- If AXPRT(*NO) is specified, then the physical attachment specified is the attachment between the printer and the ASCII work station controller.

This is a required parameter for ASCII device types.

***EIA422:** The EIA-422 attachment is used. This value is valid only for auxiliary printers and the following printers, which support *EIA422 for both auxiliary and non-auxiliary attachments:

4201-3

4202-3

4207-2

4208-2

4224

4234

***DIRECT:** The EIA-232 direct attachment is used.

***MODEM:** The EIA-232 modem attachment is used, and is valid only for auxiliary printers.

***PTT:** Post Telephone and Telegraph (PTT) attachment is used, and is valid only for auxiliary printers.

***WIRE3:** The EIA-232 three-wire attachment is used.

***WIRE4:** The EIA-232 four-wire attachment is used.

ONLINE

Specifies whether this object is automatically varied on at initial program load (IPL).

***YES:** The device is automatically varied on at IPL.

***NO:** This device is not automatically varied on at IPL.

CTL Specifies the name of the controller description to which this object is attached.

LNGTYPE

Specifies the language keyboard country or region identifier for an ASCII printer.

The following languages can be used by ASCII devices only if either host print transform or work station customization are also used: ALI, BGB, CSB, HNB, IRB, JPB, MKB, PLB, RMB, RUB, SKB, SQB, TRB, and YGI.

***SYSVAL:** The default printer language is *SYSVAL, which instructs the system to use the QKBDTYPE system value.

language-type: Specify one of the following language keyboard country or region identifiers from the Keyboard Mapping table which are supported for all printers:

Table 1. Keyboard Mapping

Language/Country or Region	Identifier	ASCII Device Group
Albania	ALI	
Arabic X/Basic	CLB	D
Austria/Germany	AGB	A, B
Austria/Germany Euro Currency	AGE	
Austria/Germany Multinational	AGI	A, B
Belgium Multinational	BLI	B
Belgium Multinational Euro Currency	BLM	
Brazilian Portuguese	BRB	
Brazilian Portuguese Euro Currency	BRE	
Bulgaria	BGB	
Canadian French	CAB	A, B
Canadian French Multinational	CAI	A, B
Canadian French Multinational Euro Currency	CAM	
Chinese (Simplified)	RCB	
Chinese (Traditional)	TAB	
Croatia	YGI	
Cyrillic	CYB	
Czech Republic	CSB	
Denmark	DMB	B
Denmark Euro Currency	DME	
Denmark Multinational	DMI	B
Estonia	ESB	
Finland/Sweden	FNB	B
Finland/Sweden Euro Currency	FNE	
Finland/Sweden Multinational	FNI	B
France (Azerty)	FAB	A, B
France (Azerty) Euro Currency	FAE	
France (Azerty) Multinational	FAI	A, B
France (Qwerty)	FQB	
France (Qwerty) Multinational	FQI	
Greece ¹	GNB ¹	
Hebrew	NCB	D
Hungary	HNB	
Iceland	ICB	
Iceland Euro Currency	ICE	
Iceland Multinational	ICI	
International	INB	
International Multinational	INI	
Iran (Farsi)	IRB	
Italy	ITB	A, B
Italy Euro Currency	ITE	
Italy Multinational	ITI	A, B
Japan English	JEB	
Japan English Multinational	JEI	
Japan Kanji (for PS/55 and 5295 display stations)	JKB	
Japan Latin Extended	JPB	

Language/Country or Region	Identifier	ASCII Device Group
Japan United States Basic	JUB	
Japan Katakana (for 5251, 5291, 5292, and 3180 Katakana display stations)	KAB	
Korea	KOB	
Latin-2/ROECE	ROB	
Latvia	LVB	
Lithuania	LTB	
FYR Macedonia (Former Yugoslav Republic)	MKB	
Netherlands	NEB	
Netherlands Euro Currency	NEE	
Netherlands Multinational	NEI	
Norway	NWB	B
Norway Euro Currency	NWE	
Norway Multinational	NWI	B
Poland	PLB	
Portugal	PRB	B
Portugal Euro Currency	PRE	
Portugal Multinational	PRI	B
Romania	RMB	
Russia	RUB	
Serbia (Cyrillic)	SQB	
Serbia (Latin)	YGI	
Slovakia	SKB	
Slovenia	YGI	
Spain	SPB	B
Spain Euro Currency	SPE	
Spain Multinational	SPI	B
Spanish Speaking	SSB	B
Spanish Speaking Multinational Euro Currency	SSE	
Spanish Speaking Multinational	SSI	B
Sweden	SWB	B
Sweden Euro Currency	SWE	
Sweden Multinational	SWI	B
Switzerland/French Multinational	SFI	B
Switzerland/French Multinational Euro Currency	SFM	
Switzerland/German Multinational	SGI	B
Switzerland/German Multinational Euro Currency	SGM	
Thai	THB	
Turkey (Qwerty)	TKB	
Turkey (F)	TRB	
Ukraine	UAB	
United Kingdom	UKB	A, B
United Kingdom Euro Currency	UKE	
United Kingdom Multinational	UKI	A, B
United States/Canada	USB	A, B, C
United States/Canada Euro Currency	USE	
United States/Canada Multinational	USI	A, B, C
Urdu	PKB	
Vietnam	VNB	
Languages of the former Yugoslavia	YGI	

Language/Country or Region**Identifier****ASCII Device Group****Note:**

- ¹ The GNB code is the current identifier for Greece. The GKB code was used prior to V2R1, and continues to be supported, but provides fewer characters than the recommended GNB code.

PRTQLTY

Specifies whether the default print quality for ASCII printers is draft, standard, or near-letter quality (in order of increasing quality). All ASCII printer types (with all emulations) support this parameter. If the printer is emulating a 5219 (EMLDEV parameter), this quality setting is overridden by individual printer files sent to this printer.

The table at the end of this parameter description shows the relative characters per second (CPS), lines per minute (LPM), or rate of ribbon advance when you specify print qualities for the 4214, 4224, 4234, and 5219 printers.

***STD:** The output is printed with standard quality.

***DRAFT:** The output is printed with draft quality.

***NLQ:** The output is printed with near-letter quality.

Table 2. Relative Print Quality (PRTQLTY Parameter)

Printer	*DRAFT	*STD	*NLQ
4214	200 CPS	50 CPS	50 CPS
4224 Model 1	200 CPS	100 CPS	50 CPS
4224 Model 2	400 CPS	200 CPS	100 CPS
4234	410 LPM	300 LPM	120 LPM
5219	Ribbon advances 1/3 as fast as standard mode	Ribbon advances in normal mode	Ribbon advances in normal mode

FONT Specifies the font identifier and the point size used by the 3812, 3816, and 5219 (including ASCII printers emulating the 5219 printer), and IPDS printers. A font identifier (up to 10 digits) is used with this printer file. Each font identifier has an implied characters-per-inch (CPI) value. If an identifier or point size is not specified, the system automatically sets one.

More information about the valid font identifiers, the display value, the characters per inch value implied with each font style, a description of each font style, and whether the font is supported on

a particular printer is in Printer Device Programming  book.

Note:

Some fonts may be substituted by the printer. Consult the various printer reference guides for details.

Element 1: Font Identifier

identifier: Specify the 3-, 4-, or 5-digit font identifier associated with this printer.

Element 2: Point Size

***NONE:** The point size is supplied by the system and is determined by the specified font identifier.

point-size: Specify a point size ranging from 0.1 through 999.9.

FORMFEED

Specifies the form feed attachment used for this spooled file. This parameter determines how

forms are fed into the printer. Not all printers support this parameter. Refer to the Create Printer File (CRTPRTF) command to determine if this parameter is supported.

Note: The FORMFEED parameter is overridden by the value specified on the PPRSRC1 parameter when the host print transform function is enabled.

***TYPE:** Form feed value is determined by the system based on printer type. For MODEL(*IPDS), this value cannot be determined accurately. You must select a value that is appropriate for the printer: *CONT, *CONT2, *CUT or *AUTOCUT.

***CONT:** Continuous forms are used by the printer, and the tractor feed attachment must be on the device. For ASCII devices only: Continuous forms are used by the printer. This value is valid for all ASCII printers, except the 4216 Printer emulating a 5219 Printer.

***CUT:** Single-cut sheets are manually fed into the printer. For cut sheets, the forms alignment message is not sent. This value is valid for all ASCII printers, except the 4216 Printer, that are emulating a SCS 5219 Printer.

***AUTOCUT:** The sheet-feed attachment must be on the printer. Single-cut sheets are automatically fed into the printer. The forms alignment message is not sent for cut sheets. For ASCII devices only: Single-cut sheets are automatically fed into the printer; valid for 4207, 4208, 4216, 4224, and 5204 Printers that are emulating a 5219 Printer.

***CONT2:** Continuous forms are used by the printer. The form is fed from the secondary tractor feed attachment. The secondary tractor feed attachment must be on the printer device. This value is allowed for 4214, 4234, 4247, and *IPDS printers.

SEPDRAWER

Specifies which drawer is selected for printing separators.

***FILE:** The separator pages are printed on paper from the same drawer as the rest of the spooled file.

separator-drawer: Specify a value ranging from 1 through 255 to indicate the drawer from which the separator pages are printed.

Note: For some printers, SEPDRAWER(3) implies an envelope drawer.

SEPPGM

Specifies a style of separator page by allowing you to call a user exit program while printing job and file separators.

***NONE:** The separator pages are not changed.

The name of the exit program can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

exit-program-name: Specify an exit program name.

NBRDRAWER

Specifies, for ASCII devices only, and only if FORMFEED(*AUTOCUT) is also specified, the number of drawers supported by the printer.

- 1:** One drawer is supported.
- 2:** Two drawers are supported.
- 3:** Three drawers are supported.

For the printers that support FORMFEED(*AUTOCUT), the following number of drawers are supported:

- For 4207-1 and 4208 printers, only NBRDRAWER(1) is valid.
- For a 4224 printer, only NBRDRAWER(3) is valid.
- For 4207-2, 4216, and 5204 printers, NBRDRAWER values of 1, 2, and 3 are supported.

Note: NBRDRAWER(3) implies that two paper drawers and an envelope drawer are used.


PRTERMSG

Specifies whether the device has inquiry messages or informational messages sent for recoverable errors. This parameter is not valid for printers attached to ASCII work station controllers.

***INQ:** Inquiry messages are sent for recoverable errors.

***INFO:** Informational messages are sent for recoverable errors whenever possible.

MSGQ

Specifies the name of the message queue to which messages are sent. More information about using this parameter is in the Communications Management  book.

***CTLD:** Messages are sent to the message queue defined in the attached controller. The message queue is determined when the device is varied on.

***SYSOPR:** Messages are sent to the system operator message queue (QSYS/QSYSOPR).

message-queue-name: Specify the name of the message queue to which messages are sent.

The name of the message queue can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched. 

MAXLENRU

Specifies the maximum request unit (RU) length (in bytes) allowed.

***CALC:** The system determines the value to use.

maximum-length-request-unit: Specify a value to be used as the maximum length for incoming request units. Values 241 and 247 are valid only for X.25 devices.

PACING

Specifies the rate at which the receiver accepts data (measured in request units) from the SNA data flow. This parameter cannot be used for 3287 remote printers.

7: Character density is 16.7 characters per inch.

request-units: Specify the number of request units that can be accepted by the receiver. Valid values range from 1 through 7.

APPTYPE

Specifies the application type being used.

***NONE:** The device is not used for any application.

***NRF:** The device is used for the network routing facility application.

***DEVINIT:** The device starts (initiates) the session.

***APPINIT:** The application program starts (initiates) the session.

LINESPEED

Specifies the line speed (in bits per second) that ASCII printers use to communicate over the interface (attachment) between the ASCII work station and the printer. The value of ***TYPE** specifies 19200 bits per second for all printers.

***TYPE:** The system uses the suggested setting (in bits per second) for the device type. ***TYPE** specifies 19200 for all printers.

Valid values are 150, 300, 600, 1200, 1800, 2400, 3600, 4800, 7200, 9600, 19200, and 38400.

The valid line speeds for each printer are as follows:

Printer

Line Speed

4201-2

150, 300, 600, 1200, 2400, 4800, 9600, 19200

4201-3

150, 300, 600, 1200, 2400, 4800, 9600, 19200, 38400

4202-1

150, 300, 600, 1200, 2400, 4800, 9600, 19200

4202-2

150, 300, 600, 1200, 2400, 4800, 9600, 19200, 38400

4202-3

150, 300, 600, 1200, 2400, 4800, 9600, 19200, 38400

4207-1

150, 300, 600, 1200, 2400, 4800, 9600, 19200

4207-2

150, 300, 600, 1200, 2400, 4800, 9600, 19200, 38400

4208-1

150, 300, 600, 1200, 2400, 4800, 9600, 19200

4208-2

150, 300, 600, 1200, 2400, 4800, 9600, 19200, 38400

4216 600, 1200, 2400, 4800, 9600, 19200

4224 300, 600, 1200, 2400, 4800, 9600, 19200

4234 150, 300, 600, 1200, 2400, 4800, 9600, 19200, 38400

5204 300, 600, 1200, 2400, 4800, 9600, 19200
6252 300, 600, 1200, 2400, 9600, 19200, 38400

WORDLEN

Specifies the word length (in bits per character) that ASCII printers use to communicate with the printer.

All ASCII printers support both 7-bit and 8-bit word lengths except for the 4224 printer and the 6252, which support only 8 bits. *TYPE indicates 8-bit word lengths for all printers.

Note: When DEVCLS(*LAN) is specified, the default value is 8.

***TYPE:** The system uses the suggested setting for this printer.

7: 7-bit word lengths are used.

8: 8-bit word lengths are used.

PARITY

Specifies the type of parity ASCII printers use to communicate with the printer. All printers support *NONE, *ODD, and *EVEN. *TYPE specifies *EVEN parity for all printers. Even parity is valid for all printers.

Note: When DEVCLS(*LAN) is specified, the default value is *NONE.

***TYPE:** The system uses the suggested setting for this printer.

***EVEN:** Even parity is used.

***NONE:** No parity bit is used.

***ODD:** Odd parity is used.

***MARK:** Mark parity is used.

***SPACE:** Space parity is used.

STOPBITS

Specifies the number of stop bits ASCII printers use to communicate with the printer. All ASCII printers support both one and two stop bits, except for the 4224, which supports only one stop bit. *TYPE specifies one stop bit for all printers.

Note: When DEVCLS(*LAN) is specified, the default value is 1.

***TYPE:** The system uses the suggested setting for this printer.

1: One stop bit is used.

2: The page width is 132 printed characters per line.

MAXPNDRQS

Specifies the maximum number of print requests that can be queued for AFP printers. This parameter is valid only when AFP(*YES) is specified.

6: Up to six print requests can be queued.

maximum-pending-requests: Specify a value ranging from 1 through 31, indicating the maximum number of print requests that can be queued.

PRTCVT

Specifies whether a file using AFP must be completely converted to IPDS before printing can begin.

***YES:** Printing begins prior to complete IPDS conversion.

***NO:** Printing does not begin prior to complete IPDS conversion.

PRTRQSTMR

Specifies the number of seconds to wait after a print request has been sent to a continuous forms printer configured for advanced function printing before the last printed output is forced into the stacker. This parameter is used only if AFP(*YES) and FORMFEED(*CONT) or FORMFEED(*CONT2) are specified.

***NOMAX:** The timer is disabled.

print-request-timer: Specify a value ranging from 1 through 3600, indicating the number of seconds to wait after a print request has been sent.

FORMDF

Specifies the library and form definition to be used for print requests that do not specify a form definition. This parameter is used only if AFP(*YES) is specified.

The name of the form definition can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

***F1C10110:** Form definition F1C10110 is used.

form-definition-name: Specify the name of the form definition to be used.

CHRID

Specifies the default character identifier (graphic character set and code page). This parameter is valid only if AFP(*YES) and AFPATTACH(*APPC) are specified, or if TRANSFORM(*YES) is specified.

***SYSVAL:** The system determines the graphic character set and code page values for the command parameters from the QCHRID system values.

Element 1: Character Set

graphic-character-set: Specify the graphic character set values that match the attributes of the printer. Valid values range from 1 through 32767.

Element 2: Code Page

code-page: Specify the code page set values that match the attributes of the printer. Valid values range from 1 through 32767.

WSCST

Specifies the qualified name of a work station customizing object to be created.

Note: This parameter is ignored when AFP(*YES) is specified.

***NONE:** No work station customizing object is specified.

The name of the work station customizing object can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

work-station-customizing-object: Specify the work station customizing object.

Note: If a work station customizing object is specified for this parameter, all language keyboard country or region identifiers are valid for ASCII devices except for the following: FQB, FQI, INB, INI, JEB, JEI, JKB, JUB, KAB, KOB, RCB, and TAB. See the Keyboard Mapping table at the end of the description for the LNGTYPE parameter for a list of the language keyboard country or region identifiers.

RMTLOCNAME

Specifies the remote location name of the printer device. This value may be an SNA network ID and control point name, an internet protocol (IP) host name, or an internet address.

An SNA remote location name is specified using the format nnnnnnnn.ccccccc, where nnnnnnnn is the network ID and ccccccc is the control point name. If only the control point name is specified, the RMTNETID parameter value is used as the value of the network ID.

An IP remote location name must be from 1 to 255 characters in length.

Note: This parameter is valid if AFP(*YES) and AFPATTACH(*APPC) both are specified, or when LANATTACH(*IP) or LANATTACH(*USRDFN) is specified. This parameter is required when APPTYPE(*APPINIT) is specified. The remote location name for an APPTYPE(*APPINIT) device is the Virtual Telecommunications Access Method/IBM Network Control Program (VTAM/NCP) name of the physical device.

remote-location-name: Specify the remote location name, remote system name, or internet address.

LCLLOCNAME

Specifies the local location name. This parameter is valid only when AFP(*YES) and AFPATTACH(*APPC) are specified, or when APPTYPE(*APPINIT) is specified. The local location name for an APPTYPE(*APPINIT) device is the name of the independent logical unit (LU) in the IBM Network Control Program (NCP).

***NETATR:** The LCLLOCNAME value specified in the system network attributes is used.

local-location-name: Specify the local location name.

RMTNETID

Specifies the identifier (ID) of the remote network. This parameter is required when AFP(*YES) and AFPATTACH(*APPC) are specified, or when APPTYPE(*APPINIT) is specified.

***NETATR:** The RMTNETID value specified in the system network attributes is used.

***NONE:** No remote network identifier (ID) is used.

remote-network-ID: Specify the ID of the remote network.

MODE Specifies the name of the mode used to define the session limits and session characteristics for the device. This parameter is valid only if AFP(*YES) and AFPATTACH(*APPC) are specified.

QSPWTR: QSPWTR is the mode used.

***NETATR:** The mode name specified in the network attributes is used.

mode-name: Specify the mode name.

IGCFEAT

Specifies which double-byte character set (DBCS) table is used, in DBCS feature code format expressing device features and the last code point value. The table at the end of this parameter description shows valid device features and last code point values for DBCS-capable devices.

Note: This parameter is valid for DBCS-capable devices only.

Element 1: Features of the DBCS-Capable Device

device-features: Specify the character resolution, language, and relative buffer size device features using the format SSSSLR, where:

SSSS =

The resolution (number of matrix points used to create) of the character. For example, 2424 would be 24 matrix points of height and 24 matrix points of width available to formulate the character.

L = The language code. The 4 language codes currently supported are:

J = Japanese

K = Korean

C = Traditional Chinese

S = Simplified Chinese

R = The relative buffer size. The valid values are: 0, 1, 2, and 4.

Element 2: Last Code Point

last-code-point: Specify the 4-digit code point of the last double byte character. This value can be blank.

Table 3. DBCS-Capable Display Device Features (IGCFEAT Parameter)

Type of Physical Work Station	Type-Model	Device Feature/ Last Code Point
Japanese Display Stations		
5295-001 Display Station	5555-B01	2424J4 55FE
5295-002 Display Station	5555-B01	2424J4 68FE
InfoWindow 3477-J Display Station	5555-B01, C01	2424J4 68FE
Personal System/55* running 5250PC	5555-B01	2424J4 68FE
Personal System/55 running graphics-capable 5250PC	5555-G01	2424J4 68FE
Personal System/55 running graphics-capable 5250PC	5555-G02	2424J4 68FE
Personal System/55 running 5250PC/2	5555-E01	2424J0
Personal System/55 running Client Access/400 by OS/400 System	5555-B01	2424J0
3270-type Display Stations*	3279-0	2424J0
Korean Display Stations		
5250-Type Display Stations	5555-B01	2424K0
3270-type Display Stations*	3279-0	2424K0
Traditional Chinese Display Stations		
5250-Type Display Stations	5555-B01	2424C0
3270-type Display Stations*	3279-0	2424C0
Simplified Chinese Display Stations		
5250-Type Display Stations	5555-B01	2424S0
3270-type Display Stations*	3279-0	2424S0

INACTTMR

Specifies an inactivity timer (time-out) value. This parameter also specifies what happens when the time-out value is exceeded, dependent on other attributes of the device:

- For devices connected using SNA pass-through (SNPT) support, the user is informed by a message to QSYSOPR and the session is ended when the amount of time that the device is not bound to a host application exceeds the time-out value. The user must reestablish the connection and session.
- For devices with an application type value of *APPINIT, *DEVINIT, or *NRF, the session is ended when the device is inactive (the file opened against the device is closed and no additional requests to open files are received for the device) for a period of time that exceeds the time-out value.

Note:

This timer is not used by devices allocated to a subsystem (normal interactive use) because the subsystem always has a file open for the device. The timer is used by batch jobs that open and close files for the device.

For all other attachments, valid values range from 1 through 30 minutes.

***ATTACH:** This value varies by the value on the physical attachment (ATTACH parameter) and certain values on the device class (DEVCLS) and application type (APPTYPE) parameters.

- For DEVCLS(*SNPT) or APPTYPE(*DEVINIT) or AFP(*YES) support, *ATTACH maps to *NOMAX.
- For DEVCLS(*LAN), *ATTACH maps to *SEC15.
- For APPTYPE(*NRF) and APPTYPE(*APPINIT) support, *ATTACH maps to 1 minute.

***NOMAX:** Maximum inactivity time is not tracked.

***SEC15:** A 15-second time-out period is used.

***SEC30:** A 30-second time-out period is used.

inactivity-timer: Specify a time-out value.

ACTTMR

Specifies the amount of time (in seconds) to wait for the device to respond to the activation request from the host iSeries 400. If the device does not respond within this time, it is considered not available.

170: The device waits 170 seconds.

***NOMAX:** The device waits forever.

Note:

*NOMAX is valid only when DEVCLS(*LAN) and AFP(*YES), or when LANATTACH(*LEXLINK) is specified.

activation-timer: Specify a number indicating the number of seconds before the device is considered not available.

Note:

If LANATTACH is *LEXLINK, and the specified number of seconds has elapsed, an inquiry message is issued. If DEVCLS(*LAN) is specified, valid values range from 1 through 2550.

SNPTDEV

Specifies the name of the associated SNA pass-through device that is attached to a host or advanced program-to-program communications (APPC) controller.

***NONE:** No name is specified.

associated-device-name: Specify the name of a device that is attached to a host or an APPC controller that is associated with this device.

SNPTGRP

Specifies the name configured for a group of host devices in a configuration list. This indicates that this device is associated with any one of the devices in that group which is available.

***NONE:** No name is specified.

group-name: Specify the name configured for a group of host devices that must be associated with this device.

LOGON

Specifies the sign-on (logon) text. This parameter is allowed when DEVCLS(*SNPT) or APPTYPE(*NRF) is specified. APPTYPE(*NRF) specifies the logon string that is sent to the host system when a request is made to establish a session. DEVCLS(*SNPT) specifies the sign-on text that is sent to the host system after starting SNA pass-through support.

Specifies the logon string that is sent to the system services control point (SSCP) on the host network when the file is opened.

***NONE:** No text is sent to the host system.

host-logon-command: Specify text that is sent to the host system. The text must be enclosed in apostrophes if it contains blanks or other special characters. All apostrophes within the text must be represented by two apostrophes. A maximum of 256 characters can be specified.

TRANSFORM

Specifies whether the printer uses the host print transform function.

Note: When DEVCLS(*LAN) is specified with 3812 printers, the default value is *YES.

***NO:** The printer does not use the host print transform function

***YES:** The printer uses the host print transform function.

MFRTYPMDL

Specifies the manufacturer, type, and model for a printer using the host print transform function. The following list shows the values to be specified for the device you are using:

Note: If *WSCST is specified for MFRTYPMDL, a workstation customizing object must be specified.

See the Manufacturer Type and Model (MFRTYPMDL Parameter) table at the end of this command description for a list of the manufacturers, types, and models for printers using the host print transform function.

PPRSRC1

Specifies the type of paper used in paper source one.

***MFRTYPMDL:** The system uses the suggested setting for this printer.

***LETTER:** The paper for this source is letter-sized (8.5 x 11 inches).

***LEDGER:** The paper for this source is ledger-sized (11 x 17 inches).

***LEGAL:** The paper for this source is legal-sized (8.5 x 14 inches).

***EXECUTIVE:** The paper for this source is executive-sized (7.25 x 10.5 inches).

***A3:** The paper for this source is A3-sized (297mm x 420mm).

***A4:** The paper for this source is A4-sized (210mm x 297mm).

***A5:** The paper for this source is A5-sized (148 x 210mm).

***B4:** The paper for this source is B4-sized (257 x 364mm).

***B5:** The paper for this source is B5-sized (182 x 257mm).

***CONT80:** The paper for this source is continuous form (8.0 inches).

***CONT132:** The paper for this source is continuous form (13.2 inches).

***NONE:** No paper source number one is specified.

PPRSRC2

Specifies the type of paper used in paper source two.

***MFRTYPMDL:** The system uses the suggested setting for this printer.

***LETTER:** The paper for this source is letter-sized (8.5 x 11 inches).

***LEDGER:** The paper for this source is ledger-sized (11 x 17 inches).

***LEGAL:** The paper for this source is legal-sized (8.5 x 14 inches).

***EXECUTIVE:** The paper for this source is executive-sized (7.25 x 10.5 inches).

***A3**: The paper for this source is A3-sized (297mm x 420mm).

***A4**: The paper for this source is A4-sized (210mm x 297mm).

***A5**: The paper for this source is A5-sized (148 x 210mm).

***B4**: The paper for this source is B4-sized (257 x 364mm).

***B5**: The paper for this source is B5-sized (182 x 257mm).

***NONE**: No paper source number two is specified.

ENVELOPE

Specifies the type of envelopes used in the third paper source.

***MFRTYPMDL**: The system uses the suggested setting for this printer.

***MONARCH**: The envelopes for this source are monarch-sized (3.875 x 7.5 inches).

***NUMBER9**: The envelopes for this source are number 9-sized (3.875 x 8.875 inches).

***NUMBER10**: The envelopes for this source are number 10-sized (4.125 x 9.5 inches).

***B5**: The envelope for this source is B5-sized (176 x 250mm).

***C5**: The envelopes for this source are C5-sized (162mm x 229mm).

***DL**: The envelopes for this source are DL-sized (110mm x 220mm).

***NONE**: No envelope source is specified.

ASCII899

Specifies whether the printer has ASCII code page 899 installed.

***NO**: The printer does not have ASCII code page 899 installed.

***YES**: The printer has ASCII code page 899 installed.

IMGCFG

Specifies the image configuration for this printer. An image configuration object provides transform services for a variety of image and print datastream formats.

See the Image Configuration Object (IMGCFG Parameter) table at the end of this command description for a list of the image configuration objects provided.

See the Image Configuration Objects (IMGCFG Parameter) by Printer Type table at the end of this command description for the suggested IMGCFG object for many popular printers.

***NONE**: No image configuration specified.

image-configuration: Specify image configuration for a printer.

DEPLOCNAME

Specifies the dependent local location name used for dependent LU requestor (DLUR), providing additional security for the connection. If this name is filled in, an activation request (SNA ACTLU) from a dependent LU server (DLUS) node must reference this name or it is rejected.

Remote DLUS nodes may optionally accept unsolicited reply PSIDs (Product Set IDs) from the iSeries 400 for auto-definition of LUs at the DLUS node. If so, then this name is sent to the DLUS node in the reply PSID and it is returned on the ACTLU request.

If unsolicited reply PSIDs are not supported by the DLUS node, then there will have to be close coordination of the PU name definitions on both systems.

***NONE**: No location name is defined.

dependent-location-name: Specify the dependent location name used for DLUR applications.

USRDFNOPT

Specifies, for spooled output only, one or more user-defined options to be used by user applications or user-specified programs that process spooled files. A maximum of four user-defined options can be specified.

***NONE:** No user-defined option is specified.

user-defined-option: Specify the user-defined option to be used by user applications or user-specified programs that process spooled files. All characters are acceptable.

USRDFNOBJ

Specifies, for spooled output only, the qualified name and type of the user-defined object to be used by user applications or user-specified programs that process spooled files.

***NONE:** No user-defined object name is specified.

Element 1: Name of User-Defined Object

The name of the user-defined object can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

user-defined-object-name: Specify the name of the user-defined object to be used by user applications or user-specified programs that process spooled files.

Element 2: Type of User Defined Object

object-type: The user object type can be one of the following:

***DTAARA**

Data Area

***DTAQ.**

Data Queue

***FILE** File

***PSFCFG**

PSF Configuration

***USRIDX**

User Index

***USRQ**

User Queue

***USRSPC**

User Space

USRDTATFM

Specifies the qualified name of a user-defined data program that is used to transform the spooled file data.

Notes:

1. This parameter is not valid when AFP(*YES) is specified.
2. This parameter is not valid when TRANSFORM(*YES) is specified.

***NONE:** No user-defined data transform program is specified.

The name of the user-defined data transform program can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

user-defined-data-transform-program-name: Specify the name of a user-defined data transform program.

USRDRVPGM

Specifies the qualified name of a user-defined driver program.

Note:

This parameter is not valid when AFP(*YES) is specified, or when DEVCLS(*LAN), TYPE(3812) and LANATTACH(*IP) is specified.

***NONE:** No user-defined driver program is specified.

The name of the user-defined driver program can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

user-defined-driver-program-name: Specify a user-defined driver program name.

SYSDRVPGM

Specifies the name of a system-defined driver program. It is used to provide the capability for sending iSeries 400 print output to a printer attached over a TCP/IP network.

Note:

This parameter is only valid when DEVCLS(*LAN), TYPE(3812) and LANATTACH(*IP) is specified.

***NETSTNDRV:** A network station driver program is used.

***HPPJLDRV:** An HP-compatible printer driver program is used.



***IBMIPPDRV:** An IBM Internet printing protocol (IPP) printer driver program is used.



***IBMPJLDRV:** An IBM network printer driver program is used.

***IBMSNMPDRV:** An IBM SNMP printer driver program is used.

SECURECNN

Note: This parameter is only valid when SYSDRVPGM(*IBMIPPDRV) is specified.

Specifies whether a secure connection is established with the printer. A secure connection provides an encrypted communications session to ensure print data that passes over the connection remains private.

***NO:** Connection with printer is not secure.

***YES:** Connection with printer is secure. The printer must support SSL (Secure Sockets Layer) or TLS (Transport Layer Security) and must have a system digital certificate.

More information about the secure connection can be found in the Printer Device Programming book.

VLDL

Note: This parameter is only valid when SYSDRVPGM(*IBMIPPDRV) is specified.

Specifies a validation list that is used if the printer requests authentication.

The validation list is checked for the name of the user who created the spooled file, the name of the printer device, or the name of the system. Authentication information associated with the name is returned to the printer.

Single Values

***NONE:** No validation list is specified.



The name of the validation list can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

validation-list-name: Specify the name of the validation list which contains authentication information.

More information about building a validation list can be found in the Printer Device Programming book.  

PUBLISHINF

Specifies information about the printer device that could be *published* to a Lightweight Directory Access Protocol (LDAP) directory.

Element 1: Duplex Support

Specifies whether the printer supports printing on both sides of a sheet of paper.

***UNKNOWN:** Whether the printer supports duplex printing is unknown.

***DUPLEX:** The printer device supports printing on both sides of a sheet.

***SIMPLEX:** The printer device only supports printing on one side of a sheet.

Element 2: Color Support

Specifies whether the printer device supports color ink printing.

***UNKNOWN:** Whether the printer supports color ink printing is unknown.

***COLOR:** The printer device does support color ink printing.

***NOCOLOR:** The printer device does not support color ink printing.

Element 3: Pages Per Minute Black

Specifies the number of black ink pages per minute that the printer device can produce.

***UNKNOWN:** The value for black ink pages per minute is unknown.

page-count-black: The number of black ink pages per minute the printer device can produce.

Element 4: Pages Per Minute Color

Specifies the number of color ink pages per minute that the printer device can produce.

Note:

The number of color ink pages per minute is valid only when *COLOR specified for element 2.


***UNKNOWN:** The value for color ink pages per minute is unknown.

page-count-color: The number of color ink pages per minute the printer device can produce.

Element 5: Location

Briefly describes the location of the printer device.

***BLANK:** The location of the printer device is unknown.

'location': Specify no more than 30 characters of text, enclosed in apostrophes, to describe where the printer is located. 

Element 6: Data Streams Supported

Specifies the data stream formats supported by the printer device.

***UNKNOWN:** The value for data streams supported is unknown.

***PCL:** The printer device supports PCL (Printer Command Language).

***PS:** The printer device supports PostScript.

***PDF:** The printer device supports PDF (Portable Document Format).

***IPDS:** The printer device supports IPDS (Intelligent Printer Data Stream).

***SCS:** The printer device supports SCS (SNA Character String). <<

AUT Specifies the authority given to users who do not have specific authority to the device description, who are not on an authorization list, and whose user group has no specific authority to the device description.

***LIBCRTAUT:** The authority for the object is the same as the create authority for QSYS. The create authority for QSYS can be displayed by using the Display Library Description (DSPLIBD) command. If the create authority is changed with the Change Library (CHGLIB) command, the new authority does not affect existing objects.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the device description.

***USE:** The user can perform basic operations on the device description, such as running a program or reading a file. The user cannot change the device description. *USE authority provides object operational authority, read authority, and execute authority.

***EXCLUDE:** The user cannot access the device description.

authorization-list-name: Specify the name of the authorization list used.

TEXT Specifies the text that briefly describes the printer device. More information on this parameter is in Commonly used parameters.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CRTDEVPRT

```
CRTDEVPRT  DEVD(PRT1)  TYPE(5219)  DEVCLS(*LCL)
MODEL(D1)  PORT(0)    SWTSET(1)   CTL(CTL01)
FONT(011)
```

This command creates a device description for a local printer named PRT1. It is a 5219 Model D1 Printer attached to Port 0 of CTL01. It has an address of 1 and uses the Courier font.

```
CRTDEVPRT  DEVD(PRT2)  DEVCLS(*LAN) TYPE(3812) MODEL(1)
ADPTADR(999999999999) FONT(011)  MFRTYPMDL(*IBM3812)
```

This command creates a device description for a LAN printer named PRT2. It is a 3812 Model 1 Printer attached to IBM 3812 Pageprinter. It has an adapter address of 999999999999 and uses the Courier font.

Table 4. Manufacturer Type and Model (MFRTYPMDL Parameter)***

*IBM2380	IBM 2380 Personal Printer Series II IBM 2380 Plus Printer
*IBM2381	IBM 2381 Personal Printer Series II, IBM 2381 Plus Printer
*IBM2390	IBM 2390 Personal Printer Series II IBM 2390 Plus Printer
*IBM2391	IBM 2391 Personal Printer Series II IBM 2391 Plus Printer
*IBM3112	IBM 3112 Page Printer
*IBM3116	IBM 3116 Page Printer
*IBM3130	IBM 3130 Advanced Function Printer
*IBM3812	IBM 3812 Pageprinter
*IBM3816	IBM 3816 Pageprinter
*IBM3912HP	IBM 3912 Page Printer (HP Mode)
*IBM3916HP	IBM 3916 Page Printer (HP Mode)
*IBM39302	IBM 39302 IBM 3930-02S Page Printer IBM 39302 IBM 3930-02D Page Printer
*IBM39303	IBM 39303 IBM 3930-03S Page Printer IBM 39303 IBM 3930-03D Page Printer
*IBM4019	IBM 4019 LaserPrinter IBM 4019E LaserPrinter E
*IBM4019HP	IBM 4019 LaserPrinter (HP** Mode) IBM 4019E LaserPrinter E (HP Mode)
*IBM4029	IBM 4029-010 LaserPrinter 5E IBM 4029-020 LaserPrinter 6 IBM 4029-030 LaserPrinter 10 IBM 4029-040 LaserPrinter 10L
*IBM4029HP	IBM 4029-010 LaserPrinter 5E (HP Mode) IBM 4029-020 LaserPrinter 6 (HP Mode) IBM 4029-030 LaserPrinter 10 (HP Mode) IBM 4029-040 LaserPrinter 10L (HP Mode)
*IBM4037	IBM 4037 5E Printer

*IBM4039HP	IBM LaserPrinter 4039-10D (HP Mode)
	IBM LaserPrinter 4039-10D Plus (HP Mode)
	IBM LaserPrinter 4039-10R (HP Mode)
	IBM LaserPrinter 4039-10R Plus (HP Mode)
	IBM LaserPrinter 4039-12R (HP Mode)
	IBM LaserPrinter 4039-12R Plus (HP Mode)
	IBM LaserPrinter 4039-12L (HP Mode)
	IBM LaserPrinter 4039-12L Plus (HP Mode)
	IBM LaserPrinter 4039-16L (HP Mode)
	IBM LaserPrinter 4039-16L Plus (HP Mode)
*IBM4070	IBM 4070 IJ
*IBM4070EP	IBM 4070 IJ (Epson** Mode)
IBM4072	IBM 4072 ExecJet
IBM4076	IBM 4076 ExecJet II Printer (HP Mode)
IBM42011	IBM 4201-1 Proprinter
*IBM42012	IBM 4201-2 Proprinter II
*IBM42013	IBM 4201-3 Proprinter III
*IBM42021	IBM 4202-1 Proprinter XL
*IBM42022	IBM 4202-2 Proprinter II XL
*IBM42023	IBM 4202-3 Proprinter III XL
*IBM42071	IBM 4207-1 Proprinter X24
*IBM42072	IBM 4207-2 Proprinter X24E
*IBM42081	IBM 4208-1 Proprinter XL24
*IBM42082	IBM 4208-2 Proprinter XL24E
*IBM4212	IBM 4212 Proprinter 24P
*IBM4216	IBM 4216-10 Personal Pageprinter
*IBM4226	IBM 4226-302 Printer
*IBM4230	IBM 4230-4S3 Printer (IBM Mode)
	IBM 4230-4I3 Printer (IBM Mode)
*IBM4232	IBM 4232-302 Printer (IBM Mode)
*IBM4244MAN	IBM4244 Printer (single tractor or manual feed selection)
*IBM4244ASF	IBM4244 Printer (single tractor feed and ASF)
*IBM4244DUAL	IBM4244 Printer (dual tractor feeds)
*IBM4247MAN	IBM4247 Printer (single formfeed or manual selection)
*IBM4247DUAL	IBM4247 Printer (dual tractor feeds)
*IBM4247ASF	IBM4247 Printer (single tractor feed and ASF)
*IBM4312	IBM Network Printer 12

*IBM4317	IBM Network Printer 17
*IBM4320	IBM InfoPrint 20
*IBM4324	IBM Network Printer 24
*IBM4332	IBM InfoPrint 32
*IBM47121	IBM 4712-1 Transaction Printer
*IBM47122	IBM 4712-2 Transaction Printer
*IBM47221	IBM 4722-1 Document Printer
*IBM47222	IBM 4722-2 Document Printer
*IBM4770	IBM 4770 InkJet Transaction Printer
*IBM5152	IBM 5152 Graphics Printer
IBM5201	IBM 5201-2 Quietwriter
*IBM5202	IBM 5202-1 Quietwriter III
IBM5204	IBM 5204-1 Quickwriter
*IBM5216	IBM 5216 Wheelprinter
*IBM5575	IBM 5579-H02 Printer
	IBM 5579-K02 Printer
	IBM 5577-T02 Printer
	IBM 5579-S02 Printer
	IBM 5577-K02 Printer
	IBM 5577-J02 Printer
	IBM 5577-G02 Printer
	IBM 5577-H02 Printer
	IBM 5577-F02 Printer
	IBM 5577-B02 Printer
	IBM 5575-H02 Printer
	IBM 5575-F02 Printer (with SBCS Cartridge)
	IBM 5575-B02 Printer (with SBCS Cartridge)
	IBM 5573-K02 Printer
	IBM 5573-J02 Printer
	IBM 5573-H02 Printer
	IBM 5573-G02 Printer
	IBM 5572-B02 Printer
	IBM 5417-011 Printer
	IBM 5407-011 Printer
	IBM 5327-011 Printer
	IBM 4208-502 Printer

*IBMPAGES	IBM 5589-H01 Printer IBM 5588-H02 Printer IBM 5587-H01 Printer IBM 5586-H02 Printer IBM 5585-H01 Printer IBM 5584-K02 Printer IBM 5584-H02 Printer IBM 5584-G02 Printer
*IBMPAGES300	IBM Network Printer 12 (with PAGES feature) IBM Network Printer 17 (with PAGES feature) IBM Network Printer 24 (with PAGES feature)
*IBM6400	IBM 6400 Printers (IBM Mode)
*IBM6400EP	IBM 6400 Printers (Epson Mode)
*IBM6404	IBM 6404 Printers (IBM Mode)
*IBM6404EP	IBM 6404 Printers (Epson Mode)
*IBM6408	IBM 6408-A00 Printer (IBM Mode) IBM 6408-CTA Printer (IBM Mode)
*IBM6408EP	IBM 6408-A00 Printer (Epson Mode) IBM 6408-CTA Printer (Epson Mode)
*IBM6412	IBM 6412-A00 Printer (IBM Mode) IBM 6412-CTA Printer (IBM Mode)
*IBM6412EP	IBM 6412-A00 Printer (Epson Mode) IBM 6412-CTA Printer (Epson Mode)
*CANLIPS3	Canon LIPS3 DBCS Printers
*CPQPM15	COMPAQ** PageMark 15 (HP Mode)
*CPQPM20	COMPAQ PageMark 20 (HP Mode)
*HPDBCS	HP LaserJet-compatible printers for Double Byte Character Set (DBCS) input.
*HP II	HP LaserJet** Series II
*HP IID	HP LaserJet IID
*HP IIP	HP LaserJet IIP
*HP III	HP LaserJet III
*HP IIID	HP LaserJet IIID
*HP IIIP	HP LaserJet IIIP
*HP IIISI	HP LaserJet IIISi
*HP1200C	HP DeskJet 1200C
*HP1600C	HP DeskJet 1600C
*HP310	HP DeskJet 310

*HP320	HP DeskJet 320
*HP4	HP LaserJet 4
*HP4000	HP LaserJet 4000 series
*HP5	HP LaserJet 5 series
*HP500	HP DeskJet 500
*HP520	HP DeskJet 520
*HP540	HP DeskJet 540
*HP550C	HP DeskJet 550C
*HP560C	HP DeskJet 560C
*HP5000	HP LaserJet 5000 series
*HP5SI	HP LaserJet 5Si
*HP6	HP LaserJet 6 series
*HP8000	HP LaserJet 8000 series
*HPCOLORLJ	HP Color LaserJet 5
*HPPAINT	HP PaintJet
	HP PaintJet XL
	HP PaintJet XL300
*LEXOPTRA	Lexmark Optra Family (HP Mode)
*LEXOPTRAC	Lexmark Optra C Color Printer
*LEXOPTRAN	Lexmark Optra N Printer
*LEXOPTRAS	Lexmark Optra S Printer family
*LEXOPTRASC	Lexmark Optra SC Color Printer
	Lexmark Optra Color 1200 Printer
*LEX2380	Lexmark Forms Printer 2380 Plus
*LEX2381	Lexmark Forms Printer 2381 Plus
*LEX2390	Lexmark Forms Printer 2390 Plus
*LEX2391	Lexmark Forms Printer 2391 Plus
*LEX4227	Lexmark 4227 Forms Printer
*ESCPDBCS	Epson ESC/P DBCS Printers
*EPAP2250	Epson ActionPrinter 2250
*EPAP3250	Epson ActionPrinter 3250
*EPAP5000	Epson ActionPrinter 5000
*EPAP5500	Epson ActionPrinter 5500
*EPDFX5000	Epson DFX-5000
*EPDFX8000	Epson DFX-8000
*EPFX850	Epson FX-850
*EPFX870	Epson FX-870

*EPFX1170	Epson FX-1170
*EPLQ570	Epson LQ-570
*EPLQ860	Epson LQ-860
*EPLQ870	Epson LQ-870
*EPLQ1070	Epson LQ-1070
*EPLQ1170	Epson LQ-1170
*EPLQ510	Epson LQ-510
*EPLQ2550	Epson LQ-2550
*EPLX810	Epson LX-810
*EPSQ870	Epson SQ-870
*EPSQ1170	Epson SQ-1170
*EPEPL7000	Epson EPL-7000
*EPEPL8000	Epson EPL-8000
*NECPR201	NEC** PC-PR101
	NEC** PC-PR201
*NECP2	NEC** P2 Pinwriter
*NECP2200	NEC P2200 Pinwriter
*NECP2200XE	NEC P2200 XE Pinwriter
*NECP5200	NEC P5200 Pinwriter
*NECP5300	NEC P5300 Pinwriter
*NECP6200	NEC P6200 Pinwriter
*NECP6300	NEC P6300 Pinwriter
*NONE	Printer supports page-descriptor language generated by the CVTIMG API. Note: Spoolfiles with device type of *SCS or *AFPDS cannot be processed by the Host Print Transform function for these printers.
*OKI184IBM	Okidata** Microline 184 Turbo (IBM Mode)
*OKI320IBM	Okidata Microline 320 (IBM Mode)
*OKI321IBM	Okidata Microline 321 (IBM Mode)
*OKI390IBM	Okidata Microline 390 Plus (IBM Mode)
*OKI391IBM	Okidata Microline 391 Plus (IBM Mode)
*OKI393IBM	Okidata Microline 393 Plus (IBM Mode)
*OKI590IBM	Okidata Microline 590 (IBM Mode)
*OKI591IBM	Okidata Microline 591 (IBM Mode)
*OKI400	Okidata OL400 LED Page Printer
*OKI800	Okidata OL800 LED Page Printer
*OKI810	Okidata OL810 LED Page Printer
*OKI820	Okidata OL820 LED Page Printer
*OKI3410	Okidata Pacemark 3410

*PAN1123EP	Panasonic** KX-P1123 (Epson Mode)
*PAN1124EP	Panasonic KX-P1124 (Epson Mode)
*PAN1124IEP	Panasonic KX-P1124i (Epson Mode)
*PAN1180EP	Panasonic KX-P1180 (Epson Mode)
*PAN1180IEP	Panasonic KX-P1180i (Epson Mode)
*PAN1191EP	Panasonic KX-P1191 (Epson Mode)
*PAN1624EP	Panasonic KX-P1624 (Epson Mode)
*PAN1654EP	Panasonic KX-P1654 (Epson Mode)
*PAN1695EP	Panasonic KX-P1695 (Epson Mode)
*PAN2123EP	Panasonic KX-P2123 (Epson Mode)
*PAN2124EP	Panasonic KX-P2124 (Epson Mode)
*PAN2180EP	Panasonic KX-P2180 (Epson Mode)
*PAN2624EP	Panasonic KX-P2624 (Epson Mode)
*PAN4410HP	Panasonic KX-P4410 (HP Mode)
*PAN4420HP	Panasonic KX-P4420 (HP Mode)
*PAN4430HP	Panasonic KX-P4430 (HP Mode)
*PAN4450IHP	Panasonic KX-P4450i (HP Mode)
*PAN4451HP	Panasonic KX-P4451 (HP Mode)
*XRX4215MRP	Xerox** 4215/MRP (HP Mode)
*XRX4219MRP	Xerox 4219/MRP (HP Mode)
*XRX4220MRP	Xerox 4220/MRP (HP Mode)
*XRX4230MRP	Xerox 4230/MRP (HP Mode)
*XRX4235	Xerox 4235 LaserPrinting (HP Mode)
*XRX4700II	Xerox 4700 II Color Document Printer (HP Mode)
*WSCST	Printer is not listed
*WSCSTLETTER	Printer is not listed (letter-sized paper)
*WSCSTLEGAL	Printer is not listed (legal-sized paper)
*WSCSTLEDGER	Printer is not listed (ledger-sized paper)
*WSCSTEXECUTIVE	Printer is not listed (executive-sized paper)
*WSCSTA3	Printer is not listed (A3-sized paper)
*WSCSTA4	Printer is not listed (A4-sized paper)
*WSCSTA5	Printer is not listed (A5-sized paper)
*WSCSTB4	Printer is not listed (B4-sized paper)
*WSCSTB5	Printer is not listed (B5-sized paper)
*WSCSTCONT80	Printer is not listed (8-inch continuous forms)
*WSCSTCONT132	Printer is not listed (13.2 inch continuous forms)
*WSCSTNONE	Printer is not listed (paper size not specified)

Table 5. Image Configuration Object (IMGCFG Parameter) Table

----- HP PCL Datastream -----	
*IMGA01	PCL 300-dpi printer
*IMGA02	PCL 600-dpi printer
*IMGA03	PCL 1200-dpi printer
*IMGA04	PCL 300-dpi color printer
*IMGA05	PCL 600-dpi color printer
*IMGA06	PCL 1200-dpi color printer
*IMGA07	PCL 75-dpi printer (No compression)
*IMGA08	PCL 600-dpi color printer w/larger no-print border
*IMGA09	PCL 300-dpi printer (No compression)
----- Postscript Datastream -----	
*IMGB01	Postscript 300-dpi printer
*IMGB02	Postscript 600-dpi printer
*IMGB03	Postscript 1200-dpi printer
*IMGB04	Postscript 300-dpi color printer
*IMGB05	Postscript 600-dpi color printer
*IMGB06	Postscript 1200-dpi color printer
*IMGB07	Postscript 600x300-dpi color printer
*IMGB08	Postscript 1200x300-dpi color printer
*IMGB09	Postscript 360-dpi color printer
*IMGB10	Postscript 720-dpi color printer
*IMGB11	Postscript 1440x720-dpi color printer
*IMGB12	Postscript 400-dpi printer
*IMGB13	Postscript 800-dpi color printer
*IMGB14	Postscript 600-dpi color printer w/larger no-print border
*IMGB15	Postscript 300-dpi color printer w/larger no-print border
----- IPDS Datastream -----	
*IMGC01	IPDS 240-dpi printer
*IMGC02	IPDS 300-dpi printer
*IMGC03	IPDS 600-dpi printer
*IMGC04	IPDS 1200-dpi printer
*IMGC05	IPDS 240-dpi printer w/no-print border
*IMGC06	IPDS 300-dpi printer w/no-print border
*IMGC07	IPDS 600-dpi printer w/no-print border
*IMGC08	IPDS 1200-dpi printer w/no-print border
*IMGC09	IPDS 240-dpi printer (IM/1 image only)
*IMGC10	IPDS 240-dpi printer w/no-print border (IM/1 image only)
*IMGC11	IPDS 240-dpi printer (CCITT G4 compression)
----- PCL and Postscript Datastreams -----	
*IMGD01	PCL/Postscript 300-dpi printer
*IMGD02	PCL/Postscript 600-dpi printer
*IMGD03	PCL/Postscript 1200-dpi printer
*IMGD04	PCL/Postscript 300-dpi color printer
*IMGD05	PCL/Postscript 600-dpi color printer

*IMGD06	PCL/Postscript 1200-dpi color printer
*IMGD07	PCL 300-dpi/Postscript 600-dpi printer
*IMGD08	PCL 300-dpi/Postscript 1200-dpi printer
*IMGD09	PCL 600-dpi/Postscript 300-dpi printer
*IMGD10	PCL 600-dpi/Postscript 1200-dpi printer
*IMGD11	PCL/Postscript 600-dpi color printer w/larger no-print border

Table 6. Recommended Image Configuration Objects by Printer

Compaq Pagemarc 20	*IMGD01
Epson EPCL-4 Printer	*IMGA01
Epson EPCL-5 Printer	*IMGA02
Epson Stylus Photo w/Postscript	*IMGB10
Epson Stylus Color 600, 800 w/Postscript	*IMGB11
HP Color Laserjet 5	*IMGA04
HP Color Laserjet 5M	*IMGD04
HP Deskjet 560C, 820C, 1200C	*IMGA04
HP Deskjet 500, 600, 1200	*IMGA01
HP Deskjet 1600C, 1600CN	*IMGA04
HP Deskjet 1600CM	*IMGD04
HP Laserjet II, IID, IIP	*IMGA09
HP Laserjet II, IID, IIP w/Postscript	*IMGB01
HP Laserjet III, IIID, IIISi, 4L	*IMGA01
HP Laserjet III, IIID, IIISi, 4L w/Postscript	*IMGD01
HP Laserjet 4, 4P, 4V, 4Si, 4 Plus	*IMGA02
HP Laserjet 4M, 4MP, 4MV, 4Si MX, 4M Plus	*IMGD02
HP Laserjet 5, 5P, 5Si	*IMGA02
HP Laserjet 5M, 5MP, 5Si MX	*IMGD02
HP Laserjet 6, 6P, 6L	*IMGA02
HP Laserjet 6M, 6MP	*IMGD02
IBM 3112, 3116 Page Printer w/IPDS feature	*IMGD02
IBM 3112, 3116 Page Printer (ASCII/LAN)	*IMGA02
IBM 3112, 3116 Page Printer w/Postscript	*IMGD02
IBM 3130, 3160-1 AF Printer (240-pel mode)	*IMGC01
IBM 3130 AF Printer (300-pel mode)	*IMGC02
IBM InfoPrint 20 w/IPDS feature	*IMGC02
IBM InfoPrint 20 (ASCII)	*IMGA02
IBM InfoPrint 32 w/IPDS feature	*IMGC02
IBM InfoPrint 32 (ASCII)	*IMGA02
IBM InfoPrint 60	*IMGC03
IBM InfoPrint 62 Model 2	*IMGC05
IBM InfoPrint 62 Model 3	*IMGC06
IBM InfoColor 70	*IMGB05
IBM InfoPrint 4000	*IMGC05
IBM InfoPrint 4000 High Resolution	*IMGC06
IBM 3825, 3827, 3828 AF Printer	*IMGC09
IBM 3825, 3827, 3828 AF Printer (w/AFIG)	*IMGC01
IBM 3829 AF Printer	*IMGC01
IBM 3835-001 AF Printer	*IMGC10
IBM 3835-001 AF Printer (w/AFIG)	*IMGC05
IBM 3835-002, 3900 AF Printer	*IMGC05
IBM 3912, 3916 Page Printer (ASCII/LAN)	*IMGA01
IBM 3912, 3916 Page Printer w/IPDS feature (twinax)	*IMGC06

IBM 3930-02 Page Printer (IPDS diskette)	*IMGC01
IBM 3930-03 Page Printer	*IMGA01
IBM 3930-03 Page Printer w/Postscript	*IMGD01
IBM 3935 AF Printer	*IMGC02
IBM 4019 LaserPrinters (HP mode)	*IMGA09
IBM 4019 LaserPrinters w/Postscript	*IMGB01
IBM 4028 LaserPrinters	*IMGC06
IBM 4029 LaserPrinters	*IMGA01
IBM 4029 LaserPrinters w/Postscript	*IMGB02
IBM 4039 LaserPrinters	*IMGA01
IBM 4039 LaserPrinters w/Postscript	*IMGD07
IBM 4049 LaserPrinters	*IMGA02
IBM 4049 LaserPrinters w/Postscript	*IMGD02
IBM 4079 Color Jetprinter PS	*IMGB09
IBM 4303 Network Color Printer	*IMGB05
IBM 4312, 4317, 4324 NP w/IPDS feature (twinax)	*IMGC06
IBM 4312, 4317, 4324 NP w/IPDS feature (LAN)	*IMGC06
IBM 4312, 4317, 4324 NP (ASCII/LAN)	*IMGA02
IBM 4312, 4317, 4324 NP w/Postscript (ASCII/LAN)	*IMGD02
Lexmark 4039Plus	*IMGB02
Lexmark Optra C Color Printer	*IMGD11
Lexmark Optra E, E+	*IMGA02
Lexmark Optra N	*IMGD02
Lexmark Optra R+, Rx+, Lx+, Lxn+	*IMGD02
Lexmark Optra S Printers	*IMGD02
Lexmark Optra SC Color Printer	*IMGD05
Okidata OL400 LED Page Printer	*IMGA01
Okidata OL800, OL810 LED Page Printers	*IMGA02
QMS 2025, 3225	*IMGB12
QMS Magicolor CX	*IMGD04
Tektronix Phaser 140	*IMGB09
Tektronix Phaser 300	*IMGB04
Tektronix Phaser 400	*IMGB05
Tektronix Phaser 540, 550	*IMGB05
Tektronix Phaser 560	*IMGB06
Xerox 4219/MRP	*IMGA01
Xerox 4220/MRP	*IMGA02
Xerox 4230 DocuPrinter	*IMGA02
Xerox 4512, 4517 Network Printer	*IMGA02
Xerox 4520mp Printer	*IMGB13
Xerox 4700 II Color Document Printer	*IMGD04
Xerox 4915 Color Laser Printer	*IMGB08
Xerox 4920, 4925 Color Laser Printer	*IMGB05

Error messages for CRTDEVPRT

*ESCAPE Messages

CPDB12C

Remote location name &2 not in correct format.

CPF261A

Device description &1 not created due to errors.


CPF2631

Device type &2 not valid.

CRTDEVRTL (Create Device Description (Retail)) Command Description

CRTDEVRTL Command syntax diagram

Purpose

The Create Device Description (Retail) (CRTDEVRTL) command creates a device description for a retail device. More information about using this command is in the Communications Configuration  book.

Required Parameters

DEV Specifies the name of the device description being created.

LOCADR

Specifies the local location address. Specify a 2-character hexadecimal value ranging from 01 through FE.

RMTLOCNAME

Specifies the remote location name of the system with which this object communicates.

Optional Parameters**ONLINE**

Specifies whether this object is automatically varied on at initial program load (IPL).

***YES:** The device is automatically varied on at IPL.

***NO:** This device is not automatically varied on at IPL.

CTL Specifies the name of the controller description to which this object is attached.

PACING

Specify a value ranging from 0 through 7 to indicate the pacing count used when communicating with this device.

7: Character density is 16.7 characters per inch.

pacing-value: Specify a value ranging from 0 through 7 to indicate the pacing count used for this device.

MAXLENRU

Specifies the default maximum request unit (RU) length that can be sent or received by the local systems if the maximum size is not specified in the bind.

Note:

If the LOCADR parameter has a value of 01, then the only valid lengths for the maximum request unit is *CALC or 256 bytes.

***CALC:** The system determines the value to use.

maximum-length-request-unit: Specify either 247, 256, 503, 512, 1015, or 1024 bytes for the maximum length of incoming request units.

APPTYPE

Specifies the application type being used.

***OTHER**: This device is used to communicate with either the Host Command Processor (HCP) (if *LOCADDR* = 01) or an application on the controller.

***RCMS**: This device communicates with the remote change management server (RCMS).

***SBMRTLPGM**: This device is used with the SBMRTLPGM command to start a program on the retail controller using the Advanced Data Communication for Stores (ADCS) SUP (Start User Program) support. This value is meaningful only when the Retail Point-of-Sale Communications Facility Licensed Program is being used on the controller.

DEVCLS

Specifies the device class for this device.

***NONE**: This device description will not be using SNA Passthrough support.

***SNPT**: This device description is for a display station connected to an SNA pass-through advanced program-to-program communications (APPC) controller. SNA pass-through support allows the user to connect this display station with host logical unit (LU) types 0 through 3 applications.

INACTTMR

Specifies an inactivity timer (time-out) value. This parameter also specifies what happens when the time-out value is exceeded, dependent on other attributes of the device:

- For devices connected using SNA pass-through (SNPT) support, the user is informed by a message to QSYSOPR and the session is ended when the amount of time that the device is not bound to a host application exceeds the time-out value. The user must reestablish the connection and session.
- For all other attachments, valid values range from 1 through 30 minutes.

Note:

This timer is not used by devices allocated to a subsystem (normal interactive use) because the subsystem always has a file open for the device. The timer is used by batch jobs that open and close files for the device.

***NOMAX**: Maximum inactivity time is not tracked.

***SEC15**: A 15-second time-out period is used.

***SEC30**: A 30-second time-out period is used.

inactivity-timer: Specify a time-out value.

ACTTMR

Specifies, for switched lines, the amount of time (in seconds) that the SNA pass-through support waits for the device to respond to the activation request from the host iSeries 400. If the device does not respond within this time, it is considered not available.

170: Specifies the activate time of 170 seconds.

activation-timer: Specify a number ranging from 1 through 2550 indicating the number of seconds before the device is considered not available.

SNPTDEV

Specifies the name of the associated SNA pass-through device that is attached to a host or advanced program-to-program communications (APPC) controller.

***NONE:** No name is specified.

associated-device-name: Specify the name of a device that is attached to a host or an APPC controller that is associated with this device.

SNPTGRP

Specifies the name configured for a group of host devices in a configuration list. This indicates that this device is associated with any one of the devices in that group which is available.

***NONE:** No name is specified.

group-name: Specify the name configured for a group of host devices that must be associated with this device.

AUT

Specifies the authority given to users who do not have specific authority to the device description, who are not on an authorization list, and whose user group has no specific authority to the device description.

***LIBCRTAUT:** The authority for the object is the same as the create authority for QSYS. The create authority for QSYS can be displayed by using the Display Library Description (DSPLIBD) command. If the create authority is changed with the Change Library (CHGLIB) command, the new authority does not affect existing objects.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the device description.

***USE:** The user can perform basic operations on the device description, such as running a program or reading a file. The user cannot change the device description. *USE authority provides object operational authority, read authority, and execute authority.

***EXCLUDE:** The user cannot access the device description.

authorization-list-name: Specify the name of the authorization list used.

TEXT

Specifies the text that briefly describes the device file. More information on this parameter is in Commonly used parameters.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CRTDEVRTL

```
CRTDEVRTL DEVD(RTL1) LOCADR(05)
          RMTLOCNAME(DETROIT) CTL(CTL4)
```

This command creates a retail device description named RTL1. The location address of the retail device is X'05'. The remote-location name is Detroit, and the device is attached to the retail controller CTL4.

Error messages for CRTDEVRTL

*ESCAPE Messages


CPF261A

Device description &1 not created due to errors.

CRTDEVHOST (Create Device Description (SNA Host)) Command Description

CRTDEVHOST Command syntax diagram

Purpose

The Create Device Description (SNA Host) (CRTDEVHOST) command creates a device description for a Systems Network Architecture (SNA) host system device. More information about using this command is in the Communications Configuration  book.

Required Parameters

DEVD Specifies the name of the device description being created.

LOCADR

Specifies the local location address. Specify a 2-character hexadecimal value ranging from 01 through FF.

RMTLOCNAME

Specifies the remote location name of the system with which this object communicates.

Optional Parameters

ONLINE

Specifies whether this object is automatically varied on at initial program load (IPL).

***YES:** The device is automatically varied on at IPL.

***NO:** This device is not automatically varied on at IPL.

CTL Specifies the name of the controller description to which this object is attached.

APPTYPE

Specifies the application type being used.

***RJE:** This host device description is used by Remote Job Entry (RJE).

***EML:** This host device description is used by 3270 device emulation.

***PGM:** This host device description is used for program-to-program communications.

MAXLENRU

Specifies the default maximum request unit (RU) length that can be sent or received by the local systems if the maximum size is not specified in the bind.

***CALC:** The system determines the value to use.

maximum-length-request-unit: Specify, for SDLC devices, a value ranging from 256 through 4096 in 256-byte amounts to be used as the maximum length for incoming request units. Values 241, 245, 247, 497, 501 and 503 are valid only for X.25 devices.

ENDSSNHOST

Specifies how the host device ends a session with the host system.

***UNBIND:** The host device sends the SNA command requesting the iSeries 400 to end the session.

***RSHUTD:** The host device sends the SNA command requesting the host system to end the session.

EMLDEV

Specifies the type of 3270 device being emulated. This parameter is valid only if *EML was specified on the APPTYPE parameter when the device was created. The change requested by this

command becomes effective the next time either the Start 3270 Display Emulation (STREML3270) command or the Start Print Emulation (STRPRTEML) command accesses the device.

3278: This device description is used to emulate a 3278 display device.

3284: This device description is used to emulate a 3284 printer device.

3286: This device description is used to emulate a 3286 printer device.

3287: This device description is used to emulate a 3287 printer device.

3288: This device description is used to emulate a 3288 printer device.

3289: This device description is used to emulate a 3289 printer device.

EMLKBD

Specifies the type of 3278 display keyboard being emulated. A value can be specified for this parameter only if APPTYPE(*EML) is specified. The specified value is used if EMLDEV(3278) is specified.

***UPPER:** A 3270 display device keyboard is emulated with uppercase characters only.

***LOWER:** A 3270 display device keyboard is emulated with uppercase and lowercase characters.

EMLNUMLCK

Specifies whether numeric input fields allow only numeric data on a 5250 keyboard. The value can be specified for this parameter only if this is a 3270 device emulation application type (APPTYPE is *EML).

***NO:** 3270 emulation allows any data to be typed in the numeric input fields.

***YES:** 3270 emulation allows only numeric data to be typed in the numeric input fields. Numeric data that can be typed includes the characters 0 through 9 and the symbols + - , . and blank.

EMLWRKSTN

Specifies that this emulation device is associated with a real display or printer device and reserved for use exclusively by that work station. If no device or *ANY is specified, any work station can use the emulation device. A value can be specified for this parameter only if APPTYPE(*EML) is specified.

***ANY:** Any work station can use the emulation device.

emulation-work-station: Specify the device name for the work station that uses this emulation device.

DEPLOCNAME

Specifies the dependent local location name used for dependent LU requestor (DLUR), providing additional security for the connection. If this name is filled in, an activation request (SNA ACTLU) from a dependent LU server (DLUS) node must reference this name or it is rejected.

Remote DLUS nodes may optionally accept unsolicited reply PSIDs (Product Set IDs) from the iSeries 400 for auto-definition of LUs at the DLUS node. If so, then this name is sent to the DLUS node in the reply PSID and it is returned on the ACTLU request.

If unsolicited reply PSIDs are not supported by the DLUS node, then there will have to be close coordination of the PU name definitions on both systems.

***NONE:** No location name is defined.

dependent-location-name: Specify the dependent location name used for DLUR applications.

AUT

Specifies the authority given to users who do not have specific authority to the device description, who are not on an authorization list, and whose user group has no specific authority to the device description.

***LIBCRTAUT:** The authority for the object is the same as the create authority for QSYS. The create authority for QSYS can be displayed by using the Display Library Description (DSPLIBD) command. If the create authority is changed with the Change Library (CHGLIB) command, the new authority does not affect existing objects.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the device description.

***USE:** The user can perform basic operations on the device description, such as running a program or reading a file. The user cannot change the device description. *USE authority provides object operational authority, read authority, and execute authority.

***EXCLUDE:** The user cannot access the device description.

authorization-list-name: Specify the name of the authorization list used.

TEXT Specifies the text that briefly describes the device file. More information on this parameter is in Commonly used parameters.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CRTDEVHOST

```
CRTDEVHOST  DEVD(COMMDSP1)  LOCADR(FE)
             RMTLOCNAME(SYS)  CTL(HOSTCTL001)
             APPTYPE(*EML)    EMLDEV(3284)
```

This command creates a device description for an SNA host communications device named COMMDSP1. The address of the device is X'FE'. It is attached to the controller HOSTCTL001 and communicates with SYS. This device uses 3270 emulation to emulate a 3284 printer.

Error messages for CRTDEVHOST

*ESCAPE Messages

CPF261A

Device description &1 not created due to errors.

CRTDEVSNTPT (Create Device Description (SNA Pass-Through)) Command Description

CRTDEVSNTPT Command syntax diagram

Purpose

The Create Device Description (SNA Pass-Through) (CRTDEVSNTPT) command creates a device description for an SNA pass-through device.

Required Parameters

DEVD Specifies the name of the device description being created.

LOCADR

Specifies the local location address for this SNA pass-through device. Specify two hexadecimal characters with values ranging from 01 through FF.

SNPTCLS

Specifies whether this device is attached to a SNA pass-through host controller or to a SNA pass-through downstream (APPC) controller.

***UP:** Specifies the device to be attached to a SNA pass-through host controller.

***DOWN:** Specifies the device to be attached to a SNA pass-through downstream (APPC) controller.

Optional Parameters

ONLINE

Specifies whether this object is automatically varied on at initial program load (IPL).

***YES:** The device is automatically varied on at IPL.

***NO:** This device is not automatically varied on at IPL.

CTL Specifies the name of the controller description to which this object is attached.

ACTTMR

Specifies, for switched lines, the amount of time (in seconds) that the SNA pass-through support waits for the device to respond to the activation request from the host iSeries 400. If the device does not respond within this time, it is considered not available.

170: Specifies the activate time of 170 seconds.

activation-timer: Specify a number ranging from 1 through 2550 indicating the number of seconds before the device is considered not available.

SNPTDEV

Specifies the name of the associated SNA pass-through device that is attached to a host or advanced program-to-program communications (APPC) controller.

***NONE:** No name is specified.

associated-device-name: Specify the name of a device that is attached to a host or an APPC controller that is associated with this device.

SNPTGRP

Specifies the name configured for a group of host devices in a configuration list. This indicates that this device is associated with any one of the devices in that group which is available.

***NONE:** No name is specified.

group-name: Specify the name configured for a group of host devices that must be associated with this device.

AUT

Specifies the authority given to users who do not have specific authority to the device description, who are not on an authorization list, and whose user group has no specific authority to the device description.

***LIBCRTAUT:** The authority for the object is the same as the create authority for QSYS. The create authority for QSYS can be displayed by using the Display Library Description (DSPLIBD) command. If the create authority is changed with the Change Library (CHGLIB) command, the new authority does not affect existing objects.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***ALL:** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the device description.

***USE:** The user can perform basic operations on the device description, such as running a program or reading a file. The user cannot change the device description. *USE authority provides object operational authority, read authority, and execute authority.

***EXCLUDE:** The user cannot access the device description.

authorization-list-name: Specify the name of an existing authorization list. Users included in the authorization list are granted authority as specified by the list.

DEPLOCNAME

Specifies the dependent local location name used for dependent LU requestor (DLUR), providing additional security for the connection. If this name is filled in, an activation request (SNA ACTLU) from a dependent LU server (DLUS) node must reference this name or it is rejected.

Remote DLUS nodes may optionally accept unsolicited reply PSIDs (Product Set IDs) from the iSeries 400 for auto-definition of LUs at the DLUS node. If so, then this name is sent to the DLUS node in the reply PSID and it is returned on the ACTLU request.

If unsolicited reply PSIDs are not supported by the DLUS node, then there will have to be close coordination of the PU name definitions on both systems.

***NONE:** No location name is defined.

dependent-location-name: Specify the dependent location name used for DLUR applications.

TEXT Specifies the text that briefly describes the device file. More information on this parameter is in Commonly used parameters.

***NONE:** No text is specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CRTDEVSNPT

```
CRTDEVSNPT  DEVD(SNPTDEV1)  LOCADR(05)  SNPTCLS(*UP)
             CTL(MYCTL)     SNPTDEV(DOWNDEV1)
```

This command creates a SNA pass-through device description named SNPTDEV1. The location address of the device is X'05'. The device is attached to controller MYCTL. The SNA pass-through class is *UP and the device name associated with this device is DOWNDEV1.

Error messages for CRTDEVSNPT

*ESCAPE Messages

CPF261A

Device description &1 not created due to errors.


CPF2654

Device description &1 created but possibly not usable.

CRTDEVSNUF (Create Device Description (SNUF)) Command Description

CRTDEVSNUF Command syntax diagram

Purpose

The Create Device Description (SNUF) (CRTDEVSNUF) command creates a device description for a Systems Network Architecture Upline Facility (SNUF) device. More information about using this command is in the Communications Configuration  book.

Required Parameters

DEV D Specifies the name of the device description being created.

LOCADR

Specifies the local location address. Specify a 2-character hexadecimal value ranging from 01 through FE.

RMTLOCNAME

Specifies the remote location name of the system with which this object communicates.

Optional Parameters

ONLINE

Specifies whether this object is automatically varied on at initial program load (IPL).

***YES:** The device is automatically varied on at IPL.

***NO:** This device is not automatically varied on at IPL.

CTL Specifies the name of the controller description to which this object is attached.

PGMSTRRQS

Specifies whether this device is reserved for host system call through a Program Start Request.

***NO:** This device is not reserved for a start program request.

***YES:** This device is reserved for a start program request.

SPCHOSTAPP

Specifies whether SNUF customizes support for special host applications outside the Customer Information Control System for Virtual Storage (CICS/VS) or Information Management System for Virtual Storage (IMS/VS) application layer.

***NONE:** SNUF does not customize support for special host applications.

***FLASH:** SNUF customizes support for the Federal Link Access for Secondary Half-sessions (*FLASH) protocol application.

APPID

Specifies the Virtual Telecommunications Access Method (VTAM) Application Identifier sent with the sign-on message.

HOST Specifies the type of host system with which the device communicates.

***CICS:** The host system type is CICS/VS.

***IMS:** The host system type is IMS/VS.

***IMSRTR:** Information Management System Ready to Receive (IMSRTR) is the type of the host system.

***ADCS:** Advanced Data Communication for Stores (ADCS) is the type of host system.

RCDLEN

Specifies the maximum record length allowed when communicating with this device. The maximum value for this parameter is 32767. The value must not exceed the block length value for this device.

512: The record length is 512.

record-length: Specify the maximum record length (in bytes) to use with this device file. The value must be at least the size of the largest record sent. If a record is longer than the specified record length, a run time error occurs when the record is sent or received. Valid values range from 1 through 32767 bytes for SNUF communications. For BSCEL communications, the maximum record length is 8192 bytes.

BLKLEN

Specifies the maximum block length allowed when communicating with this device. The maximum value for this parameter is 32767. This value must be greater than or equal to the record length.

512: The block length is 512.

block-length: Specify the maximum block length (in bytes) of records sent. The value must be at least the size of the largest record sent. Valid values range from 1 through 32767.

DFTPGM

Specifies the qualified name of the program called if a program start request is received from the host system not using *EXEC/*EXEX/*TXTC/*TXTX format. This parameter is required if the value specified for the program start request parameter is *YES.

The name of the program name can be qualified by one of the following library values:

***LIBL**: All libraries in the job's library list are searched until the first match is found.

***CURLIB**: The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

program-name: Specify the name of the default program.

AUT

Specifies the authority given to users who do not have specific authority to the device description, who are not on an authorization list, and whose user group has no specific authority to the device description.

***LIBCRTAUT**: The authority for the object is the same as the create authority for QSYS. The create authority for QSYS can be displayed by using the Display Library Description (DSPLIBD) command. If the create authority is changed with the Change Library (CHGLIB) command, the new authority does not affect existing objects.

***CHANGE**: The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***ALL**: The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the device description.

***USE**: The user can perform basic operations on the device description, such as running a program or reading a file. The user cannot change the device description. *USE authority provides object operational authority, read authority, and execute authority.

***EXCLUDE**: The user cannot access the device description.

authorization-list-name: Specify the name of the authorization list used.

DEPLOCNAME

Specifies the dependent local location name used for dependent LU requestor (DLUR), providing additional security for the connection. If this name is filled in, an activation request (SNA ACTLU) from a dependent LU server (DLUS) node must reference this name or it is rejected.

Remote DLUS nodes may optionally accept unsolicited reply PSIDs (Product Set IDs) from the iSeries 400 for auto-definition of LUs at the DLUS node. If so, then this name is sent to the DLUS node in the reply PSID and it is returned on the ACTLU request.

If unsolicited reply PSIDs are not supported by the DLUS node, then there will have to be close coordination of the PU name definitions on both systems.

***NONE:** No location name is defined.

dependent-location-name: Specify the dependent location name used for DLUR applications.

HCPEML

Specifies the Host Command Processor (HCP) emulation to be done by the iSeries 400 Retail Licensed Program in support of the Advanced Data Communications for Stores (*ADCS) value on the HOST parameter. HCPEML can only be specified when *ADCS is the value for the HOST parameter.

4680: The host is running ADCS and uses this Device Description for a 4680 HCP emulated session.

3651: The host is running ADCS and uses this Device Description for a 3651 HCP emulated session.

3684: The host is running ADCS and uses this Device Description for a 3684 HCP emulated session.

4684: The host is running ADCS and uses this Device Description for a 4684 HCP emulated session.

***STRUSRPGM:** The host is running ADCS and uses this Device Description for the Start User Program (SUP) emulated session.

TEXT Specifies the text that briefly describes the device file. More information on this parameter is in Commonly used parameters.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CRTDEVSNUF

```
CRTDEVSNUF  DEVD(SNUFDEV02)  LOCADR(FE)
             RMTLOCNAME(DETROIT)  CTL(SNUFCTL01)
             PGMSTRRQS(*YES)  DFTPGM(PAYROLL)
```

This command creates a device description for a SNUF communications device named SNUFDEV02. The device is attached to the communications controller SNUFCTL01 in Detroit, and is at location address X'FE'. The device will be program start request-capable and the default program is PAYROLL.

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