



@server

iSeries

CL Commands Volume 5





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Command Descriptions

CHGOBJAUD (Change Object Auditing) Command Description

CHGOBJAUD Command syntax diagram

Purpose

The Change Object Auditing (CHGOBJAUD) command allows users with *AUDIT special authority to set up or change auditing on an object. Users with *AUDIT special authority can turn auditing on or off for an object regardless of whether they have authority to the object. The system value QAUDCTL controls turning auditing on and off. The auditing attribute of an object can be displayed with the Display Object Description (DSPOBJD) command.

Required Parameters

OBJ Specifies the name of the object for which auditing values are being changed.

The name of the 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.

***USRLIBL:** Only the libraries in the user portion of the job's library list are searched.

***ALL:** >> All libraries in the auxiliary storage pools (ASPs) specified by the ASPDEV parameter are searched. <<

***ALLUSR:** >> All user libraries in the ASPs specified by the ASPDEV parameter are searched. << All libraries with names that do not begin with the letter Q are searched except for the following:

#CGULIB
#COBLIB
#DFULIB
#DSULIB

#RPLIB
#SDALIB
#SEULIB

Although the following Qxxx libraries are provided by IBM, they typically contain user data that changes frequently. Therefore, these libraries are also considered user libraries and are also searched:

QDSNX	QS36F	QUSROND
QGPL	QUSER38	QUSRPOSGS
QGPL38	QUSRADSM	QUSRPOSSA
QMPGDATA	QUSRBRM	QUSRPYMSVR
QMOMDATA	QUSRDIRCL	QUSRRDARS
QMOMPROC	QUSRDIRDB	QUSRSYS
QPFRDATA	QUSRIJS	QUSRVI
QRCL	QUSRINFSKR	QUSRVxRxMx
» QRCLnnnnn «	QUSRNOTES	

Notes:

1. » “nnnnn” is the number of a primary auxiliary storage pool. «
2. A different library name, of the form QUSRVxRxMx, can be created by the user for each release that IBM supports. VxRxMx is the version, release, and modification level of the library.

» ***ALLAVL:** All libraries in all available ASPs are searched.

***ALLUSRAVL:** All user libraries in all available ASPs are searched. Refer to ***ALLUSR** for a definition of user libraries. «

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

***ALL:** All objects that have the specified object type are changed.

object-name: Specify the name of the object for which auditing values are changed.

generic-object-name:* Specify the generic name of the object. 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. If the complete object name is specified, and multiple libraries are searched, multiple objects can be changed only if ***ALL**, ***ALLUSR**, » ***ALLAVL**, or ***ALLUSRAVL** « library values can be specified for the name. For more information on the use of generic names, refer to generic names.

OBJTYPE

Specifies the type of the object being changed. More information on this parameter is in Commonly used parameters.

***ALL:** All object types that have the specified object name are changed.

object-type: Specify the type of the object for which auditing values are changed.

OBJAUD

Specifies the object auditing value for this object.

***NONE:** Using or changing this object will not cause an audit entry to be sent to the security journal.

***USRPRF:** The user profile of the user accessing this object is used to determine if an audit record will be sent for this access. The OBJAUD keyword of the CHGUSRAUD command is used to turn on auditing for a specific user.

***CHANGE:** All change accesses to this object by all users are logged.

***ALL**: All change or read accesses to this object by all users are logged.

» Optional Parameter

ASPDEV

Specifies the auxiliary storage pool (ASP) device name where the library that contains the object (OBJ parameter) is located. If the object's library resides in an ASP that is not part of the library name space associated with the job, this parameter must be specified to ensure the correct object is used as the target of the change object auditing operation.

*: The ASPs that are currently part of the job's library name space will be searched to locate the object. This includes the system ASP (ASP number 1), all defined basic user ASPs (ASP numbers 2-32), and, if the job has an ASP group, all independent ASPs in the ASP group.

***SYSBAS**: The system ASP and all basic user ASPs will be searched to locate the object. No independent ASPs will be searched, even if the job has an ASP group.

auxiliary-storage-pool-device-name: The device name of the independent ASP to be searched to locate the object. The independent ASP must have been activated (by varying on the ASP device) and have a status of 'Available'. The system ASP and basic user ASPs will not be searched.◀◀

Example for CHGOBJAUD

```
CHGOBJAUD OBJ(PAYROLL/PAYFILE) OBJTYPE(*FILE)
          OBJAUD(*CHANGE)
```

This command changes the object auditing value of the PAYFILE object in the PAYROLL library that has an object type *FILE. The auditing value of the PAYFILE file is changed so that changes to the file by any user is logged to the auditing journal QAUDJRN in QSYS.

Error messages for CHGOBJAUD

*ESCAPE Messages

CPF22B0

Not authorized to change the auditing value.

CPF22CB

Auditing value not changed for some objects.

CPF22FE

Audit value may not have been changed for object &1 in &3 type *&2.

» CPF2208

Object &1 in library &3 type *&2 not found

CPF98A1

Cannot find object to match specified name.

CPF980B

Object &1 in library &2 not available.

CPF9801

Object &2 in library &3 not found.

CPF9803

Cannot allocate object &2 in library &3.

CPF9810

Library &1 not found.

CPF9814

Device &1 not found.

CPF9873

ASP status is preventing access to object.⏪



CHGOBJCRQA (Change Object Change Request Activity) Command Description

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

CHGOBJCRQA Command syntax diagram

Purpose

The Change Object Change Request Activity (CHGOBJCRQA) command changes an object distribution activity in a change request description. The object referred to in the activity can be an OS/400 object identified by an OS/400 object name or a global name, or a non-OS/400 object such as a PS/2 file which is identified by a global name.

The activity can be conditioned so that it only runs after one or more other activities have completed (successfully or unsuccessfully). The activity can also be scheduled to run at a date and time in the future.

Restrictions:

1. You must have *CHANGE authority to the change request description and *EXECUTE to the library.
2. An object can be specified using an OS/400 object name or a global name but not both.
3. The global name can be a maximum of 65-*n* characters in length, where *n* is the number of tokens. A maximum of 10 tokens can be specified.
4. Only OS/400 program objects or file members such as CL and REXX can be run.
5. The object to be distributed cannot reside in the QTEMP library.
6. If a node list (NODL) value is specified, the node list can only contain entries that have a value of *SNA for the address type.

Notes:

The following notes provide information on how the command works.

1. When you add the activity, you do not need to be authorized to any objects that are to be manipulated. When you submit a change request, you must be authorized to any objects that are manipulated.
2. The save and restore history for the object is not updated when it is sent or retrieved.
3. Active message queues are not saved when libraries (*LIB) are sent or retrieved.
4. All conditions must be satisfied before the activity can be run.
5. The start times indicate when the activity can be started. Actual start times can be later due to network delays and system delays.
6. If a global name is to be used, the Add Distribution Catalog Entry (ADDDSTCLGE) command can be used to indicate where the object is located or is to be stored.
7. Authorization to the object specified on the activity is not verified until the activity runs.

Required Parameters

CRQD Specifies the change request description object name.

The possible library values are the following:

***LIBL:** All of the libraries in the user and in the system portions of the job's library list are searched.

***CURLIB:** The current library for the job used to locate the object.

library-name: Specify that only the library named in this parameter is searched.

change-request-description: Specify the name of the change request description object.

ACTIVITY

Specifies the name of the activity to change in the change request description.

***LAST:** The activity is the last to run in the change request. When *LAST is specified for the activity (ACTIVITY) parameter, the condition (COND) parameter and the start time (STRTIME) parameter cannot be specified. Only one activity named *LAST can exist in the change request description.

activity-name: Specify a 10-character activity name.

ACTION

Specifies the object distribution functions to be performed.

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

***SND:** Sends the specified object to the specified managed system or systems.

***RTV:** Retrieves the specified object from the specified managed system or systems. To retrieve an object from more than one system, a global name with an *ANY token is required so that each retrieved object has a unique global name. Global names with unspecified tokens (*ALL, *HIGHEST, or *LOWEST) are stored in the distribution repository when they are retrieved.

***DLT:** Deletes the specified object on the specified system or systems.

***RUN:** Runs the specified program on the specified system or systems. OS/400 program objects (*PGM), REXX programs, or file members, containing a CL input stream or a REXX procedure, can be run on iSeries managed systems.

***SNDRUN:** Sends the specified program and runs it on the specified system or systems. The program that is sent deletes on completion.

***INS:** Sends the specified program and runs it on the specified managed system or systems. Only installable objects can be installed.

***SNDINS:** Sends the objects, previously packaged for installation, on the specified managed system or systems, and installs them. Only objects identified by global names can be installed.

***UNINS:** Removes the objects installed on the specified managed system or systems. Only objects identified by global names can be deleted.

OBJ Specifies the name of the object that is run, sent, retrieved, or deleted. For send and retrieve actions, the object name represents the name of the object on both the central site system and the managed systems.

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

***GLOBAL:** The object is identified by the global name specified on the GLBNAME parameter.

***COMPNAME:** The object is identified by the component name specified on the COMPNAME parameter.

The possible library values are one of the following:

***LIBL:** All of the libraries in the user and in the system portions of the job's library list are searched.

***CURLIB:** The current library for the job is used to locate the object.

library-name: Specify that only the library named in this parameter is searched.

object name: Specify the object name. Only characters A through Z and 0 through 9 can be used in the object names.

Optional Parameters

GLBNAME

Specifies a global name, which is a series of tokens that uniquely identify an object in an SNA network. The global name represents the name that is used to locate the appropriate catalog entry on both the central site system and the managed systems. The catalog entry specifies the object that is used on that system. For example, if a retrieve action is specified, the global name is used to determine the object that is retrieved on the managed system. Also, the global name shows the location where it is to be stored on the central site system.

Special values in a token position indicate how to search for the object. By specifying *ANY in a token position, the token is ignored when searching for the correct object. If multiple objects are found matching the tokens specified, an error is returned.

If an object is sent, the global name must have been previously cataloged so that it is associated with a local object name or loaded into the distribution repository. Retrieved objects for which no catalog entry exists are placed in the distribution repository. The GLBNAME parameter is ignored if the object name is not *GLOBAL.

GLBNAME is not valid when ACTION(*UNINS) is specified. When the OBJ is *GLOBAL and the global name maps to an installable object, the global name must have the following structure:

```
ComponentName REF RefreshLevel
```

In the previous example:

- Component name are the tokens before the token with the REF value. It is used to distinguish objects from an installable object from those from another. The component can be between 1 and 7 tokens.
- The REF token is required to identify the global name as an installable object, and can only be specified from the second to the eighth token in the global name.
- The refresh level is a token with a numeric value. The refresh level shows the level of the installable object and must follow the token with the REF value.

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

Element 1: Token 1

***NETID:** The first global name token value is a network ID generated by the command from the network attributes. The network ID is determined by the current value of the LCLNETID network attribute value.

global-name-token: Specify the first token of the global name. The first token is recommended to be the registered enterprise ID or network ID.

Element 2-10: Token 2-10

***ANY**: Any token value matches when searching for the object where the action is performed. This is useful when retrieving objects for which some of the tokens in the global name are not known or vary between systems.

***HIGHEST**: The object with the highest token value has the action performed on it. The token must be ordered. This is useful when a token in a global name is used to indicate a different version of the object and you need to manipulate the object with the highest version level.

***LOWEST**: The object with the lowest token value has the action performed on it. The token must be ordered. This is useful when a token in a global name is used to indicate a different version of the object and you need to manipulate the object with the lowest version level.

***NETID**: The network ID of this system is used. The network ID is determined by the current value of the LCLNETID network attribute value.

***CPNAME**: The control point name of this system is used. The control point is determined by the current value of the LCLCPNAME network attribute value.

***SERVER**: This token is stored within the change request activity with the value &SERVER, and is replaced by the short name of the change control server when the object is distributed.

***TARGET**: This token is stored within the change request activity with the value &TARGET, and is replaced by the short name of the target when the object is distributed.

***MDDATE**: This token is stored within the change request activity with the value &DATE, and is replaced when distributed by the date that the object was last changed.

***MDTIME**: This token is stored within the change request activity with the value &TIME, and is replaced when distributed by the time that the object was last changed.

global-name-token: Specify one of a series of 1 to 16 character tokens that uniquely identify the object on which the action is to be performed. Characters A through Z and 0 through 9 can be used. Other special values (@, #, and \$) can be used for tokens that represent network IDs and system names.

OBJTYPE

Specifies the object type. It is ignored if a global name is used.

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

***FILEDATA**: A file member should be transferred without the file attributes. This is used to move files between an iSeries server and a non-iSeries server. The *FILE object type can be used with a iSeries server to preserve the file attributes.

object-type: Specify the OS/400 object type.

MBR Specifies the physical file member name. This cannot be specified unless the object type is *FILE or *FILEDATA.

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

***ALL:** The action should be performed on all members within the physical file. The object type must be *FILE. *ALL must be used for file types that do not have members such as device files. *ALL is not allowed when the action is *SNDRUN or *RUN, or *FIRST and *LAST for the *RUN action.

***FIRST:** The action should be performed on the first member (by date added) in the physical file. The member name is determined when the activity is run.

***LAST:** The action should be performed on the last member (by date added) in the physical file. The member name is determined when the activity is run.

member-name: Specify the member name on which the action should be performed.

DATATYPE

Specifies the data type of the member. It is used to specify the type of source file that is run on the managed system. This parameter is ignored when a file is not being sent or run.

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

***UNSPEC:** Unspecified file member type. If the data type cannot be determined at the managed system, or if the name of the file where this member resides is QCLSRC, then the file member is treated as a CL batch input stream. If the source file is named QREXSRC, the file member is treated as a REXX procedure.

***CL:** The file member contains control language, in other words, an OS/400 CL batch input stream.

***REXX:** The file member contains a REXX procedure.

COMPNAME

A component name, which is the set of tokens of a global name previous to the REF token. It is the object on which the *UNINS action acts on. COMPNAME is only valid when ACTION(*UNINS) and OBJ(*COMPNAME) are specified.

The possible single value:

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

Element 1: Token 1

***NETID:** The network ID of this system is used. The network ID is determined by the current value of the LCLNETID network attribute value.

component-name-token: One of a series of 1 to 16 character tokens that uniquely identifies the object on which the action is to be performed. Characters A through Z and 0 through 9 can be used. Other special values (@, #, and \$) can be used for tokens that represent network IDs and system names.

Elements 2-7: Tokens 2-7

***NETID:** The network ID of this system is used. The network ID is determined by the current value of the LCLNETID network attribute value.

***CPNAME:** The control point name of this system is used. The network ID is determined by the current value of the LCLCPNAME network attribute value.

component-name-token: One of a series of 1 to 16 character tokens that uniquely identifies the object on which the action is to be performed. Characters A through Z and 0 through 9 can be used. Other special values (@, #, and \$) can be used for tokens that represent network IDs and system names.

REFLVL

The refresh level is the level of the installable object that will be uninstalled. REFLVL is only valid when ACTION(*UNINS) and OBJ(*COMPNAME) are specified.

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

***ALL:** All the installable objects with different levels will be uninstalled.

refresh-level: Specify the level of the installable object to be uninstalled. The level is a numeric value up to 16 characters.

NODL Specifies that the node list parameter is the object name that contains a list of systems that are the destinations for the activity. This parameter cannot be specified if the control point name (CPNAME) parameter is also specified.

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

***NONE:** The systems on which this activity is to be performed are not specified by a node list. Individual control point names must be specified.

The possible library values are one of the following:

***LIBL:** All of the libraries in the user and system portions of the job's library list are searched for the node list object.

***CURLIB:** The current library for the job is used to locate the node list object.

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

node-list-name: Specify the node list object name containing the list of systems on which the activity is to be performed.

CPNAME

Specifies the APPN control point names of the managed systems on which this activity is to be performed. Control point names cannot be specified if the node list (NODL) parameter is specified.

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

***NONE:** The systems on which this activity is performed are not identified individually. A node list must be specified.

***NETATR:** The network ID of the local system is used. This is useful when the node being specified is in the same network as the local system.

network-identifier: Specify the APPN network identifier of the managed system on which the activity is to be performed.

control-point-name: Specify the APPN control point name of the managed system on which the activity is to be performed. For NetView Distribution Management Agents, the control point name is the change control client which supports numeric characters (0-9) in the first position of control point names that are valid in other platforms.

TGTRLS

Specifies the release of the operating system on which you intend to use the object. This parameter is ignored for objects with global names that are in the distribution repository or for actions other than send or retrieve.

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

***CURRENT:** The object is used on the release of the operating system currently running on your system. If V5R2M0 is running on your system, *CURRENT means that you intend to use the object on a system with V5R2M0 installed. The object can also be used on a system with any later release of the operating system.

***PRV:** The object is intended for a system that is at the previous release level compared to the local system.

Note: Modification levels are not supported.

release-level: Specify the release level in the VxRxMx format. The object is used on a system with the specified release or with any later release of the operating system installed.

Valid values depend on the current version, release, and modification level and they change with each new release.

REPLACE

Specifies whether the object should be replaced if it already exists. This parameter is ignored for actions other than for send, send and run, or retrieve.

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

***NO:** An error is returned if the object already exists.

***YES:** The object is replaced if it already exists.

DTACPR

Specifies that data be compressed when sending or retrieving. This parameter is ignored for actions other than for *SND, *SNDRUN, and *RTV of *FILEDATA object types. SNA compression with a prime compression character of blank is performed.

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

***NONE:** The file data is not compressed when sent or when retrieved.

***SNA:** The file data is compressed when sent or when retrieved.

Objects that are globally named can have compression information specified when they were added to the distribution catalog (ADDDSTCLGE) command.

KEEPCLGE

Specifies if the catalog entry and associated save file corresponding to the installable object will be kept in the specified system or systems. The KEEPCLGE parameter is only valid when ACTION(*SNDINS) or ACTION(*INS) is specified.

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

***NO:** The catalog entry and associated save file are not kept.

***YES:** The catalog entry and associated save file are kept.

PARAM Specifies parameters to be passed when starting the program. This is ignored if the action is not *RUN or *SNDRUN. Up to 20 parameters can be specified.

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

***NONE:** There is no special value.

parameter: Specify a 1 to 253 character parameter. The prompt panel initially allows 50 characters to be entered. By entering an ampersand (&) in position 1, the field expands for larger parameters.

COND Specifies which conditions must be met before this activity can be performed. Each condition identifies an activity that must run before this activity and the value the end code from that activity must have to allow this activity to run. The default condition is that the previous activity (in alphabetical order) must complete successfully before this activity can be run.

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

***NONE:** There are no conditions for this activity.

Element 1: Conditioning Activity

The activity that must be run before this activity.

***PRV:** This activity is conditioned on the previous activity. Activities are ordered alphabetically by activity name. If the activity being added is the first activity, a previous activity does not exist and any condition with *PRV is marked as having been met.

conditioning-activity-name: Specify the name of the activity that must be run before this activity. The activity name specified in the activity (ACTIVITY) parameter cannot be specified in the conditioning activity name. An activity cannot be conditioned on itself.

generic-conditioning-activity-name:* Specify the generic name of the activities that must run before this activity.

Element 2: Relational Operator

This element is the relational operator to use when comparing the end code from an activity.

***EQ** Equal

***GT:** Greater than

***LT:** Less than

***NE:** Not equal

***GE:** Greater than or equal

***LE:** Less than or equal

Element 3: Condition Code

The element is the value compared to the actual end code of the conditioning activity.

***SUCCESS:** The activity ended successfully (0 <= end code <= 9). This end code can only be specified with relational operator *EQ or *NE.

***FAIL:** The activity failed (10 <= end code <= 89). This end code can only be specified with relational operator *EQ or *NE.

***NOTRUN:** The activity never started (90 <= end code <= 99). This end code is only specified with relational operator *EQ or *NE.

***ANY:** The activity ended with any end code. This end code is only specified with relational operator *EQ.

end-code: Specify an integer value (0-99) that indicates the result of an activity (success or failure). The end code ranges and descriptions are:

- 00** Activity completed successfully.
- 01-09** Activity completed with warning messages.
- 10-29** Activity did not complete successfully.
- 30-39** Activity was canceled by a user before it completed.
 - 30 = Activity ended with *CNTRLD option
 - 35 = Activity ended with *IMMED option
 - 39 = Activity ended with *FRCFAIL option
- 40-49** Activity was not run due to errors detected by the application.
 - 40 = Activity not run for security reasons
- 90-99** Activity was not run because conditions or schedules were not met.
 - 95 = Scheduled start time expired
 - 99 = Conditions cannot be met

Element 4: Condition Mode

This element indicates which systems the conditioning activity must have completed on before this activity can be performed.

***ALLNODES:** The conditioning activity specified must complete on all nodes before this activity runs.

***SAMENODE:** When the conditioning activity specified completes for a given node, the activity specified on the ACTIVITY parameter can run for that same node even though the conditioning activity specified cannot have completed for all other nodes. In the case where this activity can run for that node, the condition is ignored.

STRTIME

Specifies the date and the time when this activity can be started on the central site system. The current date and time values and the next date values are determined when the change request is submitted.

Element 1: Start After Time

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

***CURRENT:** This activity can start on or after the time when the change request is submitted.

start-after-time: Specify the time when this activity can start. The time can be entered as 4 or 6 digits (hhmm or hhmmss) where hh = hours, mm = minutes, and ss = seconds. Seconds are optional. The time can be specified with or without a time separator such as a colon (:). With a time separator, specify a string of 5 or 8 digits (hh:mm or hh:mm:ss).

Element 2: Start After Date

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

***CURRENT:** This activity can start on or after the date on which the change request is submitted.

***NEXT:** The activity can start on any date after the date the change request is submitted.

start-after-date: Specify the date after this activity can start. The date must be specified in the job date format.

Element 3: Start Before Time

This element is ignored if the start before date is *ANY.

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

***ANY:** The activity can start at any time on or before the start before date.

***CURRENT:** The activity must start before the time at which the change request was submitted on the date specified on the start before data element. This value cannot be specified if the start before date is *CURRENT.

start-before-time: Specify the time before which the activity must start. If the activity cannot be started before this time, it never starts. The time can be entered as 4 or 6 digits (hhmm or hhmmss) where hh = hours, mm = minutes, and ss = seconds. Seconds are optional. The time can be specified with or without a time separator such as a colon (:). With a time separator, specify a string of 5 or 8 digits (hh:mm or hh:mm:ss).

Element 4: Start Before Date

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

***ANY:** The activity can start at any time after the start after time and the start after date.

***CURRENT:** The activity must start on the date the change request is submitted.

***NEXT:** The activity must start by the day after the date the change request is submitted.

start-before-date: Specify the date before the activity must start. If the activity cannot be started by this date, it never starts. The date must be specified in the job date format.

RMTSTRTIME

Specifies the date and time when the activity can begin running on the managed system. The current date and time values and the next date values are determined when the activity begins running at the central site systems based on the central site date and time.

Element 1: Time Zone

The time zone of the remote start time.

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

***LCLSYS:** The remote start time is specified in the time zone of the central site system.

***MGDSYS:** The remote start time is specified in the time zone of the managed system.

Element 2: Start After Time

This is the definition of the time after which the activity is to start.

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

***CURRENT:** This function can start on the managed system at any time on or after the time this activity is started on the central site system on the date specified in element 3.

start-after-time: Specify the time when this function can start on the managed system. The time can be entered as 4 or 6 digits (hhmm or hhmmss) where hh = hours, mm = minutes, and ss = seconds. Seconds are optional. The time can be specified with or without a time separator. With a time separator, specify a string of 5 or 8 digits (hh:mm or hh:mm:ss).

Element 3: Start After Date

This is the start after date.

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

***CURRENT:** This function starts on the managed system on any date on or after the activity starts on the central site system.

***NEXT:** This function starts on the managed system on any date after the activity starts on the central site system.

start-after-date: Specify the date after the functions start on the managed system. The date must be specified in the job date format.

Notes:

1. The special values *CURRENT and *NEXT cannot be specified for the date and the time when the time zone value *MGDSYS is specified.
2. This parameter can only be specified when *RUN, *SNDRUN, *INS, *SNDINS, and *UNINS actions are specified.

TEXT Specifies the activity description.

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

***GEN:** A description is generated based on the action selected.

text-description: Specify a 50-character description of the activity.

HOLD Specifies that the activity be held when the change request is submitted.

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

***NO:** The activity is not held. It runs when all conditions and the start time are met.

***YES:** The activity is held for all nodes when the change request is submitted. It must be released by you before it runs.

Examples for CHGOBJCRQA

Example 1: Retrieving a Job Description

```
CHGOBJCRQA CRQD(MYLIB/CR1) ACTIVITY(ACT01) ACTION(*RTV)
OBJ(QGPL/QXYZ) OBJTYPE(*JOB) CPNAME((*NETATR SYS1))
```

This command changes an activity to retrieve the QGPL/QXYZ job description from the iSeries server SYS1.

Example 2: Sending a File to All Systems in the Network

```
CHGOBJCRQA CRQD(MYLIB/CR2) ACTIVITY(ACT02) ACTION(*SND)
OBJ(ACCTLIB/TAXFILE) OBJTYPE(*FILE) TGTRLS(*PRV)
MBR(DEDUCTIONS) STRTIME(23:00:00 9/30/02)
NODL(MYLIB/ACCTSYS)
```

This command changes an activity to send a tax table to all of the iSeries accounting servers identified in the ACCTSYS node list at 11 p.m. on 30 September 2002. The accounting systems are at the previous release level.

Example 3: Retrieving a Program

```
CHGOBJCRQA CRQD(MYLIB/CR3) ACTIVITY(ACT03)
ACTION(*RTV) OBJ(*GLOBAL)
GLBNAME(CUSTNET PCSOFT WDWAPP VER5 020314)
CPNAME((CUSTNET DEVPS2))

CHGOBJCRQA CRQD(MYLIB/CR3) ACTIVITY(ACT03)
ACTION(*SND) OBJ(*GLOBAL)
GLBNAME(CUSTNET PCSOFT WDWAPP VER5 020314)
NODL(MYLIB/PS2SE)

CHGOBJCRQA CRQD(MYLIB/CR3) ACTIVITY(ACT03)
ACTION(*RUN) OBJ(*GLOBAL)
GLBNAME(CUSTNET PCSOFT WDWAPP VER5 020314)
COND((*PRV *EQ *SUCCESS *SAMENODE))
RMTSTRTIME(*MGDSYS (23:00 10/21/02)) NODL(MYLIB/PS2SE)
```

This command changes activities to retrieve a program from a PS/2, send it to all of the PS/2s in the PS2SE node list, and run it on the PS/2s at 11 p.m. in the time zone where the PS/2 is located. The program runs at each PS/2 after October 21, 2002.

Example 4: Retrieving a File after 10 p.m.

```
CHGOBJCRQA CRQD(MYLIB/CR4) ACTIVITY(ACT04)
ACTION(*RTV) OBJ(*GLOBAL)
GLBNAME(CUSTNET SALES *ANY *HIGHEST)
STRTIME((22:00:00 *CURRENT) (06:00:00 *NEXT))
NODL(MYLIB/STORES)
```

This command changes an activity to retrieve the most recent nightly sales file from each system identified in the STORES node list. The files are cataloged as CUSTNET SALES system-name date-created. The file must be retrieved after 10 p.m. on the day the request is submitted but before 6 a.m. the next morning when the stores open.

Example 5: Changing an Activity to Send and Install an Object

```
CHGOBJCRQA CRQD(MYLIB/CR1) ACTIVITY(ACT01)
ACTION(*SNDINS) TEXT('New text for changed CRQ')
```

This command changes an activity from sending the object to sending and installing the object. The text is also changed.

Error messages for CHGOBJCRQA

*ESCAPE Messages

None <<

CHGOBJD (Change Object Description) Command Description

CHGOBJD Command syntax diagram

Purpose

The Change Object Description (CHGOBJD) command changes the text description of an object and resets the days used count for the object to zero.

Restrictions:

1. For file objects, users of this command must have object operational and object management authority to the object being changed and execute authority to the library where the object is located.
2. For non-file objects, users of this command must have object management authority to the object being changed and execute authority to the library where the object is located.

Required Parameters

OBJ Specifies the qualified name of the object whose text description is being changed. If no library name is given, *LIBL is used to find the specified object. The library name is entered to ensure that the correct object is being specified.

Note:

Users changing the object description for objects of type *DEVJ should first use the Allocate Object (ALCOBJ) command to obtain an *EXCLRD lock state on the device description. If this is not done, a CPF2114 message is sent, which indicates that the device description is locked. The ALCOBJ command does not have to be used if the user is already signed on the display device for which the description is being changed.

The name of the 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.

***USRLIBL:** Only the libraries in the user portion of the job's library list are searched.

***ALL:** All libraries in the system, including QSYS, are searched.

» ***ALLUSR:** User libraries are all libraries with names that do not begin with the letter Q except for the following:«

#CGULIB	#DSULIB	#SEULIB
#COBLIB	#RPGLIB	
#DFULIB	#SDALIB	

» Although the following libraries with names that begin with the letter Q are provided by IBM, they typically contain user data that changes frequently. Therefore, these libraries are also considered user libraries:«

QDSNX	» QSYS2xxxx«	QUSROND
QGPL	QS36F	QUSRPOSGS
QGPL38	QUSER38	QUSRPOSSA
QMPGDATA	QUSRADSM	QUSRPYMSVR
QMQMDATA	QUSRBRM	QUSRRDARS
QMQMPROC	QUSRDIRCL	QUSRSYS
QPFRDATA	QUSRDIRDB	QUSRVI
QRCL	QUSRIJS	QUSRVxRxMx
» QRCLxxxx«	QUSRINFSKR	
» QSYS2«	QUSRNOTES	

Notes:

1. » 'xxxxx' is the number of a primary auxiliary storage pool.«

2. A different library name, of the form QUSRVxRxMx, can be created by the user for each release that IBM supports. VxRxMx is the version, release, and modification level of the library.

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

***ALL**: All objects in the specified library (the library qualifier for this parameter) of the type specified on the OBJTYPE parameter are changed.

object-name: Specify the name of the object that is changed.

generic-object-name*: Specify the generic name of the object. 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. If the complete object name is specified, and multiple libraries are searched, multiple objects can be changed only if *ALL or *ALLUSR library values can be specified for the name. See generic names for additional information.

OBJTYPE

Specifies the object type of the object that is being changed. More information is in Commonly used parameters.

***ALL**: All objects in the specified library (the library qualifier for the OBJ parameter) are to be changed.

object-type: Specify the name of the object type to be changed.

Optional Parameters

TEXT Specifies the text that briefly describes the object and its function. More information is in Commonly used parameters.

Note: If no changes are specified on either the TEXT or USECOUNT parameters, message CPC2105 is sent, which indicates that the object was not changed.

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

***BLANK**: Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

USECOUNT

Specifies whether the days-used count for the object is reset.

Note: If no changes are specified on either the TEXT or USECOUNT parameters, message CPC2105 is sent, which indicates that the object was not changed.

***NORESET**: The days-used count for the object is not reset.

***RESET:** The days used count for the object is reset to zero. The reset date is updated to the current system date.

Note:

For database files, the reset date and days used count are updated for all members in the file.

Example for CHGOBJD

```
CHGOBJD OBJ(LIB1/DA1) OBJTYPE(*DTAARA)
        TEXT('NEW TEXT FOR DA1')
```

This command changes the text description of the data area named DA1 located in the library LIB1 to the value specified by the TEXT parameter.

Error messages for CHGOBJD

***ESCAPE Messages**

CPF2105

Object &1 in &2 type *&3 not found.

CPF2110

Library &1 not found.

CPF2113

Cannot allocate library &1.

CPF2114

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

CPF2123

No objects of specified name or type exist in library &2.

CPF2150

Object information function failed.

CPF2151

Operation failed for &2 in &1 type *&3.

CPF2176

Library &1 damaged.

CPF2182

Not authorized to library &1.

CPF2189

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

CPF2195

Text value must be *SAME.

CPF2196

Library value cannot be a special value.

CPF2198

Days used count field not reset to 0 for some objects.

CPF2451

Message queue &1 is allocated to another job.

CPF36F7

Message queue QSYSOPR is allocated to another job.

CHGOBJOWN (Change Object Owner) Command Description

CHGOBJOWN Command syntax diagram

Purpose

The Change Object Owner (CHGOBJOWN) command transfers object ownership from one user to another. The authority that other users have to the object does not change.

The owner of an object always has all the authorities applicable to the object unless they are explicitly revoked. The owner of an object has the authority to grant any authorities to any user for that object. Owners can also grant to themselves authorities that were previously revoked. Owners may, for example, remove some of their specific authorities as a precautionary measure, and then, when the need arises, grant those same authorities to themselves again.

The user with *ALLOBJ special authority has complete authority for all objects and can transfer the ownership of any object. All users have add and delete authorities for their own user profiles; that is, users can add objects to or delete objects (that they created) from their own user profiles by transferring the ownership of the object.

Restrictions:

1. To transfer ownership, you must have all of the following:
 - Object existence authority for the object
 - Object operational and object existence authorities if the object is a file, library, or subsystem description
 - *ALLOBJ special authority or ownership if the object is an authorization list
 - Add authority for the new owner's user profile
 - Delete authority for the present owner's user profile
2. For display stations, if this command is not entered at the device whose ownership is being changed or whose message queue's ownership is being changed, this command should be preceded by the Allocate Object (ALCOBJ) command and followed by the Deallocate Object (DLCOBJ) command.
3. Object type *DOC or *FLR cannot be specified; the user must use DLO (document interchange) support.
4. Changing the ownership of an object that has an authority holder associated with it also changes the ownership of the authority holder.
5. You must have *ALLOBJ and *SECADM special authorities to change the object owner of a program or an SQL (Structured Query Language) package that adopts authority.
6. >> You must have *USE authority to the auxiliary storage pool device if one is specified.<<

Required Parameters

OBJ Specifies the qualified name of the object that is being assigned to the new owner. The library name can be entered to ensure that the correct object changes ownership.

The name of the 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.

object-name: Specify the name of the object that is assigned.

OBJTYPE

Specifies the object type, such as program (*PGM), file (*FILE), or library (*LIB) of the object whose ownership is being transferred. More information is in Commonly used parameters.

NEWOWN

Specifies the name of the user to whom the object is being assigned. The user profile must already exist.

Optional Parameters

CUROWNAUT

Specifies whether the current owner's authority is revoked when ownership is transferred to the new owner specified in the NEWOWN parameter.

***REVOKE:** The current owner's authority is revoked when the object is transferred to the new owner.

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

» ASPDEV

Specifies the auxiliary storage pool (ASP) device name where the library that contains the object (OBJ parameter) is located. If the object's library resides in an ASP that is not part of the library name space associated with the job, this parameter must be specified to ensure the correct object is used as the target of the change ownership operation.

***:** The ASPs that are currently part of the job's library name space will be searched to locate the object. This includes the system ASP (ASP number 1), all defined basic user ASPs (ASP numbers 2-32), and, if the job has an ASP group, all independent ASPs in the ASP group.

***SYSBAS:** The system ASP and all basic user ASPs will be searched to locate the object. No independent ASPs will be searched, even if the job has an ASP group.

auxiliary-storage-pool-device-name: The device name of the independent ASP to be searched to locate the object. The independent ASP must have been activated (by varying on the ASP device) and have a status of 'Available'. The system ASP and basic user ASPs will not be searched. «

Example for CHGOBJOWN

```
CHGOBJOWN OBJ(USERLIB/PROGRAM1) OBJTYPE(*PGM)
NEWOWN(ANN)
```

This command assigns ownership of the program named PROGRAM1, located in the user library named USERLIB, to the user named ANN. The authority is revoked from the current owner.

Error messages for CHGOBJOWN

***ESCAPE Messages**

CPF0609

Not allowed to use specified user profile.

CPF22BD

Ownership may not have been changed for object &1 in &3 type *&2.

CPF22BE
Function not done for user profile &1.

CPF22DA
Operation on file &1 in &2 not allowed.

CPF220A
New owner &1 does not have a uid.

CPF220C
Owner and primary group cannot be the same.

CPF2204
User profile &1 not found.

CPF2207
Not authorized to use object &1 in library &3 type *&2.

CPF2208
Object &1 in library &3 type *&2 not found.

CPF2209
Library &1 not found.

CPF2210
Operation not allowed for object type *&1.

CPF2211
Not able to allocate object &1 in &3 type *&2.

CPF2213
Not able to allocate user profile &1.

CPF2216
Not authorized to use library &1.

CPF2217
Not authorized to user profile &1.

CPF2222
Storage limit is greater than specified for user profile &1.

CPF2226
Function not done for user profile &1.

CPF2230
Not authorized to object &1 in library &3.

CPF2231
Not authorized to change ownership for program &1.

CPF2232
Not authorized to user profile &1.

CPF2233
No delete authority to user profile &1.

CPF2298
Authority not revoked for object &2 in &3 from user &1.

CPF320B
Operation was not valid for database file &1.

CPF324F
File &1 in library &2 does not exist.

CPF326A

Operation not successful for file &1 in library &2.

CPF327F

Operation not successful for file &1 in library &2.

» CPF980B

Object &1 in library &2 not available.

CPF9814

Device &1 not found.

CPF9825

Not authorized to device &1.

CPF9873

ASP status is preventing access to object. «

CHGOBJPGP (Change Object Primary Group) Command Description

CHGOBJPGP Command syntax diagram

Purpose

The Change Object Primary Group (CHGOBJPGP) command changes the object's primary group from one user to another. The owner's and other users' private authorities to the object do not change.

Restrictions:

1. To change the primary group, you must have all of the following:
 - Object existence authority for the object
 - Object operational and object existence authorities if the object is a file, library, or subsystem description
 - *ALLOBJ special authority or ownership if the object is an authorization list
 - Object management authority for the object if revoking the authority for the old primary group.
 - Object management authority for the object and the authorities being given if a value other than *PRIVATE is specified for the PGPAUT parameter.
2. » You must have *USE authority to the auxiliary storage pool device if one is specified. «
3. Object type *DOC or *FLR cannot be specified; the user must use DLO support.
4. The new primary group user cannot be the owner of the object.
5. The new primary group user must have a group ID number (gid).

Required Parameters

OBJ Specifies the qualified name of the object that is having its primary group changed. The library name can be entered to ensure that the correct object changes the primary group.

The name of the 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.

object-name Specify the name of the object that is to have its primary group changed to another user.

OBJTYPE

Specifies the object type of the object whose primary group is being changed. More information is in Commonly used parameters.

NEWPGP

Specifies the name of the user who is to be the new primary group for the object. The user profile must already exist and have a gid number assigned to it.

new-primary-group: Specify the name of the user who is to be the new primary group.

***NONE**: The object does not have a primary group.

Optional Parameters

PGPAUT

Specifies what authority the new primary group has the object.

***OLDPGP**: The new primary group has whatever authority the old primary group had to the object.

***PRIVATE**: The new primary group has whatever private authority it had to the object. If the new primary group does not have a private authority to the object, it is the new primary group and does not have authority to the object.

***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.

***CHANGE**: The new primary group is given change authority to 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.

RVKOLDAUT

Specifies whether the authorities for the current primary group are revoked when the primary group is changed to the user specified in the NEWPGP parameter.

***YES**: The authorities for the current primary group are revoked when the primary group is changed to the other user.

***NO**: The authorities for the current primary group become a private authority when the primary group is changed to the other user.

➤ ASPDEV

Specifies the auxiliary storage pool (ASP) device name where the library that contains the object (OBJ parameter) is located. If the object's library resides in an ASP that is not part of the library name space associated with the job, this parameter must be specified to ensure the correct object is used as the target of the change primary group operation.

*****: The ASPs that are currently part of the job's library name space will be searched to locate the object. This includes the system ASP (ASP number 1), all defined basic user ASPs (ASP numbers 2-32), and, if the job has an ASP group, all independent ASPs in the ASP group.

***SYSBAS**: The system ASP and all basic user ASPs will be searched to locate the object. No independent ASPs will be searched, even if the job has an ASP group.

auxiliary-storage-pool-device-name: The device name of the independent ASP to be searched to locate the object. The independent ASP must have been activated (by varying on the ASP device) and have a status of 'Available'. The system ASP and basic user ASPs will not be searched. <<

Example for CHGOBJPGP

```
CHGOBJPGP OBJ(USERLIB/PROGRAM1) OBJTYPE(*PGM)
          NEWPGP(ANN) PGPAUT(*CHANGE)
```

This command changes the primary group for the program named PROGRAM1, located in the user library USERLIB, to the group named ANN. The new primary group has *CHANGE authority to the object. The authority is revoked from the current primary group.

Error messages for CHGOBJPGP

*ESCAPE Messages

CPF22BE

Function not done for user profile &1.

CPF22DA

Operation on file &1 in &2 not allowed.

CPF220B

New primary group &1 does not have a gid.

CPF220C

Owner and primary group cannot be the same.

CPF220D

Primary group may not be changed for object &1 in &3 type &2.

CPF2204

User profile &1 not found.

CPF2207

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

CPF2208

Object &1 in library &3 type *&2 not found.

CPF2209

Library &1 not found.

CPF221D

Primary group may not have been changed for object &1 in &3 type *&2.

CPF2210

Operation not allowed for object type *&1.

CPF2211

Not able to allocate object &1 in &3 type *&2.

CPF2213

Not able to allocate user profile &1.

CPF2216

Not authorized to use library &1.

CPF2217

Not authorized to user profile &1.

CPF2222

Storage limit is greater than specified for user profile &1.

CPF2226

Function not done for user profile &1.

CPF2230

Not authorized to object &1 in library &3.

CPF2232

Not authorized to user profile &1.

CPF2233

No delete authority to user profile &1.

CPF326A

Operation not successful for file &1 in library &2.

CPF327F

Operation not successful for file &1 in library &2.

CHGOPTA (Change Optical Attributes) Command Description

CHGOPTA Command syntax diagram

Purpose

The Change Optical Attributes (CHGOPTA) command changes the optical configuration that affects all jobs using the optical file system.

Optional Parameter

CPYATR

Specifies whether to copy the file attributes of the source file when copying or moving files between the QDLS and the QOPT file systems using the HFS copy or move stream file APIs.

Note:

This parameter is ignored when copying or moving files within the optical file system and is not valid for LAN-attached optical libraries.

***SAME:** The CPYATR value does not change if it was previously set. Otherwise, *YES is used.


***YES:** The file attributes, including any user-defined extended attributes, are copied. This is the default value when the operating system is shipped.

***NO:** The file attributes are not copied. The file that is copied or moved is created with default file attributes, even if the file already exists and replace was specified on the QHFCPYSF request.

PERFORMANCE TIP	This value should be set to *NO when applications do not require the file attributes to be maintained when copying between the QOPT and QDLS file systems. Using this option improves the performance of move and copy operations and reduces the optical storage requirements when writing to an optical disk.
-----------------	---

HLDFATR

Specifies whether held optical file support is enabled or disabled for the /QOPT file system. When held optical file support is disabled it is up to the user to ensure that correct recovery procedures

are followed when there is a close file error condition. Refer to the Optical Support  book for a further explanation of held optical files.

***SAME:** The HLDFATR value does not change if it was previously set. Otherwise, *YES is used.

***YES:** Held optical file support is enabled for the optical file system.


***NO:** Held optical file support is disabled for the optical file system.

ALWVRNT

Indicates whether or not variant characters can be specified for path names when accessing files on optical volumes in Universal Disk Format (UDF) through the Hierarchical File System (HFS) interfaces. This parameter does not affect access to optical volumes formatted in High Performance Optical File System (HPOFS) or ISO9660 formats. It also has no effect on integrated file system interfaces for all optical media formats.

***SAME:** The ALWVRNT value does not change if it was previously set. Otherwise, *NO is used.

***NO:** Indicates that variant characters are not allowed for path names when accessing UDF volumes through HFS. Path names through the HFS interfaces are restricted to the following invariant characters: A-Z 0-9 + = % & () , _ - . : ;. Use this value to better enable correct interchange of path names if the media is accessed from another operating system. This will also improve path name consistency between the HFS and integrated file system interfaces.

***YES:** Indicates that variant characters are allowed for path names when accessing UDF volumes through HFS. Refer to the Optical Support  book for a further explanation of which characters are allowed. When this value is specified there is no guarantee that path names will interchange correctly if accessed from another operating system. There is also no guarantee that path names will be consistent between the HFS and integrated file system interfaces.

Example for CHGOPTA

```
CHGOPTA CPYATR(*NO)
```

This command changes the optical cross-file system copy attribute value so file attributes are not copied when files are copied or moved between the QDLS and QOPT file systems in either direction using the HFS copy or move stream file APIs.

Error messages for CHGOPTA

*ESCAPE Messages

None.

CHGOPTVOL (Change Optical Volume) Command Description

CHGOPTVOL Command syntax diagram

Purpose

The Change Optical Volume (CHGOPTVOL) command changes the volume-full threshold, the authorization list, or the description of an optical volume. If TYPE(*BACKUP) was specified when the volume was initialized, the volume-full threshold cannot be changed.

Restrictions:

1. To use this command the user must have *CHANGE authority to the volume being changed.
2. If this command is being used to change the volume's authorization list, the user must have *AUTLMGT authority to the authorization list currently securing the volume.

Required Parameter

VOL Specifies the volume identifier of the optical volume to be changed.

Optional Parameters

THRESHOLD

Specifies the volume-full-threshold percentage.

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

volume-full-threshold: Specify the threshold percentage. Valid values range from 1 through 100.

AUTL The authorization list used to verify access to the optical volume on this iSeries 400. This value is not stored on the volume and will not be maintained when the optical disk is moved between iSeries 400 computers.

For volumes in media library devices the authorization list can be maintained for this iSeries 400 when the optical disk is removed from the device. This can be done by specifying VOLOPT(*KEEP) on the Remove Optical Cartridge (RMVOPTCTG) CL command. The authorization list can then be restored by specifying AUTL(*PRV) on the Add Optical Cartridge (ADDOPTCTG) CL command.

If the volume is in a stand-alone optical device such as a CD-ROM or DVD device, the authorization list will secure the volume for the duration that the optical disk is in the device. The authorization list cannot be maintained when the optical disk is removed from the device. If the optical disk is ejected from the device then inserted again, the authorization list will be reset to the default which is QOPTSEC.

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

***NONE:** No authorization list is used to secure the optical volume.

authorization-list-name: Specify the name of the authorization list used to secure the optical volume.

TEXT Specifies the text that briefly describes the optical volume. More information is in Commonly used parameters.

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

***BLANK:** Text is not specified.

'description': Specify a maximum of 50 characters enclosed in apostrophes to describe the optical volume.

Example for CHGOPTVOL

```
CHGOPTVOL VOL(VOL01) THRESHOLD(99)
```

This command changes the volume-full-threshold for the optical volume VOL01 to 99 percent.

Error messages for CHGOPTVOL

*ESCAPE Messages

OPT1305

Optical volume &1 is read only.

OPT1315

Optical volume &1 is write protected.

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.
- OPT1341**
THRESHOLD or TEXT can not be specified.
- OPT1345**
No free space available on media.
- 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.
- OPT1463**
Operation not completed, optical volume is not a primary volume.
- OPT1485**
Initialize or rename of optical volume failed.
- OPT1530**
&1 does not represent a valid optical device.
- OPT1555**
Optical device &1 in use.
- OPT1605**
Media or device error occurred.
- OPT1790**
Operation conflicts with another request.
- OPT1805**
Error accessing optical volume index file.
- OPT1810**
Error accessing optical directory index file.
- 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.

OPT2301

Internal system object in use.

OPT2410

Authorization list &1 for volume &2 was not found.

OPT2420

Not authorized to optical volume &2.

OPT7740

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

CHGOUTQ (Change Output Queue) Command Description

CHGOUTQ Command syntax diagram

Purpose

The Change Output Queue (CHGOUTQ) command allows the user to change the attributes of the specified output queue. The following attributes of the output queue can be changed while the writer is active to the output queue:

- Authority to display data from this output queue
- Operator's authority to control this output queue
- The order of spooled files on this output queue
- Object authority required to control this output queue
- The data queue of the output queue
- The auxiliary storage pool of the spooled files

The following attributes can only be changed while a writer is not active to the specified output queue:

- Number of separator pages per job
- The maximum spooled file size to print
- The remote system to send files to for remote writers
- The printer queue on the remote system to send files to
- The number of writers to auto-start to the output queue
- The message queue used by remote writers
- The connection type of the remote system
- The type of the remote system
- The class for files sent to a VM/MVS/VSE system
- The forms control buffer for files sent to a VM/MVS/VSE system
- The transform option used with connection type other than *SNA or *NONE
- The separator page option
- User defined options
- User defined object
- User driver program
- The transform option used with connection type TCP/IP
- The manufacturer type and model used with the transform

- The WSCST object used with the transform
- The internet address used with connection type TCP/IP
- The image configuration

If the output queue contains spooled files, the user cannot change the SEQ and SPLFASP parameters for the queue. Other CHGOUTQ parameters such as DSPDTA, JOBSEP, and OPRCTL can normally be changed if the output queue contains spooled files. If the user attempts to change the SEQ or SPLFASP parameters when the output queue contains spooled files, none of the specified parameters are changed.

Required Parameter

OUTQ Specifies the qualified name of the output queue whose attributes are being changed.

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.

Optional Parameters

MAXPAGES

Specifies the maximum spooled file size in pages that will be allowed to print between a starting and ending time. If a spooled file exceeds the page limit it will be deferred (DFR status) until the ending time expires. For files where the exact number of pages is not known, the estimated number of pages is used. (You can use the Work with Spooled File Attributes (WRKSPLFA) command to find out the estimated number of pages.) Time must be specified in hhmmss format, on a 24 hour clock.

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

***NONE:** There is no limit on the size of spooled files allowed to print from this output queue.

Element 1: Number of Pages

number-of-pages: Specify the largest spooled file, in pages, that is allowed to print.

Element 2: Starting Time

starting-time: Specify the time of day that the maximum spooled file size limit is to start.

Element 3: Ending Time

ending-time: Specify the time of day that the maximum spooled file size limit is to end.

DSPDTA

Specifies whether users that have authority to read the output queue can display the data from any output file on the queue or display only data from their own files.

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

***NO:** Users authorized to use the queue can display, copy, or send only the output data of their files (unless they have some special authority).

***YES:** Users with read authority for the output queue can display, copy, or send the output of any file on the queue.

***OWNER:** Users authorized to use the queue can display, copy, or send the output data of their own files only, unless they have *SPLCTL special authority.

JOBSEP

Specifies, for each job having spooled files on this output queue, the number of separators to be printed at the beginning of the printed output for each job. Each separator contains information that identifies the job such as its name, the job user's name, the job number, and the time and date when the job was run. The number of separators can range from 0 through 9.

This parameter is used only by printer writers, all other types of writers will ignore the value specified for this parameter.

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

***MSG:** No job separators are placed before each job's output. A message is sent to a message queue notifying the operator of the end of each job. The message queue receiving the message is identified by the MSGQ parameter on the command that started the writer.

number-of-job-separators: Specify the number of separators printed before the output of each job. Valid values range from 0 through 9.

OPRCTL

Specifies whether a user with job control authority is allowed to control and make changes to spooled files with entries on this output queue. A user has job control authority if SPCAUT(*JOBCTL) is specified in the user profile.

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

***YES:** Users with job control authority can control the queue and make changes to the entries on the queue.

***NO:** This queue and its entries cannot be manipulated or changed by users with job control authority unless they have some other special authority.

SEQ Specifies the order of the spooled files on the output queue.

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

***JOBNBR:** Within priority, the queue entries for spooled files are sorted using the job number of the job that created the spooled file. (The job number is a combination of the date and time which the job entered the system.)

If *JOBNBR is specified on the SEQ parameter, spooled files of a job with the same output priority and status are grouped together.

Also if *JOBNBR is specified on the SEQ parameter, the first job always has its spooled files produced first for jobs of equal priority.

***FIFO:** The queue is first-in first-out within priority for each file. That is, new spooled files are placed after all other entries on the queue of the same priority. The following changes place a queue entry after all others of equal priority on the queue.

- A change of output priority with the Change Job (CHGJOB) command
- A change in status from held (HLD), saved (SAV), closed (CLO), or open (OPN) to available (RDY)
- A change in status from available (RDY) to not available (HLD, SAV, CLO, OPN)
- A spooled file added to the queue if the file is opened
- Using the Change Spooled File Attributes (CHGSPLFA) command to move a spooled file to an output queue which has SEQ(*FIFO) specified

DTAQ Specifies the name of the data queue associated with the output queue.

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

***NONE:** No data queue is associated with the output queue.

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.

data-queue-name: Specify the name of the data queue associated with the output queue.

AUTCHK

Specifies whether the commands that check the requester's authority to the output queue also check for ownership authority or data authority.

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

***OWNER:** The requester must have ownership authority to the output queue to pass the output queue authorization test. The requester can have ownership authority by being the owner of the output queue, sharing a group profile with the queue owner, or running a program that adopts the owner's authority.

***DTAAUT:** The requester must have the appropriate data authority to the output queue (*READ, *ADD, and *DELETE) to pass the output queue authorization test.

RMTSYS

Specifies the remote system to which files are sent when a remote writer is started (using the STRRMTWTR command) to the output queue. This is referred to as the "address" by SNADS, and the "host" by TCP/IP.

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

***NONE:** The output queue is used only for local printing. The STRRMTWTR command cannot be used when this output queue is specified on the OUTQ parameter.

***NWSA:** The RMTPTQ parameter is used to identify the system when a remote writer is started to the output queue. This value is valid only when *NDS has been specified on the DESTTYPE parameter.

***PASTHR:** The system a user passed through from (using the STRPASTHR command) is used when sending spooled files created by the user job. If a spooled file was not created by a job that had passed through from another system, the spooled file will be held (HLD status).

***INTNETADR:** The INTNETADR parameter is used to identify the system when a remote writer is started to the output queue. If you have a host table or a domain name server on your TCP/IP network, you can use the remote-system-name instead of this parameter.

Note:

This value is valid only when *IP has been specified for the CNNTYPE parameter.

remote-system-name: Specify a name for the remote system. Only the first 8 characters will be used when the connection type (CNNTYPE parameter) is specified as *SNA. If the name of the remote system needs to be lower case, the name must be enclosed in apostrophes. If you do not use apostrophes, the iSeries 400 changes the name to upper case.

RMTPRTO

Specifies the printer queue on the remote system (RMTSYS parameter) to which the remote writer sends spooled files.

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

***USER:** The user profile that created the spooled file determines the user ID on the remote system. The file is spooled on the user's default output queue.

Note: This value is valid only when the connection type (CNNTYPE parameter) is specified as *SNA or *USRDFN.

***SYSTEM:** The default system printer on the remote system will be used to determine the printer queue. For a remote iSeries 400, the output queue associated with the printer device specified in the QPRTDEV system value is used as the printer queue.

Note: This value is valid only when CNNTYPE(*SNA) or CNNTYPE(*USRDFN) is specified for the connection type and DESTTYPE(*OS400) or DESTTYPE(*S390) is specified for the destination type.

printer-queue-name: Specifies the name for the printer queue on the remote system. For remote systems that are iSeries 400, this is the name of an output queue that the spooled file is created on.

If the name of the remote system needs to be lower case, the name must be enclosed in apostrophes. If you do not use apostrophes, the iSeries 400 changes the name to upper case.

If a library name qualifier is not specified, *LIBL is used as the default. This output queue is usually specified as library name/output queue name. For destination systems that are not iSeries 400, this name is system-dependent, and can be either the actual name of the device or the name of a printer queue.

AUTOSTRWTR

Specifies the number of writers that will be started automatically by the system to this output queue. If the remote system is specified as a value other than *NONE, the value of this parameter determines the number of remote writers started to this output queue. If the remote system is specified as *NONE and this is a system created printer default output queue, the value of this parameter will determine if a single printer writer is started to the output queue when the Start Printer Writer (STRPRTWTR) command is run with DEV(*ALL).

For system created printer default output queues, this parameter can be specified as *NONE or 1. For user created output queues with the remote system (RMTSYS parameter) specified as *NONE, this parameter will be ignored.

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

***NONE:** There will be no writers auto-started by the system to this output queue.

number-of-writers: Specify the number of writers to be auto-started to this output queue. Valid values range from 1 through 10.

MSGQ

Specifies the qualified name of the message queue to which messages are sent when created by the remote writer started to this output queue.

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

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.

message-queue-name: Specify the name of the message queue to which messages created by the remote writer are sent.

CNNTYPE

Specifies the type of connection with the remote system.

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

***SNA:** The spooled files are sent using SNADS. This is similar to the Send Network Spooled File (SNDNETSPLF) command and requires that SNADS be configured.

***IP :** The spooled files are sent using TCP/IP. This is similar to the Send TCP/IP Spooled File (SNDTCPSPLF) command and requires that the TCP/IP product be installed.

***IPX:** ➤ This value is no longer supported by iSeries 400. ⬅

***USRDFN:** The spooled files are sent using a user-defined connection.

DESTTYPE

Specifies the type of the remote system (RMTSYS parameter). This parameter, along with the type of data contained in the spooled file (DEVTYPE parameter on the CRTPRTF command), is used by a remote writer to determine the format used to send the spooled file. The spooled file will be held by the remote writer if the type of data in the spooled file is not supported by the system.

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

***OS400:** The spooled files are to be sent to an iSeries 400 system running OS/400 V3R1M0, or later, when the connection type (CNNTYPE) has been specified as *SNA. This value can be specified for all releases which support TCP/IP (V2R3 and later) when CNNTYPE is *IP or when CNNTYPE is *USRDFN.

Note: This value should be specified when possible, to allow the greatest flexibility when selecting values for other parameters.

***OS400V2:** The spooled files are to be sent to an iSeries 400 system running OS/400 versions prior to V3R1M0. This value is only valid when CNNTYPE is *SNA or *USRDFN.

***S390:** The spooled files are to be sent to a System/390* system.

Note: This value is valid only when CNNTYPE(*SNA) or CNNTYPE(*USRDFN) is specified.

***PSF2:** The spooled files are to be sent to a personal computer (PC) running the PSF*/2 product.

Note: This value is valid only when CNNTYPE(*IP) or CNNTYPE(*USRDFN) is specified.

➤ ***NETWARE3:** This value is no longer supported by iSeries 400.

***NDS:** The spooled files are to be sent to NETWARE4. This value is only valid when the CNNTYPE is *IP or *USRDFN. <<

***OTHER:** The spooled files are to be sent to a system not matching any of the other special values. This includes iSeries 400 running OS/400 version 1, as well as the System/36 and the System/38 systems.

Note: This value is not valid when CNNTYPE(*IPX) is specified.

CLASS

Specifies the VM/MVS SYSOUT class for files sent to a VM/MVS host system.

Note: This parameter is valid only when CNNTYPE(*SNA) and DESTTYPE(*S390) are specified.

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

class-value: Specify a distribution class value. Valid values range from A through Z and 0 through 9.

FCB Specifies the forms control buffer used when sending files to a VM/MVS host system.

Note: This parameter is valid only when CNNTYPE(*SNA) and DESTTYPE(*S390) are specified.

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

***NONE:** No forms control buffer is used.

***USRDTA:** The first 8 characters of the user data (USRDTA) spooled file attribute is the name of the forms control buffer. If the user data is blank, no forms control buffer is used.

***PRTF:** The first 8 characters of the printer file used to spool the file is the name of the forms control buffer.

forms-control-buffer-name: Specify the name of the forms control buffer to be used.

TRANSFORM

Specifies whether to make use of the host print transform function to transform a spooled file of device type *SCS or *AFPDS into ASCII data when the file is sent to a remote printer queue.

Note: This parameter is not valid when the CNNTYPE is specified as *SNA.

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

***YES:** The SCS or AFPDS data streams are transformed.

***NO:** The SCS or AFPDS data streams are not transformed.

USRDTATFM

Specifies the qualified name of the data transform program to be used by the driver program.

Note: This parameter is valid only when RMTSYS is not *NONE.

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

***NONE:** No data transform program is specified.

The name of the 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.

data-transform-program-name: Specify the name of the data transform program to be used by the driver program.

MFRTYPMDL

Specifies the manufacturer, type, and model for a printer using the host print transform function or a user data transform program.

Note: If *WSCSTxxx 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.

This parameter is only prompted when TRANSFORM(*YES) is specified or when a user data transform program is used.

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

***WSCST:** The value of the WSCST parameter is used.

manufacturer-type-model: Specify the manufacturer, type, and model for a printer using the host print transform function or a user data transform program.

WSCST

Specifies an object that consists of a table of attributes used to customize a given ASCII device, such as a workstation or printer. Character presentation, font specifications, and control key sequences are examples of characteristics that can be customized.

This parameter is only prompted when TRANSFORM(*YES) is specified, when a user data transform program is used, or when MFRTYPMDL (*WSCST) is specified.

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

***NONE:** No workstation customizing object is specified.

The name of the workstation 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.

workstation-customizing-object: Specify a valid workstation customizing object, which has been created with the Create Work Station Customizing Object (CRTWSCST) command.

IMGCFG

Specifies the image configuration for this output queue. An image configuration object provides transform services for a variety of image and print datastream formats. This parameters is only used with remote writers.

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 Types table at the end of this command description for the suggested IMGCFG object for many popular printers.

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

***NONE:** No image configuration specified.

image-configuration: Specify image configuration for a output queue.

INTNETADR

Specifies the internet address of the remote system to which the print request will be sent.

Note: This parameter is valid only when RMTSYS(*INTNETADR) is specified.

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

internet-address: The internet address is specified in the form *nnn.nnn.nnn.nnn*, where *nnn* is a decimal number ranging from 0 through 255. (An internet address having all binary ones or zeros in the bits of the network or host identifier portions of the address is not valid.)

Values must be enclosed in apostrophes (') when entered from a command line.

DESTOPT

➤ Specifies the destination-dependent options. When CNNTYPE(*IP) is specified, the destination-dependent options are added to the control file which is sent to the remote LPD server. When CNNTYPE(*IP) and DESTTYPE(*NDS) or CNNTYPE(*SNA) is specified, this field is used to determine how spooled files are handled once they are sent to the remote system. ⚡

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

***NONE:** No destination options are specified.

***USRDFNTXT:** The user-defined text of the user profile when the spooled file was created is used.

***NOWAIT:** >> When CNNTYPE(*IP) and DESTTYPE(*NDS) or CNNTYPE(*SNA) is specified, a value of *NOWAIT indicates that the operating system will no longer keep track of spooled files once they have been sent. <<

'destination-options': Specify no more than 128 characters, enclosed in apostrophes.

SEPPAGE

Specifies whether or not to request a separator page when printing on a remote system. >>

Note: This parameter is valid only when CNNTYPE(*IP) and DESTTYPE(*PSF2), DESTTYPE(*OS400) or DESTTYPE(*OTHER) are specified.

<<

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

***YES:** A separator page is requested.

***NO:** A separator page is not requested.

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.

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

***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.

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

***NONE:** No user-defined object 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 Object

***USRIDX**

User Index

***USRQ**

User Queue

***USRSPC**

User Space

USRDRVPGM

Specifies the qualified name of the user-specified driver program used to process spooled files.

Note:

This parameter is valid only when RMTSYS is not *NONE.

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

***NONE:** No driver program is specified.

The name of the 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-driver-program-name: Specify the name of the user-specified driver program to process spooled files.

SPLFASP

Specifies the auxiliary storage pool (ASP) where the spooled files physically reside.

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

***SYSTEM:** The spooled files reside in the system ASP.

***OUTQASP:** The spooled files reside in the same ASP that the output queue resides in.

TEXT Specifies the text that briefly describes the output queue. More information is in Commonly used parameters.

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

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CHGOUTQ

```
CHGOUTQ  OUTQ(QPRINT4)  JOBSEP(4)
          TEXT('Default queue for files using 4-part forms')
```

This command changes the number of job separators and the text that describes the output queue named QPRINT4. Four job separator pages are inserted before the spooled files for each job produced from the QPRINT4 output queue.

Table 1. 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.
*HP11	HP LaserJet** Series II
*HP11D	HP LaserJet IID
*HP11P	HP LaserJet IIP
*HP11I	HP LaserJet III
*HP11ID	HP LaserJet IIID
*HP11IP	HP LaserJet IIIP
*HP11ISI	HP LaserJet IIISi
*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 2. 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 3. 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 CHGOUTQ

*ESCAPE Messages

CPF0002

Command not run. Error detected by validity checker.

CPF2207

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

CPF33F1

Data queue &1 in library &2 not found.

CPF3319

Cannot change parameters specified. A writer is active to output queue &1.

CPF3330

Necessary resource not available.

CPF3357

Output queue &1 in library &2 not found.

CPF3361

Output queue &1 in library &2 not changed. Output queue in use.

CPF34D7

Output queue &1 in &2 not changed due to errors.

CHGOWN (Change Owner) Command Description

CHGOWN Command syntax diagram

Purpose



The Change Owner (CHGOWN) command transfers object ownership from one user to another. The authority that other users have to the object does not change.

The owner of an object always has all the authorities applicable to the object unless they are explicitly revoked. The new owner is given all of the authorities to the object when the ownership is changed. The owner of an object has the authority to grant any authorities to any user for that object. Owners can also grant to themselves authorities that were previously revoked. Owners may, for example, remove some of their specific authorities as a precautionary measure, and then, when the need arises, grant those same authorities to themselves again.

A user with *ALLOBJ has complete authority for all objects and can transfer the ownership of any object. All users have add and delete authorities for their own user profiles; that is, users can add objects to, or delete objects (that they created) from their own user profiles by transferring the ownership of the object.

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

Restrictions:

1. To transfer ownership of an object in the QSYS.LIB  or independent ASP QSYS.LIB  file system, you must have all of the following:
 - Object existence authority for the object
 - Object operational and object existence authorities if the object is a file, library, or subsystem description
 - *ALLOBJ special authority or ownership if the object is an authorization list
 - Add authority for the new owner's user profile
 - Delete authority for the present owner's user profile
2. Changing the ownership of an object that has an authority holder associated with it also changes the ownership of the authority holder.
3. You must have *ALLOBJ and *SECADM special authorities to change the object owner of a program that adopts authority.

Required Parameters

OBJ Specifies the path name of the object that is being assigned to the new owner. See path names for more information on specifying path names.

NEWOWN

Specifies the name of the user to whom the object is being assigned. The user profile must already exist.

Optional Parameters

RVKOLDAUT

Specifies whether the authorities for the current owner are revoked when ownership is transferred to the new owner specified in the NEWOWN parameter.

***YES:** The authorities for the current owner are revoked when the object is transferred to the new owner.

***NO:** The current owner's authority is not changed when the object is transferred to the new owner.

SYMLNK

Specifies whether to change the ownership of the object or the symbolic link to the object.

***NO:** The ownership of the object, not the symbolic link to the object, is changed.

***YES:** If the object for which ownership is changing is a symbolic link, the ownership of the symbolic link is changed instead of changing the ownership of the object that the symbolic link points to.

Example for CHGOWN

```
CHGOWN OBJ('/QSYS.LIB/USERLIB.LIB/PROGRAM1.PGM')  
NEWOWN(ANN)
```

This command assigns ownership of the program named PROGRAM1, located in the user library named USERLIB, to the user named ANN. The authority is revoked from the current owner.

Error messages for CHGOWN

***ESCAPE Messages**

CPDA080

User profile name too long.

CPE3101

A non-recoverable I/O error occurred.

CPE3408

The address used for an argument was not correct.

CPE3418

Possible APAR condition or hardware failure.

CPE3474

Unknown system state.

CPFA0AA

Error occurred while attempting to obtain space.

CPFA0AB

Object name not a directory.

CPFA0AD

Function not supported by file system.

CPFA0A1

An input or output error occurred.

CPFA0A2

Information passed to this operation was not valid.

CPFA0A3

Path name resolution causes looping.

CPFA0A4

Too many open files for process.

CPFA0A5

Too many open files.

CPFA0A7

Path name too long.

CPFA0A9

Object not found.

CPFA0B1

Requested operation not allowed. Access problem.

CPFA0C0
Buffer overflow occurred.

CPFA0C1
CCSID &1 not valid.

CPFA0CE
Error occurred with path name parameter specified.

CPFA0DD
Function was interrupted.

CPFA0D4
File system error occurred.

CPFA08B
Path name cannot begin with *.

CPFA08C
Pattern not allowed in path name directory.

CPFA085
Home directory not found for user &1.

CPFA086
Matching quote not found in path name.

CPFA087
Path name contains null character.

CPFA088
Path name pattern not valid.

CPFA09C
Not authorized to object.

CPFA09D
Error occurred in program &1.

CPFA09E
Object in use.

CPFA09F
Object damaged.

CPFA091
Pattern not allowed in user name.

CPFA092
Path name not converted.

CPFA093
Name matching pattern not found.

CPFA094
Path name not specified.

CPF1F05
Directory handle not valid.

CPF1F41
Severe error occurred while addressing parameter list.

CPF1F4A
Value for number of directory entries not valid.

CPF1F53

Value for length of data buffer not valid.

CPF220A

New owner &1 does not have a uid.

CPF2203

User profile &1 not correct.

CPF2204

User profile &1 not found.

CPF2213

Not able to allocate user profile &1.

CPF2217

Not authorized to user profile &1.

CPF2225

Not able to allocate internal system object.

CPF9801

Object &2 in library &3 not found.

CPF9802

Not authorized to object &2 in &3.

CPF9803

Cannot allocate object &2 in library &3.

CPF223A

Not all objects changed.

CPF3BF6

Path Type value is not valid.

CHGPGRJS (Change Pager Command using Job Scheduler) Command

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

CHGPGRJS Command syntax diagram

Purpose

The Change Pager Command using Job Scheduler (CHGPGRJS) command allows you to specify the command to use from your paging software to send a pager message. The command you specify here is used by the ADDJOBJS, CHGJOBJS and SBMJOBJS commands to send pages for normal and abnormal job completion respectively. The values you specify in the PGRRCPNORM and PGRRCPABN parameters become the substitution values that are used in the CHGPGRJS command. The two substitution variables are &RCP (recipient) and &MSGTXT (message).

Optional Parameters

CMD Specifies the command used in the specified paging software to send a message. The command you specify here is used to send pages for normal and abnormal completions of job schedule entries.

***SAME:** The current value for the parameter does not change.

***NONE:** You are not using a paging software package with Job Scheduler.

pager-command: Specify the command to use when you want to Job Scheduler to send a pager message for normal and abnormal job schedule entry completion.

Example for CHGPGRJS

Example 1: Specifying a PagerPac Command

```
CHGPGRJS CMD('SNDMNASG TOUSER(&RCP) +  
MSG('&MSGTXT')')
```

In this example the Send MNA Message (SNDMNASG) command is used to send pager messages to recipients as a result of normal or abnormal job completions. The values for variables &RCP (recipient) and &MSGTXT (message) are specified in the PGRRCPNORM and PGRRCPABN parameters and are the replacement values used in the CHGPGRJS command. You should enter paired quotes around the &MSGTXT variable.

Error messages for CHGPGRJS

None

CHGDTAJS (Change Parameter Data) Command Description

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

CHGDTAJS Command syntax diagram

Purpose

The Change Parameter Data (CHGDTAJS) command allows you to change parameter data for the parameter that you specify.

Required Parameter

PARM Specifies the name of the parameter whose data you want to change. If you enter a parameter that has not been added to Job Scheduler, you will receive an error message.

This is a required parameter.

parameter-name: Specify the name of the parameter that you want to change.

Optional Parameter

PARMDATA

Specifies the user-defined parameter data for the parameter specified in the PARM parameter.

***SAME:** The current value for the parameter does not change.

parameter-data: Specify the data for the parameter that you want to change.

Example for CHGDTAJS

Example 1: Changing Parameter Data

```
CHGDTAJS PARM(FRDATE) PARMDATA('12/01/99')
```

In this example the parameter FRDATE is changed to be 12/01/99. The date format in PARMDATA is mm/dd/yy for this example.

Error messages for CHGDTAJS


None

CHGPWD (Change Password) Command Description

CHGPWD Command syntax diagram

Purpose

The Change Password (CHGPWD) command shows the Change Password display which allows you to change the password. The password is the security key that allows the user to sign on the system.

The new password that is entered from the change password display is checked against the password validation rules. The password validation rules are defined by iSeries 400 values. A description of the password validation rules is in the iSeries Security Reference  book.

There are no parameters for this command.

Example for CHGPWD

CHGPWD

This command shows the user the Change Password display.

Error messages for CHGPWD


None

CHGPEXDFN (Change Performance Explorer Definition) Command Description

CHGPEXDFN Command syntax diagram

Purpose

The Change Performance Explorer Definition (CHGPEXDFN) command changes an existing performance explorer definition. The current values stored in an existing definition are inserted when the CHGPEXDFN command is prompted. Each definition is stored as a member in the QAPEXDFN file in library QUSRSYS. A performance explorer definition identifies the performance data to be collected during a performance explorer session. A session can be started using the Start Performance Explorer (STRPEX) command. When starting a new session, a performance explorer definition name must be provided.

Additional information about the performance explorer tool can be found in the Performance Tools for iSeries  book.

➤ Restrictions:

1. This command is shipped with PUBLIC *EXCLUDE authority.
2. You must have execute authority to the PGM library if PGM is specified.
3. To use this command you must have *SERVICE special authority, or be authorized to the Service Trace function of Operating System/400 through iSeries Navigator's Application Administration support. The Change Function Usage Information (QSYCHFUI) API, with a function ID of QIBM_SERVICE_TRACE, can also be used to change the list of users that are allowed to perform trace operations.
4. The following user profiles have private authorities to use the command:

- QPGMR
- QSRV



Required Parameter

DFN Specifies the name of the performance explorer definition to be changed. If no definition by this name exists (that is, no member by this name exists in file QAPEXDFN in library QUSRSYS), an error condition will occur. The user can either change the definition name or add a definition by the specified name using the Add Performance Explorer Definition (ADDPEXDFN) command, and try this command again.

definition-name: Specify the name of the performance explorer definition to change.

Optional Parameters

TYPE Specifies the type of performance data to be collected.

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

***STATS**: General performance statistics are collected to help identify the problem areas. This mode is mainly used as a map to help determine if and where more detailed information should be collected and analyzed.

***TRACE**: Detailed trace information is collected. This is the most detailed type of performance data collection available.

***PROFILE**: Specific programs are sampled to identify sections of code that are using larger amounts of resources. This information is very valuable when the user wants to improve the performance of a specific program or application.

JOB Specifies which jobs are included in the performance explorer data collection session.

» Single Value «

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

*****: Only the job that issues the STRPEX (Start Performance Explorer) command is included.

***ALL**: All jobs on the system are included.

» Element 1: Job Identifier «

job-name: Specify the name of the job to be included.

generic-job-name*: Specify the generic name of the jobs to be included.

» Job User Name Qualifier «

***ALL**: All jobs that match the specified *job name* will be included.

user-name: Specify a user name to further qualify the job name.

generic-user-name*: Specify the generic user name of the jobs to be included.

» Job Number Qualifier

***ALL**: All jobs that match the specified *job name* and *user name* are included.

job-number: Specify the job number to further qualify the job name and user name.

TASK Specifies which licensed internal code (LIC) tasks are included in the performance explorer data collection session.

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

***NONE**: No LIC tasks on the system are included.

***ALL:** All LIC tasks on the system are included.

task-name: Specify the name of the task to be included in the performance explorer data collection session.

generic-task-name:* Specify the generic name of the task to be included. 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. For more information on the use of generic names, refer to generic names.

PGM Specifies the program whose performance profile data is collected. Up to 16 programs may be specified.

Note: This parameter is only valid when TYPE(*PROFILE) is specified.

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

Element 1: Program Name

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

***LIBL:** The library list of the job that issues the STRPEX command is searched to find the specified program or service program.

library-name: Specify the name of the library which contains the program or service program.

program-name: Specify the name of the program to be sampled.

Element 2: Module Name

***ALL:** All modules in the program or service program are sampled. If sampling an OPM (Original Program Model) *PGM, specify *ALL or *N for this element.

***PGM:** Only the module that has the same name as the program or service program is sampled.

module-name: Specify the name of the module within the program or service program that is to be sampled.

Element 3: Procedure Name

***ALL:** All procedures in the specified module are sampled. If sampling an OPM (Original Program Model) *PGM, specify *ALL or *N for this element.

procedure-name: Indicate a specific procedure within the specified module that is to be sampled.

Element 4: Program Type

Indicate the type of program being specified. All procedures in the specified module are sampled. If sampling an OPM (Original Program Model) *PGM, specify *ALL or *N for this element.

***PGM:** The program being specified is a program (*PGM) object.

***SRVPGM:** The program being specified is a service program (*SRVPGM) object.

Element 5: Pane Size

Specifies the pane size, which is the number of consecutive program instruction addresses assigned to each counter. The smaller the pane size, the more fine-grained the program profile information will be.

4: Default pane size is 4.

pane-size: Specify the pane size to use for the program. Valid values are 4, 8, 16, 32, 64, 128, 256, 512, 1024, 2048, 4096.

DTAORG

Specifies how the data will be organized.

Note: This parameter is only valid if TYPE(*STATS) is specified.

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

***FLAT:** The performance explorer tool will not collect data for a parent-child relationship.

***HIER:** The performance explorer tool will collect data for a parent-child relationship.

MAXSTG

Specifies the maximum amount of storage, in kilobytes (K), that the performance explorer tool will use for collecting trace data.

Note: This parameter is only valid if TYPE(*TRACE) is specified.

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

maximum-K-bytes: Specify the maximum amount of storage, in kilobytes, used to store trace records (one K equals 1024 bytes). Valid values range from 1K to 4000000K (4 gigabytes).

TRCFULL

Specifies whether the trace records wrap (replace oldest records with new records) or whether the trace stops when all of the storage specified by the MAXSTG parameter has been used.

Note: This parameter is only valid if TYPE(*TRACE) is specified.

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

***STOPTRC:** Tracing stops when the trace file is full of trace records.

***WRAP:** When the trace file is full, the trace wraps to the beginning. The oldest trace records are written over by new ones as they are collected.

MRGJOB

Specifies whether the data from different jobs should be merged in one data area or kept separate (for example, one data area for each job).

Note: This parameter is only valid if DTAORG(*FLAT) is specified.

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

***YES:** The data of individual jobs is merged.

***NO:** The data of individual jobs is kept separate.

INTERVAL

Specifies the interval at which samples are taken of the program. A low interval will cause a high number of samples to be taken, and will also cause higher overhead. A low interval will also provide a significant amount of data.

Note: This parameter is only valid when TYPE(*TRACE) or TYPE(*PROFILE) is specified.


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

sampling-interval: Specify the interval at which samples are taken of the program. Valid values range from 0.1 to 200.0 milliseconds.

TRCTYPE

Specifies the types of trace performance data to be collected.

Note: This parameter is only valid if TYPE(*TRACE) is specified.

Note: Additional information about the TRCTYPE options can be found in the Performance Tools for iSeries  book.

Single Values

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

***SLTEVT:** Only selected individual events and machine instructions are included in the trace definition.

Note: If TRCTYPE(*SLTEVT) is specified, SLTEVT(*YES) must have been specified when the performance explorer definition was created (ADDPEXDFN command).

Trace Event Categories

Specify one or more categories of events to be included in the trace definition.

***CALLRTN:** Specifies that call return events are included in the trace definition. Call return events occur when a program is entered and exited as well as when certain machine instruction are started and completed.

***BASIC:** Specifies that events relative to general performance analysis are included in the trace definition. This option should be used when it is unclear as to what type of performance problem determination is necessary.

***DSKIO1:** Specifies that events associated with disk input/output operations are included in the trace definition.

***DSKIO2:** Specifies that events associated with disk input/output operations plus higher level requests to do input/output operations are included in the trace definition.

***DSKSVR:** Specifies that events associated with disk server operations are included in the trace definition.

***DSKSTG:** Specifies that events associated with disk space consumption are included in the trace definition.

***VRTADR:** Specifies that events associated with virtual address assignment are included in the trace definition.

***PGMACT:** Specifies that events associated with program activations and deactivations are included in the trace definition.

***FILEOPEN:** Specifies that events associated with file opens are included in the trace definition.

***PRFDTA:** Specifies that events associated CPU instruction profiling are included in the trace definition.

***TASKSWT:** Specifies that events associated with tasking are included in the trace definition.

TEXT Specifies the text that briefly describes the performance explorer definition. More information is in Commonly used parameters.

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

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Examples for CHGPEXDFN

Example 1: Using TYPE(*TRACE)

```
CHGPEXDFN DFN(TEST1) TYPE(*TRACE)
          JOB(*) MAXSTG(5000)
```

This command changes the performance definition named TEST1. When this definition is used to start a performance explorer session (STRPEX command), detailed trace information will be collected for the job that invoked the STRPEX command. A maximum of 5000 kilobytes of trace data will be collected. When the trace record storage area is full no more trace records will be collected.

Example 2: Using TYPE(*PROFILE)

```
CHGPEXDFN DFN(TEST2) TYPE(*PROFILE)
          PGM((MYLIB/MYSRVPGM1 *ALL *ALL *SRVPGM))
```

This command changes the performance explorer definition named TEST2. When this definition is used to start a performance explorer session (STRPEX command), performance profile information for service program MYSRVPGM1 in library MYLIB will be collected.

Error messages for CHGPEXDFN

***ESCAPE Messages**

CPFAF0E

Definition not found.

CHGPFTRG (Change Physical File Trigger) Command Description

CHGPFTRG Command syntax diagram

Purpose

The Change Physical File Trigger (CHGPFTRG) command changes the state of one or all triggers for a database physical file. The triggers have been defined with either the SQL interface or the Add Physical File Trigger (ADDPFTRG) command.

The state of a trigger can be changed to disabled (stopped from being called during I/O operations) or, if it has been disabled, to enabled (causing the trigger program to be called during I/O operations again). The alternative to changing the state of the trigger is to remove it when you do not want it to be called, and add it again when you need it.

Restrictions:

1. You must have object management or object alter authority to the physical file.
2. You must have execute authority to the library qualifier of the physical file.

Required Parameters

FILE Specifies the file for which a trigger is being changed, and the library of the file. The file must be a physical file.

The name of the physical 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.

TRG Specifies the name of the trigger being changed.

***ALL:** All of the triggers for the file are changed.

trigger-name: Specify the name of the trigger.

Optional Parameters

TRGLIB

Specifies the name of the library where the trigger is located.

***ALL:** All triggers in all libraries will be changed.

***CURLIB:** The current library is used. 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.

STATE

Specifies the state to which the trigger is being changed. You can use this parameter to temporarily stop a trigger from being called during I/O operations (disable), or to make a trigger that was previously disabled to start working again (enable).

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

***ENABLED:** The trigger that was disabled will be called during I/O operations again.

***DISABLED:** The trigger will not be called during I/O operations.

Examples for CHGPFTRG

```
CHGPFTRG FILE(ADMN/PERSONNEL) TRG(*ALL)
STATE(*DISABLED)
```

This command disables all triggers for the PERSONNEL file in the ADMN library.

The following command causes all triggers to be called again:

```
CHGPFTRG FILE(ADMN/PERSONNEL) TRG(*ALL)
STATE(*ENABLED)
```

Error messages for CHGPFTRG

*ESCAPE Messages

CPF32C6

Trigger operation not successful.

CHGPF (Change Physical File) Command Description

CHGPF Command syntax diagram

Purpose

The Change Physical File (CHGPF) command changes the attributes of a physical file and all its members. The changed attributes are also used for all members subsequently added to the file. To change the attributes of a specific member, use the Change Physical File Member (CHGPFM) command.

Restrictions:

1. The user of this command must have object management authority or object alter authority for the file and execute authority to the library. An exclusive-no-read lock is required, which means no one can be using the file for any purpose.
2. If a request to make an existing file re-use deleted records is made, but there are logical files over the physical file that specify "FIFO" or "LIFO" ordering for duplicate keys, the change is not allowed.

Required Parameter

FILE Specifies the qualified name of the physical file to be changed.

Note:

If a distributed data management (DDM) file is specified, then the physical file specified on the RMTFILE parameter of the Create Distributed Data Management File (CRTDDMF) command is changed on the remote system specified on the RMTLOCNAME parameter on the CRTDDMF command. More information is outlined in the SYSTEM parameter of this command.

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.

Optional Parameters**SYSTEM**

Specifies whether the physical file is changed on the local system or on a remote system.

***LCL:** The physical file is changed on the local system.

***RMT:** The physical file is changed on a remote system using DDM. The physical file name specified on the FILE parameter must be the name of the DDM file (created by using the Create Distributed Data Management File (CRTDDMF) command). The DDM file contains the name of the physical file to be changed (RMTFILE parameter on the CRTDDMF command) and the name of the remote system (RMTLOCNAME parameter on the CRTDDMF command) on which the file is to be changed.

***FILETYPE:** If the name specified on the FILE parameter is a DDM file, the physical file is changed on the remote system specified by the RMTLOCNAME parameter of that DDM file. Otherwise, the name specified on the FILE parameter to be changed must be the name of a local physical file.

SRCFILE

Specifies the qualified name of the source file used to change the physical file. The source file contains the specifications that describe the record format and its fields, and the access path for the file and its members. The data description specifications (DDS) that are made are described in the Database Programming topic in the Information Center and DDS Reference topic in the Information Center.

If the format attributes are changed, the data in the existing file is converted to the new attributes.

Attention:

1. The data in the existing file is converted to the new format based on field names. If the name of a field is changed, its existing data is lost.
2. Because you are converting data, it is strongly recommended that you save the file before you issue this command.

If the access path attributes are changed or the attributes of one of the key fields in the format are changed, a new access path may need to be built.

Note: When the data or the access path attributes are changed, the change file operation can take a long time to complete. Status messages are sent to keep the interactive user informed of the progress of the operation.

***NONE:** No source file is specified. Neither the format nor the access path attributes for the file are changed.

QDDSSRC: The source file, QDDSSRC, contains the DDS used to change the physical file.

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.

source-file-name: Specify the name of the source file that contains the DDS used to change the physical file.

SRCMBR

Specifies the name of the source file member that contains the DDS for the physical file being changed.

Note: This parameter is valid only when a source file is specified on the SRCFILE parameter.

***FILE:** The source file member name is the same as the name of the physical file being changed.

source-file-member-name: Specify the name of the source file member used to change the physical file.

OPTION

Specifies the type of output produced when the file is changed. A maximum of four of the following values can be specified in any order on this parameter. If neither or both of the values on an option are specified, the underlined value is used.

Notes:

1. This parameter is valid only when a source file is specified on the SRCFILE parameter.
2. The underlined values on this parameter are similar to, but are not actually default values, and therefore they cannot be changed with the Change Command Default (CHGCMDDFT) command.

Source Listing Options

***SRC** or ***SOURCE:** A printout is created of the source statements used to change the file, and of the errors that occur.

***NOSRC** or ***NOSOURCE**: No printout of the source statements is created unless errors are detected. If errors are detected, they are listed along with the keyword or record format that caused the error.

Program Listing Options

***LIST**: An expanded source printout is created, showing a detailed list of the file specifications that result from the source statements and references to other file descriptions.

***NOLIST**: An expanded source printout is not created.

Second-Level Message Text Options

***NOSECLVL**: The messages section of the DDS printout does not contain the second-level message for the errors found during DDS processing.

***SECLVL**: Second-level message text is included in the source listing.

Event File Creation Options

***NOEVENTF**: The compiler does not produce an event file for the CoOperative Development Environment/400 product.

***EVENTF**: The compiler produces an event file that can be used by the CoOperative Development Environment/400 (CODE/400) product. The event file is created as a member in the file EVFEVENT in your object library. The CODE/400 product uses this file to offer error feedback integrated with the CODE/400 editor. This value is normally specified by the CODE/400 product on your behalf.

GENLVL

Specifies the severity level of errors at which the change operation fails. If errors occur that have a severity level greater than or equal to this value, the operation ends.

Notes:

1. This parameter is valid only when a source file is specified on the SRCFILE parameter.
2. This parameter applies only to messages created while processing the DDS source. Messages created elsewhere in the file change process are not affected by this parameter.
3. The value on this parameter must be greater than or equal to the value specified on the FLAG parameter.

20: The error severity level of 20 or above ends the change operation.

severity-level: Specify a severity level ranging from 0 through 30. The file is not changed if the severity level specified is 0.

FLAG Specifies the minimum severity level of messages to be listed in the DDS source listing.

Note:

This parameter is valid only when a source file is specified on the SRCFILE parameter.

0: The spooled file is owned by the original user profile of the job. If the job has switched to a new user profile, the original user profile is still the owner of the spooled file.

severity-level: Specify the minimum severity level of messages to be listed. Valid values range from 0 through 30. The severity level specified must be less than or equal to the severity level specified on the GENLVL parameter.

DLTDEPLF

Specifies whether the logical files that are dependent on a field are deleted if that field is removed from the file as part of the change operation. A field is removed from the file if its definition is not included in the DDS identified in the source file.

Note: This parameter is valid only when a source file is specified on the SRCFILE parameter.

***NO:** The logical files are not deleted. The field on which the access paths are dependent is not removed and the file is not changed. The command ends.

***YES:** The logical files that are dependent on a field that is removed from the file are deleted.

RMVCST

Specifies whether the constraint relationships are removed in the associated set of dependent files when you are deleting a parent file of a referential constraint.

Note: This parameter is valid only when DLTDEPLF(*YES) is specified.

***RESTRICT:** The constraint relationships are not removed. The parent file is not removed and the file is not changed. The command ends.

***REMOVE:** The constraints that are dependent on a field that is removed from the file are removed. If a unique constraint is removed, any referential constraints that are dependent on the unique constraint are also removed.

EXPDATE

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

Note: An attempt to open a file member that has exceeded its expiration date causes an error message to be sent to the user. (The Remove Member (RMVM) command is used to remove the member.) If EXPDATE is specified, all members in the file are changed. The expiration date must be later than or equal to the current date. The date must be specified in the format defined by the job attributes, DATFMT and DATSEP. The date must be enclosed in apostrophes if special characters are used in the format.

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

***NONE:** No expiration date is specified.

expiration-date: Specify the date after which the member is not used.

MAXMBRS

Specifies the maximum number of members that the physical file can have at any time. The maximum number of members specified must be greater than or equal to the current number of members in the file.

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

***NOMAX:** The system maximum is used.

maximum-members: Specify the maximum number of members that the physical file can have. Valid values range from 1 through 32767.

ACCPHSIZ

Specifies the maximum size of auxiliary storage that can be occupied by the following kinds of access paths:

- The access paths that are associated with a physical file that has a keyed sequence access path.
- The access paths that are created for referential or unique constraints, and that can be added to this file with the Add Physical File Constraint (ADDPFCST) command.

Changing the value for this file causes the access paths that are owned by the file to be rebuilt.

Note: This parameter does not apply to access paths that are created for logical files or for queries that refer to the data in a physical file.

Performance Tip	For optimum performance, consider whether there is high contention for keys within the access paths when selecting the value on this parameter: <ul style="list-style-type: none">• When there is little or no contention for keys, specifying the *MAX4GB value generally provides better performance.• When there is high contention for keys, specifying the *MAX1TB value generally provides better performance.
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***SAME:** The value does not change.

***MAX4GB:** The access paths associated with this file can occupy a maximum of four gigabytes (4,294,966,272 bytes) of auxiliary storage. This value provides compatibility with releases of the operating system earlier than Version 3 Release 6 Modification 0.

***MAX1TB:** The access paths associated with this file can occupy a maximum of one terabyte (1,099,511,627,776 bytes) of auxiliary storage.

Note: This value is not supported on releases of the system earlier than Version 3 Release 6 Modification 0 (V3R6M0). Therefore, if an attempt is made to save a physical file that has this attribute, and the save operation specifies a target release earlier than V3R6M0, the save operation might be unsuccessful, or if successful, the access paths are not saved. If the save operation is successful and the saved version of the file is then used to restore the physical file, the system rebuilds all of the access paths.

MAINT

Specifies the type of access path maintenance used for all members of the physical file. This parameter is valid only if the file has a keyed access path.

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

***IMMED:** The access path is maintained for each physical file member whether the source physical file is opened or closed. The access path is changed whenever a record is updated, added to, or deleted from a member of this file or a logical file member based on a member of this file.

***REBLD:** The access path is rebuilt when a file member is opened. The access path is continuously maintained until the member is closed; then the access path maintenance is ended. *REBLD is not valid for access paths that require unique key values.

***DLY:** The maintenance of the access path is delayed until the member is opened for use. The access path is changed only for records that are added, deleted, or changed since the file was last closed. (While the file is open, all changes made to based-on members are immediately reflected in the access paths of the members of the opened files, no matter what is specified for the MAINT parameter.) To prevent a lengthy rebuild time when the file is opened, *DLY should be specified only when the number of changes to the access path between a close operation and the next open operation are small (when key fields in records for this access path change infrequently). *DLY is not valid for access paths that require unique key values.

If the number of changes between a close operation and the next open operation reaches approximately 10% of the access path size, the system stops saving changes and the access path is completely rebuilt the next time the file is opened.

RECOVER

Specifies, for files having immediate or delayed maintenance on their access paths, when recovery processing of the file is done if a system failure occurs while the access path is being changed.

An access path having immediate or delayed maintenance is rebuilt during IPL (before any user can run a job), after the IPL is completed (while other jobs are running), or when the file is next opened. While the access path is being rebuilt, the file must not be used by any job.

During the IPL, an Override Access Path Recovery display lists those access paths that must be recovered and what the RECOVER parameter value is for each. The user can override the RECOVER parameter value on this display. More information is available in the Backup and Recovery topic in the Information Center.

An access path having rebuild maintenance is rebuilt the next time its file is opened, the time that it normally is rebuilt. This parameter is valid only for files with a keyed access path.

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

***NO:** The access path of the file is not rebuilt. The file's access path, if not valid, is rebuilt when the file is next opened.

***AFTIPL:** The file has its access path rebuilt after the IPL operation is completed. This option allows other jobs not using this file to begin processing immediately after the IPL has been completed. If a job tries to open the file while its access path is being rebuilt, a file open exception occurs.

***IPL:** The file has its access path rebuilt during the IPL. This ensures that the file's access path is rebuilt before the first user program tries to use it; however, no jobs start running until after all files that specify RECOVER(*IPL) have their access paths rebuilt.

FRCACPTH

Specifies, for files with keyed access paths only, whether access path changes are forced to auxiliary storage along with the associated records in the file whenever the access path is changed. FRCACPTH(*YES) minimizes (but does not remove) the possibility that an abnormal job end can cause damage to the access path, which then requires it to be rebuilt.

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

***NO:** The access path and changed records are not forced to auxiliary storage whenever the access path is changed.

***YES:** The access path and changed records are forced to auxiliary storage whenever the access path is changed. If this value is specified, MAINT(*REBLD) cannot be specified.

FRCACPTH(*YES) slows the response time of the system if the access path is changed in an interactive job. If the access path is changed frequently, the entire performance of the system is affected.

SIZE Specifies the initial number of records in each member of the file, the number of records in each increment that is automatically added to the member size, and the number of times the increment is automatically applied.

A change to the initial number of records takes effect when a new member is added to the file or when a current member is cleared, restored, or reorganized. A change to the number of records to add for each increment, and the number of times the increment is automatically applied take effect the next time a member of the file needs an increment.

The total size of the member (first number of records plus the number of records added per increment times the number of increments) must be larger than the current size of the member. If it is smaller than the current size of the member, an error message is sent to the user, and the size does not change.

Element 1: Number of Records

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

number-of-records: Specify the number of records (ranging from 1 through 16777215) that can be inserted before an automatic extension occurs. If automatic extensions are not wanted, enter zeros for the second and third values in the list.

Element 2: Increment Value

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

increment-value: Specify the number of additional records (ranging from 0 through 32767) which, if greater than 10% of the size of the member when the maximum number of records is reached, are to be added to the member during an automatic extension.

If the number specified is not greater than 10% of the member size and not equal to zero, the member size is increased by 10%.

Specify 0 to prevent automatic extensions. This value must be 0 if the value for the number of increments is 0.

Element 3: Maximum Number of Increments

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

number-of-increments: Specify the maximum number of increments (ranging from 0 through 32767) that can be automatically added to the member. Enter a 0 to prevent automatic extensions. If the increment value is 0, the number of increments must be 0.

Other Single Values

***NOMAX:** The system maximum is used. This option cannot be specified if ALLOCATE(*YES) is in effect.

ALLOCATE

Specifies whether storage space is allocated for the initial number of records (SIZE parameter) for each physical file member when it is added. This change takes effect the next time a new member is added to the file or when a current member is cleared, restored, or reorganized.

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

***NO:** When a new member is added, or when an existing member is cleared, restored, or reorganized, the system determines whether additional space is needed and allocates that amount.

***YES:** The amount of storage space specified in the first value of the SIZE parameter is allocated each time a new member is added, or each time an existing member is cleared, restored, or reorganized. If that amount of storage space is not available, the member is not added, and a message is sent to the user. If this parameter value is used, SIZE(*NOMAX) must not be in effect.

UNIT This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 3 Release 6 Modification 0 of the AS/400 system. For information on using auxiliary storage pools (ASPs), refer to the Backup and Recovery topic in the Information Center.

You can specify the value *SAME, the value *ANY, or a value ranging from 1 through 255 on this parameter.

FRCRATIO

Specifies the number of inserted, updated, or deleted records that are processed before they are forced to auxiliary (permanent) storage. More information is in Commonly used parameters.

If the physical file is being recorded in a journal, a larger force write ratio, or *NONE, should be specified. More information on journal management is in the Journal management article in the Information Center.

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

***NONE:** There is no force write ratio; the system determines when the records are written to auxiliary storage.

number-of-records-before-force: Specify the number of inserted, updated, or deleted records that are processed before they are explicitly forced to auxiliary storage.

WAITFILE

Specifies the number of seconds that the program waits for the file resources and session resources to be allocated when the file is opened, or for the device or session resources to be allocated when an acquire operation is performed to the file. If those resources are not allocated within the specified wait time, an error message is sent to the program. More information is in Commonly used parameters.

Note:

An immediate allocation of the device by the device resource is required when an acquire operation is performed to the file.

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

***IMMED:** The program does not wait; when the file is opened, an immediate allocation of the file resources is required.

***CLS:** The job default wait time is used as the wait time for the file resources being allocated.

number-of-seconds: Specify the number of seconds that a program waits for the file resources to be allocated to the job. Valid values range from 1 through 32767 seconds.

WAITRCD

Specifies the number of seconds that a program waits for a record to be updated or deleted, or for a record read in the commitment control environment with LCKLVL(*ALL) specified. More information on record locking is in the Database Programming topic in the Information Center. If the record is not allocated in the specified wait time, an error message is sent to the program.

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

***IMMED:** The program does not wait; when a record is locked, an immediate allocation of the record is required.

***NOMAX:** The system maximum is used.

number-of-seconds: Specify the number of seconds that a program waits for the file resources to be allocated to the job. Valid values range from 1 through 32767 seconds.

SHARE

Specifies whether the open data path (ODP) for the physical file is shared with other programs in the routing step. When an ODP is shared, the programs accessing the file share facilities such as the file status and the buffer.

More information on shared database files is in the Database Programming topic in the Information Center.

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

***NO:** The ODP created by the program with this attribute is not shared with other programs in the routing step. Every time a program opens the file with this attribute, a new ODP to the file is created and activated.

***YES:** The ODP created with this attribute is shared with each program in the routing step that also specifies SHARE(*YES) when it opens the file, provided the scope specified on the OPNSCOPE keyword for the subsequent open of the file is compatible with the scope of the original open.

Note:

When SHARE(*YES) is specified and control is passed to a program, a read operation in that program retrieves the next input record. A write operation produces the next output record.

DLTPCT

Specifies the maximum percentage of deleted records that any member in the physical file can have. The percentage is based on the number of deleted records compared with the total record count in a member. This change takes effect the next time the file is opened and closed.

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

***NONE:** No percentage is specified; the number of deleted records in the file members is not checked when a member is closed.

deleted-records-threshold-percentage: Specify the largest percentage of deleted records, ranging from 1 through 100, that any member in the file can have. If a value is larger than this percentage, a message is sent to the system history log (QHST) whenever the file is closed.

SRTSEQ

Specifies the sort sequence used for this file. The sort sequence value is used with the LANGID parameter to determine which sort sequence table is used.

Note:

Changing the value for this file causes the access paths that are owned by the file to be rebuilt.

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

***SRC:** The table specified on the ALTSEQ keyword in the data description specification (DDS) is used. If the ALTSEQ keyword is not used in the DDS, this value defaults to the *JOB value on this parameter.

***JOB:** The sort sequence value used is the value for the job issuing this command to change the physical file.

***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.

***LANGIDUNQ:** The sort sequence table must contain a unique weight for each character in the code page.

***HEX:** A sort sequence table is not used. The hexadecimal values of the characters are used to determine the sort sequence.

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.

sort-sequence-table-name: Specify the name of the sort sequence table to use.

LANGID

Specifies the language identifier used when *LANGIDSHR or *LANGIDUNQ is specified on the SRTSEQ parameter. The language identifier is used with the SRTSEQ and CCSID parameters to determine which sort sequence table the file will use.

Note:

Changing the value for this file causes the access paths that are owned by the file to be rebuilt unless the SRTSEQ attribute is *HEX.

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

***JOB:** The language identifier specified in the job description is used.

language-identifier: Specify a language identifier.

REUSEDLT

Specifies whether the space made available by deleting data entries is reclaimed.

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

***NO:** The file does not reclaim space made available by deleting data entries.

***YES:** The file reclaims space made available by deleting data entries. More information about the algorithm used to reclaim the deleted data is in the Database Programming topic in the Information Center.

CCSID

Specifies the coded character set identifier (CCSID) being used to describe the character data in the fields of the file.

Notes:

1. If this parameter is specified, SRCFILE(*NONE) also must be specified.
2. The CCSID cannot be changed if:

- Any explicit field- or file-level CCSIDs are specified on the CCSID keyword in the DDS for fields in the physical file, the IDDU, or the SQL.
- The physical file is a program-described file.
- The physical file's format contains a concatenated field.

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

***HEX:** The CCSID 65535 is used, which indicates that the character data in the fields is treated as bit data and is not converted.

coded-character-set-identifier: Specify the CCSID being used.

If a DBCS field is in the physical file, the CCSID specified must have a corresponding mixed CCSID. More information on valid CCSIDs is in the Globalization topic in the Information Center.

LVLCHK

Specifies whether the record format level identifiers in the program are checked against those in the logical file when the file is opened. If so, the record format identifiers in the program must match those in the logical file. This value can be overridden by the Override with Database File (OVRDBF) command at run time.

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

***YES:** The level identifiers of the record formats are checked when the file is opened. If the level identifiers do not match, an error message is sent to the program requesting the open operation, and the file is not opened.

***NO:** The level identifiers are not checked when the file is opened.

NODGRP

Specifies the name of a node group across which the file is distributed.

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

***NONE:** The file is not a distributed file. All data associated with the file is on the local system.

The name of the node 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.

node-group-name: Specify the name of a node group associated with this file.

PTNKEY

Specifies the field, or set of fields, that is used as the partition key for distributing data.

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

Note:

This parameter is not valid when NODGRP(*NONE) is specified. If a node group name is specified (NODGRP parameter), one or more field names must be specified.

partition-key-field-name: Specify the name of a field to be used to define the partition key.

TEXT Specifies the text that briefly describes the physical file. More information is in Commonly used parameters.

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

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Examples for CHGPF

Example 1: Changing Expiration Date for All Members

```
CHGPF FILE(QGPL/INV) EXPDATE('10/31/89')
```

This command changes the expiration date for all members in physical file INV to October 31, 1989.

Example 2: Changing File Size

```
CHGPF FILE(QGPL/DDMF) SIZE(*NOMAX) SYSTEM(*RMT)
```

This command changes the size of file INV located in the QGPL library on the remote system. Prior to specifying the above command, this user had created a DDM file by specifying the command CRTDDMF FILE(QGPL/DDMF) RMTFILE(QGPL/INV) RMTLOCNAME(AS400).

Example 3: Adding, Removing, and Changing Fields

```
CHGPF FILE(QGPL/T1) SRCFILE(QDDSSRC)
```

This command adds fields, removes fields, and changes field attributes based on the DDS in the source file member T1 in the source file QDDSSRC. Prior to specifying the above command, the user had edited the source member.

Error messages for CHGPF

*ESCAPE Messages

CPF326A

Operation not successful for file &1 in library &2.

CPF327F

Operation not successful for file &1 in library &2.

CPF7304

File &1 in &2 not changed.

CPF7305

File &1 in &2 changed but distributed requests failed.

CHGPF CST (Change Physical File Constraint) Command Description

CHGPF CST Command syntax diagram

Purpose

The Change Physical File Constraint (CHGPF CST) command changes the state of one or more referential constraints between local database files. The local database files of a constraint are physical files that have been defined in a parent and dependent relationship with either the SQL interface or the Add Physical File Constraint (ADDPFCST) command.

The state of a referential constraint can be changed to disabled (stopped from providing referential integrity) or, if it has been disabled, to enabled (providing referential integrity again). The alternative to changing the state of the constraint is to remove it when you do not want it to be used, and add it again when you need it.

Restrictions:

1. You must have object management or object alter authority to the physical file.
2. You must have execute authority to the library qualifier of the physical file.

Required Parameters

FILE Specifies the dependent file for which a constraint is being changed, and the library of the dependent file. The file must be a physical file and it must allow a maximum of one member (MAXMBRS(1)).

The name of the physical 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.

CST Specifies the name of the constraint relationship being changed.

***ALL:** All of the constraint relationships for the dependent file are changed.

***CHKPND:** The constraint relationships that have records that possibly are in violation of the constraints and are pending verification (check pending) are changed.

constraint-name: Specify the name of the constraint relationship. The case is preserved when lowercase characters are specified.

Optional Parameter

STATE

Specifies the state to which the constraint is being changed. You can use this parameter to temporarily stop a defined or established constraint from providing referential integrity (disable), or to make a constraint that was previously disabled to start working again (enable).

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

***ENABLED:** The constraint that was disabled starts providing referential integrity again.

***DISABLED:** The constraint stops providing referential integrity.

Examples for CHGPFCST

```
CHGPFCST FILE(ADMN/PERSONNEL) CST(*CHKPND)
STATE(*DISABLED)
```

This command disables the referential constraints that have caused records in the PERSONNEL file of the ADMN library to be in check pending status. While referential integrity is disabled, the user can correct the records that are causing the check pending.

After the records are corrected, the following command is run to provide referential integrity again.

```
CHGPF CST FILE (ADMN/PERSONNEL) CST (*CHKPND)
STATE (*ENABLED)
```

Error messages for CHGPF CST

*ESCAPE Messages

CPF32B2

Constraint cannot be changed for file &1.

CHGPFM (Change Physical File Member) Command Description

CHGPFM Command syntax diagram

Purpose

The Change Physical File Member (CHGPFM) command is used to change the attributes of a physical file member.

Restrictions:

1. To change a physical member, the user must have object management or object alter authority for the physical file that contains the member, and execute authority to the file library.
2. No other user may be clearing or initializing the member, nor may any user be holding the file for exclusive use. Other users may have the member open, but the changes made to the member are not reflected in any open members. For the changes in open members to be effective, first close the member (this must be a full close if the member is open SHARE(*YES)) and then open it again.

Required Parameters

FILE Specifies the qualified name of the physical file that contains the member to be changed.

The name of the physical 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.

MBR Specifies the name of the member, or the first member (*FIRST) to be changed.

***FIRST:** The first member in the database file is used.

physical-file-member-name: Specify the name of the physical file member to be changed.

Optional Parameters

SRCTYPE

Specifies the source type of a member if this is a source file. The source type option is a character string of no more than 10 characters representing a name. The first character must be alphabetic (including the characters \$, @, or #), and the remaining characters must be alphanumeric or an underline.

Notes:

1. The user of this command must assure the validity of the source type option.
2. The source type option can only be used with this command to change the source type attribute of a source file member.

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

***NONE:** No source type is specified.

source-type: Specify the source type of a member.

EXPDATE

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

Note:

An attempt to open a file member that has exceeded its expiration date causes an error message to be sent. A member that has exceeded its expiration date may be changed to not exceed its expiration date by changing the EXPDATE parameter. The expiration date must be later than or equal to the current day's date.

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

***NONE:** No expiration date is specified.

expiration-date: Specify the date after which the member cannot be used. The date is specified in the format defined by the job attributes, DATFMT and DATSEP. The date is enclosed in apostrophes if special characters are used in the format.

SHARE

Specifies whether the open data path (ODP) for the physical file member is shared with other programs in the routing step. When an ODP is shared, the programs accessing the file share facilities such as the file status and the buffer.

More information on shared database files is in the Database Programming topic in the Information Center.

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

***NO:** The ODP created by the program with this attribute is not shared with other programs in the routing step. Every time a program opens the file with this attribute, a new ODP to the file is created and activated.

***YES:** The ODP created with this attribute is shared with each program in the routing step that also specifies SHARE(*YES) when it opens the file.

Note:

When SHARE(*YES) is specified and control is passed to a program, a read operation in that program retrieves the next input record. A write operation produces the next output record.

TEXT Specifies the text that briefly describes the physical file member. More information is in Commonly used parameters.

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

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CHGPFM

```
CHGPFM FILE(QGPL/INV) MBR(FEB) EXPDATE('10/31/90')
```

This command changes the member named FEB in the physical file INV in the QGPL library so that the expiration date of the member is now October 31, 1990.

Error messages for CHGPFM

*ESCAPE Messages

CPF3288

Member &3 file &1 in &2 not changed.

CHGPTR (Change Pointer) Command Description

CHGPTR Command syntax diagram

Purpose

The Change Pointer (CHGPTR) command changes the value of a pointer variable in a program. The value of the program pointer specified can be changed to point to a new system object (SYSOBJ), to a new space pointer address (ADR), or to a new offset within a space object (OFFSET). This command is not normally used in high-level language (HLL) programs.

Restrictions:

1. This command is shipped with public *EXCLUDE authority, and the QSRV user profile has private authority to use the command.
2. This command is valid only for changing program variables that are used as pointers and is valid only in debug mode. To start debug mode, refer to the STRDBG (Start Debug) command.
3. This command cannot be used if the user is servicing another job, and that job is on a job queue, or is being held, suspended, or ended.
4. This command cannot be used to change variables in a bound program.
5. This command cannot be used to change variables that are write-protected or within the system domain, unless the user has *SERVICE special authority.

Required Parameters

PTR Specifies the name of the pointer (program variable) whose value is being changed, allowing the pointer to point to a different address.

If the pointer variable is an HLL pointer (which was declared in the source for a high-level language program), a space pointer or null value can be assigned to the pointer, or the offset of the pointer can be changed, but the variable cannot be set with a system pointer value. If the user specifies a pointer that is not an HLL pointer, or if the user specifies an object-definition-table-vector (ODV) number for a pointer which is an HLL pointer, this restriction does not apply. More information on testing and debugging at the machine interface level is in the CL Programming



book.

Element 1: Program Variables

'program-variable': Specify the name of the pointer variable whose value is being changed. The name must be enclosed in apostrophes if it contains special characters.

If the pointer (program variable) is an array, the subscripts representing the element in the array to be changed must be specified. Up to 132 characters may be specified for this pointer (program

variable) entry. This includes any qualifiers, subscripts, embedded blanks, parentheses, and commas. It does not include the enclosing apostrophes when special characters are not used. An integer, machine-interface object-definition-table-vector (MI ODV) number, or a numeric variable name can be specified for a subscript. For more information on the program-variable value, see parameter values used for testing and debugging in the Information Center.

Some examples are:

```
PTR('A(2,INDEX2)')  
PTR(PTR3)
```

Element 2: Basing Pointers

'basing-pointer': Specify the basing pointers for the pointer being changed. In some languages, the pointer (program variable) can be based on a pointer variable. This set of values allows the user to specify the basing pointers for the pointer being changed. Each basing pointer name must be enclosed in apostrophes if contains special characters.

If the basing pointer is an array, the subscripts representing an element in the array must be specified. Up to 132 characters can be specified for a basing pointer name. This includes any qualification, embedded blanks, parentheses, and commas. It does not include the enclosing apostrophes when special characters are used. An integer, MI ODV number, or a numeric variable name can be specified for a subscript. For more information on the basing pointer value, refer to parameter values used for testing and debugging in the Information Center.

Some examples are:

```
PTR('PTR1(B,5)' 'PTR2(C)')  
PTR(PTR1 (BASEPTRA BASEPRT2))
```

SYSOBJ

Specifies that the pointer is set to either a system pointer or to a space pointer that addresses a particular system object, or to a null pointer value. This parameter cannot be specified when an HLL pointer is specified for the PTR parameter.

***NULL:** The system pointer is set to a null; that is, it no longer points to any system object nor does it have a pointer type. The OBJTYPE parameter cannot be specified if *NULL is specified here.

The name of the 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.

object-name: Specify the name of the object to which the system pointer is set. The pointer variable is set to one of the following:

- A system pointer value (if PTRTYPE(*SYP) is specified, or if PTRTYPE(*SAME) is used and the pointer variable already contains a system pointer)
- A space pointer value (if PTRTYPE(*SPP) is specified or if PTRTYPE(*SAME) is used and the pointer variable already contains a space pointer)

The user who specifies this value must have at least *USE authority for the specified object.

OBJTYPE

Specifies the object type of the system object specified in the SYSOBJ parameter to which the pointer named in the PTR parameter is set. More information on this parameter is in Commonly used parameters.

ADR Specifies the name of the program variable (if any) to which the specified space pointer is to point (that is, the program variable's address).

***NULL:** The space pointer is set to a null; it no longer points to the address of any space object nor does it have a pointer type.

Element 1: Program Variables

'program-variable': Specify the name of the program variable to which the space pointer is set. The name must be enclosed in apostrophes if it contains special characters.

If an array is specified without any subscripts, the pointer is set to the address of the first element in the array. Up to 132 characters may be specified for this program variable entry. This includes any qualifiers, subscripts, embedded blanks, parentheses, and commas. It does not include the enclosing apostrophes when special characters are used. An integer, MI ODV number, or numeric variable name can be specified for a subscript. For more information on the program-variable value, refer to parameter values used for testing and debugging in the Information Center.

Some examples are:

```
ADR('VAR1(INX1,3)')  
ADR(DSPARRAY)
```

Element 2: Basing Pointers

'basing-pointer': In some languages, the program variable may be based on a pointer variable. This set of values allows the user to specify the basing pointers for the variable that is addressed. Each basing pointer name must be enclosed in apostrophes if it contains special characters.

If the basing pointer is an array, the subscripts representing an element in the array must be specified. Up to 132 characters can be specified for a basing pointer name. This includes any qualifiers, embedded blanks, parentheses, and commas. It does not include the enclosing apostrophes when special characters are used. An integer, MI ODV number, or a numeric variable name can be specified for a subscript. For more information on the basing pointer value, refer to parameter values used for testing and debugging in the Information Center.

Some examples are:

```
ADR('VAR1(VAR2,5)' 'PGMPTR(5)')  
ADR(VAR5 (BASEPTR1 BASEPTR2))
```

OFFSET

Specifies the value to which the offset portion of the specified space pointer is set. Specify the number of bytes from the start of the space object to which the space pointer is set.

Optional Parameters

PTRTYPE

Specifies the type of pointer to which the pointer named in the PTR parameter is set.

An HLL pointer cannot be changed to a system pointer value. HLL pointers should be changed by using the CHGHLLPTR command.

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

***SYP:** The pointer type is a system pointer.

***SPP:** The pointer type is a space pointer.

PGM Specifies the name of the program that contains the pointer whose value is to change.

***DFTPGM:** The program previously specified as the default program contains the pointer whose value is to change.

program-name: Specify the name of the program that contains the pointer whose value is to change. The same name must already have been specified in the Start Debug (STRDBG) command or Add Program (ADDPGM) command.

RCRLVL

Specifies which recursion level of the program contains the pointer whose value is being changed. Changes made to static variables automatically affect all recursion levels. Recursion level 1 is the first (or earliest) call of the program, recursion level 2 is the second call of the program, and so on to the last (most recent) recursion level in the stack. For example, if program A calls program B, and then program B calls program A, a new recursion level of program A is formed. If the first recursion level of program A contains the pointer being changed, RCRLVL(1) must be specified. Some high-level languages also allow recursive procedures. The appropriate high-level language manual has more information on these programs.

***LAST:** The last, most recent, call of the specified program contains the pointer being changed.

recursion-level-number: Specify the number of the recursion level of the program that contains the pointer being changed.

Example for CHGPTR

```
CHGPTR PTR(DATAFILPTR) SYSOBJ(QGPL/MYFILE)
      OBJTYPE(*FILE)
```

This command changes the value of the pointer DATAFILPTR that is used in the default program in the debug mode. The pointer value is changed to point to the file called MYFILE, which is stored in the QGPL library.

Error messages for CHGPTR

***ESCAPE Messages**

CPF1999

Errors occurred on command.

CHGPWRSCD (Change Power On/Off Schedule) Command Description

CHGPWRSCD Command syntax diagram

Purpose

The Change Power On/Off Schedule (CHGPWRSCD) command is used to display and change the system's power on/off schedule from the Change Power On/Off Schedule display. On the display, the user can change power on or power off default values for the days of the week or change the values for a particular day. The user can also change or set the time the system sends a message that warns users of an impending power off. The changes the user makes in the power on/off schedule are effective immediately.

Restriction: The user of this command must have *ALLOBJ and *SECADM special authority and must have authority to the Power Down System (PWRDWN SYS) command.

There are no parameters for this command.

Example for CHGPWRSCD

```
CHGPWRSCD
```


This command displays the Change Power On/Off Schedule display.

Error messages for CHGPWRSCD

*ESCAPE Messages

CPF1E2A

Unexpected error in QSYSSCD job.

CPF1E2B

Power scheduler and cleanup options not found.

CPF1E23

Power schedule or cleanup options in use by another user.

CPF1E27

Not authorized to change power on/off schedule.

CPF1E99

Unexpected error occurred.

CHGPWRSCDE (Change Power On/Off Schedule Entry) Command Description

CHGPWRSCDE Command syntax diagram

Purpose

The Change Power On/Off Schedule Entry (CHGPWRSCDE) command is used to change the system's power on/off schedule. The user can change power-on or power-off default values for the days of the week or change the values for a particular day. The user can also change or set the time the system sends a message that warns users of an impending power off. The changes the user makes in the power on/off schedule are effective immediately.

Restriction: The user of this command must have *ALLOBJ and *SECADM special authority and authority to the Power Down System (PWRDWNSYS) command.

Required Parameter

DAY Specifies the day or days for which the user wants to change the power on/off schedule.

***TODAY:** The schedule for the current date is changed.

***ALL:** The default values for all days of the week are changed.

***DAY-OF-WEEK:** The default values for the specified day of the week are changed.

date: Specify the date to be changed. The date must be specified in the format defined by the job.

Optional Parameters

PWRONTIME

Specifies the power-on time.

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

***NONE:** No power-on time or default power-on time is set.

***DFT:** The power-on time for the date being changed is set to the default value for the day of the week on which the date occurs. This value is allowed only if *TODAY or a specific date is specified on the DAY parameter.

time: Specify the power-on time. 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.

PWROFFTIME

Specifies the power-off time.

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

***NONE**: No power-off time or default power-off time is set.

***DFT**: The power-off time for the date being changed is set to the default value for the day of the week on which the date occurs. This value is allowed only if ***TODAY** or a date is specified on the **DAY** parameter.

time: Specify the power-off time. See the **PWRONTIME** parameter for a description of time formats.

DAYDESC

Specifies the description for the day. The user can enter an explanation of the day's power on/off schedule. This parameter is allowed only if ***TODAY** or a date is specified on the **DAY** parameter.

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

'description': Specify up to 38 characters of text for an explanation of the day's power on/off schedule.

MSGITV

Specifies the number of minutes before the scheduled power off that a message is sent to all work stations warning users of the impending power off. This parameter is allowed only if **DAY(*ALL)** is specified.

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

***DFT**: A message is sent 30 minutes prior to the power off.

message-interval: Specify the message interval. Valid values range from 0 through 60 minutes.

Examples for CHGPWRSCDE

Example 1: Changing the Schedule For An Entire Week

```
CHGPWRSCDE DAY(*ALL) PWRONTIME(0800)
PWROFFTIME(1800)
CHGPWRSCDE DAY(*SAT) PWRONTIME(*NONE)
PWROFFTIME(*NONE)
CHGPWRSCDE DAY(*SUN) PWRONTIME(*NONE)
PWROFFTIME(*NONE)
```

These commands set the power on and power off values for an entire week.

Example 2: Changing the Power-Off Time

```
CHGPWRSCDE DAY('01/22/90') PWROFFTIME(2000)
CHGPWRSCDE DAY('01/22/90') PWRONTIME(*SAME)
```

Either of these commands is used to set the power-off time to 8 p.m. on January 22, 1990.

Example 3: Changing the Power-On Time

```
CHGPWRSCDE DAY(012590) PWROFFTIME(060000)
PWROFFTIME(*NONE)
```

This command sets the power-on time to 6 a.m. for January 25, 1990 and sets no power-off time.

Example 4: Changing Back to the Defaults

```
CHGPWRSCDE DAY(012590) PWROFFTIME(*DFT)
PWROFFTIME(*DFT)
```

This command sets the power on and off times for January 25, 1990 back to the defaults for that day of the week.

Error messages for CHGPWRSCDE

*ESCAPE Messages

CPF1E2A

Unexpected error in QSYSSCD job.

CPF1E2B

Power scheduler and cleanup options not found.

CPF1E2C

Error occurred scheduling next power on and off.

CPF1E23

Power schedule or cleanup options in use by another user.

CPF1E26

Cannot change a date or a time that has passed.

CPF1E27

Not authorized to change power on/off schedule.

CPF1E99

Unexpected error occurred.

CPF2105

Object &1 in &2 type *&3 not found.

CPF9808

Cannot allocate one or more libraries on library list.

CHGPJ (Change Prestart Job) Command Description

CHGPJ Command syntax diagram

Purpose

The Change Prestart Job (CHGPJ) command changes the job attributes of the prestart job in which this command is issued to those in the job description specified in the prestart job entry, or to those in the job description specified in the user profile of the current user. When a program start request is received, the system will set the current user to the user profile specified in the program start request. The current user may subsequently be set to a different value by the Set Profile (QWTSETP) API.

Restrictions:

1. This command must only be called by a prestart job that is servicing a program start request. This command will not work against local prestart jobs.
2. The user must have *USE authority to the job description.

3. To change the OUTQ, the user must have authority to the new output queue and the old output queue. Authority to new output queue must not come from program adoption.
4. This command is conditionally threadsafe. Refer to for additional information.

Optional Parameters

OUTPTY

Specifies the output priority for spooled files produced by this job.

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

***PGMSTRRQS:** The value specified in the job description for the user profile of the current user is used.

***PJE:** The value specified in the job description for the prestart job entry in the subsystem description is used.

PRTTXT

Specifies up to 30 characters of text to be printed at the bottom of each page of output. More information is in Commonly used parameters.

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

***PGMSTRRQS:** The value specified in the job description for the user profile of the current user is used.

***PJE:** The value specified in the job description for the prestart job entry in the subsystem description is used.

PRTDEV

Specifies the qualified name of the default printer device for this job. If OUTQ(*DEV) is specified, the file is placed on an output queue with the same name as the printer.

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

***PGMSTRRQS:** The value specified in the job description for the user profile of the current user is used. If *USRPRF is specified for this parameter value in the job description, the value specified in the user profile of the current user is used.

***PJE:** The value specified in the job description for the prestart job entry in the subsystem description is used. If *USRPRF is specified for this parameter value in the job description, the value specified in the user profile for the prestart job entry (USER parameter) is used.

OUTQ Specifies the qualified name of the output queue.

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

***PGMSTRRQS:** The value specified in the job description for the user profile of the current user is used. If *USRPRF is specified for this parameter value in the job description, the value from the user profile of the current user is used.

***PJE:** The value specified in the job description for the prestart job entry in the subsystem description is used. If *USRPRF is specified for this parameter value in the job description, the value from the user profile for the prestart job entry (USER parameter) is used.

ACGCDE

Specifies the accounting code used for the job.

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

***PGMSTRRQS:** The value specified in the job description for the user profile of the current user is used. If *USRPRF is specified for this parameter value in the job description, the value from the user profile of the current user is used.

***PJE:** The value specified in the job description for the prestart job entry in the subsystem description is used. If *USRPRF is specified for this parameter value in the job description, the value from the user profile for the prestart job entry (USER parameter) is used.

Examples for CHGPJ

Example 1: Changing the Output Priority

```
CHGPJ  OUTPTY(*PGMSTRRQS)
```

This command changes the output priority for spooled files produced by this job to the OUTPTY in the job description associated with the user profile of the program start request.

Example 2: Changing the Output Queue

```
CHGPJ  OUTQ(*PJE)
```

This command changes the output queue for spooled files produced by this job to the OUTPUT queue in the job description specified in the prestart job entry.

Additional Considerations

Warning: Temporary Level 3 Header

Considerations for Attribute Thread Safety

This command is intended to be used to change the job attributes for the prestart job that the command was issued in. All of the attributes are scoped to the job.

The **Threadsafe** column of the following table indicates whether the attributes can be changed in a manner that is threadsafe.

- Yes:** Attributes marked with this value are considered to be threadsafe. These attributes can be changed safely by issuing this command from either the initial thread or from a secondary thread.
- No:** Attributes marked with this value are not threadsafe. An attempt to change these attributes will be denied if multiple threads are active.

Table 1. Attribute and Thread Safety

Attribute	Threadsafe
Job accounting code (ACGCDE)	No
Output priority (OUTPTY)	Yes
Output queue name (OUTQ)	Yes
Print text (PRTTXT)	Yes
Printer device name (PRTDEV)	Yes

Error messages for CHGPJ

*ESCAPE Messages

CPF1314

Value &1 for parameter &2 not allowed.

CPF1317

No response from subsystem for job &3/&2/&1.

CPF1321

Job &1 user &2 job number &3 not found.

CPF1332

End of duplicate job names.

CPF1334

Must be an interactive job for requested change.

CPF1336

Errors on CHGJOB command for job &3/&2/&1.

CPF1337

&3/&2/&1 not authorized to change parameters.

CPF1340

Job control function not performed.

CPF1341

Reader or writer &3/&2/&1 not allowed as job name.

CPF1343

Job &3/&2/&1 not valid job type for function.

CPF1344

Not authorized to control job &3/&2/&1.

CPF1351

Function check occurred in subsystem for job &3/&2/&1.

CPF1352

Function not done. &3/&2/&1 in transition condition.

CHGPJE (Change Prestart Job Entry) Command Description

CHGPJE Command syntax diagram

Purpose

The Change Prestart Job Entry (CHGPJE) command changes a prestart job entry in the specified subsystem description. The associated subsystem may be active when the prestart job entry is changed. Changes made to the entry when the subsystem is active are reflected over time. New prestart jobs created after the command is issued use the new job-related values. This command identifies prestart jobs that are started when the subsystem is started.

Restriction: This command is restricted to a user with *USE and object management authorities for the subsystem description and *USE authority for the user profile and the job description.

Required Parameters

SBSD Specifies the qualified name of the subsystem description that contains the prestart job entry being changed.

The name of the subsystem 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.

subsystem-description-name: Specify the name of the subsystem description that contains the prestart job entry.

PGM Specifies the qualified name of the program that identifies the prestart job entry being changed. This program name is used to match an incoming request with an available prestart job. Two entries with the same program name can exist in a single subsystem description, but they must have different library names. If the program does not exist when the entry is added, a library qualifier must be specified because the qualified name is retained in the subsystem description. 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.

Optional Parameters

USER Specifies the user profile under which the prestart job is initiated. In addition, the current user profile of the prestart job is set to this user whenever the job waits for a request to handle.

Note: When a prestart job is given a request to handle, the current user profile of the job is updated. Refer to the Work Management guide for information on how this profile is determined. This change in current user profile is for authority checking only. None of the other attributes of the user profile, such as the current library (CURLIB) or the initial program to call (INLPGM), are given to the prestart job.

***SAME**: The value of this parameter does not change.

user-profile-name: Specify the name of the user profile used for the prestart job.

JOB Specifies the name of the prestart job that is started.

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

***PGM**: The job name is the same name as the program name, specified by the PGM parameter.

job-name: Specify the name of the prestart job.

JOBID Specifies the qualified name of the job description being used for the prestart job. If the job description does not exist when the entry is changed, a library qualifier must be specified because the qualified job description name is retained in the subsystem description.

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

***USRPRF**: The job description name specified in the user profile, which was named in the USER parameter, is used.

***SBSD:** The job description having the same name as the subsystem description named in the SBSDB parameter is used.

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.

job-description-name: Specify the name of the job description being used for this prestart job. If no library is specified, the library list (*LIBL) of the job where this command is run is used to find the job description.

STRJOBS

Specifies whether prestart jobs are started when the subsystem is started.

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

***YES:** The prestart jobs are started when the subsystem is started.

***NO:** The prestart jobs are not started at the time the subsystem is started. The Start Prestart Jobs (STRPJ) command must be used to start these prestart jobs.

INLJOBS

Specifies the initial number of prestart jobs that are started when the subsystem specified in the SBSDB parameter is started.

Notes:

1. The value of this parameter must be less than or equal to the value of the MAXJOBS parameter.
2. The value of this parameter must be greater than or equal to the value of the THRESHOLD parameter.

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

initial-active-jobs: Specify the number of prestart jobs that are started when the subsystem is started. Valid values range from 1 through 9999.

THRESHOLD

Specifies when additional prestart jobs are started. When the pool of available prestart jobs (jobs available to service requests) is reduced below this number, more jobs (specified by the ADLJOBS parameter) are started and added to the available pool.

Note:

The value of this parameter must be less than or equal to the value of the INLJOBS parameter.

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

threshold-value: Specify the minimum number of prestart jobs that must be available before additional prestart jobs are started. Valid values range from 1 through 9999.

ADLJOBS

Specifies the additional number of prestart jobs that are started when the number of prestart jobs drops below the THRESHOLD parameter.

Note:

The value of this parameter must be less than the value of the MAXJOBS parameter.

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

additional-active-jobs: Specify the number of additional prestart jobs to start. Valid values range from 0 through 999.

MAXJOBS

Specifies the maximum number of prestart jobs that can be active at the same time for this prestart job entry.

Notes:

1. The value of this parameter must be greater than or equal to the value of the INLJOBS parameter.
2. The value of this parameter must be greater than the value of the ADLJOBS parameter.
3. If the value specified for this parameter is changed, the value specified for the CLS parameter might also need to be changed.

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

***NOMAX:** There is no maximum number of jobs that can be active at the same time.

maximum-jobs: Specify the maximum number of prestart jobs that can be active at the same time. Valid values range from 1 through 9999.

MAXUSE

Specifies the maximum number of requests that can be handled by each prestart job before the subsystem ends the job in a controlled manner by issuing an ENDJOB command with a value of *CNTRLD on the OPTION parameter.

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

Note:

If *NOMAX is specified, the prestart jobs may end abnormally because the job has exceeded the allowed maximum job log size, the maximum number of spool files, the maximum CPU time, or the maximum temporary storage space required.

***NOMAX:** There is no maximum number of jobs that can be active at the same time.

maximum-uses: Specify the maximum number of requests that a prestart job can handle before it is ended. Valid values range from 1 through 1000.

WAIT

Specifies whether program start requests wait for a prestart job to become available or are rejected if a prestart job is not immediately available when the program start request is received.

Note:

See the CL Programming  book for the time-out considerations for each communications type.

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

***YES:** Program start requests wait until there is either an available prestart job, or until a prestart job is started, to service the request.

***NO:** Program start requests are rejected if a prestart job is not immediately available when the program start request is received.

POOLID

Specifies the subsystem pool identifier under which the prestart jobs are run.

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

pool-identifier: Specify the subsystem pool identifier under which prestart jobs run. Valid values range from 1 through 10.

CLS Specifies the names of the classes under which the prestart jobs run and how many prestart jobs are allowed to run under each class. Jobs start by using the first class. After the number of jobs specified for the first class is reached, jobs are started under the second class. If the class does not exist when the entry is added, a library qualifier must be specified because the qualified class name is retained in the subsystem description.

Note:

If the value specified for the MAXJOBS parameter is changed, the value for the number of jobs specified for this parameter might need to be changed. If *CALC or *MAXJOBS is specified, the system recalculates the value for the number of jobs to use the specified class.

Element 1: Class Name of First Class

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

***SBSD:** The class having the same name as the subsystem description specified in the SBSBD parameter is used for prestart jobs.

The name of the class 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.

class-name: Specify the name of the class being used for prestart jobs. If no library qualifier is specified, the library list (*LIBL) of the job in which the CHGPJE command is run is used to find the class.

Element 2: Number of Jobs Using First Class

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

***CALC:** The system calculates how many prestart jobs use this class. If one class is specified and *CALC is specified, all of the jobs use the specified class. If two classes are specified and *CALC is specified for both, the first class is the value of the MAXJOBS parameter divided by two, and the second class is the value of the MAXJOBS parameter minus the value calculated for the first class. If a specific number of jobs is specified for one class and *CALC is specified for the other class, the system calculates the difference between MAXJOBS and the specific number of jobs for the *CALC designation.

***MAXJOBS:** All prestart jobs use the specified class.

number-of-jobs: Specify the number of jobs that use this class. The value specified for both classes must total the value specified for the MAXJOBS parameter.

Element 3: Class Name of Second Class

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

***NONE:** This value indicates that only one class is used.

***SBSD:** The class having the same name as the subsystem description, specified on the SBSDB parameter, is used for prestart jobs.

The name of the class 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.

class-name: Specify the name of the class being used for prestart jobs. If no library qualifier is specified, the library list (*LIBL) of the job where the CHGPJE command is run is used to find the class.

Element 4: Number of Jobs Using Second Class

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

***CALC:** The system calculates how many prestart jobs use this class. If one class is specified and *CALC is specified, all of the jobs use the specified class. If two classes are specified and *CALC is specified for both, the first class is the value of the MAXJOBS parameter divided by two, and the second class is the value of the MAXJOBS parameter minus the value calculated for the first class. If a specific number of jobs is specified for one class and *CALC is specified for the other class, the system calculates the difference between MAXJOBS and the specific number of jobs for the *CALC designation.

***MAXJOBS:** All prestart jobs use the specified class.

number-of-jobs: Specify the number of jobs that use this class. The value specified for both classes must total the value specified for the MAXJOBS parameter.

Example for CHGPJE

```
CHGPJE SBSD(QGPL/PJSBS) PGM(QGPL/PGM1) STRJOBS(*NO)
      THRESHOLD(1) ADLJOBS(1)
```

This command changes the prestart job entry for the PGM1 program in the QGPL library in the PJSBS subsystem description contained in the QGPL library. The prestart jobs associated with this entry are not started the next time the PJSBS subsystem description in the QGPL library is started. The STRPJ command is needed to start the prestart jobs. When more jobs need to be started, one additional job is started.

Error messages for CHGPJE

*ESCAPE Messages

CPF1619

Subsystem description &1 in library &2 damaged.

CPF1691

Active subsystem description may or may not have changed.

CPF1697

Subsystem description &1 not changed.

CHGPGP (Change Primary Group) Command Description



CHGPGP Command syntax diagram

Purpose

The Change Primary Group (CHGPGP) command changes the primary group from one user to another. The owner's and other user's private authorities to the object do not change.

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

Restrictions:

1. To change the primary group of an object in the QSYS.LIB  or independent ASP QSYS.LIB  file system, you must have all of the following:
 - Object existence authority for the object
 - Object operational and object existence authorities if the object is a file, library, or subsystem description
 - *ALLOBJ special authority or ownership if the object is an authorization list
 - Object management authority, and the authorities being revoked, for the object if revoking the authority for the old primary group
 - Object management authority for the object and the authorities being given if a value other than *PRIVATE is specified for the DTAAUT parameter
2. The new primary group user cannot be the owner of the object.

Required Parameters

OBJ Specifies the path name of the object that is having its primary group changed. See path names for more information on specifying path names.

NEWPGP

Specifies the name of the user who is to be the new primary group for the object. The user profile must already exist and have a group ID number (gid number) assigned to it.

primary-group: Specify the name of the user who is to be the new primary group.

***NONE**: The object does not have a primary group.

Optional Parameters

DTAAUT

Specifies which of the data authorities the new primary group has to the object.

***OLDPGP**: The new primary group has the authority that the old primary group had to the object.

***PRIVATE**: The new primary group has the private authority that the user has to the object. If the user that is the new primary group does not have private authority to the object, the new primary group has no authority to the object.

***RWX**: The new primary group has object operational and all of the data authorities to the object.

***RX**: The new primary group has object operational and data read and execute authorities to the object.

***RW**: The new primary group has object operational and data read, add, update, and delete authorities to the object.

***WX**: The new primary group has object operational and data add, update, delete, and execute authorities to the object.

***R**: The new primary group has object operational and data read authorities to the object.

***W**: The new primary group has object operational and data add, update, and delete authorities to the object.

***X**: The new primary group has object operational and data execute authorities to the object.

***EXCLUDE**: The new primary group has exclude authority to the object.

***NONE**: The new primary group does not have any of the data authorities to the object.

OBJAUT

Specifies which of the object authorities the new primary group has to the object.

***NONE**: None of the other object authorities (existence, management, alter, or reference) are given to the new primary group. If ***OLDPGP**, ***PRIVATE**, or ***EXCLUDE** are specified for the DTAAUT parameter, this value must be specified.

***ALL**: All of the other object authorities (existence, management, alter, and reference) are given to the new primary group.

You can specify a maximum of four of the following values:

***OBJEXIST**: The new primary group has object existence authority to the object.

***OBJMGT**: The new primary group has object management authority to the object.

***OBJALTER**: The new primary group has object alter authority to the object.

***OBJREF**: The new primary group has object reference authority to the object.

RVKOLDAUT

Specifies whether the authorities for the current primary group are revoked when the primary group is changed to the user specified on the NEWPGP parameter.

***YES**: The authorities for the current primary group are revoked when the primary group is changed to the other user.

***NO**: The authorities for the current primary group become a private authority when the primary group is changed to the other user.

SYMLNK

Specifies whether to change the primary group of the object or of the symbolic link to the object.

***NO:** The primary group of the object, not the symbolic link to the object, is changed.

***YES:** If the object whose primary group is changing is a symbolic link, the primary group for the symbolic link is changed instead of changing the primary group of the object that the symbolic link points to.

Example for CHGPGP

```
CHGPGP OBJ('/QSYS.LIB/USERLIB.LIB/PROGRAM1.PGM')  
NEWPGP(ANN)
```

This command changes the primary group of the program named PROGRAM1, located in the user library named USERLIB, to the group named ANN. The new primary group will have the same authority as the old primary group. The old primary group's authority is revoked.

Error messages for CHGPGP

*ESCAPE Messages

CPDA080

User profile name too long.

CPE3101

A non-recoverable I/O error occurred.

CPE3408

The address used for an argument was not correct.

CPE3418

Possible APAR condition or hardware failure.

CPE3474

Unknown system state.

CPFA0AA

Error occurred while attempting to obtain space.

CPFA0AB

Object name not a directory.

CPFA0AD

Function not supported by file system.

CPFA0A1

An input or output error occurred.

CPFA0A2

Information passed to this operation was not valid.

CPFA0A3

Path name resolution causes looping.

CPFA0A4

Too many open files for process.

CPFA0A5

Too many open files.

CPFA0A7

Path name too long.

CPFA0A9
Object not found.

CPFA0B1
Requested operation not allowed. Access problem.

CPFA0C0
Buffer overflow occurred.

CPFA0C1
CCSID &1 not valid.

CPFA0CE
Error occurred with path name parameter specified.

CPFA0DD
Function was interrupted.

CPFA0D4
File system error occurred.

CPFA08B
Path name cannot begin with *.

CPFA08C
Pattern not allowed in path name directory.

CPFA085
Home directory not found for user &1.

CPFA086
Matching quote not found in path name.

CPFA087
Path name contains null character.

CPFA088
Path name pattern not valid.

CPFA09C
Not authorized to object.

CPFA09D
Error occurred in program &1.

CPFA09E
Object in use.

CPFA09F
Object damaged.

CPFA091
Pattern not allowed in user name.

CPFA092
Path name not converted.

CPFA093
Name matching pattern not found.

CPFA094
Path name not specified.

CPF1F05
Directory handle not valid.

CPF1F41
Severe error occurred while addressing parameter list.

CPF1F4A
Value for number of directory entries not valid.

CPF1F53
Value for length of data buffer not valid.

CPF220B
New primary group &1 does not have a gid.

CPF2203
User profile &1 not correct.

CPF2204
User profile &1 not found.

CPF2213
Not able to allocate user profile &1.

CPF2217
Not authorized to user profile &1.

CPF2225
Not able to allocate internal system object.

CPF9801
Object &2 in library &3 not found.

CPF9802
Not authorized to object &2 in &3.

CPF9803
Cannot allocate object &2 in library &3.

CPF223A
Not all objects changed.

CPF3BF6
Path Type value is not valid.

CHGPDGPRF (Change Print Descriptor Group Profile) Command Description

CHGPDGPRF Command syntax diagram

Purpose

The Change Print Descriptor Group Profile (CHGPDGPRF) command changes a print descriptor name for a particular user by altering the print descriptor values in the system.

Restriction: The user must have *OBJMGT authority to use this command.

Required Parameters

USER Specifies the name of the user whose print descriptor group (PDG) profile is being changed.

***CURRENT:** The user profile that is currently running is used.

user-name: Specify the name of the user whose PDG profile is being changed.

PDG Specifies the qualified name of the print descriptor group to be changed.

The name of the print descriptor 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.

print-descriptor-group-name: Specify the name of the print descriptor group being changed.

Other Single Value

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

PRTD Specifies the name of the print descriptor within the print descriptor group that is used for the specified user profile.

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

print-descriptor-name: Specify up to 256 characters for the name of the print descriptor.

Example for CHGPDGPRF

```
CHGPDGPRF  USER(JPSMITH)  PDG(*LIBL/LETTERS)
           PRTD(DRAFT_QUALITY)
```

This command changes the print descriptor for user profile JPSMITH. The print descriptor is changed to DRAFT_QUALITY in print descriptor group LETTERS.

Error messages for CHGPDGPRF

*ESCAPE Messages

CPF2204

User profile &1 not found.

CPF2217

Not authorized to user profile &1.

CPF2247

Internal security object not available. Reason code &1.

CPF6D82

PDG profile not changed for user &1.

CHGPSFCFG (Change Print Services Facility Configuration) Command Description

CHGPSFCFG Command syntax diagram

Purpose

The Change Print Services Facility Configuration (CHGPSFCFG) command changes a PSF* (Print Services Facility*) configuration object with the information specified on this command.

A PSF configuration object allows the user to specify additional parameters for an AFP printer device that are not supported on the CRTDEVPRT command.

The Change Print Services Facility Configuration command changes the object in the library specified on the command. This PSF configuration object is stored on the OS/400 as a new object (*PSFCFG).

Restrictions:

1. One of the four PSF/400 features must be licensed and installed to use this command.
2. *IOSYSCFG special authority is required to use this command.

Required Parameter

PSFCFG

Specifies the name and library of the PSF/400 configuration object to be changed.

The name of the PSF configuration 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.

PSF/400-configuration-name: Specify the name of the PSF configuration object being changed.

Optional Parameters

USRRSCLIBL

Specifies the user resource library list to be used for searching AFP resources. The user resource library list (USRRSCLIBL) is searched first and then the device resource library list (DEVRSCLIBL) is searched when attempting to find an AFP resource specified with the spool file.

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

***JOBLIBL:** The job's library list at the time the spool file is created is used to search for AFP list resources.

***CURLIB:** The current library for the job that created the spool file is used for searching for AFP resources. If no library is specified as the current library for the job, then library QGPL is used.

***NONE:** No user resource library list is used for searching for AFP resources. Only the device resource library list is used.

DEVRSCLIBL

Specifies the device resource library list to be used for searching AFP resources. The user resource library list (USRRSCLIBL) is searched first and then the device resource library list (DEVRSCLIBL) is searched when attempting to find an AFP resource specified with the spool file.

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

***DFT:** The following libraries (if present on system) are used in searching for AFP resources.

- QFNTCPL
- QFNT01 - QFNT19
- QFNT61 - QFNT69

Note:

Should the user choose the *DFT option on the DEVRSLIBL parameter, and all the system libraries in the above list have not been created, it is possible for the user to create libraries by the name of the missing system libraries. The user could then place resources in the libraries that could subsequently be found by other users. To prevent this from occurring, the system administrator can create all of the missing system libraries with PUBLIC *USE authority.

device-resource-library-names: Specify a list of up to 30 library names to be used to search for AFP resources.

IPDSPASTHR

Specifies whether IPDS pass-through is done for the device.

Not all SCS or IPDS spooled files are eligible for IPDS pass-through. They may contain special functions that require transform to AFPDS for correct printing. Specifying IPDS pass-through on this command or the printer file allows only those spooled files eligible for IPDS pass-through to bypass the extra transforms. Those spooled files not eligible for IPDS pass-through will still undergo the transforms to AFPDS and back to IPDS.

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

***NO:** No IPDS pass-through is done.

***YES:** IPDS pass-through is to be done for the device for all spool files that are eligible for IPDS pass-through.

IPDS pass-through is not valid for all PSF/400 supported printer devices. Any printer device (or attachment) that does not support resident fonts cannot support IPDS pass-through. This is because the resident font references in the data stream must be mapped to host fonts which are downloaded to the printer device. The following IPDS printer devices can support IPDS pass-through (when AFP(*YES) is specified):

- Any printer which supports resident fonts.

The following IPDS printer devices cannot support IPDS pass-through (when AFP(*YES) is specified):

- 3820, 3825, 3827, 3828
- 3829, 3831, 3835, 3900-001
- Any DPF attached printer device. DPF (Distributed Print Function) is a function supported by the PSF for OS/2 print server which blocks the usage of printer-resident fonts.

ACTRLSTMR

Specifies the point at which the release timer (RLSTMR) is activated.

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

***NORDYF:** The release timer is to be activated when there are no spooled files in the printer device's output queue with a status of RDY and the last page of the last spooled file processed has printed. If the release timer expires, the session to the printer device is released; the writer does not terminate. When the session is released, another PSF can start a session to the printer device.

Use this value when you want the writer to print all files with a status of RDY before the releasing the session.

The value of *NORDYF is supported only for printers and devices attached to an iSeries 400 using APPC or TCP/IP. For an APPC connection, use this value only with the PSF Direct support

provided by PSF for OS/2 and PSF for AIX. For a TCP/IP connection, this value can be used for any printer device. This value is not supported for Twinax-attached printer devices.

***IMMED:** The release timer is to be activated immediately after PSF has successfully linked to the printer device. If the release timer expires, the session to the printer device is released; PSF does not terminate. If a file is being printed when the release timer expires, the writer releases the session after all pages of the spooled file have printed. When the session is released, another PSF can start a session to the printer device.

Use this value when you want the writer to time-share the printer device. The value used for release timer determines the length of time the writer will “keep” the printer device before releasing the session.

The value of *NORDYF is supported only for printers and devices attached to an iSeries 400 using APPC or TCP/IP. For an APPC connection, use this value only with the PSF Direct support provided by PSF for OS/2 and PSF for AIX. For a TCP/IP connection, this value can be used for any printer device. This value is not supported for Twinax-attached printer devices.

***PRTNORDYF:** This value can be specified if you are using a printer device that allows control over the exchange of IPDS data (the IPDS dialog).

This value specifies that the release timer is to be activated:

- After the writer receives an indication from the printer device to release the IPDS dialog,
- There are no spooled files in the printer device’s output queue with a status of RDY, and
- The last page of the last spooled file processed has printed.

If the release timer expires, the writer releases the IPDS dialog with the printer device; the session is not released. The port in use by the writer is not available to another PSF. However, another print driver can start a dialog with the printer device on a different printer port.

If the writer detects that the printer device is not capable of controlling the IPDS dialog, then the value is ignored. PSF behaves as if RLSTMR(*NOMAX) was specified.

Use this value when you want the writer to print all files with a status of RDY before releasing the IPDS dialog.

The value of *PRTNORDYF is supported on a Twinax, TCP/IP or APPC connection.

***PRTIMMED:** This value can be specified if you are using a printer device that allows control over the exchange of IPDS data (the IPDS dialog).

This value specifies that the release timer is to be activated immediately after the writer receives an indication from the printer device to release the IPDS dialog. If the release timer expires, the writer releases the IPDS dialog with the printer device; the session is not released. The port in use by the writer is not available to another PSF. However, another print driver may start a dialog with the printer device on a different printer port. If a file is being printed when the release timer expires, the writer releases the dialog after all pages of the spooled file have printed.

Use this value when you want to specify the length of time the writer controls the printer device after the printer has indicated that it is needed by a print driver at another printer port.

If the writer detects that the printer device is not capable of telling the writer to stop the flow of data, then this value is ignored. PSF behaves as if RLSTMR(*NOMAX) was specified.

The value of *PRTIMMED is supported on a Twinax, TCP/IP or APPC connection.

RLSTMR

Specifies the amount of time to wait, after the last page of the last ready spooled file has printed,

before releasing the printer device. PSF/400 does not terminate, but closes the connection with the printer device. When a spooled file becomes ready, PSF/400 will attempt to establish a session with the printer device.

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

***NOMAX:** The session with the printer device is not closed unless the ENDWTR command is issued.

***SEC15:** PSF/400 waits 15 seconds before closing the session with the printer device.

***SEC30:** PSF/400 waits 30 seconds before closing the session with the printer device.

length-of-wait: Specify the number of minutes PSF/400 will wait before closing the session with the printer device.

RESTRTMR

Specifies the amount of time to wait before the writer attempts to re-establish either a session or dialog. To determine whether a session or dialog is to be re-established, the writer considers the following factors:

- What value was specified for ACTRLSTMR.
- Whether or not the printer device supports IPDS dialog management.
- Whether the type of link is Twinax, APPC or TCP/IP.

If ACTRLSTMR(*NORDYF) or ACTRLSTMR(*IMMED) are specified, the session is retried.

If ACTRLSTMR(*PRTNORDYF) or ACTRLSTMR(*PRTIMMED) are specified, the dialog is retried.

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

***IMMED:** The writer should attempt to re-establish the session or dialog as soon as a spooled file has a status of RDY.

number-of-minutes: Specify the number of minutes the writer waits, after a session or dialog have been released, before attempting to connect. Valid values range from 1 through 1440.

RETRY

Specifies the number of retry attempts to establish a session. This parameter applies to printers and devices configured as AFPATTACH(*APPC) in the printer device description.

This is the number of retries PSF/400 will make to establish a connection with a printer device.

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

***NOMAX:** No limit is put on the number of retry attempts to establish a session. PSF/400 continues retrying until the session is established or the user cancels the printer writer.

number-of-retries: Specify the number of retry attempts to establish a session. Valid values are 0 through 99 and *NOMAX.

RETRYDLY

Specifies the number of seconds to wait between retry attempts to establish a session. This parameter applies to printers and devices configured as AFPATTACH(*APPC) in the printer device description. This parameter only applies if the RETRY parameter has a value greater than 0. Valid values are 0 through 999. The default is 0 (no waiting between retry attempts).

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

number-of-seconds-between-retries: Specify the number of seconds to wait between retry attempts to establish a session.

AUTOSSNRCY

Specifies whether PSF/400 will automatically attempt to resume printing when a session has been unexpectedly ended by a device. This parameter applies to devices configured in a printer device description as either

- AFPATTACH(*APPC) and AFP(*YES), or
- DEVCLS(*LAN), LANATTACH(*IP) and AFP(*YES).

Single Values

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

***NO:** Specifies that PSF/400 ends when a session has been unexpectedly ended by a device.

Element 1: Enabled

***YES:** Specifies that PSF/400 attempts to re-establish a session which has been unexpectedly ended by a device.

- If you are using a printer device description which specifies AFPATTACH(*APPC) and AFP(*YES), note the following:
 - PSF configuration object parameters RETRY and RETRYDLY are used when PSF/400 is attempting to re-establish a session.
 - **»** If a PSF configuration object is not specified in a printer device description, then a maximum of 15 retries with a 90-second delay between them are used.**«**
 - You must use an APPC controller description and an APPC device description which specify APPN(*YES). Additionally, the APPC controller description must have MINSWTSTS(*VRYONPND) specified.
- If you are using a printer device description which specifies DEVCLS(*LAN), LANATTACH(*IP) and AFP(*YES), then PSF configuration object parameter RETRY is used when PSF/400 is attempting to re-establish a session.
 - »** If a PSF configuration object is not specified in a printer device description, then a maximum of 15 retries is used.**«**

To avoid reprinting pages, you may want to consider the setting for this parameter's second element, or the value used for ACKFRQ (Acknowledgment frequency).

Element 2: Message option

The possible values are:

***INFO:** An informational message is sent to the message queue associated with the writer when PSF/400 is performing automatic session recovery.

***INQ:** An inquiry message is sent to the message queue associated with the writer when PSF/400 is performing automatic session recovery. This message lets you specify the page number from which a writer should begin printing the last spooled file being processed.

ACKFRQ

Specifies the frequency, in pages, with which PSF/400 sends IPDS acknowledgment requests to a printer device. The acknowledgment request responses from the printer device contain information as to the status of pages sent to the printer device.

If a spooled file contains fewer pages than specified for ACKFRQ, an acknowledgment is requested after the last page of the spooled file is sent.

Consider adjusting this value when specifying AUTOSSNRCY(*YES). When a connection with a printer device is abnormally terminated, PSF/400 may reprint pages because the printer device was unable to return the status of pages printed. By increasing the frequency with which acknowledgments are sent, the number of pages which might be reprinted is decreased when a severed connection is restored. However, if acknowledgments are requested with great frequency, such as once per page, you may notice a performance degradation.

Acknowledgment frequency is supported on all attachments: Twinaxial, APPC and TCP/IP. Note that AUTOSSNRCY is supported on APPC and TCP/IP attachments only.

The possible values are:

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

100: Specifies that an acknowledgement is sent to the printer device after every 100 pages.

number-of-pages: Specifies the number of pages after which PSF/400 sends an acknowledgment to the printer device. Valid values range from 1 through 32767.

PRTRSPTMR

Specifies the length of time for which a writer should wait for a response from a printer device. This parameter is used only for printer devices configured in a printer device description as DEVCLS(*LAN), LANATTACH(*IP) and AFP(*YES).

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

***NOMAX:** Specifies that there is no limit on the length of time for which a writer waits for a response from a printer device.

number-of-seconds: Specify the number of seconds for which a writer waits for a response from a printer device. Valid values range from 5 through 3600.

BLANKPAGE

Specifies whether PSF/400 issues a blank page after every separator page and spool file copy that contains an odd number of pages. The blank pages assure that the printer device output is placed into the output stacker in a manner suitable for bursting. This parameter applies to the following continuous forms printer devices only:

1. 3831
2. 3835
3. 3900-001
4. 3900-0W1
5. 3900 Duplex Printing System and 3900 Wide Duplex Printing System

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

***YES:** PSF/400 issues a blank page after every separator page and spool file copy that contains an odd number of pages.

***NO:** PSF/400 does not issue a blank page after every separator page and spool file copy that contains an odd number of pages.

PAGSIZCTL

Specifies whether PSF/400 sets the page size (forms) in the printer device. This parameter only applies to the 4224, 4230, 4234, 4247, 4028, 6404, 6408, and 6412 printer devices.

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

***NO:** PSF/400 does not set the page size (forms) in the printer device.

***YES:** PSF/400 sets the page size (forms) in the printer device.

RESFONT

Specifies whether PSF/400 should use resident fonts to print the spooled file.

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

***YES:** PSF/400 can use resident fonts to print the spooled file.

***NO:** PSF/400 does not use the resident fonts to print the spooled file. PSF/400 maps the resident font referenced in the spool file to its equivalent host font and then downloads the host font to the printer device.

RSCRET

Specifies whether PSF/400 should use resource retention across spool files.

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

***YES:** PSF/400 stores page segments and overlays in the printer device across spool file boundaries. This minimizes data transfers, especially when a user is printing multiple spooled files that reference the same resources.

***NO:** PSF/400 does not store page segments and overlays in the printer device across spool file boundaries. They are deleted after each spool file.

Note that the page segments and overlays are deleted in the printer device when the printer writer is terminated.

EDGEORIENT

When the page rotation value of a spooled file is *COR or *AUTO and the system rotates the output, 90 degree rotation is normally used. When *YES is specified, PSF/400 rotates the output 270 degrees instead of 90 degrees.


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

***NO:** The output remains at its original orientation.

***YES:** Landscape output of 90 or 270 degrees is rotated an additional 180 degrees before printing.

USEOUTLNT

Specifies whether the user would like the requested downloadable AFP raster fonts replaced with the equivalent downloadable outline fonts.

See the Printer Device Programming  book for more information regarding this parameter's relationship with the FNTRSL parameter.

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

***NO:** The raster fonts will be used.

***YES:** If the equivalent downloadable outline font exists, it will be used in place of the raster font.

PSDFNOPT

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

***NONE:** No PSF defined options are specified. For V3R2 this value is a restricted value since no new options are defined for this release.

PSF-defined-option: Specifies a value as defined by IBM. One or more values may be made available between releases of OS/400. If a value is made available, a PTF cover letter will contain the required syntax.

FNTSUBMSG

Specifies whether PSF/400 will issue messages indicating that a successful font substitution was performed.

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

***YES:** Specifies that messages indicating that a successful font substitution was performed are to be issued.

***NO:** Specifies that messages indicating that a successful font substitution was performed are not to be issued. The following messages will not be issued:

PQT2066

Font substitution was performed.

PQT2077

Font substitution was performed.

PQT2072

Font substitution was performed.

PQT3531

Font substitution was performed.

PQT3533

Font substitution was performed.

PQT3535

Font substitution was performed.

PQT3537

Font substitution was performed.

PQT3539

Font substitution was performed.

PQT3541

Font substitution was performed.

PQT3542

Font substitution was performed.

PQT3544

Font substitution was performed.

PQT3545

Font substitution was performed.

PQT3546

Font substitution was performed.

Messages indicating that a font substitution attempt failed will still be issued.

FNTCAPTURE

Specifies whether the printer device should capture host downloaded fonts. Host character sets and code pages may be marked as eligible for capturing using the CHGFNTRSC or CHGFNTRSC commands. The OS/2 Type Transformer(5648-113) product will also create font resources marked as eligible for capture.

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


***NO:** Specifies that the printer device should not capture the host fonts.

***YES:** Specifies that the printer device should capture the host fonts.

FNTRSL

Specifies the resolution PSF/400 should use to print the spooled file when printing to a multiple resolution printer device and the printer file is configured to report support of multiple resolutions

and the spooled file does not specify the font metrics and resolution with which to print the spooled file or the font is not available at that resolution. If the printer device is configured to report support of either 240 pels per inch or 300 pels per inch only, then PSF/400 will produce the same results as if going to a single resolution printer device.

For more information regarding the algorithm used for searching a library list for a font resource, see the Printer Device Programming  book section entitled User and Device Resource Library Lists in the chapter called Working With PSF Configuration Objects.

***SAME:** The value for this parameter remains unchanged.

***SEARCH:** Specifies to search the library list for the first occurrence of a host font with a name match. The resolution of that font will be used to print the spooled file. Message PQT3546 will be issued when this value is selected to indicate to the user the resolution of the font that was finally selected.

240: Specifies that the font resolution used to print the spooled file should be 240 pels per inch.


300: Specifies that the font resolution used to print the spooled file should be 300 pels per inch.

FNTTBL

Specifies the name of a printer resident to printer resident font table. This printer resident font table is used by PSF/400 when printing to a printer device that supports printer resident fonts and the print job specifies a printer resident font which is not supported by the printer device.

For the printer resident to printer resident font substitution table, the following processing is done by the system:

- If the printer resident font specified in the print job is supported by the printer device, then it is used. The printer resident to printer resident font substitution table is not searched.
- If the printer resident font specified in the print job is not supported by the printer device, then the printer-resident to printer-resident font substitution table is searched.
 - If a matching entry is found in the printer resident font substitution table and the entry is supported by the printer device, then the specified substitute font in the printer resident font substitution table is used.
 - If a matching entry is not found in the printer resident font substitution table or if the specified substitute font is not supported by the printer device, then the system will use its internal font substitution tables to perform the font substitution.

Refer to Appendix D in the Printer Device Programming  book for more information on supported printer resident fonts. See the CRTFNTTBL, DSPFNTTBL, ADDFNTTBLE, CHGFNTTBLE, and RMVFNTTBLE commands for more information on user font tables.

***SAME:** The value for this parameter remains unchanged.

***NONE:** No printer resident to printer resident font table is specified. For a print job that references a printer resident font, if the font is not supported by the printer device, then the system will substitute another resident font.

The name of the printer resident to printer resident font table can be qualified by one of the following library values:

➤ The font table must exist in a library in the job's library list when the CHGPSFCFG command is run. The library name where the font table is found is stored in the PSF configuration object. ⬅

library-name: Specify the name of the library where the font table is located.

font-table-name: Specify the name of the printer resident to printer resident font table.

CSEMODE

Specifies to what degree PSF/400 will do size checking of the document when using Cute Sheet Emulation.

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

***NONE**: Specifies that no checking will be done to verify that the document page will fit on half the continuous forms physical page.

***CHKFIRST**: Specifies that the first page of each copy group will be checked to determine if the page will fit on half the continuous forms physical page.

***CHKALL**: Specifies that each front side page will be checked to determine if the page will fit on half the continuous forms physical page.

MAPIGCFNT

Specifies whether to use outline DBCS simulation fonts. Outline DBCS simulation fonts are outline coded fonts which simulate older raster DBCS fonts. The writer processes all coded font names beginning with X0 by changing the first two characters of the name to XZ and searching for a coded font of this name. If no match is found for the XZnnnnnn coded font the writer performs a second search using the original X0nnnnnn name.

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

***NO**: No mapping of coded fonts will be done.

***YES**: ➤ All coded font references will be mapped to outline coded font equivalents. ⬅ Coded font names of the form X0nnnnnn will be mapped to XZnnnnnn. If the XZnnnnnn coded font is found it will be used, else the original X0nnnnnn coded font will be used.

PDFGEN

Specifies whether the user would like the spooled file converted to PDF via the IPDS to PDF transform and if so what to do with the associated PDF output. This parameter is valid only for devices configured AFP(*YES).

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

***NONE**: Specifies that no PDF generation of the spooled file should be performed.

***SPLF**: Specifies that the PDF output should be placed on the output queue identified in parameter PDFOUTQ.

***STMF**: Specifies that the PDF output should be placed into a stream file in the directory specified in the PDFDIR parameter.

***MAIL**: Specifies that the PDF output should be electronically mailed.

PDFDEVTYPE

Specifies the type of device that the IPDS to PDF transform virtual printer device should emulate.

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

***IP40240**: Specifies that the virtual printer device should emulate an IP40 printer device configured at 240 pels per inch resolution.

***IP40300**: Specifies that the virtual printer device should emulate an IP40 printer device configured at 300 pels per inch resolution.

***4028**: Specifies that the virtual printer device should emulate a 4028 printer device.

***3812**: Specifies that the virtual printer device should emulate a 3812 printer device.

PDFPPRDWR1

Specifies the paper size to use for drawer 1 during the IPDS to PDF transform process.

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

***LETTER**: Specifies to use the dimensions of letter paper.

***LEGAL**: Specifies to use the dimensions of legal paper.

***STATEMENT**: Specifies to use the dimensions of statement paper.

***EXECUTIVE**: Specifies to use the dimensions of executive paper.

***LEDGER**: Specifies to use the dimensions of ledger paper.

***A5**: Specifies to use the dimensions of A5 paper.

***A4**: Specifies to use the dimensions of A4 paper.

***A3**: Specifies to use the dimensions of A3 paper.

***B5**: Specifies to use the dimensions of B5 paper.

***B4**: Specifies to use the dimensions of B4 paper.

PDFPPRDWR2

Specifies the paper size to use for drawer 2 during the IPDS to PDF transform process.

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

***LETTER**: Specifies to use the dimensions of letter paper.

***LEGAL**: Specifies to use the dimensions of legal paper.

***STATEMENT**: Specifies to use the dimensions of statement paper.

***EXECUTIVE**: Specifies to use the dimensions of executive paper.

***LEDGER**: Specifies to use the dimensions of ledger paper.

***A5**: Specifies to use the dimensions of A5 paper.

***A4**: Specifies to use the dimensions of A4 paper.

***A3**: Specifies to use the dimensions of A3 paper.

***B5**: Specifies to use the dimensions of B5 paper.

***B4**: Specifies to use the dimensions of B4 paper.

PDFMULT

➤ Specifies the action the IPDS to PDF transform should take when encountering multiple groups within the input data.

Single Values

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

***NO**: Specifies the groups should be ignored and a single output file should be created.

Element 1: Separate PDF Files

***YES**: Specifies that the IPDS to PDF transform should process the multiple groups.

Element 2: Separation Option

The possible values are:

***SPLIT:** Multiple PDF output files should be generated at the group boundaries.

***INDEX:** An index tag should be placed at the group boundaries in the single output file.

PDFINCFNT

Specifies whether the PDF output generated by the IPDS to PDF transform should carry the necessary fonts inline.

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

***YES:** Specifies that the fonts should be carried inline with the PDF output.

***NO:** Specifies that the fonts should not be carried inline with the PDF output. The user will need access to the fonts for printing or displaying the file. <<

PDFDTAQ

Specifies the name and library of the data queue where PSF will log the IPDS to PDF transformation completion notifications.

Note:

Keyed data queues are not supported for this parameter. If a keyed data queue is specified, a run-time error will occur; but because it is not required that a data queue exist at the time this command is issued, the error will not be detected.

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

***NONE:** Specifies that no data queue should be used to log completions.

>> *library-name:* Specify the name of the library where the data queue is located.

data-queue-name: Specifies the library-qualified name of the data queue used for logging transformation completions.

PDFMAILSVR

Specifies what mail server to use for emailing the resulting PDF files from the IPDS to PDF transform.

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

***SNDDST:** Specifies that the SNDDST (Send Distribution) command should be used for emailing PDF output. The SMTP protocol is used for sending the email.

***LOCAL:** Specifies the local machine as a mail server. The SMTP protocol is used for sending the email. *LOCAL may be specified in any position in a list of mail servers.

mail-server-name: Specifies the mail server at the provided domain name or Internet address be used for mailing PDF output.

You may specify up to 4 mail servers. The writer uses the mail servers in the order in which they are listed. If the writer detects that the first mail server cannot be used, the writer will attempt to use additional servers you have specified. If another server can be used, the writer will reorder the list of servers so that the current working server is the first one in the list. The re-organized list is used while a writer is active. The PSF configuration object is not modified. If all specified servers cannot be used, the action taken by the writer is determined by the value specified for

PRTERMSG in the printer device description. If PRTERMSG(*INFO) is specified, the writer is ended. If PRTERMSG(*INQ) is specified, then an inquiry message is issued. Replies to the inquiry message are Retry and Cancel. <<

PDFSENDER

Specifies the owner/sender from whom the PDF output file is electronically mailed. The sender must be a valid user profile on the the system and be enrolled in the System Distribution Directory.

>> If you have specified PDFMAILSVR(mail-server-name), the entry in the System Distribution Directory must have both an SMTP user ID and SMTP domain specified. << This parameter is only valid when the PDFGEN parameter has a value of *MAIL.

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

***SPLFOWN:** Specifies that the owner of the original spooled file should be the sender of the electronically mailed PDF file.

QSPLJOB: Specifies that owner of the electronically mailed PDF file will be QSPLJOB.

mail-file-sender: Specifies the name of a valid user profile to be used as the sender of the electronically mailed PDF file.

PDFMPPGM

Specifies the qualified name of a user-defined mail mapping program. The mail mapping program will resolve the mail tag found in the data stream and return one or more mail addresses to use for electronically mailing the PDF output. It is possible that the mail tag is an actual/real electronic mailing address that will simply be returned from the mapping program. This parameter is only valid when the PDFGEN parameter has a value of *MAIL. The user mapping program must exist and the user must have the appropriate authority at the time the command is issued.

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

***NONE:** Specifies that no user program was specified. When this occurs, PSF/400 will assume that the mail tag is a valid mail address and will attempt to use it for electronic mailing purposes.

>> *library-name:* Specify the name of the library where the user mapping program is located.

PDF-mapping-program-name: Specifies the library-qualified name of the user program to use for mapping mail tags. <<

PDFOUTQ

Specifies the qualified name of an output queue that should be used when spooling PDF output. This parameter is only valid when the PDFGEN parameter has a value of *SPLF.

Note:

Because it is not required that an output queue exist at the time the command is issued, the error will not be flagged. Existence and authority errors will be detected at run-time. The name of the PDF output queue can be qualified by one of the following library values:

>> *library-name:* Specify the name of the library where the output queue is located. <<

PDF-output-queue: Specifies the library-qualified name of the output queue to use for spooling the PDF output from the IPDS to PDF transform.

» PDFDIR «

Specifies the directory where the PDF file should be stored if it is not electronically mailed by PSF/400 or spooled by the IPDS to PDF transform. If the user plans to use the PDF file with SNDDST, the PDF file must be stored in the /QDLS file system. This parameter is valid only when the PDFGEN parameter has a value of *STMF.

» PDF-directory-name: « Specifies the path where the PDF file should be stored. The field must begin with a /. The directory name(s) in the path cannot contain any of the following characters: \ < > " ? : * |.

TEXT Specifies the text that briefly describes the object.

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

***BLANK:** No text is specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CHGPSFCFG »

```
CHGPSFCFG PSFCFG(QGPL/P5002)
PDFGEN(*MAIL) PDFDEVTYPE(*3812) PDFPPRDWR1(*LETTER)
PDFPPRDWR2(*LEGAL) PDFMULT(*NO) PDFDTAQ(QGPL/PDF)
PDFINCFNT(*NO) PDFMAILSVR(MAIL.EARTHLINK.NET)
PDFSENDER(*SPLFOWN) PDFMAPPGM(*NONE)
```

This command creates a Print Services Facility configuration object named P5002 in library QGPL. The PSF configuration (via the PDFGEN parameter) is requesting that the IPDS to PDF transform be performed and that the output be emailed using the mail server found at mail.earthlink.net. The transform is told to emulate a 3812 printer with paper sizes in drawers 1 and 2 to be letter and legal respectively.

There will be a single PDF output file because the PDFMULT parameter is *NO. The fonts used by the file will not be inline so the user of the output file will need access to the fonts to display or print the file. The sender is the owner of the spooled file. Since there is no mapping program the mail tag information associated with the file are assumed to be valid email addresses.

Transform completion messages will be logged to data queue PDF in library QGPL. «

Error messages for CHGPFSCFG

*ESCAPE Messages

CPF2112

Object &1 in &2 type *&3 already exists.

CPF2182

Not authorized to library &1.

CPF2283

Authorization list &1 does not exist.

CPF88D2

PSF configuration &1 in library &2 not changed.

CPF9810

Library &1 not found.

CPF9820

Not authorized to use library &1.

CPF9822

Not authorized to file &1 in library &2.

CHGPRTF (Change Printer File) Command Description

CHGPRTF Command syntax diagram

Purpose

The Change Printer File (CHGPRTF) command changes, in the file description, one or more of the attributes of the specified printer device file. Only the information specified on this command can be changed. If the data description specifications (DDS) used to create the file are changed, the printer device file must be deleted and created again before the changes can be made in the file.

Required Parameter

FILE Specifies the qualified name of the printer file whose description is being changed.

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.

***USRLIBL:** Only the libraries in the user portion of the job's library list are searched.

***ALL:** All libraries in the system, including QSYS, are searched.

» ***ALLUSR:** User libraries are all libraries with names that do not begin with the letter Q except for the following:«

#CGULIB
#COBLIB
#DFULIB

#DSULIB
#RPGLIB
#SDALIB

#SEULIB

» Although the following libraries with names that begin with the letter Q are provided by IBM, they typically contain user data that changes frequently. Therefore, these libraries are also considered user libraries:«

QDSNX
QGPL
QGPL38
QMPGDATA
QMQMATA
QMQMPROC
QPFRDATA
QRCL

» QSYS2xxxx«
QS36F
QUSER38
QUSRADSM
QUSRBRM
QUSRDIRCL
QUSRDIRDB
QUSRIJS

QUSROND
QUSRPOSGS
QUSRPOSSA
QUSRPYMSVR
QUSRRDARS
QUSRSYS
QUSRVI
QUSRVxRxMx

Notes:

1. » 'xxxxx' is the number of a primary auxiliary storage pool.«
2. A different library name, of the form QUSRVxRxMx, can be created by the user for each release that IBM supports. VxRxMx is the version, release, and modification level of the library.

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

***ALL:** All the printer files in the specified library are changed.

printer-device-file-name: Specify the name of the printer file being changed.

generic-file-name:* Specify the generic name of the printer device file. 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. If the complete object name is specified, and multiple libraries are searched, multiple objects can be changed only if *ALL or *ALLUSR library values can be specified for the name. See generic names for additional information.

Optional Parameters

DEV Specifies the name of a printer device description. For nonspooled output, this identifies the printer device used to produce the printed output. For spooled output, the file is placed on the output queue determined by the OUTQ parameter. If OUTQ(*DEV) is used, the file is placed on the output queue with the same name as the device.

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

***JOB:** The printer device specified in the job description is used.

***SYSVAL:** The value specified in the system value QPRTDEV is used.

device-name: Specify the name of the printer associated with this display station. The printer and the display station must be attached to the same controller. When printing double-byte character set (DBCS) data, specify a DBCS printer (5553 or 5583).

DEVTYPE

Specifies the type of data stream created for a printer file.

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

***SCS:** An SNA character stream (SCS) is created. This parameter must be specified when using the 3287, 3812 SCS, 3816 SCS, 4214, 4234 SCS, 4245, 5219, 5224, 5225, 5256, 5262, 6252, or 6262 work station printers.

- If *SCS is specified and the spooled printer file is directed to an IPDS* printer, the SCS printer file is converted to emulate an IPDS printer file. More information is in the Printer Device

Programming  book.

Double-Byte Character Set Consideration:

When using the 5553 and 5583 DBCS-capable printers, DEVTYPE(*SCS) must be specified.

***IPDS:** An intelligent printer data stream* (IPDS*) is created. This parameter can be specified when using an IPDS printer.

- If *IPDS is specified and the spooled printer file is directed to a printer other than an IPDS printer, the IPDS printer file is converted to an SCS printer file. More information is in the Printer

Device Programming  book.

***USERASCII:** An ASCII data stream is placed on a spooled output queue. The user is responsible for placing the entire hexadecimal data stream in the buffer, since the iSeries 400 does not change or validate the values that are passed. This value cannot be specified with SPOOL(*NO).

***AFPDS:** An advanced function print data stream (AFPDS) is created. Some systems refer to this data stream as MODCA-P. *AFPDS spooled files require PSF/400 to print on an IPDS attached printer or Host Print Transform to print on an ASCII attached printer.

***AFPDSLIME:** Mixed data (line data and AFPDS data) is created. This value can be specified when using the 3812 IPDS, 3816 IPDS, 3820, 3825, 3827, 3828, 3829, 3831, 3835, 3900, 3912, 3916, 3930, 3925, 4028, 4224, 4230, 4234, 4312, 4317, 4324, 6406, 6408, or 6412 IPDS printers. Also for the InfoPrint 20, InfoPrint 32, InfoPrint 40, InfoPrint 60, InfoPrint 3000, and InfoPrint 4000 printers. *AFPDSLIME spooled files require PSF/400 to print on an IPDS attached printer. The printer must be configured with AFP(*YES).

***LINE:** Line data is created. This value can be specified when using the 3812 IPDS, 3816 IPDS, 3820, 3825, 3827, 3828, 3829, 3831, 3835, 3900, 3912, 3916, 3930, 3925, 4028, 4224, 4230, 4234, 6406, 6408, or 6412 IPDS printers. Also for the InfoPrint 20, InfoPrint 32, InfoPrint 40, InfoPrint 60, InfoPrint 3000, and InfoPrint 4000 printers. *LINE spooled files require PSF/400 to print on an IPDS attached printer. The printer must be configured with AFP(*YES).

PAGESIZE

Specifies the length and width of the printer forms used by this printer file. The length is specified in lines per page or by the units specified for the UOM parameter. The width is specified in print positions (characters) per line or by the units specified for the UOM parameter.

The page size must be specified with reference to the way the data is printed on the page. For example, if using 8.5 inch wide by 11.0 inch long forms and printing at 6 lines per inch with a 10-pitch font, specify PAGESIZE(66 85) PAGRTT(0). However, to rotate the page, specify the page size for an 11.0 inch wide by 8.5 inch long page and enter PAGESIZE(51 110) PAGRTT(90).

Note:


Specify PAGRTT(*AUTO) or PAGRTT(*DEVD) and PRTQLTY(*DRAFT) on this command to enable automatic reduction or rotation if the data does not fit on the paper.

Specify PAGRTT(*COR) on this command to enable automatic reduction whether or not the data fits on the paper.

Element 1: Page Length Value

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


page-length: Specify the page length that is used by this printer file. Although a value ranging from 1 through 255 can be specified as the page length, the value specified must not exceed the actual length of the forms used.

More information about the page lengths that are valid for each printer type is in the Printer Device Programming  book.

Element 2: Page Width Value

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

page-width: Specify the page width used by this printer file. The value specified must not exceed the actual width of the forms used.

More information about page width is in Printer Device Programming  book.

Element 3: Method of Measure

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


***ROWCOL:** Page length and page width are measured as numbers of rows and columns.

***UOM:** Page length and page width are measured in the units specified on the UOM parameter.

LPI Specifies the line spacing setting on the printer, in lines per inch, used by this printer file.

The line spacing on the 5256 printer must be set manually. When the lines per inch (LPI) value on this parameter changes (from the value on the previous printer file), an inquiry message is sent to the message queue associated with the printer that requests a change to the LPI value.

The line spacing on the 4214, 4224, 4230, 4234, 4245, and 5262 Printers is set by a print command. These also allow setting the lines per inch spacing on the control panel of the printer. The lines per inch value must not be set at the printer. If the LPI value is overridden at the control panel, the system overrides the value set with the LPI value of the next printer file received.

More information about the lines per page and lines per inch that are valid for each printer type is in the Printer Device Programming  book.

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

6: The line spacing on the printer is 6 lines per inch.

3: The line spacing on the printer is 3 lines per inch. This value is valid only for double-byte character set (DBCS) data.

4: The format of this tape is FMT3480. The data density on this tape volume is formatted to support a 3480 device. This density is used for 1/2 inch cartridge tapes.

7.5: The line spacing on the printer is 7.5 lines per inch. This value is valid only for double-byte character set (DBCS) printers.

8: The data density on the tape volume is 38,000 bits per inch, which is used for 1/2 inch reel tapes.

9: The line spacing on the printer is 9 lines per inch.


12: The line spacing on the printer is 12 lines per inch.

CPI Specifies the printer character density, in characters per inch (CPI), used by this printer file.

For the printers that support fonts, the value specified in the font special value implies the CPI. If FONT(*CPI) is specified, the font used is based on the CPI value. The following diagram describes the default font ID for each CPI value:

CPI FONT ID DEFAULT

5	245
10	011
12	087
13.3	204
15	222
16.7	400
18	252
20	281

More information about the characters per page and characters per inch that are valid for each printer type is in the Printer Device Programming  book.

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

10: Character density is 10 characters per inch.

5: The format of this tape is QIC525, which is used for 1/4 inch cartridge tapes that can hold 525 megabytes of data.

12: Character density is 12 characters per inch.

13.3: Character density is 13.3 characters per inch. This value is valid only for double-byte character set (DBCS) printers.

15: Character density is 15 characters per inch.

16.7: Character density is 16.7 characters per inch.

18: Character density is 18 characters per inch. This value is valid only on double-byte character set (DBCS) printers.

20: The format of this tape is QIC120, which is used for 1/4 inch cartridge tapes that can hold 120 megabytes of data.

OVRFLW

Specifies the line number on the current page at which overflow to a new page begins. Generally, after the specified line is printed, the printer overflows to the next page before printing continues. Margins specified for the printer file are ignored when determining overflow. More information is in

the Printer Device Programming  book.

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

overflow-line-number: Specify the line number on the current page at which overflow to a new page begins, whether or not printing has occurred on that line. The value specified must not be greater than the page length (PAGESIZE). Margins specified for the printer file are ignored when determining overflow.

LVLCHK

Specifies whether the record format level identifiers in the program are checked against those in the device file when the file is opened. If so, the record format identifiers in the program must

match those in the device file. Because the same record format name can exist in more than one file, each record format is given an internal system identifier when it is created.

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

***YES:** The level identifiers of the record formats are checked when the file is opened. If the level identifiers do not match, an error message is sent to the program that requested the open, and the file is not opened.

***NO:** The level identifiers are not checked when the file is opened.

TEXT Specifies the text that briefly describes the printer file. More information is in Commonly used parameters.

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

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

FRONTMGN

Specifies the offset, down and across, of the origin from the edge on the front side of the paper. The offsets are in the units of measure specified on the UOM parameter. If UOM(*CM) is specified, valid values range from 0 through 57.79, and if UOM(*INCH) is specified, valid values range from 0 through 22.57. This parameter can only be used for printer files with DEVTYPE(*AFPDS) specified.

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

***DEV D:** The no-print border from the printer is used to place the text on the page when printing to a printer configured as AFP(*YES). A margin of 0 is used for IPDS* printers without a no-print border, or which are configured as AFP(*NO).

Element 1: Offset Down

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

0: The format of this tape is FMT3570. The data format is written on the tape volume with a 3570 device.

offset-down: Specify the offset of the origin from the top of the page.

Element 2: Offset Across

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

0: The format of this tape is FMT3570. The data format is written on the tape volume with a 3570 device.

offset-across: Specify the offset of the origin from the left side of the page.

BACKMGN

Specifies the offset, down and across, of the origin from the edge on the back side of the paper. The offsets are in the units of measure specified on the UOM parameter. If UOM(*CM) is specified, valid values range from 0 through 57.79, and if UOM(*INCH) is specified, valid values range from 0 through 22.57. This parameter can only be used for printer files with DEVTYPE(*AFPDS) specified.

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

***FRONTMGN:** The offsets specified on the FRONTMGN parameter are used.

***DEV D:** The no-print border from the printer is used to place the text on the page when printing to a printer configured as AFP(*YES). A margin of 0 is used for IPDS* printers without a no-print border, or which are configured as AFP(*NO).

Element 1: Offset Down

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

0: The format of this tape is FMT3570. The data format is written on the tape volume with a 3570 device.

offset-down: Specify the offset of the origin from the top of the page.

Element 2: Offset Across

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

0: The format of this tape is FMT3570. The data format is written on the tape volume with a 3570 device.

offset-across: Specify the offset of the origin from the left side of the page.

FOLD Specifies whether all positions in a record are printed when the record length exceeds the page width (specified by the PAGESIZE parameter). When folding is specified and a record exceeds the page width, any portion of the record that cannot be printed on the first line continues (is folded) on the next line or lines until the entire record has been printed.

The FOLD parameter is ignored under the following conditions:

- When DEVTYPE(*SCS) is not specified.
- When printing through OfficeVision*.
- When in the S/36 execution environment.

Double-Byte Character Set Considerations:

The system ignores this parameter when printing double-byte character set (DBCS) files. The system assumes that DBCS records fit on a printed line. If the record exceeds the page width, the system continues printing the record on the next line.

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

***YES:** Records are not folded; if a record is longer than the page width, only the part of the record that fits on one line is printed.

***NO:** Records whose length exceeds the page width are folded on the following lines.

RPLUNPRT

Specifies (1) whether unprintable characters are replaced and (2) which substitution character (if any) is used. An unprintable *character is a character the printer is unable to print.*

Double-Byte Character Set Considerations:

For double-byte character set (DBCS) data, an unprintable character is one that cannot be processed. When using DBCS-capable printers, consider the following:

- If IGCEXNCHR(*YES) is also specified, the system replaces unprintable extension characters with DBCS underline characters. There may be some cases in which the system is unable to replace an unprintable character with a DBCS underline character. In this case, the undefined character is printed.
- If IGCEXNCHR(*NO) is also specified, the device replaces all extension characters with the undefined character. Choosing a blank as the replacement character for alphanumeric characters might improve system performance.

More information is in the Printer Device Programming  book.

Element 1: Replace Character?

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

***YES:** Unprintable characters are replaced. The program is not notified when unprintable characters are detected. Note the DBCS considerations above.

Element 2: Replacement Character

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

'replacement-character': Specify, if *YES is also specified on this parameter, the replacement character that is used each time an unprintable character is detected. Any printable EBCDIC character can be specified. Valid values range from 40 through 99 and A1 through FE.

Other Single Values

***NO:** Unprintable characters are not replaced. When an unprintable character is detected, a message is sent to the program.

ALIGN

Specifies whether the page must be aligned in the printer before printing is started. If ALIGN(*YES) and SPOOL(*NO) are specified, and forms alignment is required, the system sends a message to the message queue specified in the printer device description and waits for a reply to the message. When spool (*YES) is specified on the CRTPRTF command and ALIGN(*FILE) is specified on the STRPRTWTR command, then this parameter is used to determine whether an alignment message is sent by the system.

This parameter is ignored when cut sheets are used (spooled and direct output). Page alignment can be done only for text-only files. Page alignment cannot be done for print jobs containing graphics or bar codes.

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

***NO:** No page alignment is required.

***YES:** The page is aligned before the output is printed.

CTLCHAR

Specifies whether the printer file supports input with print control characters. Any invalid control characters that are found are ignored, and single spacing is assumed.

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

***NONE:** No print control characters are passed in the data being printed.

***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.

***MACHINE:** The first character of every record contains a machine code control character. If *MACHINE 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.

If TBLREFCHR(*YES) is also specified, then the record length must include two extra positions for the control character and the table reference character.

CHLVAL

Specifies a list of channel numbers with their assigned line numbers. Use this parameter only if CTLCHAR(*FCFC) has been specified.

Note:

If one or more channel-number/line-number combinations are changed, all other combinations must be re-entered.

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

***NORMAL:** The default values for skipping to channel identifiers are used. The default values are found in the following table.

Figure 1. 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 line 1
2-11	Space one line
12	Skip to overflow line (OVRFLW parameter)

Element 1: Channel Number

channel-number: Specify an American National Standard channel number to be associated with a corresponding 'skip to' line number. Valid values for this parameter range from 1 through 12, corresponding to channels 1 through 12. The CHLVAL parameter associates the channel number with a page line number. For example, if you specify CHLVAL(2 20), channel identifier 2 is allocated with line number 20; therefore, if you place the forms-control 2 in the first position of a record, the printer skips to line 20 before printing the line.

Note:

If the printer stops and the next record processed has a channel value forms-control number that is the same value as the line number the printer is on, the printer advances to that value (line number) on the next page. However, if the printer is positioned at the top of the page (line number one) and the channel value forms-control value is associated with line number one, the printer does not advance to a new a new page.

If no line number is specified for a channel identifier, and that channel identifier is encountered in the data, a default of 'space one line' before printing is used. Each channel number can be specified only once.

Element 2: Line Number

line-number: Specify the line number assigned for the channel number in the same list. Valid line numbers range from 1 through 255. If no line number is assigned to a channel number, and that channel number is encountered in the data, a default of 'space one line' before printing is used. Each line number can be specified only once.

FIDELITY

Specifies whether printing continues when print errors are found for printers configured with AFP(*YES).

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

***CONTENT:** Printing continues when errors are found.

***ABSOLUTE:** Printing stops when errors are found.

PRTQLTY

Specifies, for the 3812 SCS, 3816 SCS, 4214, 4224, 4230, 4234, and 5219 printers, the quality of print produced.

For the 5219 Printer, different print qualities are produced by varying the speed at which the print ribbon advances. Quality mode (*STD or *NLQ) results in normal print ribbon advancement. In draft mode (*DRAFT), the ribbon advances at a rate of one-third the distance it advances in quality mode. The 5219 Printer has a conserve ribbon switch that overrides the value of *DRAFT specified by this parameter.

For the 3812 SCS and 3816 SCS Printers, the automatic hardware selection of computer output reduction printing selected through soft switches on the printers occurs only when *DRAFT is specified for PRTQLTY and PAGRTT is *DEVD. If PAGRTT(*COR) is specified, the PRTQLTY parameter does not affect the printed output.

For the 4224, 4230, and 4234 Printers, standard print quality is produced by varying the density of the dot matrix pattern used to create printable characters. Standard mode (*STD) is the normal mode. Quality mode (*NLQ) requires multiple passes by the printer to produce a line of data. Draft mode (*DRAFT) results in high-speed printing.

For the 4214 printer, only draft (*DRAFT), quality (*NLQ), and device default (*DEVD) modes are supported. Other values are set to quality (*NLQ) mode.

More information about the valid values for the 4214, 4224, 4230, 4234, and 5219 Printers is in

Printer Device Programming  book.

Notes:

1. For the 4214 Printer, quality mode (*STD or *NLQ) is only supported for 10 and 12 characters per inch. If PRTQLTY(*STD or *NLQ) and 5, 15, or 16.7 characters per inch is specified, the data is printed in draft mode.
2. For the 4234 Printer, only a limited character set (62 characters) is supported when PRTQLTY(*DRAFT) is specified. A description of the character set supported with draft print quality is in the *4234 Printer Operator's Guide*.
3. For the 4224 and 4230 printers, the fonts supported are not available for all three print qualities. The OCR-A and OCR-B fonts are supported only with PRTQLTY(*NLQ). The Courier and Essay fonts are available only with PRTQLTY(*NLQ) and PRTQLTY(*STD). The Gothic font is available only with PRTQLTY(*DRAFT) or PRTQLTY(*FASTDRAFT). If there is a mismatch between the print quality and the font selected, the font is changed to match the print quality.
4. Specify PAGRTT(*DEVD) and PRTQLTY(*DRAFT) on this command to enable automatic rotation if the data does not fit on the paper.

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

***STD:** The output is printed with standard quality.

***DEVD:** The print quality is set on the printer by the user, if it is not set within the data stream.

***DRAFT:** The output is printed with draft quality.

***NLQ:** The output is printed with near letter quality.

***FASTDRAFT:** The output is printed at a higher speed and with lower quality than it would be if you specified *DRAFT. This value is only supported by the 4230 printer.

FORMFEED

Specifies the form feed attachment used by this printer device file.

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

***DEVD:** The forms are fed into the printer in the manner specified in the device description.

***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.

***CONT:** Continuous forms are used by the printer. The tractor feed attachment must be on the device.

***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.

***CUT:** Single-cut sheets are used by the printer. Each sheet must be manually loaded. For cut sheets, the forms alignment message is not sent.

DRAWER

Specifies the source drawer used when single-cut sheets are fed into the printer (specified by FORMFEED(*AUTOCUT)).

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

***E1:** The envelopes are fed from the envelope drawer on the sheet-feed paper handler.

***FORMDF:** The paper is fed from the source drawer specified in the form definition. If a form definition is not specified, then source drawer 1 is used.

source-drawer: Specify the drawer from which the paper is fed. Valid values range from 1 through 255.

OUTBIN

Specifies the destination of the output on printers capable of multiple output bins.


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

***DEVD:** The destination of the output is the device default output bin.

output-bin: Specify the output bin for the destination of the output. Valid values range from 1 through 65535.

FONT Specifies the font identifier and point size used with this printer device file. If a font identifier or point size is not specified, the system automatically sets them.

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 the Printer Device Programming  book.

Note:

Some fonts can be substituted by the printer. Consult the various printer reference guides for details.

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

***CPI:** The identifier of the font with the specified pitch (characters per inch (CPI)) is used.

***DEVD:** The font identifier and point size specified in the device description are used.

Element 1: Font Identifier

identifier: Specify the numeric 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.

CHRID

Specifies the character identifier (graphic character set and code page) for the file. This parameter allows printing of text that is in different character identifier (graphic character set and code page) coding. The value specified on this parameter is used to instruct the printer device to interpret the hexadecimal byte string to print the same characters that were intended when the text was

created. More information about the character identifier is in the Printer Device Programming  book. A list of valid CHRID values and applicable printers is in the “CHRID Values and Applicable

Printers (CHRID parameter)” table in the Printer Device Programming  book.

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

***DEVD:** The default CHRID value that the device is designed to handle is used. The *DEVD value means character selection is normal because the file has the same character identifier as the device default.

***SYSVAL:** The system determines the graphic character set and code page values for the command parameters from the QCHRID system values.

***JOBCCSID:** The character identifier for the printer file is taken from the coded character set identifier (CCSID) of the job.

Note:

This value is not allowed if the file was created on a system at an earlier release level than V2R3M0.

***CHRIDCTL:** The system checks the CHRIDCTL job definition attribute to determine whether to use *JOBCCSID or *DEVD on the CHRID command parameter for this file.

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 value that matches the attributes of the printer. Valid values range from 1 through 32767.

DECFMT

Specifies which decimal format value is used when editing numeric fields with the EDTCDE DDS keyword. The decimal format value determines the use of commas and periods for the decimal position and three digit positional separators on edited fields.

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

***FILE:** Use the decimal format value stored with the file when the file was created.

***JOB:** Use the decimal format value from the DECFMT job attribute when the file is opened.

FNTCHRSET

Specifies a downloaded font consisting of a character set and code page. For an outline font, a point size is required. For a raster font, the point size is ignored. This parameter can only be used for printer files with DEVTYPE(*AFPDS) specified.

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

***FONT:** The value specified on the FONT parameter is used.

Element 1: Font Character Set

The name of the font character set 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.

character-set: Specify the font character set to use.

Element 2: Code Page Name

The name of the code page 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.

code-page: Specify the code page value used to create the command parameters. Valid values range from 1 through 999.

Element 3: 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.

CDEFNT

Specifies the coded font that the system uses for single-byte character set (SBCS) printing. For coded fonts that reference an outline font, a point size may also be specified. This parameter can only be used for printer files with DEVTYPE(*AFPDS) specified.

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

***FNTCHRSET:** The font specified on the FNTCHRSET parameter is used.

The name of the coded font 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.

coded-font-name: Specify the DBCS-coded font name to use.

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.

PAGDFN

Specifies the qualified name of the page definition to be used to format line data.

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

***NONE:** No page definition is specified.

Because PSF/400 requires a page definition when *LINE or *AFPDSLINe is specified, an inline page definition is built from the print file parameters and passed to PSF/400 when *NONE is specified.

The name of the page 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.

page-definition-name: Specify the name of the page definition that must exist in the library specified. Valid values range from 1 to 8 characters. Device type *AFPDSLINe or *LINE must be specified when using a page definition.

FORMDF

Specifies the form definition to use when printing the file. A form definition is a resource object that defines the characteristics of the form, including overlays, position of page data on the form, and number of copies of pages and modifications to pages. The form definition is located inline with the file being printed, or in a library.

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

***NONE:** No form definition is used.

Because PSF/400 requires a form definition, an inline form definition is built from the print file parameters and passed to PSF/400 when *NONE is specified.

***DEVD:** The name of the form definition is specified in the printer device description.

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.

form-definition-name: Specify the name of the form definition that must exist in the library specified. Valid values range from 1 to 8 characters.

AFPCHARS

Specifies one or more AFP characters (coded fonts) to be used with line data and a page definition.

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

***NONE:** No AFP character (coded fonts) specified.

user-defined-data: Specify up to four 4-byte names of coded fonts to be specified with line data and a page definition. The 4-byte names would be concatenated to X0 to identify up to four coded fonts which are to be used when TBLREFCHR is being used within the data.

TBLREFCHR

Specifies whether table reference characters are present in the line data.

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

***NO:** No table reference character is present in line data.

***YES:** Table reference characters are present in line data.

If forms control characters are used with the data, the table reference character follows the forms control character but precedes the data bytes. If forms control characters are not used, the table reference character is the first byte of the data record. As with forms control character, if table reference characters are used, every data record must contain a TRC byte.

PAGRRT

Specifies the degree of text rotation for the 3112, 3116, 3130, 3812, 3816, 4028, 3820, 3825, 3827, 3829, 3831, 3835, 3900, 3916, 3930 and 3935 printers. This parameter allows the user to specify the degree of rotation of the text on the page with respect to the way the form is loaded into the printer. See the note under the PAGESIZE parameter for directions on specifying page size when rotating the page.

Specify ***AUTO** or ***DEV**D for this parameter and **PRTQLTY(*DRAFT)** on this command to enable automatic rotation if the data does not fit on the paper.

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

***AUTO:** Indicates that automatic rotation of output is done to fit the printed data on the form. If rotation does not accomplish this, computer output reduction is performed automatically (regardless of the print quality being used). This parameter is valid only for printers supporting rotation.

***DEV**D: The operating system sends a device default rotation value to the printer. Page rotation is dependent on your printer's specifications. See your printer or printer emulation documentation to determine how page rotation is affected.

***COR:** Computer output reduction is done. Computer output reduction allows printed output intended for a 13.2 inch wide by 11.0 inch long form to be printed on an 11 inch wide by 8.5 inch long form.

For computer output reduction printing, the following operations are done for the 3112, 3116, 3130, 3812, 3816, 4028, 3820, 3825, 3827, 3829, 3831, 3835, 3900, 3916, 3930 and 3935 printers:

- Automatic rotation to ***COR** is not done if the file contains graphics, bar codes, variable LPI, variable font, variable page rotations, or variable drawer.

- The text is rotated 90 degrees clockwise from the 0 degree rotation position (lower left corner of the first edge loaded into the printer).

Note:

For landscape paper on a 3835 printer, the rotation is counter-clockwise from the 0 degree rotation position (upper right corner of the first edge loaded into the printer).

- A top and left margin of 0.5 inches is added to the printed output.
- The 12-pitch fonts are changed to a 15-pitch font and 15-pitch fonts are changed to a 20-pitch font. All other font widths are changed to a 13.3-pitch font, except for the 4028 printer where they are changed to a 15-pitch font.
- Vertical spacing (specified by the LPI parameter) is 70 percent of the normal spacing.
- The page size is set to 8.5 inches wide by 11 inches long.

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.

90: Rotation of the text is done 90 degrees clockwise from the 0 degree writing position.

180: Rotation of the text is done 180 degrees clockwise from the 0 degree writing position.

270: Rotation of the text is done 270 degrees clockwise from the 0 degree writing position.

MULTIUP

Specifies, for spooled output only, the number of pages printed on a single physical page.

Note:

Overlays are not reduced when more than one page is printed on a side.

For examples and more details see the Printer Device Programming  book.

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

1: One page of output is printed on one physical sheet of paper.

2: Two pages of output are printed on 1 physical sheet of paper.

3: Three pages of output are printed on 1 physical sheet of paper.

4: Four pages of output are printed on 1 physical sheet of paper.

REDUCE

Specifies whether or not to reduce the output when doing multiple up printing.

For examples and more details see the Printer Device Programming  book.

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

***TEXT:** The text output is reduced when doing multiple up printing.

***NONE:** The output is not reduced when doing multiple up printing.

PRTTXT

Specifies up to 30 characters of text to be printed at the bottom of each page of output. More information is in Commonly used parameters.

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

***JOB:** The value for the current job is used.

***BLANK:** Text is not specified.

'print-text': Specify the character string printed at the bottom of each page. No more than 30 characters of text can be entered, enclosed in apostrophes.

JUSTIFY

Specifies the printing positions of the characters on a page so the right-hand margin of printing is regular. Justification is done to the record length on the printer file opened.

Note:

The JUSTIFY parameter is supported only on the 3812 SCS, 3816 SCS, and 5219 Printers.

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

0: The format of this tape is FMT3480. The data density on this tape volume is formatted to support a 3480 device. This density is used for 1/2 inch cartridge tapes.

50: Spaces are added to the blanks in the text so that the right margin is more closely aligned but not flush.

100: The text is expanded by spaces (added where the blanks already exist) until the right margin is flush.

DUPLEX

Specifies whether output is printed on one side or two sides of the paper.

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

***NO:** The output is printed on one side of the paper.

***YES:** The output is printed on both sides of the paper with the top of each printed page at the same end of the paper.

***TUMBLE:** The output is printed on both sides of the paper with the top of one printed page at the opposite end of the sheet from the top of the other printed page. This is usually used for output that is bound at the top.

***FORMDF:** The output is printed on both sides of the paper if the duplex value is specified in the form definition. If a form definition is not specified, then the output is printed on one side of the paper.

DFRWRT

Specifies how much output is held in the system buffer before being sent to the printer.

***SAME:** The output queue associated with the job is used.

***YES:** The system controls the amount of output that is held in the buffer before being sent to the printer.

If SPOOL(*YES) is specified along with SCHEDULE(*IMMED), output is held in the buffer until a page of output is available or until the system buffer is full.

***NO:** If SPOOL(*NO) is specified, output is not held in the buffer. Output is sent to the printer immediately after the program performs a write operation.

If the spooled output schedule is not immediate, specifying DFRWRT(*NO) has no effect.

UOM Specifies the unit of measure that is used.

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

***INCH:** An inch is used as the unit of measure.

***CM:** A centimeter is used as the unit of measure.

FRONTOVL

Specifies the qualified name of the object that contains both the overlay that is printed on the FRONT side of the page and the offset, down and across, from the point of origin used when the overlay is printed.

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

***NONE:** No overlay is used.

Element 1: Overlay Name

The name of the overlay 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.

overlay-name: Specify the name of the overlay.

Element 2: Offset Down

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

offset-down: Specify the offset down from the point of origin at which to begin printing the overlay. If UOM(*CM) is specified, valid values range from 0 through 57.79, and if UOM(*INCH) is specified, valid values range from 0 through 22.57.

Element 3: Offset Across

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

offset-across: Specify the offset across from the point of origin at which to begin printing the overlay. If UOM(*CM) is specified, valid values range from 0 through 57.79, and if UOM(*INCH) is specified, valid values range from 0 through 22.57.

BACKOVL

Specifies the object name and library name containing both the overlay that is printed on the BACK side of the page and the offset, down and across, from the point of origin used when the overlay is printed.

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

***FRONTOVL:** The values that are specified on the FRONTOVL parameter are used.

***NONE:** No overlay is used.

Element 1: Overlay Name

The name of the overlay 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.

overlay-name: Specify the name of the overlay.

Element 2: Offset Down

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

offset-down: Specify the offset down from the point of origin at which to begin printing the overlay. If UOM(*CM) is specified, valid values range from 0 through 57.79, and if UOM(*INCH) is specified, valid values range from 0 through 22.57.

Element 3: Offset Across

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

offset-across: Specify the offset across from the point of origin at which to begin printing the overlay. If UOM(*CM) is specified, valid values range from 0 through 57.79, and if UOM(*INCH) is specified, valid values range from 0 through 22.57.

Element 4: Constant Back

The constant back function allows you to print overlays on blank pages without adding blank pages to the print application. Specifying the constant back function would cause, for each page generated by the application program, a blank page to be generated onto which the specified back overlay could be printed. The generated blank pages are called constant forms because no variable data from the user's program is printed on the pages. The constant back function is only supported for duplex printing. It is ignored when DUPLEX(*NO) is specified on the printer file.

Note that the offset down and offset across values are ignored when *CONSTANT is specified for constant back. An offset of 0.0 is assumed for these values.

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

***NOCONSTANT:** No constant back is specified.

***CONSTANT:** Constant back is specified.

CVTLINDTA

Specifies whether line data is converted to Advanced Function Presentation Data Stream (AFPDS) before the data is written to the spooled file. When DEVTYPE(*LINE) or DEVTYPE(*AFPDSL) is specified, and a page definition is specified (PAGDFN Parameter), this parameter allows the line data to be converted to AFPDS before the data is written to spooled file. For device types of *SCS,*USERASCII, *IPDS, and *AFPDS, this parameter is ignored. For device types of *LINE and *AFPDSL, if a page definition is not specified, then this parameter is ignored.

To print AFPDS spooled files on an OS/400 requires Host Print Transform when printing to ASCII attached printers and PSF/400 (optional feature of OS/400) for IPDS attached printers.

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

***NO:** Line data is not converted to AFPDS.

***YES:** Specifies that line data is converted to AFPDS before the data is written to the spooled file.

IPDSPASTHR

Specifies whether IPDS (intelligent printer data stream) pass-through is done for the spooled file.

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

***DEV:** The value specified for IPDSPASTHR in the PSF configuration object specified for a printer device description is used. If no PSF configuration object is specified for the device, a value of *NO is used.

***NO:** No IPDS pass-through is done.

***YES:** Specifies that IPDS pass-through is to be done if the spooled file is eligible for IPDS pass-through.

Note:

Not all SCS or IPDS spooled files are eligible for IPDS pass-through. They may contain special functions that require transform to AFPDS for correct printing. Specifying IPDS pass-through on the printer file allows only those spooled files eligible for IPDS pass-through to bypass the extra transforms. Those spooled files not eligible for IPDS pass-through will still undergo the transforms to AFPDS and back to IPDS.

IPDS pass-through will not be valid for all PSF/400 supported printers. Any printer (or attachment) that does not support resident fonts can not support IPDS pass-through. This is because the resident font references in the data stream must be mapped to host fonts which are downloaded to the printer. All IBM IPDS printers, except for the following, can be supported with IPDS pass-through: 3820, 3825, 3827, 3828, 3829, 3831, 3835, 3900-001 and any printer attached using Print Services Facility for OS/2's Distributed Print Function.

For V3R7, V4R1 and V4R2, IPDSPASTHR can be specified with the USRDFNDDTA parameter in a printer file. You may continue using this support with existing printer files and PSF configuration objects by specifying IPDSPASTHR(*DEV) in the printer file. If you specify a value of anything other than *DEV for the IPDSPASTHR parameter, any IPDS pass-through value in the USRDFNDDTA parameter is ignored.

USRRSCLIBL

Specifies the list of user resource libraries to be used for searching for AFP resources for a spooled file. If the AFP resource is not found in the user resource libraries, then the library list specified in the DEVRSCLIBL parameter of the PSF configuration object is searched. If no PSF configuration object is specified for the device, then libraries QFNTCPL, QFNT01-QFNT19, and QFNT61-69 are searched.

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

***DEV:** The value specified for USRRSCLIBL in the PSF configuration object specified for a printer device description is used. If no PSF configuration object is specified for the device, a value of *JOBLIBL is used.

***NONE:** No user libraries are specified.

***JOBLIBL:** Specifies that the library list of the job that created the spool file is used in searching for AFP resources. This library list is saved with the spool file when it is created.

***CURLIB:** Specifies that the current library of the job that created the spool file is used for searching for AFP resources. If no library is specified as the current library for the job, then library QGPL is used.

user-resource-library-name: Specify the name of a library that will be used to search for AFP resources. Up to four library names may be specified.

For V3R7, V4R1 and V4R2, USRRSCLIBL can be specified with the USRDFNDA parameter in a printer file. PSF/400 uses that value if USRRSCLIBL(*PRTF) is specified in a PSF configuration object which is specified in the printer device description. You may continue using this support with existing printer files and PSF configuration objects by specifying USRRSCLIBL(*DEV) in the printer file. If you specify a value of anything other than *DEV for the USRRSCLIBL parameter, any user resource library value in the USRDFNDA parameter is ignored.

CORNERSTPL

Specifies the reference corner to be used for a corner staple. A staple is driven into the media at the reference corner. Refer to your printer's documentation for information as to which reference corners are supported.

Page rotation does not affect the placement of a corner staple.

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

***NONE:** A corner staple is not specified.

***DEV:** The reference corner is the default reference corner used by the device.

***BOTRIGHT:** The reference corner is the bottom right corner of the media.

***TOPRIGHT:** The reference corner is the top right corner of the media.

***TOPLEFT:** The reference corner is the top left corner of the media.

***BOTLEFT:** The reference corner is the bottom left corner of the media.

EDGESTITCH

Specifies the placement of staples along the finishing margin in either inches or centimeters (specified in the unit of measure (UOM) field). The finishing margin can be thought of as an imaginary line parallel to the edge of the paper where the staples will be placed.

See the Printer Device Programming  book for more information.

Page rotation does not affect the placement of an edge stitch.

Single Value

***NONE:** An edge stitch is not specified.

Element 1: Reference Edge

Specifies the reference edge to be used for an edge stitch. An edge stitch is formed by having one or more staples driven into the media along the finishing operation axis.

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

***DEV:** The reference edge is the default reference edge used by the device.

***BOTTOM:** The reference edge is the bottom edge of the media.

***RIGHT:** The reference edge is the right edge of the media.

***TOP:** The reference edge is the top edge of the media.

***LEFT:** The reference edge is the left edge of the media.

Element 2: Reference Edge Offset

Specifies the offset of the edge stitch from the reference edge toward the center of the media.

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

***DEVD:** The reference edge offset is the default reference edge offset used by the device.

reference-edge-offset: Specify the offset of the edge stitch from the reference edge. If UOM(*CM) is specified, valid values range from 0 through 57.79, and if UOM(*INCH) is specified, valid values range from 0 through 22.57. This value is converted to millimeters for the printer. Fractional millimeters are not supported and are discarded when when conversion to millimeters is performed.

Element 3: Number of Staples

Specifies the number of staples that are to be applied along the finishing operation axis.

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

***DEVD:** The number of staples depends on the value of the Staple Offsets element of this parameter. If *DEVD is also specified or defaulted for the Staple Offsets element value, then the number of staples is the default number of staples used by the device. If one or more offsets are specified for Staple Offsets, the number of staples is the same as the number of staple offsets specified.

number-of-staples: Specify the number of staples to be used for the edge stitch. Valid values range from 1 to 122 staples. If one or more offsets are specified for Staple Offsets, the number of staples is the same as the number of staple offsets specified.

Element 4: Staple Offsets

Specifies the offset of the staples along the finishing operation axis. The offset is measured from the point where the finishing operation axis intersects either the bottom edge or the left edge of the media, toward the center of the media. Each consecutive value is used to position a single finishing operation centered on the specified point on the finishing operation axis.

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

***DEVD:** The staple offsets are the default staple positions used by the device. If a value was specified for the Number of Staples element, the staple position of each staple will be calculated automatically by the printer.

staple-offset: Specify the staple offset for each staple in the edge stitch. Up to 122 staple offsets may be specified. If one or more offsets are specified, and a value was specified for Number of Staples, the number of staple offsets will take precedence. If UOM(*CM) is specified, valid values range from 0 through 57.79, and if UOM(*INCH) is specified, valid values range from 0 through 22.57. This value is converted to millimeters for the printer. Fractional millimeters are not supported and are discarded when when conversion to millimeters is performed.

Single Value

***NONE:** An edge stitch is not specified.

SADLSTITCH

Specifies where one or more staples are driven into the media along the finishing operation axis, which is positioned at the center of the media parallel to the reference edge.

Page rotation does not affect the placement of a saddle stitch.

Single Value

***NONE:** A saddle stitch is not specified.

Element 1: Reference Edge

Specifies the reference edge to be used for a saddle stitch. A saddle stitch is formed by having one or more staples driven into the media along the finishing operation axis, which is positioned at the center of the media parallel to the reference edge.

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

***DEVD:** The reference edge is the default reference edge used by the device.

***TOP:** The reference edge is the top edge of the media.

***LEFT:** The reference edge is the left edge of the media.

Element 2: Number of Staples

Specifies the number of staples that are to be applied along the finishing operation axis.

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

***DEVD:** The number of staples depends on the value of the Staple Offsets element of this parameter. If *DEVD is also specified or defaulted for the Staple Offsets element value, then the number of staples is the default number of staples used by the device. If one or more offsets are specified for Staple Offsets, the number of staples is the same as the number of staple offsets specified.

number-of-staples: Specify the number of staples to be used for the saddle stitch. Valid values range from 1 to 122 staples. If one or more offsets are specified for Staple Offsets, the number of staples is the same as the number of staple offsets specified.

Element 3: Staple Offsets

Specifies the offset of the staples along the finishing operation axis. The offset is measured from the point where the finishing operation axis intersects either the bottom edge or the left edge of the media, toward the center of the media. Each consecutive value is used to position a single finishing operation centered on the specified point on the finishing operation axis.

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


***DEVD:** The staple offsets are the default staple positions used by the device. If a value was specified for the Number of Staples element, the staple position of each staple will be calculated automatically by the printer.

staple-offset: Specify the staple offset for each staple in the saddle stitch. Up to 122 staple offsets may be specified. If one or more offsets are specified, and a value was specified for Number of Staples, the number of staple offsets will take precedence. If UOM(*CM) is specified, valid values range from 0 through 57.79, and if UOM(*INCH) is specified, valid values range from 0 through 22.57. This value is converted to millimeters for the printer. Fractional millimeters are not supported and are discarded when conversion to millimeters is performed.

FNTRSL

Specifies the resolution PSF/400 uses when printing to a multiple resolution printer configured to report multiple resolutions, but the spooled file does not specify the font metrics and resolution or the font is not available at the resolution that is contained in the spooled file.

For more information regarding the algorithm used for searching a library list for a font resource,

see the Printer Device Programming  book section entitled User and Device Resource Library Lists in the chapter called Working With PSF configuration objects.

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

***DEVD:** The value specified in the FNTRSL parameter of the PSF configuration object for the device is used. If no PSF configuration object is specified for the device, a value of *SEARCH is used.

***SEARCH:** Specifies to search the library list for the first occurrence of a host font with a name match. The resolution of that font is used to print the spool file. Message PQT3546 is sent to specify the resolution of the font that was selected.

240: The font resolution is 240 pels per inch.

300: The font resolution is 300 pels per inch.

SPOOL

Specifies whether the output data for the printer file is spooled. If SPOOL(*NO) is specified, the following parameters in this command which only apply to spooled files are ignored: OUTQ, COPIES, PAGERANGE, MAXRCDS, FILESEP, SCHEDULE, HOLD, SAVE, OUTPTY, USRDTA, SPLFNAME, SPLFOWN, USRDFNOPT, USRDFNDDTA, and USRDFNOBJ. In addition, several other parameters in this command are not supported for SPOOL(*NO) because they either require PSF/400 or are only supported for certain device types which cannot be specified with SPOOL(*NO). These parameters are: FRONTMGN, BACKMGN, FIDELITY, FNTCHRSET, CDEFNT, PAGDFN, FORMDF, AFPCHARS, TBLREFCHR, REDUCE, FRONTOVL, BACKOVL, IPDSPASTHR, USRRSCLIBL, CORNERSTPL, EDGESTITCH, SADLSTITCH, FNTRSL, and CVTLINDTA.

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

***YES:** The data is spooled for processing by a diskette writer or a print writer.

***NO:** The data is not spooled; it is sent directly to the device and printed as the output becomes available.

OUTQ Specifies, for spooled output only, the qualified name of the output queue.

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

***JOB:** The output queue associated with the job is used.

***DEV:** The output queue associated with the printer specified on the DEV parameter is used. The output queue has the same name as the printer.

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 to which the output data is spooled.

FORMTYPE

Specifies the type of form on which the output is printed. The identifiers used to indicate the type of forms are user-defined and can be a maximum of 10 characters in length.

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

***STD:** The standard form type is used.

form-type: Specify the identifier of the form type used with this device file for printed output from jobs. Up to 10 alphanumeric characters can be specified. When the device file is opened, the system sends a message identifying the form type to the system operator, and requests that the identified forms be in the printer.

COPIES

Specifies, for spooled files, the number of copies being printed.

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

number-of-copies: Specify a value, ranging from 1 through 255, that indicates the number of identical printouts produced when this printer file is used.

PAGERANGE

Specifies the page range to print for each copy of the file to be printed.

Element 1: Starting Page to Print

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

***ENDPAGE:** Only the ending page is printed.

starting-page: Specify the page on which to start printing.

Element 2: Ending Page to Print

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

***END:** The last page in the file is printed.

ending-page: Only the ending page is printed.

MAXRCDS

Specifies, for spooled output only, the maximum number of records that can be in the spooled file for jobs using this printer file. If this maximum is reached, an inquiry message is sent to the program message queue.

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

***NOMAX:** The system maximum is used.

maximum-records: Specify a value, ranging from 1 through 999999, that specifies the maximum number of records allowed in the spooled file.

FILESEP

Specifies, for spooled output only, the number of separator pages placed at the start of each printed file, including those between multiple copies of the same output. Each separator page has the following items printed on it: file name, file number, job name, user name, and the job number.

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

number-of-file-separators: Specify the number of separator pages used at the start of each printed output file produced by this device file. Valid values range from 0 through 9. If 0 is specified, no separator pages are printed for the file. In this case, the printed output for each file (or copy of a file) starts at the top of a new page.

SCHEDULE

Specifies, for spooled output only, when the spooled file is available to a writer.

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

***JOBEND:** The spooled file is made available to the writer only after the entire job is completed.

***FILEEND:** The spooled file is made available to the writer as soon as the file is closed in the program.

***IMMED:** The spooled file is made available to the writer as soon as the file is opened in the program.

HOLD Specifies, for spooled output only, whether the spooled file is held. The spooled file can be released by using the Release Spooled File (RLSSPLF) command.

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

***NO:** The spooled printer file is not held by the output queue. The spooled output is available to a writer based on the SCHEDULE parameter value.

***YES:** The spooled file is held until released by the Release Spool File (RLSSPLF) command.

SAVE Specifies, for spooled output only, whether the spooled file is saved (left on the output queue) after the output has been produced.

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

***NO:** The spooled file data is not saved on the output queue after it has been produced.

***YES:** The spooled file data is saved on the output queue until the file is deleted. After the file is produced, the number of copies (see COPIES parameter) is set to 1, and its status is changed from WTR to SAV. Refer to the Release Spooled File (RLSSPLF) command for information on how to produce the spooled file again.

OUTPTY

Specifies the output priority for spooled output files that are produced by this job. The highest priority is 1 and the lowest priority is 9. More information on this parameter is in Commonly used parameters.

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

***JOB:** The output priority associated with the job that created the spooled file is used.

output-priority: Specify the output priority. Valid values range from 1 (high priority) through 9 (low priority).

USRDTA

Specifies, for spooled output only, the user-specified data that identifies the file.

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

***SOURCE:** If the spooled file was created by an application program, the name of the program is used. Otherwise, blanks are used.


user-data: Specify up to 10 characters of text.

SPLFOWN

Specifies, for spooled output only, who the owner of the spooled file will be.

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


***CURUSRPRF:** The spooled file is owned by the current effective user of the current job or thread.

See the Printer Device Programming  book for information on how the SPLFOWN parameter is affected when using any of the following APIs:

- QWTSETP - Set Profile
- qsyssetuid() - Set User ID
- qsysseteuid() - Set Effective User ID
- qsyssetreuid() - Set Real and Effective User ID

***JOB:** The spooled file is owned by the original user profile of the job. If the job has switched to a new user profile, the original user profile is still the owner of the spooled file.

***CURGRPPRF:** The spooled file is owned by the current effective group profile of the current job or thread. If there is no current effective group profile, ownership of the spooled file is determined

in the same manner as *CURUSRPRF. See the Printer Device Programming  book for information on how the SPLFOWN parameter is affected when using any of the following APIs:

- QWTSETP - Set Profile
- qsyssetgid() - Set Group ID

- qsyssetgid() - Set Effective Group ID
- qsyssetregid() - Set Real and Effective Group ID

***JOBGRPPRF:** The spooled file is owned by the group profile of the original user profile of the job. If the job has switched to a new user profile, the group profile of the original user profile is still the owner of the spooled file. If no group profile exists, ownership of the spooled file is determined the same way as *JOB.

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.

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

***NONE:** No user-defined options are 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.

USRDFNDDTA

Specifies, for spooled output only, the user-defined data to be used by user applications or user-specified programs that process spooled files.

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

***NONE:** No user-defined data specified.

user-defined-data: Specify the user-defined data 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.

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

***NONE:** No user-defined object 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.

object-name: Specify 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 Object
- *USRIDX**
User Index
- *USRQ**
User Queue
- *USRSPC**
User Space

IGCDTA

Specifies, for program-described original files, whether the file processes double-byte character set (DBCS) data. For externally described printer files, this parameter specifies DBCS attributes of the file.

For program-described files:

- *SAME:** The value does not change.
- *NO:** The file does not process DBCS data.
- *YES:** The file processes DBCS data.

For externally described files:

- *SAME:** The value does not change.
- *NO:** The only DBCS attributes of the file are those defined in the data description specifications (DDS).
- *YES:** The file processes DBCS data.

IGCEXNCHR

Specifies whether the system processes double-byte character set (DBCS) extension characters.

- *SAME:** The value does not change.
- *YES:** The system processes DBCS extension characters.
- *NO:** The system does not process DBCS extension characters; it prints extension characters as the undefined character.

IGCRRRTT

Specifies, for the 5553 and 5583 Printers only, whether the printer rotates double-byte characters 90 degrees counterclockwise when printing. The system prints rotated double-byte characters so they appear in a vertical reading sequence. Alphanumeric characters are not rotated.

- *SAME:** The value does not change.
- *NO:** The system does not rotate double-byte characters when printing.
- *YES:** The system rotates double-byte characters 90 degrees counterclockwise when printing. The printer rotates each character individually.

IGCCPI

Specifies the printer character density of double-byte character set (DBCS) characters, in characters per inch (CPI).

Note:

This parameter does not specify the printer character density of alphanumeric characters. Alphanumeric characters are printed with the value specified on the CPI parameter.

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

***CPI:** DBCS character density is based on the values specified for the CPI parameter. The system prints one double-byte character for every two alphanumeric characters.

- For CPI(10), DBCS characters print at 5 characters per inch.
- For CPI(12), DBCS characters print at 6 characters per inch.
- For CPI(13.3), DBCS characters print at 6.7 characters per inch (same as IGCCPI(*CONDENSED)).
- For CPI(15), DBCS characters print at 7.5 characters per inch.
- For CPI(18), DBCS characters print at 9 characters per inch.
- For CPI(20), DBCS characters print at 10 characters per inch.

***CONDENSED:** Condensed printing is used in which the system prints 20 DBCS characters every 3 inches. This value is valid only for the 5553 or 5583 Printers.

5: The format of this tape is QIC525, which is used for 1/4 inch cartridge tapes that can hold 525 megabytes of data.

6: DBCS character density is 6 characters per inch. This value is valid for the 5553 and 5583 Printers only.

10: DBCS character density is 10 characters per inch. This value is valid for the 5553 or 5583 Printers only.

IGCSOSI

Specifies, for bracketed DBCS character strings only, how the system prints shift control characters.

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

***NO:** The system does not print shift control characters. These characters do not occupy a position in printed output.

***YES:** The system prints shift control characters as blanks.

***RIGHT:** The system prints two blanks when printing shift-in characters but does not print shift-out characters.

IGCCDEFNT

Specifies the coded font that the system uses for DBCS printing. For a coded font that references an outline font, a point size may also be specified.

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

***SYSVAL:** The DBCS-coded font specified in the system value QIGCCDEFNT is used.

The name of the coded font 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.

coded-font-name: Specify the coded font name to use.

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.

WAITFILE

Specifies the number of seconds that the program waits for the file resources and session resources to be allocated when the file is opened, or for the device or session resources to be allocated when an acquire operation is performed to the file. If those resources are not allocated within the specified wait time, an error message is sent to the program. More information on this parameter is in Commonly used parameters.

Note:

An immediate allocation of the device by the device resource is required when an acquire operation is performed to the file.

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

***IMMED:** The program does not wait; when the file is opened, an immediate allocation of the file resources is required.

***CLS:** The job default wait time is used as the wait time for the file resources being allocated.

number-of-seconds: Specify the number of seconds that the program waits for the file resources to be allocated to the printer file when the file is opened, or the wait time for the device allocated when an acquire operation is performed to the file. Valid values range from 1 through 32767 seconds.

SHARE

Specifies whether the open data path (ODP) for the printer file is shared with other programs in the routing step. When an ODP is shared, the programs accessing the file share facilities such as the file status and the buffer.

More information on shared database files is in the Database Programming topic in the Information Center.

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

***NO:** The ODP created by the program with this attribute is not shared with other programs in the routing step. Every time a program opens the file with this attribute, a new ODP to the file is created and activated.

***YES:** The ODP created with this attribute is shared with each program in the routing step that also specifies SHARE(*YES) when it opens the file, provided the scope specified on the OPNSCOPE keyword for the subsequent open of the file is compatible with the scope of the original open.

Note:

When SHARE(*YES) is specified and control is passed to a program, a read operation in that program retrieves the next input record. A write operation produces the next output record.

Examples for CHGPRTF**Example 1: Changing Two Parameters**

```
CHGPRTF FILE(ACCREC/PRTRPT) LPI(6) ALIGN(*YES)
```

This command changes two parameters in printer file PRTRPT stored in library ACCREC. The system operator must align the pages in the printer before the system starts printing the file. The file is printed in 6 lines per inch on the pages.

Example 2: Changing All IBM-Supplied Printer Files

```
CHGPRTF FILE(QSYS/Q*) PAGESIZE(88 132) LPI(8)  
OVRFLW(80)
```

This command changes all IBM-supplied printer files (that is, all printer files in library QSYS whose names start with a Q) to use 88 lines of 132 characters (8 lines per inch), but to skip to the next page after 80 lines.

Example 3: Processing DBCS Data

```
CHGPRTF FILE(IGCLIB/IGCPRT) FORMFEED(*AUTOCUT)  
IGCDTA(*YES) IGCCHRRTT(*YES)
```

This command changes printer file IGCPRT stored in library IGCLIB, so that it processes double-byte character set data. The system rotates double-byte characters before printing, and cut sheets are fed automatically when printing.

Error messages for CHGPRTF***ESCAPE Messages****CPF7304**

File &1 in &2 not changed.

CPF7308

&5 files not changed for &1 in &2. &4 files changed.

CHGPRB (Change Problem) Command Description

CHGPRB Command syntax diagram

Purpose

The Change Problem command allows the user to change the values of selected fields within the problem log. The changeable fields include the service assigned number, problem severity, user name assigned to the problem log entry, and problem description.

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

Required Parameter

PRBID

Specifies the problem identifier of the problem log entry. Problems with different system origins can have the same identifier. This parameter can be used with the ORIGIN parameter to select a single problem from a particular system origin.

Optional Parameters

ORIGIN

Specifies the node of the system from which the problem log entry originated. This parameter is used with the PRBID parameter to uniquely identify the problem.

Element 1: Network Identifier

***NETATR:** The LCLNETID value specified in the system network attributes is used.

network-identifier: Specify a network identifier.

Element 2: Control Point Name

***NETATR:** The LCLNETID value specified in the system network attributes is used.

control-point-name: Specify a control point name.

SEV

Specifies the severity level of the problem log entries being shown on the display. The severity level is assigned by the user when the problem is prepared for reporting. The four severity levels are:

- | | |
|---|--------|
| 1 | High |
| 2 | Medium |
| 3 | Low |
| 4 | None |

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

***NONE:** No severity level is assigned to the problem.

severity: Specify the severity level. Valid values range from 1 through 4.

ASNUSER

Specifies the user name assigned to the problem log entry.

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

***NONE:** No user name is assigned to the problem.

user-name: Specify the user name that is assigned to the problem log entry.

GROUP

Specifies the group in the filter to which the problem is assigned.

***SAME:** The group name does not change.

***NONE:** The problem is not assigned to a filter group.

group-name: Specify the group into which the problem entry is filtered.

SRVID

Specifies the service-assigned number for the problem log entry. This number is assigned when the problem is reported to IBM service support.

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

***NONE:** No service-assigned number is assigned to the problem.

service-ID-number: Specify the service-assigned number for the problem log entry.

PRBCGY

Specifies whether a problem should be logged and reported to the service provider, or logged only.

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

***REPORT:** The problem is logged and reported to the service provider.

***LOGONLY:** The problem is logged, but is not reported to the service provider.

TEXT Specifies the text that briefly describes the problem. More information is in Commonly used parameters.

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

'problem-description-text': Specify the problem description.

Example for CHGPRB

```
CHGPRB PRBID(9213438081) ORIGIN(AS400 SYSTEM02)
SEV(4) ASNUSER(JEFFREY) GROUP(CHGPROB)
SRVID(PMR01) TEXT('NEW PROBLEM DESCRIPTION')
```

This command changes the problem 9213438081 originating on SYSTEM02.AS400 to severity 4, changes the assigned user to JEFFREY, changes the group to CHGPROB, changes the service assigned number to PMR01, and adds a new description.

Error messages for CHGPRB

***ESCAPE Messages**

CPF7AAD

Problem &1 not changed.

CPF7AA7

Problem &1 not found or in use.

CPF7A8D

Problem &1 not changed.

CPF7A9C

Cannot work with the problem log at this time.

CHGPRBACNE (Change Problem Action Entry) Command Description

CHGPRBACNE Command syntax diagram

Purpose

The Change Problem Action Entry (CHGPRBACNE) command changes a problem action entry that was added using the Add Problem Action Entry (ADDPRBACNE) command.

See the ADDPRBACNE command for a table that describes the record format of the record that is received when the QRCVDTAQ program is called.

Required Parameters

FILTER

Specifies the name of the filter.

The name of the filter 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.

problem-filter-name: Specify the name of the filter.

Optional Parameters

GROUP

Specifies the group for which the actions are to be applied. The group name is assigned from selection criteria from a selection entry in the filter.

***DEFAULT:** The default specified when the filter was created is used.

group-name: Specify a group name.

ASNUSER

Specifies the user assigned to the problem log entry.

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

***NOCHG:** No change occurs to the problem log entry.

***NONE:** No user is assigned to the problem log entry.

assigned-user: Specify a user name.

SNDDTAQ

Specifies the data queue for the problem notification record. Keyed data queues are supported.

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

***NONE:** No data queue is used.

Element 1: Data Queue Name

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.

data-queue-name: Specify the name of the data queue.

Element 2: Data Queue Key

***NONE:** No key is used on the data queue.

data-queue-key: Specify the data queue key.

An 80-byte record is enqueued on the data queue specified by the user. This record is received when the QRCVDTAQ program is called. The data queue does not have to be used solely for problems; alerts and problems can share the same data queue.

If a key is specified, it is used when enqueueing the record on the queue. If the data queue is non-keyed, the record is enqueued without a key.

Note: The time stamp used is the system standard time stamp. This time is already stored in the problem record.

The following table describes the record format.

Table 1. Record Format

Position	Type	Value	Description
1-10	CHAR	*PRBFTR	Problem filtering notification
11-11	CHAR	Function	Function performed
			1-Problem created
			2-Problem changed
			3-Problem deleted
12-19	CHAR	Function TOD	TOD time stamp for function
20-29	CHAR	Group	Group problem was filtered into
30-39	CHAR	Problem ID	Problem ID number
40-59	CHAR	Origin System	System where problem originated
60-60	CHAR	Last Event	Last event committed into the history log (see note)
61-68	CHAR	Event TOD	TOD time stamp for Last Event
69-80	CHAR	Reserved	Reserved for future use

Position	Type	Value	Description
----------	------	-------	-------------

Note: Valid Last Event values are the following:

'01'X			Problem entry opened
'02'X			Request received
'03'X			Opened by Alert
'10'X			Problem analyzed
'11'X			Verification test ran
'12'X			Recovery procedure ran
'20'X			Prepared to report
'21'X			Service request sent
'22'X			Problem answered
'23'X			Response sent
'24'X			Reported by voice
'25'X			Fixes transmitted
'30'X			Fix verified
'41'X			Analyzed remotely
'42'X			Remote verification ran
'43'X			Remote recovery ran
'50'X			Alert created
'51'X			APAR created
'52'X			APAR data saved
'54'X			APAR data restored
'55'X			APAR data deleted
'60'X			Problem changed by Change Problem (CHGPRB) command
'61'X			Problem deleted by Delete Problem (DLTPRB) command
'99'X			Problem entry closed

Example for CHGPRBACNE

```
CHGPRBACNE  FILTER(MYLIB/MYFILTER)
             GROUP(IOWA)  ASNUSER(NIGHTOPR)
             SNDDTAQ(*SAME)
```

This command changes the actions for group IOWA. The assigned user is changed to NIGHTOPR.

Error messages for CHGPRBACNE

*ESCAPE Messages

CPF2150

Object information function failed.

CPF2151

Operation failed for &2 in &1 type *&3.

CPF7A82

Error occurred while applying the problem filter.

CPF812F

Filter damaged.

CPF91DD

Action entry for group &4 not found.

CPF91DE

Filter &1/&2 at maximum size.

CPF91EB

Filter type &3 not correct for this operation.

CPF91EC

Internal processing error occurred.

CPF91E8

Internal processing error occurred.

CPF9802

Not authorized to object &2 in &3.

CPF9803

Cannot allocate object &2 in library &3.

CPF9807

One or more libraries in library list deleted.

CPF9808

Cannot allocate one or more libraries on library list.

CHGPRBSLTE (Change Problem Selection Entry) Command Description

CHGPRBSLTE Command syntax diagram

Purpose

The Change Problem Selection Entry (CHGPRBSLTE) command is used to change a problem selection entry that was added using the Add Problem Selection Entry (ADDPRBSLTE) command.

Required Parameters

FILTER

Specifies the name of the filter.

The name of the filter 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.

problem-log-filter-name: Specify the name of the filter.

SEQNBR

Specifies the sequence number of the problem selection entry. Selection entries in a filter are numbered by sequence number. When a filter is applied, the selection entries with lower sequence numbers are tried first.

***LAST:** Change the default selection entry. This entry is automatically added when the filter is created.

sequence-number: Specify a number between 1 and 9999.

Optional Parameters

SELECT

Specifies that a problem log entry is selected or not selected based on whether information in the problem log entry satisfies a specified relationship.

You can specify a single value (*ANY) or all four elements that define a relationship. When you specify the four elements, the attribute and attribute value are compared for the relationship specified by the relational operator.

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

***ANY:** Any problem log entry is selected.

Element 1: Logical Operator

***IF:** The specified relationship must be satisfied for a problem log entry to be selected.

***AND:** The specified relationship must be satisfied in addition to the *IF relationship for a problem log entry to be selected.

***OR:** The specified relationship must be satisfied in addition to or instead of the *IF relationship for a problem log entry to be selected.

Element 2: Attribute

***EVENT:** The filter is applied when the problem log entry is created (a value of 1), changed (a value of 2), or deleted (a value of 3). If the entry has been created and is changed before being committed, use the value of 1.

***ORIGIN:** The problem log entry was locally generated (a value of L) or was received from another system (a value of R).

***ORGNETID:** The network identifier (ID) of the system in which the problem log entry originated is specified. This information is displayed using the Work with Problems (WRKPRB) command which shows the details for a specific problem. Specify the value in the following form:

'nnnnnnnnn'

***ORGPCNAME:** The control point name of the system in which the problem log entry originated is specified. This information is displayed using the Work with Problems (WRKPRB) command which shows the details for a specific problem. Specify the value in the following form:

'cccccccc'

***RCVNETID:** The network identifier of the remote system from which the problem log entry was received is specified. This information is displayed using the Work with Problems (WRKPRB) command which shows the details for a specific problem. Specify the value on the following form:

'nnnnnnnnn'

***RCVCPNAM:** This attribute specifies the Remote System Control Point name in which the problem log entry received from. This information is displayed using the Work with Problems (WRKPRB) command and shows the details for a specific problem. The value specified for this attribute should be of the following form:

'cccccccc'

***PROBTYPE:** The type of problem entry created. Possible problems are machine-detected (a value of 1), user-detected (a value of 2), PTF order (a value of 3), application-detected (a value of 4), PC machine-detected (a value of 5), or PC user-detected (a value of 6).

Note: User-Detected Remote Hardware problems are grouped with number 2 User-Detected problems.

***SEV:** The severity of the problem log entry created. Possible choices are high (a value of 1), medium (a value of 2), low (a value of 3), none (a value of 4), or not assigned (a value of 5).

Note: Problems do not have a severity level when locally created.

***MSGID:** The message ID found in the problem log entry. This is usually an iSeries 400 message ID from an iSeries 400.

***ORGHDW:** The origin hardware resource information in the problem log entry. This information is displayed using the Work with Problems (WRKPRB) command and shows the details for a specific problem. Specify the value in the following form:

```
'tttt mmm ss-sssssss'  
'tttt mmm ss-sssss'  
'tttt mmm sssssss'  
'tttt mmm sssss'
```

where tttt is the machine type, mmm is the model number and ssssssss is the serial number. Use this exact format to match a particular hardware resource exactly, or use a part of the hardware value with the Contains (*CT) relation to provide a partial match.

***RSCHDW:** The failing hardware resource information in the problem log entry. This information is displayed using the Work with Problems (WRKPRB) command and shows the details for a specific problem. Specify the value in the following form:

```
'tttt mmm ss-sssssss'  
'tttt mmm ss-sssss'  
'tttt mmm sssssss'  
'tttt mmm sssss'
```

where tttt is the machine type, mmm is the model number and ssssssss is the serial number. Use this exact format to match a particular hardware resource exactly, or use a part of the hardware value with the Contains (*CT) relation to provide a partial match.

***RSCSFW:** The failing software resource information in the problem log entry. This information is displayed using the Work with Problems (WRKPRB) command and shows the details for a specific problem. Specify the value in the following form:

```
'ppppppp vv rr mm'
```

where ppppppp is the licensed program ID, vv is the version number, rr is the release number, and mm is the modification level. Use this exact format to match a particular software resource exactly, or use a part of the software value with the Contains (*CT) relation to provide a partial match.

Element 3: Relational Operator

The value specified for Element 2 must have the following relationship to Element 4:

***EQ:** Equal to

***GT:** Greater than

***LT:** Less than

***NE:** Not equal to

***GE:** Greater than or equal to

***LE:** Less than or equal to

***CT:** Contains

Element 4: Attribute Value

attribute-value: Specify a value of up to 30 characters to compare with the contents of the attribute specified for Element 2. The value must be specified in character format and must be enclosed in apostrophes if it contains blanks or special characters. If a CL variable is specified for the value, it must be a character variable.

generic-attribute-value:* Specify the generic attribute value.

GROUP

Specifies the group to which a problem is assigned if it matches the criteria specified on the SELECT parameter.

***SAME:**

***DEFAULT:** The problem is assigned to the default group.

group-name: Specify a group name.

Example for CHGPRBSLTE

```
CHGPRBSLTE FILTER(MYLIB/MYFILT) SEQNBR(1250)
  SELECT((*IF *SEV *EQ 1) (*OR *SEV *EQ 2))
  GROUP(SEVHIGH)
```

This command changes the problem selection entry with the sequence number 1250 in filter MYFILT located in library MYLIB. If the severity level equals 1 or 2, it is put in group SEVHIGH.

Error messages for CHGPRBSLTE

***ESCAPE Messages**

CPF2150

Object information function failed.

CPF2151

Operation failed for &2 in &1 type *&3.

CPF7A82

Error occurred while applying the problem filter.

CPF812F

Error occurred while applying the problem filter.

CPF91DC

Selection entry with sequence number &4 not found.

CPF91DE

Filter &1/&2 at maximum size.

CPF91DF

The SELECT keyword cannot be changed for *LAST entry.

CPF91EA

*IF relationship not in correct position.

CPF91EB

Filter type &3 not correct for this operation.

CPF91EC

Internal processing error occurred.

CPF91E6

Generic values only allowed with *EQ or *NE.

CPF91E7

Character in position &4 not valid in value specified.

CPF91E8

Internal processing error occurred.

CPF9802

Not authorized to object &2 in &3.

CPF9803

Cannot allocate object &2 in library &3.

CPF9807

One or more libraries in library list deleted.

CPF9808

Cannot allocate one or more libraries on library list.



CHGPRDCRQA (Change Product Change Request Activity) Command Description

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

CHGPRDCRQA Command syntax diagram

Purpose

The Change Product Change Request Activity (CHGPRDCRQA) command changes a product distribution activity in a change request description.

Restrictions:

1. This command is shipped with public *EXCLUDE authority.
2. You must have *CHANGE authority to the change request description object and *EXECUTE authority to the library.
3. If you change the activity, you do not need to be authorized to any objects that are to be manipulated. If you submit the change request, you must be authorized to the change request description.
4. The product must be packaged in a save file and cataloged at the time it runs. You can use the Package Product for Distribution (PKGPRDDST) command to package the product.
5. If a NODL value is specified, the node list can only contain entries that have a value of *SNA for the address type.

The following notes provide information on how the command works.

Notes:

1. Authorization to the product specified on the activity is not verified until the activity runs.
2. All conditions must be satisfied before the activity can be performed.
3. The start times indicate when the activity can be started. Actual start times can be later due to network and system delays.
4. Action *DLTCLGE only deletes the save file containing the licensed program and deletes the distribution catalog entry that maps this save file. It does not delete the product.
5. The save file containing the product is not deleted after an installation. This should be done using a *DLTCLGE action.
6. If TGTRLS(*ONLY) is specified, the action parameter must be a value other than *INS.
7. When it is requested to send the license key of the product, a record with the license key information must exist in the central site license repository by the time this activity runs.
8. All the existing records in the central site license repository containing the license key information for the specified product will be sent to the specified managed system or systems, but only those that match the system serial number are added to the managed system license repository.

Required Parameters

CRQD Specifies the change request description object name.

The possible library values are:

***LIBL:** All of the libraries in the user and system portions of the job's library list are searched.

***CURLIB:** The current library for the job is used to locate the object.

library-name: Specify that only the library named in this parameter is searched.

change-request-description: Specify the name of the change request description object.

ACTIVITY

Specifies the name of the activity to change in the change request description.

***LAST:** The activity is the last to run in the change request. When *LAST is specified for the activity (ACTIVITY) parameter, the condition (COND) parameter and the start time (STRTIME) parameter cannot be specified. Only one activity named *LAST can exist in the change request description.

activity-name: Specify a 10-character activity name.

ACTION

Specifies the product distribution function that is to be performed.

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

***SND:** Send the product to the specified managed systems.

***RTV:** Retrieve the product from the specified managed systems.

***DLTCLGE:** Delete the catalog entry and associated save file for the product from the specified managed systems.

***INS:** Install the product on the specified managed systems.

***SNDINS:** Send and install the specified product on the specified managed systems.

PRDID

Specifies the 7-character identifier of the product for which the action is performed.

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

product-ID: Specify the 7-character product ID that is used in the activity.

Optional Parameters

RLS Specifies which version, release, and modification level of the product is used.

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

***ONLY:** The release level of the product that is installed on your system.

release-level: Specify the release level in the format VxRxMy, where Vx is the version number, where Rx is the release number, and My is the modification number. Valid values for x range from numbers 0 through 9. Valid values for y range from numbers 0 through 9 and the letters A through Z.

OPTION

Specifies which of the optional parts of the product given in the PRDID parameter are used.

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

***BASE:** Only the base part of the product is used. This is only valid when ACTION is *SND, *RTV, *INS, and *SNDINS.

product-option-number: Specify the option number for the product load being used. Valid values range from 1 through 99.

LODTYPE

Specifies the product load objects being used.

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

***ALL:** Code and language objects specified on the LODID parameter are used.

***CODE:** The object associated with this product load are used.

***LNG:** The objects associated with the NLV identified on the LODID parameter are used.

LODID

Specifies the load identifier used.

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

***ALL:** All languages for this product option are used.

***CODE:** The code load is used.

product-load-ID: Specify the load ID of the product when LODTYPE(*LNG) or LODTYPE(*ALL) is used. The load ID must be one of the valid IBM national language versions and be specified in the form 29xx. The value of x can be 0 through 9.

TGTRLS

Specifies the release of the operating system on which you intend to use the product.

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

***ONLY:** The release is determined by the release of the existing product. This value is not valid if more than one release exists for the same product.

***CURRENT:** The product is to be used on the release of the operating system currently running on your system.

***PRV:** The product is to be used on the previous release with modification level 0 of the operating system.

release-level: Specify the release level in the format VxRxMx. The product can be used on a system with the specified release or with any later release of the operating system installed. Valid values depend on the current version, release, and modification level, and can change with each new release.

NODL Specifies that the node list parameter is the object name that contains a list of systems which are the destinations for the activity. This parameter cannot be specified if the control point name (CPNAME) parameter is also specified.

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

***NONE:** The systems on which this activity is to be performed are not specified by a node list. Individual control point names must be specified.

The possible library values are:

***LIBL:** All of the libraries in the user and system portions of the job's library list are searched for the node list object.

***CURLIB:** The current library for the job is used to locate the node list object.

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

node-list-name: Specify the node list object name containing the list of systems on which the activity is to be performed.

CPNAME

Specifies the APPN control point names of the managed systems on which this activity is to be performed. Control point names cannot be specified if the node list (NODL) parameter is specified.

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

***NONE:** The systems on which this activity is performed are not identified individually. A node list must be specified.

***NETATR:** The network ID of the local system is used. This is useful when the node being specified is in the same network as the local system.

network-identifier: Specify the APPN network identifier of the managed system on which the activity is to be performed.

control-point-name: Specify the APPN control point name of the managed system on which the activity is to be performed.

KEEPCLGE

Specifies if the distribution catalog entry and its associated save file corresponding to the product is kept on the specified systems. This is only valid if ACTION(*INS) or ACTION(*SNDINS) is specified.

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

***NO:** The catalog entry and associated save file are not kept.

***YES:** The catalog entry and associated save file are kept.

SNDLICKEY

Specifies if the license key is to be sent with the product.

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

***YES:** The license key is sent with the product.

***NO:** The license key is not sent with the product.

TEXT Specifies the activity description.

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

***GEN:** A text description is generated based on the action chosen.

text-description: Specify a 50-character description of the activity.

COND Specifies which conditions must be met before this activity can be performed. Each condition identifies the activity that must run before this activity and the value the end codes from that activity must have to allow this activity to run. The default condition is that the previous activity (in alphabetical order) must complete successfully before this activity can be run.

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

***NONE:** There are no conditions for this activity.

Element 1: Conditioning Activity

The activity which must run before this activity.

***PRV:** This activity is conditioned on the previous activity. Activities are ordered alphabetically by activity name. If the activity being added is the first activity, a previous activity does not exist and any condition with ***PRV** is marked as having been met.

conditioning-activity-name: Specify the name of the activity that must run before this activity. The activity name specified in the activity (ACTIVITY) parameter cannot be specified in the conditioning activity name. An activity cannot be conditioned on itself.

generic-conditioning-activity-name:* Specify the generic name of the activities that must run before this activity.

Element 2: Relational Operator

This element is the relational operator to use when comparing the end code from the conditioning activity.

***EQ:** Equal

***GT:** Greater than

***LT:** Less than

***NE:** Not equal

***GE:** Greater than or equal

***LE:** Less than or equal

Element 3: Condition Code

This element is the value compared to the actual end code of the conditioning activity.

***SUCCESS:** The activity ended successfully (0 <= end code <= 9). This end code can only be specified with relational operator *EQ or *NE.

***FAIL:** The activity failed (10 <= end code <= 89). This end code can only be specified with relational operator *EQ or *NE.

***NOTRUN:** The activity never started (90 <= end code <= 99). This end code can only be specified with relational operator *EQ or *NE.

***ANY:** The activity ended with any end code. This end code is only be specified with relational operator *EQ.

end-code: Specify an integer value (0-99) that indicates the result of an activity (success or failure). The end code ranges and descriptions are:

- 00** Activity completed successfully.
- 01-09** Activity completed with warning messages.
- 10-29** Activity did not complete successfully.
- 30-39** Activity was canceled by a user before it completed.
 - 30 = Activity ended with *CNTRLD option
 - 35 = Activity ended with *IMMED option
 - 39 = Activity ended with *FRCFAIL option
- 40-49** Activity was not run due to errors detected by the application.
 - 40 = Activity not run for security reasons
- 90-99** Activity was not run because conditions or schedules were not met.
 - 95 = Scheduled start time expired
 - 99 = Conditions cannot be met

Element 4: Condition Mode

This element indicates which systems the conditioning activity must have completed on before this activity can be performed.

***ALLNODES:** The conditioning activity specified must complete on all nodes before this activity runs.

***SAMENODE:** When the conditioning activity specified completes for a given node, the activity specified on the ACTIVITY parameter can run for that same node even though the conditioning activity specified cannot have completed for all other nodes. In the case where this activity can run for that node, the condition is ignored.

STRTIME

Specifies the date and time when this activity can be started on the central site system. The current date and time values and next date values are determined when the change request is submitted.

Element 1: Start After Time

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

***CURRENT:** This activity can start any time on or after the time when the change request is submitted.

start-after-time: Specify the time when this activity can start. The time can be entered as 4 or 6 digits (hhmm or hhmmss) where hh = hours, mm = minutes, and ss = seconds. Seconds are optional. The time can be specified with or without a time separator such as a colon (:). With a time separator, specify a string of 5 or 8 digits (hh:mm or hh:mm:ss).

Element 2: Start After Date:

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

***CURRENT:** This activity can start on or after the date on which the change request is submitted.

***NEXT:** The activity can start on any date after the date the change request is submitted.

start-after-date: Specify the date after this activity can start. The date must be specified in the job date format.

Element 3: Start Before Time

This element is ignored if start before date is *ANY.

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

***ANY:** The activity can start at any time on or before the start before date.

***CURRENT:** The activity must start before the time at which the change request was submitted on the date specified on the start before date element.

start-before-time: Specify the time before which the activity must start. If the activity cannot be started before this time, it never starts. The time can be entered as 4 or 6 digits (hhmm or hhmmss) where hh = hours, mm = minutes, and ss = seconds. Seconds are optional. The time can be specified with or without a time separator such as a colon (:). With a time separator, specify a string of 5 or 8 digits (hh:mm or hh:mm:ss).

Element 4: Start Before Date

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

***ANY:** The activity can start at any time after the start after time and the start after date.

***CURRENT:** The activity must start on the date the change request is submitted.

***NEXT:** The activity must start by the day after the date the change request is submitted.

start-before-date: Specify the date before the activity must start. If the activity cannot be started by this date, it never starts. The date must be specified in the job date format.

RMTSTRTIME

Specifies the date and time when the activity can begin running on the managed system. The

current date and time values and next date values are determined when the activity begins running at the central site system based on the central site date and time.

Element 1: Time Zone

The time zone of the remote start time.

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

***LCLSYS:** The remote start time is specified in the time zone of the central site system.

***MGDSYS:** The remote start time is specified in the time zone of the managed system.

Element 2: Start After Time

This is the definition of the time after which the activity is to start.

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

***CURRENT:** This function can start on the managed system at any time on or after the time this activity is started on the central site system on the date specified in element 3.

start-after-time: Specify the time when this function can be started on the managed system. The time can be entered as 4 or 6 digits (hhmm or hhmmss) where hh = hours, mm = minutes, and ss = seconds. Seconds are optional. The time can be specified with or without a time separator. With a time separator, specify a string of 5 or 8 digits (hh:mm or hh:mm:ss).

Element 3: Start After Date

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

***CURRENT:** This function can start on the managed system on any date on or after the date the activity starts on the central site system.

***NEXT:** This function can start on the managed system on any date after the date this activity starts on the central site system.

start-after-date: Specify the date after the functions start on the managed system. The date must be specified in the job date format.

Notes:

1. The special values *CURRENT and *NEXT cannot be specified for the date and time when the time zone value *MGDSYS is specified.
2. This parameter can only be specified if *INS or *SNDINS actions are specified.

HOLD Specifies that the activity be held when the change request is submitted.

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

***NO:** The activity is not held. It runs when all conditions and the start time are met.

***YES:** The activity is held for all nodes when the change request is submitted. It must be released by you before it runs.

Examples for CHGPRDCRQA

Example 1: Change an Activity to Send a Product

```
CHGPRDCRQA CRQD(MYLIB/CRQ1) ACTIVITY(ACT01) ACTION(*SND)
PRDID(IACCPAY) RLS(V5R2M0) OPTION(1) LODTYPE(*CODE)
LODID(*CODE) SNDLICENSE(*YES) CPNAME((*NETATR SYS2))
```

Change an activity to send the accounts payable product to the SYS1 system. Option one with the code parts of the product and its license key will be sent.

Example 2: Change an Activity to Install an Application

```
CHGPRDCRQA CRQD(MYLIB/CRQ2) ACTIVITY(*LAST) ACTION(*INS)
PRDID(1SCHEDU) RLS(V5R2M0) OPTION(*BASE) LODTYPE(*ALL)
LODID(*ALL) NODL(MYLIB/ALLSYS) RMTSTRTIME(*MGDSYS ('23:00:00' *SAME))
```

Change the last activity of the change request CRQ2, so it installs the scheduler application on all the systems specified in the ALLSYS node list. Both the code and the languages for the application will be installed at 11:00 p.m. in the time zone where the managed systems are located.

Example 3: Change the Last Activity of the Change Request

```
CHGPRDCRQA CRQD(MYLIB/CRQ3) ACTIVITY(*LAST)
ACTION(*DLTCLGE) PRDID(1HUMRES) RLS(V5R2M0)
OPTION(*BASE) LODTYPE(*ALL) LODID(2924)
CPNAME((*NETATR SYS3))
```

Change the last activity of the change request CRQ3, so it deletes the product packaged for distribution for the human resources application on the SYS3 system.

Error messages for CHGPRDCRQA

*ESCAPE Messages

None <>>

CHGPRDOBJD (Change Product Object Description) Command Description

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

CHGPRDOBJD Command syntax diagram

Purpose

The Change Product Object Description (CHGPRDOBJD) command updates product information in object descriptions.

Required Parameters

OBJ Specifies the qualified name of the object being changed.

The possible library value is:

library-name: Specify the name of the library where the object is located.

***ALL:** All objects in the specified library that are of the types specified on the OBJTYPE parameter are changed.

generic-object-name:* Specify the generic name of the object. 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. If the complete object name is specified, and multiple libraries are searched, multiple objects can be searched only if *ALL or *ALLUSR library values can be specified for the name. For more information on the use of generic names, refer to generic names.

object-name: Specify the name of the object to be changed.

OBJTYPE

Specifies the types of object being changed.

***ALL:** All object types that have the specified object name are changed.

object-type: Specify the type of object being changed.

Note: Object type *PRDAVL is not valid.

PRDID

Specifies the 7-character identifier (ID) for the product to which the objects being changed belong.

RLS Specifies the version, release, and modification level of the product to which the objects being changed belong.

OPTION

Specifies the product option to which the objects being changed belong.

***BASE:** Specifies that the object is part of the base option of the product.

product-option-number: Specify the option number of the product option to which the objects being changed belong. Valid values range from 1 through 99.

LODID

Specifies the ID of the product load to which the objects being changed belong.

***CODEDFT:** The default code load ID, 5001, is used.

product-load-ID: Specify a language load ID (29xx) or a valid code load ID.

Example for CHGPRDOBJD

```
CHGPRDOBJD OBJ(MYLIB/*ALL) OBJTYPE(*ALL)
  PRDID(9XYZ123) RLS(V5R2M0)
  OPTION(*BASE) LODID(*CODEDFT)
```

This command changes the object description of all objects in library MYLIB. These objects are now marked to belong to the code load for the base option of product 9XYZ123 for release V5R2M0.

Error messages for CHGPRDOBJD

***ESCAPE Messages**

CPF358A

Release not valid.

SMU1307

Not all object descriptions changed.

SMU1312

Objects not found.



CHGPRF (Change Profile) Command Description

CHGPRF Command syntax diagram

Purpose

The Change Profile (CHGPRF) command allows a user to change some of the values currently specified in the user profile.

Restrictions:

1. Object management (*OBJMGT) authority and use (*USE) authority are required to change the user profile.
2. *USE authority is required to the current library, program, menu, job description, message queue, print device, output queue, and the ATTN key handling program.

Optional Parameters

ASTLVL

Specifies which user interface to use.

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

***SYSVAL:** The assistance level defined for the system is used.

***BASIC:** The Operational Assistant* user interface is used.

***INTERMED:** The system interface is used.

***ADVANCED:** The expert system interface is used. To allow for more list entries, the options keys and the function keys are not displayed. If a command does not have an advanced (*ADVANCED) level, the intermediate (*INTERMED) level is used.

CURLIB

Specifies the name of the library being used as the current library for jobs initiated by this user profile.

Note:

If *PARTIAL or *YES is specified for the LMTCPB parameter in the user profile, the user cannot change the current library.

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

***CRTDFT:** The user has no current library. If objects are created into the current library using *CURLIB on a create command, the QGPL library is used as the default current library.

current-library-name: Specify the name of the library that, after the user signs on the system, becomes the current library.

INLPGM

Specifies, for an interactive job, the qualified name of the program that is called whenever a new routing step is started that has QCL or QCMD as the request processing program. If *PARTIAL or *YES is specified on the LMTCPB parameter in the user profile, the program value cannot be changed. No parameters can be passed to the program.

A system/36 environment procedure name can be specified as the initial program if the procedure is a member of the file QS36PRC (in the library list or specified library) and if either of the following conditions are true:

- *S36 is specified on the SPCENV parameter.
- *SYSVAL is specified on the SPCENV parameter and the system value, QSPCENV, is *S36.

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

***NONE:** No program is called when the user signs on. If a menu name is specified in the INLMNU parameter, that menu is displayed.

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 that is called when the user signs on.

INLMNU

Specifies the qualified name of the menu displayed when the user signs on. If *YES is specified on the LMTCPB parameter in the user profile, the user cannot change the menu.

A system/36 environment menu can be specified as the initial menu if either of the following conditions are true:

- *S36 is specified on the SPCENV parameter.
- *SYSVAL is specified on the SPCENV parameter and the system value, QSPCENV, is *S36.

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

***SIGNOFF:** The system signs off the user after the program completes. This is intended for users authorized only to run the program.

The name of the menu 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.

menu-name: Specify the name of the menu that is called when the user signs on.

KBDBUF

Specifies the keyboard buffering value to be used when a job is initialized for this user profile. The new value takes effect the next time the user signs on. If the type-ahead feature is active, the keystrokes can be buffered. If the attention key buffering option is active, the attention key is buffered like any other key. If the attention key is not active, the attention key is not buffered and is sent to the system even if the display station is input inhibited. The keyboard buffer value can also be set by a user application using the QWSSETWS program. More information is in Application Program Interfaces (APIs) topic in the Information Center.

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

***SYSVAL:** The system value, QKBDBUF, is used to determine the keyboard buffering value for this profile.

***NO:** The type-ahead feature and attention key buffering option are not active for this user profile.

***TYPEAHEAD:** The type-ahead feature is active for this user profile.

***YES:** The type-ahead feature and attention key buffering option are active for this user profile.

JOB Specifies the name of the job description used for jobs that start through subsystem work station

entries. If the job description does not exist when the user profile is created or changed, a library qualifier must be specified, because the job description name is kept in the user profile.

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

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.

job-description-name: Specify the job description name used for the work station entries whose job description parameter values indicate the user JOB(*USRPRF).

DOCPWD

Specifies the document password that allows Document Interchange Architecture (DIA) document distribution services users to protect personal distributions from being used by people working on their behalf.

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

***NONE:** No document password is assigned to this user.

document-password: Specify a document password assigned to this user. The password must range from 1 through 8 alphanumeric characters (letters A through Z and numbers 0 through 9). The first character of the document password must be alphabetic; the remaining characters can be alphanumeric. Embedded blanks, leading blanks, and special characters are invalid.

MSGQ

Specifies the qualified name of the message queue to which messages are sent.

Note:

The message queue is created, if it does not already exist, when the user signs on. If the message queue parameter is changed by using the change user profile command, then that message queue is also created.

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

***USRPRF:** A message queue with the same name as that specified in the USRPRF parameter is used as the message queue for this user. This message queue is located in the QUSRSYS library.

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.

message-queue-name: Specify the name of the message queue that is used by this user.

DLVRY

Specifies how messages sent to the message queue for this user are delivered.

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

***HOLD:** The messages are held in the message queue until they are requested by the user or program.

***BREAK:** The job to which the message queue is assigned is interrupted when a message arrives at the message queue. If the job is an interactive job, the audible alarm is sounded (if the alarm feature is installed). The delivery mode cannot be changed to *BREAK if the message queue is also being used by another job.

***NOTIFY:** The job, to which the message queue is assigned, is notified when a message arrives at the message queue. For interactive jobs at a work station, the audible alarm is sounded (if the alarm feature is installed) and the Message Waiting light is turned on. The delivery mode cannot be changed to *NOTIFY if the message queue is also being used by another job.

***DFT:** The default reply to the inquiry message is sent. If no default reply is specified in the message description of the inquiry message, the system default reply, *N, is used.

SEV

Specifies the lowest severity code that a message can have and still be delivered to a user in break or notify mode. Messages arriving at the message queue whose severities are lower than the severity code specified on this parameter do not interrupt the job or turn on the audible alarm or the message-waiting light; they are held in the queue until they are requested by using the Display Message (DSPMSG) command. If *BREAK or *NOTIFY is specified on the DLVRY parameter, and is in effect when a message arrives at the queue, the message is delivered if the severity code associated with the message is equal to or greater than the value specified here. Otherwise, the message is held in the queue until it is requested.

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

severity-code: Specify a severity code ranging from 00 through 99.

PRTDEV

Specifies the qualified name of the default printer device for this job. If OUTQ(*DEV) is specified, the file is placed on an output queue with the same name as the printer.

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

***WRKSTN:** The printer assigned to the user's work station is used.

***SYSVAL:** The value specified in the system value QPRTDEV is used.

print-device-name: Specify the name of a printer used to print the output for this user.

OUTQ Specifies the qualified name of the output queue.

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

***WRKSTN:** The output queue assigned to the user's work station is used.

***DEV:** An output queue name with the same name as that specified in the PRTDEV parameter is used as the output queue for this user profile.

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 output queue name that identifies the output queue associated with this user profile.

ATNPGM

Specifies the qualified name of the program that is the ATTN key handling program for this user. The ATTN key handling program is called when the ATTN key is pressed during an interactive job. The program is active only when the user routes to the system-supplied QCMD command processor. The ATTN key handling program is set on before the initial program (if any) is called and it is active for both program and menu. If the program changes the ATNPGM (by using the SETATNPGM command), the new program remains active only for the duration of the program. When control returns and QCMD calls the menu, the original ATTN key handling program becomes active again. If the SETATNPGM command is run from the menus or an application is called from the menus, the new ATTN key handling program that is specified overrides the original ATTN key handling program. If *YES or *PARTIAL is specified on the LMTCPB parameter in the user profile, the ATTN key handling program cannot be changed.

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

***ASSIST**: QEZMAIN is used.

***SYSVAL**: The system value QATNPGM is used.

***NONE**: No ATTN key handling program is used by this user.

The name of the ATTN key handling 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 ATTN key handling program used by this user.

SRTSEQ

Specifies the sort sequence table to be used for string comparisons for this profile.

***SYSVAL**: The system value QSRTSEQ is used.

***HEX**: A sort sequence table is not used. The hexadecimal values of the characters are used to determine the sort sequence.

***LANGIDUNQ**: A unique-weight sort table is used.

***LANGIDSHR**: A shared-weight sort table is used.

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 profile.

LANGID

Specifies the language identifier used for this user.

***SAME:** The language identifier does not change.

***SYSVAL:** The system value QLANGID is used.

language-identifier: Specify the language identifier. More information on valid language identifiers is in the Globalization topic in the Information Center.

CNTRYID

Specifies the country or region identifier used for this user.

***SAME:** The country or region identifier does not change.

***SYSVAL:** The system value QCNTRYID is used.

country-identifier: Specify the country or region identifier from the country or region code table. More information on this parameter is in Commonly used parameters.

CCSID

Specifies the coded character set identifier (CCSID) used for this user.

A CCSID is a 16-bit number identifying a specific set of encoding scheme identifiers, character set identifiers, code page identifiers, and additional coding-related information that uniquely identifies the coded graphic representation used.

Note: If the value for CCSID is changed, the change does not affect jobs that are currently running.

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

***SYSVAL:** The system value QCCSID is used.

***HEX:** The CCSID 65535 is used.

coded-character-set-identifier: Specify the CCSID. More information on valid CCSIDs is in the Globalization topic in the Information Center.

CHRIDCTL

Specifies the character identifier control for the job. This attribute controls the type of CCSID conversion that occurs for display files, printer files and panel groups. The *CHRIDCTL special value must be specified on the CHRID command parameter on the create, change or override commands for display files, printer files and panel groups before this attribute will be used.

***SAME:** The CHRID control does not change.

***SYSVAL:** The value in the QCHRIDCTL system value will be used.

***DEV D:** The *DEV D special value performs the same function as on the CHRID command parameter for display files, printer files and panel groups.

***JOBCCSID:** The *JOBCCSID special value performs the same function as on the CHRID command parameter for display files, printer files and panel groups.

SETJOBATR

Specifies which job attributes are taken from the locale specified in the LOCALE parameter when the job is initiated.

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

***NONE:** No job attributes are taken from the locale.

***SYSVAL:** The system value, QSETJOBATR, is used to determine which job attributes are taken from the locale.

Any combination of the following values can be specified:

***CCSID:** The coded character set identifier from the locale is used. The CCSID value from the locale overrides the user profile CCSID.

***DATFMT:** The date format from the locale is used.

***DATSEP:** The date separator from the locale is used.

***DECfmt:** The decimal format from the locale is used.

***SRTSEQ:** The sort sequence from the locale is used. The sort sequence from the locale overrides the user profile sort sequence.

***TIMSEP:** The time separator from the locale is used.

USROPT

Specifies level of help information detail the user sees and the function of the Page Up and Page Down keys by default. The system shows several displays that are suitable for the inexperienced user. More experienced users must perform an extra action to see detailed information. When values are specified for this parameter, the system presents detailed information without further action by the experienced user.

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

***NONE:** Detailed information is not shown.

***CLKWD:** Parameter keywords are shown instead of the possible parameter values when a control language (CL) command is displayed.

***EXPERT:** More detailed information is shown when the user is performing display and edit options to define or change the system (such as edit or display object authority).

***ROLLKEY:** The actions of the Page Up and Page Down keys are reversed.

***HLPFULL:** Help text is shown on a full display rather than in a window.

***NOSTMSG:** Status messages are not displayed when sent to the user.

***STMSG:** Status messages are displayed when sent to the user.

***PRTMSG:** A message is sent to this user's message queue when a spooled file for this user is printed or help by the printer writer.

LOCALE

Specifies the path name of the locale that is assigned to the LANG environment variable for this user.

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

***SYSVAL:** The system value QLOCALE is used to determine the locale path name to be assigned for this user.

***NONE:** No locale path name is assigned for this user.

***C:** The C locale path name is assigned for this user.

***POSIX:** The POSIX locale path name is assigned for this user.

'locale path name': Specify the path name of the locale to be assigned for this user. See path names for more information on specifying path names.

HOMEDIR

Specifies the path name of the home directory for this user profile. The home directory is the user's initial working directory. The working directory, associated with a process, is used during path name resolution in the directory file system for path names that do not begin with a slash (/). If the home directory specified does not exist when the user signs on, the user's initial working directory is the root (/) directory.

Note:

This parameter is only used with the integrated file system. It cannot be used to set the home directory for IBM OS/2 Warp Server for AS/400.

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

***USRPRF:** The home directory assigned to the user is /home/USRPRF, where USRPRF is the name of the user profile.

'home-directory-path-name': Specify the path name of the home directory to assign to this user. See path names for more information on specifying path names.

TEXT Specifies the text that briefly describes the user profile named in the USRPRF parameter. More information is in Commonly used parameters.

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

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CHGPRF

```
CHGPRF INLPGM(ARLIB/DSPMENU)
```

In this example, JJADAMS wants to change his user profile.

This command makes the following changes to the user profile named JJADAMS:

- Changes the first program to start, following a successful sign-on, to a program names DSPMENU, which is located in a library named ARLIB.

All the other command parameters default to *SAME and do not change.

Error messages for CHGPRF

***ESCAPE Messages**

CPF22EC

Unable to process request for user profile &1.

CPF22E1

USROPT parameter cannot specify *STSMMSG and *NOSTSMMSG.

CPF22F1

Coded character set identifier &1 not valid.

CPF22F4

CCSID value &1 not compatible with the system.

CPF2209

Library &1 not found.

CPF2213

Not able to allocate user profile &1.

CPF2225

Not able to allocate internal system object.

CPF2228

Not authorized to change user profile.

CPF2242

Object &1 type *&2 not found in library list.

CPF2244

Object &1 type *&2 cannot be found.

CPF2294

Initial program value cannot be changed.

CPF2295

Initial menu value cannot be changed.

CPF2296

Attention program value cannot be changed.

CPF2297

Current library value cannot be changed.

CPF9802

Not authorized to object &2 in &3.

CPF9820

Not authorized to use library &1.

CPF9825

Not authorized to device &1.

CHGPGM (Change Program) Command Description

CHGPGM Command syntax diagram

Purpose

The Change Program (CHGPGM) command changes the attributes of a program without requiring that it be recompiled. The user can also force re-creation of a program even if the attributes being specified are the same as the current attributes.

Restrictions:

1. The user must have *USE authority for the library for the program that is being changed.
2. The user must have *USE and *OBJMGT authority for the program that is being changed.
3. The user must have *USE, *DLT, and *ADD authority for the library to change the optimization attribute (OPTIMIZE), performance collection attribute (ENBPFCOL), profiling data attribute (PRFDTA), Licensed Internal Code options (LICOPT), enable teraspace storage (TERASPACE), or to force program re-creation by specifying FRCCRT(*YES).
4. Only the program owner, or a user with *SECADM and *ALLOBJ authority, can change the user profile attribute (USRPRF) or the use adopted authority attribute (USEADPAUT).
5. Programs in library QSYS and QGDDM cannot be changed.

6. The STGMDL of the service program and all bound modules must be *SNGLVL to change a program to TERASPACE(*NO).

Other jobs running the program may fail if the Optimize program prompt (OPTIMIZE parameter), the Use adopted authority prompt (USEADPAUT parameter), the Enable performance collection prompt (ENBPFCOL parameter), the Profiling data prompt (PRFDTA parameter), the User profile prompt (USRPRF parameter), or Licensed Internal Code Options (LICOPT), or enable teraspace storage (TERASPACE parameter) are changed, or program re-creation is forced by specifying FRCCRT(*YES).

Required Parameter

PGM Specifies the programs whose attributes are being changed. *USRLIBL cannot be specified or defaulted for the library qualifier when a generic name or *ALL is specified for the program qualifier.

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

***USRLIBL:** Only the libraries in the user portion of the job's library list are searched.

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

***ALL:** All programs in the specified library to which the user has some authority (for example, *USE authority) are selected for change.

program-name: Specify the name of the programs whose attributes are being changed.

generic-program-name:* Specify the generic name of the program. 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

OPTIMIZE

Specifies whether the program is optimized. This parameter removes redundant instructions from the specified programs. Changing the current optimization level of an Integrated Language Environment (ILE) program causes the system to re-create an ILE program with the new optimization level.

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

***YES:** The program is at the most optimized level available for the release and language the program was created for (TGTRLS parameter when the program was created). In most cases, optimized programs make more efficient use of system resources. Specifying OPTIMIZE(*YES) for ILE programs has the same effect as specifying OPTIMIZE(40).

***NO:** The program is not optimized. For ILE programs at this optimization level, variables can be displayed and changed while debugging.

40: This level includes all the optimizations performed at optimization level 30 (*FULL). In addition, it includes optimization that disables call and instruction tracing. Thus, tracing of modules created at this optimization level cannot be done. Specifying OPTIMIZE(40) for OPM programs has the same effect as specifying OPTIMIZE(*YES).

***FULL or 30:** More optimization is performed in addition to those performed at optimization level 20 (*BASIC). Variables cannot be changed but can be displayed while the program is being debugged. However, the displayed value of the variable during debugging may not be its actual value. Specifying OPTIMIZE(*FULL) for OPM programs has no effect; a diagnostic message will be signaled.

***BASIC or 20:** For ILE programs, some optimization is performed on ILE programs. When debugging ILE programs at this optimization level, variables may be displayed, but the displayed value may not be the current value. Variables can also be changed but using the variables changed at this level may cause unexpected results. An informational message is sent and no optimization is performed when OPTIMIZE(*BASIC) is specified for original program model (OPM) programs.

***NONE or 10:** This value is identical to *NO.

Note:

The Change Program (CHGPGM) command must re-create the program to optimize the program. To be eligible for re-creation, OPM programs must be observable and ILE programs must have all creation data. Use the Display Program (DSPPGM) command to determine whether a program is observable or has all creation data.

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.

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

***USER:** The program runs under the user profile of the program's user.

***OWNER:** The user profiles of both the program's owner and the program's user are used when the program is processed. The collective sets of object authority in both user profiles are used to find and access objects during program processing. Authority from the owning user profile's group profile is not included in the authority for the running program.

Note:

The Change Program (CHGPGM) command must re-create the program to change the user profile. To be eligible for re-creation, OPM programs must be observable and ILE programs must have all creation data. Use the Display Program (DSPPGM) command to determine whether a program is observable or has all creation data.

USEADPAUT

Specifies whether program adopted authority from previous programs in the call stack will be used as a source of authority when this program is running.

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

***YES:** Program adopted authority from previous call levels is used when this program is running.

***NO:** Program adopted authority from previous call levels is not used when this program is running.

Note:

The Change Program (CHGPGM) command must re-create the program to change the "Use adopted authority" attribute. To be eligible for re-creation, OPM programs must be observable and ILE programs must have all creation data. Use the Display Program (DSPPGM) command to determine whether a program is observable or has all creation data.

RMVOBS

Specifies whether the observable information associated with programs is removed.

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

***ALL:** All of the observable information associated with the program is removed, if possible. If the program requires the observable information to ensure that it runs correctly, that information is not removed. *ALL observability is required to convert OPM programs to a different hardware technology. For example, between CISC (Complex Instruction Set Computer) and RISC (Reduced Instruction Set Computer) technology.

Notes:

1. If block order profiling data has previously been applied to this ILE program, specifying *ALL on the RMVOBS parameter will also remove *BLKORD observability.
2. *ALL cannot be specified if the ILE program is enabled to collect profiling data.
3. Removing observability from OPM programs compiled with OPTION(*LSTDBG) does not completely remove the debugging information. The program must be recompiled with OPTION(*NOLSTDBG) to completely remove all of the debugging information.
4. OPM CL programs created with ALWRTVSRC(*YES) can have their CL source retrieved using the RTVCLSRC (Retrieve CL Source) after observability has been removed. The program must be recompiled with ALWRTVSRC(*NO) to remove the source from the program.

***NONE:** None of the observable information associated with the program is removed.

***DBGDTA:** Information is removed from an ILE program to allow the program to be debugged. An informational message is sent and no observability is removed when RMVOBS(*DBGDTA) is specified for original program model (OPM) programs.

***CRTDTA:** Information is removed from an ILE program to allow the program to be re-created, to change the optimization level, to change the performance collection attribute, or to change the profiling data attribute. An informational message is sent and no observability is removed when RMVOBS(*CRTDTA) is specified for original program model (OPM) programs.

Notes:

1. If block order profiling data has previously been applied to this ILE program, specifying *CRTDTA on the RMVOBS parameter will also remove *BLKORD observability.
2. *CRTDTA cannot be specified if the ILE program is enabled to collect profiling data.
3. *CRTDTA observability is required to convert ILE programs to a different hardware technology. For example, between CISC (Complex Instruction Set Computer) and RISC (Reduced Instruction Set Computer) technology.
4. If the ILE program was created for a release earlier than V3R6M0, and is currently in RISC format or FRCCRT(*YES) is specified, removing *CRTDTA will cause the ILE program to no longer be able to be saved for a release earlier than V3R6M0.

***BLKORD:** Information is removed from an ILE program that allows the system to re-apply block order profiling data when the program is re-created. An informational message is sent and no observability is removed when RMVOBS(*BLKORD) is specified for original program model (OPM) programs.

***PRCORD:** Information is removed from an ILE program that allows the system to re-apply procedure order profiling data when the program is re-created or updated. An informational message is sent and no observability is removed when RMVOBS(*PRCORD) is specified for original program model (OPM) programs.

ENBPFRCOL

Specifies whether collection of performance data is enabled. Collection of this type of performance data can be enabled only for ILE programs.

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

***NONE** or ***PEP:** 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.

Element 1: Collection level

*FULL:

Performance data is collected for procedure entry and exit. Performance data is also collected before and after calls to external procedures.

***ENTRYEXIT:**

Performance data is collected for procedure entry and exit.

Element 2: Procedures

*ALLPRC:

Performance data is collected for all procedures. This is useful to capture information on all procedures.

***NONLEAF:**

Performance data is collected for procedures that are not leaf procedures and for the PEP. This is useful to capture information on most routines but not at the expense of destroying the 'leaf-ness' of the leaf procedure.

Note:

The Change Program (CHGPGM) command must re-create the program to enable or disable collection of performance data. To be eligible for re-creation, the program must have all creation data. Use the Display Program (DSPPGM) command to determine whether a program has all creation data.

PRFDTA

Specifies the profiling data attribute for ILE programs. An informational message is sent and *SAME is used if a value other than *SAME is specified for the PRFDTA parameter for original program model (OPM) programs.

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

***NOCOL:** The collection of profiling data is not enabled and profiling data is not applied.

***COL:** The collection of profiling data is enabled.

Note:

Specifying *COL will remove all applied profiling data if the ILE program has profiling data applied.

***CLR:** All previously collected profiling data is discarded. The program remains enabled to collect profiling data.

***APYBLKORD:** Block order profiling data is applied to every module bound into this ILE program previously enabled to collect profiling data. The collection of profiling data is no longer enabled.

***APYPRCORD:** Block order and procedure order profiling data is applied. The collection of profiling data is no longer enabled.

***APYALL:** Block order and procedure order profiling data is applied. The collection of profiling data is no longer enabled.

Note:

The Change Program (CHGPGM) command must re-create the program to change the profiling data attribute. To be eligible for re-creation, the program must have all creation data. Use the Display Program (DSPPGM) command to determine whether a program has all creation data.

TERASPACE

This parameter allows the teraspace storage enablement to be changed to the specified value. Changing the enable teraspace storage parameter to any value other than *SAME causes the system to re-create the program.

***SAME:** The teraspace storage enablement does not change.

***NO:** The teraspace storage enablement is changed to no. If it is a ILE program, the teraspace storage enablement of the eligible bound modules is changed to no. A bound module must be single level storage model to be changed to TERASPACE(*NO).

***YES:** The teraspace storage enablement of the program is changed. If it is a ILE program, the teraspace storage enablement of the eligible bound modules is changed to yes. A bound module must be at least V4R4M0 or later to be changed to TERASPACE(*YES).

Note:

The Change Program (CHGPGM) command must re-create the program to change the teraspace enablement. To be eligible for re-creation, OPM programs must be observable and ILE programs must have all creation data. Use the Display Program (DSPPGM) command to determine whether a program is observable or has all creation data.

LICOPT

This parameter allows individual Licensed Internal Code compile-time options to be selected, and is intended for the advanced programmer who understands the potential benefits and drawbacks of each selected type of compiler option. Changing the Licensed Internal Code options of an Integrated Language Environment (ILE) program to any value other than *SAME causes the system to re-create the ILE program with the specified Licensed Internal Code options.

***SAME:** If the program object is re-created, the existing Licensed Internal Code compile-time options are input to object re-creation. Otherwise, the Licensed Internal Code compile-time options do not change.

Licensed-Internal-Code-options: Specifies one or more Licensed Internal Code compile-time options. Changing the Licensed Internal Code options of an Integrated Language Environment (ILE) program causes the system to re-create the ILE program with the specified Licensed Internal Code options for all the bound modules. Note: Additional information about the LICOPT options

can be found in the ILE Concepts  book.

***NONE:** Program recreation is forced and no Licensed Internal Code options are used for all the bound modules.

Note:

The Change Program (CHGPGM) command must re-create the program to change the Licensed Internal Code options. To be eligible for re-creation, OPM programs must be observable and ILE programs must have all creation data. Use the Display Program (DSPPGM) command to determine whether a program is observable or has all creation data.

FRC CRT

Specifies whether program re-creation is forced. OPM programs cannot be re-created unless they are observable. ILE programs must have all creation data. Use the Display Program (DSPPGM) command to determine whether a program is observable or has all creation data.

***NO:** Program re-creation is not forced unless the optimization (OPTIMIZE), use adopted authority (USEADPAUT), user profile (USRPRF), enable performance collection (ENBPFCOL), profiling data (PRFDTA), or Licensed Internal Code options (LICOPT), or enable teraspace storage (TERASPACE), parameters are changed. This option allows the system to determine whether a change is required.

***YES:** Program re-creation is forced whether or not the optimization (OPTIMIZE), use adopted authority (USEADPAUT), user profile (USRPRF), enable performance collection (ENBPFCOL), profiling data (PRFDTA), or Licensed Internal Code options (LICOPT), or enable teraspace storage (TERASPACE), parameters are changed.

***NO CRT:** No program re-creation is done. If a value other than *SAME is specified for OPTIMIZE, USEADPAUT, USRPRF, ENBPFCOL, PRFDTA, LICOPT, or TERASPACE parameter, a command syntax error is sent and the command is not run.

TEXT Specifies the text that briefly describes the program. More information is in Commonly used parameters.

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

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Examples for CHGPGM

Example 1: Optimizing a Program

```
CHGPGM PGM(PROG1/SERVICE) OPTIMIZE(*YES)
      USRPRF(*OWNER)
```

The program SERVICE in library PROG1 is optimized, and the user profile under which it is processed is changed to include the program owner's user profile. Only the owner of program PROG1/SERVICE, or a user with security officer authority, can change the USRPRF attribute. The program is re-created only if the attributes specified differ from those of the current program.

Example 2: Changing Text for a Program

```
CHGPGM PGM(*USRLIBL/KNUTE)
      TEXT('Program description')
```

This command changes the text for program KNUTE. The user portion of the library list is used to find the program.

Example 3: Optimizing Multiple Programs

```
CHGPGM PGM(PROG1/ACE*) OPTIMIZE(*YES)
```


All programs in library PROG1 whose names begin with ACE, are optimized to their maximum optimization level.

Example 4: Changing Text of Multiple Programs

```
CHGPGM PGM(PROG2/*ALL) TEXT('Generic Text')
```

This command changes the text of all programs in library PROG2 to Generic Text.

Example 5: Enabling collection of profiling data

```
CHGPGM PGM(PROG1/PROFPGM) PRFDTA(*COL)
```

This command enables the collection of profiling data for program PROFPGM in library PROG1. If PROFPGM in library PROG1 had profiling data applied prior to issuing this command, all applied profiling data will be removed.

Example 6: Applying profiling data

```
CHGPGM PGM(PROG1/PROFPGM) PRFDTA(*APYALL)
```

This command applies block order and procedure order profiling data to program PROFPGM in library PROG1. The collection of profiling data is no longer enabled for program PROFPGM in library PROG1.

Error messages for CHGPGM

***ESCAPE Messages**

CPF0540

*USRLIBL not allowed with generic name or *ALL.

CPF0541

Program &1 in &2 not changed.

CPF0542

Program &1 in library &2 not changed.

CPF0543

User &3 not authorized to change &1.

CPF0544

Programs in libraries QSYS and QGDDM cannot be changed.

CPF0545

No programs changed.

CPF0546

&1 changed. &2 did not require change. &3 not changed.

CPF0547

Cannot remove observable information.

CPF0549

User &3 not authorized to change &1.

CPF223C

Not authorized to change the use adopted authority (USEADPAUT) attribute for &1 in &2 type *&3.

CPF223E

Authority check for use adopted authority attribute failed.

CPF9803

Cannot allocate object &2 in library &3.

CPF9804

Object &2 in library &3 damaged.

CPF9806

Cannot perform function for object &2 in library &3.

CPF9810

Library &1 not found.

CPF9811

Program &1 in library &2 not found.

CPF9818

Object &2 in library &3 not created.

CPF9819

Object &2 in library &3 not created.

CPF9820

Not authorized to use library &1.

CPF9821

Not authorized to program &1 in library &2.

CPF9830

Cannot assign library &1.

CHGPGMVAR (Change Program Variable) Command Description

CHGPGMVAR Command syntax diagram

Purpose

The Change Program Variable (CHGPGMVAR) command changes the value of a variable in a program being debugged. Only string (character or bit) and numeric variables can be changed by using this command. A portion of a character string or bit string can be changed; the length of the data being changed is the length of the data specified in the VALUE parameter.

Note:

Depending on where the variable is allocated, the duration of a change varies. For a variable in machine-interface (MI) static storage, the change lasts while the program is active. For an automatic variable, the change lasts until the call of the program is ended. Static variables are allocated either in MI static storage or in spaces controlled by language-dependent rules.

Restrictions:

1. This command is valid only in debug mode. To start debug mode, refer to the STRDBG (Start Debug) command.
2. This command cannot be used if the user is servicing another job, and that job is on a job queue, or is being held, suspended, or ended.
3. This command cannot be used to change variables in a bound program.
4. This command cannot be used to change variables that are write-protected or within the system domain, unless the user has *SERVICE special authority.

Required Parameters

PGMVAR

Specifies the name of the program variable being changed in a high-level language (HLL) program or MI program.

Element 1: Program Variables

'program-variable': Specify the name of the program variables being changed. If the variable name contains special characters, it must be enclosed in apostrophes.

If the program variable is an array, the subscripts representing an element in the array can be specified. Up to 132 characters may be specified for this program variable entry. This includes any qualifiers, subscripts, embedded blanks, parentheses, and commas. It does not include the enclosing apostrophes when special characters are used. An integer, machine-interface object-definition-table-vector (MI ODV) number, or a numeric variable name can be specified for a subscript. For more information on the program-variable value, refer to parameter values used for testing and debugging.

Some examples are:

```
PGMVAR(A)
PGMVAR('A(2,B)')
PGMVAR('B(I1,*,I3)')
PGMVAR('VAR1 OF A(I,J IN B)')
```

Element 2: Basing Pointers

'basing-pointer': Specify the basing pointers for the variable to be recorded. In some languages, the program variable may be based on a pointer variable. This set of values allows the user to explicitly specify the basing pointers for the variable to be recorded. Each basing pointer name must be enclosed in apostrophes if it contains special characters.

If the basing pointer is an array, the subscripts representing an element in the array must be specified. Up to 132 characters can be specified for a basing pointer name. This includes any qualifiers, subscripts, embedded blanks, parentheses, and commas. It does not include the enclosing apostrophes when special characters are used. An integer, MI ODV number, or a numeric variable name can be specified for a subscript. For more information on the basing pointer value, refer to parameter values used for testing and debugging.

Some examples are:

```
PGMVAR(('VAR1(B,5)' 'PTR2(C,P2)'))
PGMVAR((VAR2 (BASEPTRA BASEPTRB)))
```

VALUE

Specifies the new value for the program variable. Depending on the variable type, its value must be specified using the following rules:

- The value for a character variable must be enclosed in apostrophes if it contains blanks, special characters, or numeric characters (for example, 'ABC DE', which contains an embedded blank, or '37.92', which contains only a decimal point and numeric characters).
- The value for a bit variable must be enclosed in apostrophes, and can contain only the characters 0 and 1. Each character specified sets one bit in the variable to the value specified. A hexadecimal value cannot be specified to change a bit variable.
- For a fixed length string, a null string value can only be specified for a string with a declared length of zero.
- For a varying-length string, a null string can be specified regardless of its declared length. Any time a varying-length string is changed, the current length of the string is also implicitly changed. When the VALUE string is not null, the current length is changed to a value that reflects the last byte affected by the change (equal to the value specified in the START

parameter, plus the VALUE length, minus one). If the VALUE string is null, the current string length is changed to one less than the START parameter value.

A varying-length string can be truncated or extended by specifying a combination of a START position and a VALUE whose length is less than or greater than the current string length. A null VALUE string can be specified to truncate a varying-length string to any length (including zero).

- The value for a numeric variable can be specified with or without a decimal point (comma or period) and with or without a plus or minus sign. If a negative value is specified, it must include a minus (-) sign. If a decimal point is not entered in the value, it is assumed to be on the right of the last digit entered; that is, the value is assumed to be an integer (whole number) only. The user cannot change a fixed-point numeric variable with a value that has more nonzero integers or fractional digits than the variable was declared with. In addition, the user cannot specify more than 15 integer digits and 9 fractional digits for the new value.

If, for example, a numeric variable is defined as a five-position decimal value of which two positions are the fraction portion, the following values can be specified:

Specified Value	Assumed Value
2.7 or 2,7	2.70
27 or 27.00	27.00
-27	-27.00

- The value for any numeric variable can be specified using one of the following:
 - A decimal value (includes integer numbers)
 - A floating-point constant
- A floating-point variable can be changed to positive or negative infinity or not a number by using the special values of:

*INF (positive infinity)

*NEGINF (negative infinity)

*NAN (not-a-number)

- Values for all variable types except bit can be entered in hexadecimal form (X'058F' for packed decimal 58).

Optional Parameters

START

Specifies, for string variables only, the starting position in the string from which its value is to change. For a bit string, the value specifies the starting bit position; for a character string, the value specifies the starting character position.

1: The first position of the program variable is the starting position in the string to change.

starting-position: Specify the position number in the program variable that specifies the first position to change in the string. The starting-position number must not be greater than the length of the string, except that START(1) is allowed if the maximum length is zero. The length of the change value specified on the VALUE parameter, plus the START position minus one, must not be greater than the maximum string length.

Varying length strings have rules affecting the validity and meaning of the START parameter. Refer to the appropriate high-level language reference manual for specific information.

PGM Specifies the name of the program that contains the program variable whose value is to be changed.

***DFTPGM:** The program currently specified as the default program contains the variable to be changed.

program-name: Specify the name of the program that contains the variable to be changed. The same name must already have been specified on the Start Debug (STRDBG) command or Add Program (ADDPGM) command.

RCRLVL

Specifies which recursion level of the program contains the variable whose value is being changed. Changes made to static variables automatically affect all recursion levels. Recursion level 1 is the first (or earliest) call of the program, recursion level 2 is the second call of the program, and so on to the last (most recent) recursion level in the stack. For example, if program A calls program B, and then program B calls program A, a new recursion level of program A is formed. If the first recursion level of program A contains the variable being changed, RCRLVL(1) must be specified. Some high-level languages also allow recursive procedures. For these programs, refer to the appropriate high-level language manual for more information.

***LAST:** The last (most recent) call of the specified program contains the variable being changed.

recursion-level-number: Specify the recursion level of the program that contains the variable being changed.

Examples for CHGPGMVAR

Example 1: Changing the Program Variable

```
DCLVAR(&AMT) TYPE(*DEC) LEN(5 2)
*
*
CHGPGMVAR PGMVAR('&AMT') VALUE(16.2)
```

The first command, which is used in a CL program, declares the CL variable &AMT as a five-position decimal value having a 3-digit integer and a 2-digit fraction. The Change Program Variable (CHGPGMVAR) command is used to change the value of &AMT to 16.20. If VALUE is coded as 16 or 16.00, the value accepted is 16.00; if -16 is coded, the value accepted is -16.00. However, if 1600 is coded, an error occurs because the system assumes that, if no decimal point is coded, it is always on the right of the last digit coded.

Example 2: Changing a Value in a Specific Position

```
CHGPGMVAR PGMVAR(PARTNO) VALUE('56') START(4)
```

This command changes, starting in position 4, the program variable PARTNO to 56.

Error messages for CHGPGMVAR

***ESCAPE Messages**

CPF1999

Errors occurred on command.



CHGPTFCRQA (Change PTF Change Request Activity) Command Description

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

CHGPTFCRQA Command syntax diagram

Purpose

The Change Program Temporary Fix Change Request Activity (CHGPTFCRQA) command changes a PTF distribution activity in a change request description.

Restrictions:

1. You must have *CHANGE authority to the change request description and *EXECUTE authority to the library.
2. The PTF must be for an OS/400 product package using the System Manager licensed program. The PTF must be supported using the Work with Supported Products (WRKSPTPRD) command. Software redesigns can be managed for other types of systems by using globally named objects on the Add Object Change Request Activities (ADDOBJCRQA) command and the Add Change Request Activity (ADDCRQA) command, or by using Add Change Manage Activity (QNSADDCM) API.
3. A PTF save file must exist and be released in order to be sent to another system.
4. A PTF can only be retrieved from a single managed system.
5. If the destination node does not have the Managed System Services licensed program installed, then only the send action is available. The activity is considered successful when the PTF is sent, not when it arrives.
6. Delayed PTFs are applied only during the next IPL. Apply all other PTFs immediately while the activity runs on the system or during the next IPL.
7. PTFs marked as delayed can only be applied permanently if they have been previously applied temporarily. Notice that an IPL would have been required to apply them because they are delayed.
8. PTFs are always removed temporarily except Vertical Licensed Internal Code (VLIC) PTFs which are removed permanently.
9. If a node list (NODL) value is specified, the node list can only contain entries that have a value of *SNA for the address type.

The following notes provide information on how the command works.

Notes:

1. Authorization to the product specified on the activity is not verified until the activity runs.
2. All conditions must be met before the activity runs.
3. The start times indicate when the activity can be started. Actual start times can be later due to network and system delays.

Required Parameters

CRQD Specifies the change request description object name.

The possible library values are the following:

***LIBL:** All of the libraries in the user and system portions of the job's library list are searched.

***CURLIB:** The current library for the job is used to locate the object.

library-name: Specify only the library named in this parameter is searched.

The possible change request description value is:

change-request-description: Specify the name of the change request description object.

ACTIVITY

Specifies the activity to change in the change request description.

***LAST:** The activity is the last to run in the change request. When *LAST is specified for the activity (ACTIVITY) parameter, the condition (COND) parameter and the start time (STRTIME) parameter cannot be specified. Only one activity named *LAST can exist in the change request description.

activity-name: Specify a 10-character activity name.

ACTION

Specifies the function to be performed on the resource.

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

***SND:** Send the specified PTF to the specified managed system. The PTF is not loaded as part of this activity.

***RTV:** Retrieve the specified PTF from the specified managed system.

***DLT:** Delete the PTF save file and cover letter on the specified managed system.

***APY:** Apply the PTF on the specified system. All requisite PTFs must have been applied. If the PTF is not loaded, then the PTF is loaded and applied. A PTF can be in loaded ("Not applied") status. If the PTF is not previously loaded, then the PTF must be loaded before it is applied. To apply all corequisite PTFs, set the status to "loaded" ("Not applied"). When you request to apply one PTF, all corresponding corequisites will be applied.

***SNDAPY:** Send, load, and apply the PTF on the specified system. All requisite PTFs must have already been applied. To apply the current PTF and corresponding corequisite PTFs, set the status to "loaded" ("Not applied"). When applying one PTF, that PTF and all corresponding corequisite PTFs are applied.

***RMV:** Temporarily, remove the PTF on the specified system.

PTFID Specifies the PTF that is to be distributed.

Element 1: PTF ID

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

PTF-identifier: Specify a 7-character PTF identifier.

***ALL:** All PTFs for the specified product. It can only be specified when applying, deleting, or removing PTFs. A product must be specified.

Element 2: Product Identifier

This is the product identifier of the product to which the PTF is associated.

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

***ONLY:** The PTF identifier specified is associated with only one supported product.

product-ID: Specify the product to which the PTF is associated. The product must be specified when PTF identifiers are not unique across products.

Element 3: Release Level of Product

This element shows the release level of the product.

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

release(VxRxMx): Specify the release level of the product to which the PTF is associated. The format is VxRxMx. The release must be specified when PTF identifiers are not unique across product releases.

Optional Parameters

NODL Specifies that the node list parameter is the object name that contains a list of systems that are the destinations for the activity. This parameter cannot be specified if the control point name (CPNAME) parameter is also specified.

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

***NONE:** The systems on which this activity is to be performed are not specified by a node list. Individual control point names must be specified.

The possible library values are:

***LIBL:** All of the libraries in the user and system portions of the job's library list are searched for the node list object.

***CURLIB:** The current library for the job is used to locate the node list object.

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

node-list-name: Specify the node list object name containing the list of systems on which the activity is to be performed.

CPNAME

Specifies the APPN control point names of the managed systems on which this activity is to be performed. Control point names cannot be specified if the node list (NODL) parameter is specified.

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

***NONE:** The systems on which this activity is performed are not identified individually. A node list must be specified.

***NETATR:** The network ID of the local system is used. This is useful when the node being specified is in the same network as the local system.

network-identifier: Specify the APPN network identifier of the managed system on which the activity is to be performed.

control-point-name: Specify the APPN control point name of the managed system on which the activity is to be performed.

PTFPART

Specifies whether the PTFs or cover letters should be sent, retrieved, or deleted.

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

***PTF:** Only the PTF should be handled.

***CVRLTR:** Only the PTF cover letter is handled. *CVRLTR is valid only with the *RTV and *SND actions.

If the delete action is specified, both the PTF and the cover letter are always deleted.

CVRLTRLNG

Specifies the language of the cover letter to be sent with the PTF.

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

***SRVRQS:** The cover letter language specified in the service requester entry for each node determines which cover letter that particular node is sent. If a service requester entry is not present or a language is not specified, the default language 2924 is used. If the language specified is not found, then 2924 is sent except when 2926 is requested in which case 2950 is sent.

cover-letter-language-ID: Specify the 4-character language identifier of the cover letter to be sent or retrieved.

APY Specifies the extent of change when the PTF is applied.

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

***TEMP:** The PTF is applied temporarily.

***PERM:** The PTF is applied permanently.

***LODONLY:** The PTF is only loaded. This is useful for PTFs which are part of a corequisite group where all PTFs are applied, removed, or permanently applied as a group and the “loaded” (“Not applied”) status is the requisite to perform those functions.

DLYAPY

Specifies how PTFs are applied. Apply immediate PTFs one at a time while the activity runs on the specified system or later during the next IPL.

***NO:** Applies an immediate PTF at the time the activity runs. If the PTF is marked delayed, it is not applied until the next unattended IPL.

***YES:** Applies both immediate or delayed PTFs during the next unattended IPL.

DLYRMV

Specifies how a PTF is removed. Remove a PTF at the time the activity is specified on the system or later during the next IPL.

***NO:** Removes a PTF at the time an activity runs.

***YES:** Removes a PTF during the next unattended IPL.

TEXT Specifies the activity description.

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

***GEN:** A description is generated based on the action selected.

text-description: Specify a 50-character description of the activity.

COND Specifies which conditions must be met before this activity can be performed. Each condition identifies an activity that must run before this activity and the value the end code from that activity must have to allow this activity to run. The default condition is that the previous activity (in alphabetical order) must complete successfully before this activity can be run.

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

***NONE:** There are no conditions for this activity.

Element 1: Conditioning Activity

The activity which must be run before this activity.

***PRV:** This activity is conditioned on the previous activity. Activities are ordered alphabetically by activity name. If the activity being added is the first activity, a previous activity does not exist and any condition with *PRV is marked as having been met.

conditioning-activity-name: Specify the name of the activity which must be run before this activity. The activity name specified in the activity (ACTIVITY) parameter cannot be specified in the conditioning activity name. An activity cannot be conditioned on itself.

generic-conditioning-activity-name:* Specify the generic name of the activities that must run before this activity.

Element 2: Relational Operator

This element is the relational operator to use when comparing the end code from the conditioning activity.

***EQ:** Equal

***GT:** Greater than

***LT:** Less than

***NE:** Not equal

***GE:** Greater than or equal

***LE:** Less than or equal

Element 3: Condition Code

This element is the value compared to the actual end code of the conditioning activity.

***SUCCESS:** The activity ended successfully (0 <= end code <= 9). This end code can only be specified with relational operator *EQ or *NE.

***FAIL:** The activity failed (10 <= end code <= 89). This end code can only be specified with relational operator *EQ or *NE.

***NOTRUN:** The activity never started (90 <= end code <= 99). This end code is only specified with relational operator *EQ or *NE.

***ANY:** The activity ended with any end code. This end code is only specified with relational operator *EQ.

end-code: Specify an integer value (0-99) that indicates the result of an activity (success or failure). The end code ranges and descriptions are:

00 Activity completed successfully.

01-09 Activity completed with warning messages.

10-29 Activity did not complete successfully.

30-39 Activity was canceled by a user before it completed.

- 30 = Activity ended with *CNTRLD option
- 35 = Activity ended with *IMMED option
- 39 = Activity ended with *FRCFAIL option

40-49 Activity was not run due to errors detected by the application.

- 40 = Activity not run for security reasons

90-99 Activity was not run because conditions or schedules were not met.

- 95 = Scheduled start time expired
- 99 = Conditions cannot be met

Element 4: Condition Mode

The condition mode indicates which systems the activity must have completed on or before this activity can be performed.

***ALLNODES:** The conditioning activity specified must complete on all nodes before this activity runs.

***SAMENODE:** When the conditioning activity specified for a given node, the activity specified on the ACTIVITY parameter can run for that same node even though the conditioning activity cannot have completed for all other nodes. In the case where this activity can run for that node, the condition is ignored.

STARTIME

Specifies the date and time when this activity can be started on the central site system. The current date and time values and the next date values are determined when the change request is submitted.

Element 1: Start After Time

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

***CURRENT:** This activity can start any time on or after the time when the change request is submitted.

start-after-time: Specify the time when this activity can start. The time can be entered as 4 or 6 digits (hhmm or hhmmss) where hh = hours, mm = minutes, and ss = seconds. Seconds are optional. The time can be specified with or without a time separator such as a colon (:). With a time separator, specify a string of 5 or 8 digits (hh:mm or hh:mm:ss).

Element 2: Start After Date

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

***CURRENT:** This activity can start on or after the date when the change request is submitted.

***NEXT:** The activity can start on any date after the date the change request is submitted.

start-after-date: Specify the date after this activity can start. The date must be specified in the job date format.

Element 3: Start Before Time

This element is ignored if the start before date is *ANY.

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

***ANY:** The activity can start at any time on or before the start before date.

***CURRENT:** The activity must start before the time when the change request was submitted on the date specified on the start before date element.

start-before-time: Specify the time before which the activity must start. If the activity cannot be started before this time, it never starts. The time can be entered as 4 or 6 digits (hhmm or hhmmss) where hh = hours, mm = minutes, and ss = seconds. Seconds are optional. The time can be specified with or without a time separator such as a colon (:). With a time separator, specify a string of 5 or 8 digits (hh:mm or hh:mm:ss).

Element 4: Start Before Date

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

***ANY:** The activity can start at any time on after the start after time and the start after date.

***CURRENT:** The activity must start on the date the change request is submitted.

***NEXT:** The activity must start by the day after the date the change request is submitted.

start-before-date: Specify the date before the activity must start. If the activity cannot be started by this date, it never starts. The date must be specified in the job date format.

RMTSTRTIME

Specifies the date and time after which the activity can begin running on the managed system. The current date and time values and next date values are determined when the activity begins running at the central site system based on the central site date and time.

Element 1: Time Zone

The time zone of the remote start time.

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

***LCLSYS:** The remote start time is specified in the time zone of the central site system.

***MGDSYS:** The remote start time is specified in the time zone of the managed system.

Element 2: Start After Time

This is the definition of the time after which the activity is to start.

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

***CURRENT:** This function can start on the managed system at any time on or after the time this activity is started on the central site system on the date specified in element 3.

start-after-time: Specify the time when this function can start on the managed system. The time can be entered as 4 or 6 digits (hhmm or hhmmss) where hh = hours, mm = minutes, and ss = seconds. Seconds are optional. The time can be specified with or without a time separator. With a time separator, specify a string of 5 or 8 digits (hh:mm or hh:mm:ss).

Element 3: Start After Date

This is the start after date.

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

***CURRENT:** This function starts on the managed system on any date on or after the date the activity starts on the central site system.

***NEXT:** This function starts on the managed system on any date after the date this activity starts on the central site system.

start-after-date: Specify the date after the functions can start on the managed system. The date must be specified in the job date format.

Notes:

1. The special values *CURRENT and *NEXT cannot be specified for the date and the time when the time zone value *MGDSYS is specified.
2. This parameter can only be specified if *APY, *RMV, or *SNDAPY actions are specified.

HOLD Specifies that the activity be held when the change request is submitted.

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

***NO:** The activity is not held. It runs when all conditions and the start time are met.

***YES:** The activity is held for all nodes when the change request is submitted. It must be released by you before it runs.

Examples for CHGPTFCRQA

Example 1: Applying a Permanent Change to a PTF

```
CHGPTFCRQA CRQD(MYLIB/CR1) ACTIVITY(ACT01) ACTION(*APY)
  APY(*PERM) PTFID(SF12345) CPNAME((*NETATR SYS1))
```

This command changes an activity to permanently apply PTF SF12345 on system SYS1.

Example 2: Sending a Change to a PTF

```
CHGPTFCRQA CRQD(MYLIB/CR2) ACTIVITY(ACT03)
  ACTION(*SND) PTFID(SF89345) PTFPART(*CVRLTR)
  CVRLTRLNG(2950) NODL(MYLIB/EUROPE SYS)
```

This command changes an activity to send the PTF cover letter to all systems in Europe that are identified in the EUROPE SYS node list.

Example 3: Changing Activities to Apply a PTF

```
CHGPTFCRQA CRQD(MYLIB/CR3) ACTIVITY(ACT01)
  ACTION(*SND) PTFID(SF99911) CPNAME((NET1 SYSX))
CHGPTFCRQA CRQD(MYLIB/CR3) ACTIVITY(ACT02)
  ACTION(*APY) APY(*TEMP) PTFID(SF99911)
  RMTSTRTIME((*MGDSYS (02:00:00) (03/30/02))
  CPNAME((NET1 SYSX))
```

This command changes activities to send a PTF and apply it temporarily at 2:00 a.m. on a system encountering a problem.

Example 4: Changing an Activity to Load a PTF

```
CHGPTFCRQA CRQD(MYLIB/CR4) ACTIVITY(ACT01)
  ACTION(*APY) PTFID(SF89555) CPNAME(*NETATR SYS4)
  APY(*LODONLY)
```

This command changes an activity to load only the PTF SF89555, which is part of a corequisite PTF group, on system SYS4.

Example 5: Changing an Activity to Send and Permanently Apply a PTF in Delayed Mode

```
CHGPTFCRQA CRQD(MYLIB/CR5) ACTIVITY(ACT01)
  ACTION(*SNDAPY) PTFID(SF91388) CPNAME(*NETATR SYS5)
  DLYAPY(*YES)
```

This command changes an activity to send and permanently apply PTF SF91388 during the next unattended IPL.

Error messages for CHGPTFCRQA

*ESCAPE Messages

CPF358A

Release not valid.

SMU1307

Not all object descriptions changed.

SMU1312

Objects not found.



CHGQRYA (Change Query Attributes) Command Description

CHGQRYA Command syntax diagram

Purpose

The Change Query Attributes (CHGQRYA) command specifies attributes for database queries, database file keyed access path builds and rebuilds, and database file I/O keyed access path maintenance that are run in a job. Database queries include the open of a SQL view and the running of SQL data manipulation statements.

Restriction: You must have job control (*JOBCTL) special authority to use this command.

Optional Parameters

QRYTIMLMT

Specifies a limit for database queries allowed to be started on the estimated number of elapsed seconds that the query requires to process. The initial value of the QRYTIMLMT attribute for a job is *SYSVAL.

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

***NOMAX:** There is no maximum number of estimated elapsed seconds. Valid values range from 0 through 2147352578.

When 0 is specified all database queries issue a CPA4259 inquiry message. Setting a query time limit of 0 can be useful when attempting to tune database queries for better performance because the technical description of the CPA4259 inquiry message explains the type of access plan used by the query.

***SYSVAL:** The query time limit is obtained from the system value, QQRYTIMLMT.

query-time-limit: Specify the maximum value that is checked against the estimated number of elapsed seconds required to run a query. If the estimated elapsed seconds is greater than this value, the query is not started.

DEGREE

Specifies the parallel processing option and, optionally, the number of tasks that can be used when running database queries, database file keyed access path builds and rebuilds, and database file I/O keyed access path maintenance in the job.

The specified parallel processing option determines the types of parallel processing allowed. There are two types of parallel processing:

1. **Input/Output (I/O) parallel processing**

With I/O parallel processing, the database manager can use multiple tasks for each query to do the I/O processing. The central processor unit (CPU) processing is still done serially.

2. **Symmetric Multiprocessing (SMP)**

SMP assigns both the CPU and I/O processing to tasks that will run the query in parallel. Actual CPU parallelism requires a system with multiple processors. SMP parallelism can only be used if the system feature, DB2 Symmetric Multiprocessing, is installed.

Use of SMP processing can affect the order in which records are returned. Applications that depend on records being returned from database queries in arrival sequence or keyed access path sequence that have not explicitly defined the ordering sequence in the query, should not be run in jobs that have specified a parallel processing option that enables SMP processing.

The initial value of the DEGREE attribute for a job is *SYSVAL.

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

***NONE:** No parallel processing is allowed for database query processing, database file keyed access path build or rebuild processing, or database file I/O keyed access path maintenance.

***IO:** Any number of tasks can be used when the database query optimizer chooses to use I/O parallel processing for queries. SMP parallel processing is not allowed.

***OPTIMIZE:** The query optimizer can choose to use any number of tasks for either I/O or SMP parallel processing to process the query, database file keyed access path build or rebuild, or database file I/O keyed access path maintenance. SMP parallel processing is used only if the system feature, DB2 Symmetric Multiprocessing, is installed. Use of parallel processing and the number of tasks used is determined with respect to the number of processors available in the system, this job's share of the amount of active memory available in the pool in which the job is run, and whether the expected elapsed time for the query, database file keyed access path build or rebuild, or database file I/O keyed access path maintenance is limited by CPU processing or I/O resources. The query optimizer chooses an implementation that minimizes elapsed time based on the job's share of the memory in the pool.

***MAX:** The query optimizer can choose to use either I/O or SMP parallel processing to process the query. SMP parallel processing is used only if the system feature, DB2 Symmetric Multiprocessing, is installed. The choices made by the query optimizer are similar to those made for parameter value *OPTIMIZE except the optimizer assumes that all active memory in the pool can be used to process the query, database file keyed access path build or rebuild, or database file I/O keyed access path maintenance.

***SYSVAL:** The processing option used is set to the current value of the system value, QQRVDEGREE.

***ANY:** Parameter value *ANY has the same meaning as *IO. The *ANY value is maintained for compatibility with prior releases.

***NBRTASKS:** The number of tasks to be used for SMP parallel processing is specified by the second element of the DEGREE parameter.

Element 2: Number of tasks

Specify the number of tasks to be used when the query optimizer chooses to use SMP parallel processing to process a query. I/O parallelism is also allowed. SMP parallel processing is used only if the system feature, DB2 Symmetric Multiprocessing, is installed.

Using a number of tasks less than the number of processors available on the system will restrict the number of processors used simultaneously for running a given query, database file keyed access path build or rebuild, or database file I/O keyed access path maintenance. A larger number of tasks ensures that the query, database file keyed access path build or rebuild, or database file I/O keyed access path maintenance is allowed to use all of the processors available on the system

to run the query, database file keyed access path build or rebuild, or database file I/O keyed access path maintenance. Too many tasks can degrade performance because of the over commitment of active memory and the overhead cost of managing all of the tasks.

JOB Specifies the qualified name of the job and consists of as many as three elements. For example:

job-name

user-name/job-name

job-number/user-name/job-name

*N may be used in place of the user-name element to maintain position in the sequence. More information on this parameter is in Commonly used parameters.

*: This command is issued within the job whose query attributes are changed.

job-name: Specify the name of the job whose query attributes are being changed. If no job qualifier is given, all of the jobs currently in the system are searched for the simple job name. If duplicates of the specified name are found, a qualified job name must be specified.

user-name: Specify the name of the user of the job whose query attributes are being changed.

job-number: Specify the number of the job whose query attributes are being changed.

ASYN CJ

Specifies the circumstances in which asynchronous (server) jobs can be used to help process database queries in the job.

The specified usage option determines which types of database queries can be processed so that steps of the query can be evaluated by asynchronous jobs running in parallel.

An asynchronous job is a separate job on the system that handles query requests from jobs that are running database queries. For each request, the asynchronous job processes the request and puts the results into a temporary file. This intermediate temporary file is then used by the main job to complete the database query. The advantage of using an asynchronous job is that it can be processing its request at the same time (in parallel) that the main job is processing another step of the database query.

The disadvantage of using an asynchronous job is that it may encounter a situation that it cannot handle in the same way as the main job. For example, the asynchronous job may receive an inquiry message that it would have to cancel from, whereas the main job could have chosen to ignore the message and continue.

There are two different types of database queries that can use asynchronous jobs:

1. Distributed queries

These are database queries that involve distributed files. Distributed files are provided through the system feature DB2 Symmetric Multiprocessing.

2. Local queries

These are database queries that involve only files local to the system where the database queries are being run.

The initial value of the ASYN CJ attribute for a job is *DIST.

*SAME: The value does not change.

*DIST: Asynchronous jobs can be used for database queries that involve distributed files.

***LOCAL:** Asynchronous jobs can be used for database queries that involve only files local to the system where the database queries are being run.

***ANY:** Asynchronous jobs can be used for any database query.

***NONE:** No asynchronous jobs are allowed to be used for database query processing. In addition, all processing for distributed files performed in the associated jobs on remote systems occurs synchronously.

APYRMT

Specifies, for database queries involving distributed files, whether or not the query attributes are applied to the jobs on the remote systems associated with this job.

The specified option determines whether the query attributes specified for the job are applied to the associated jobs on the systems applicable to the distributed file or files.

The initial value of the APYRMT attribute for a job is *YES.

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

***YES:** The query attributes for the job are applied to the remote jobs used in processing database queries involving distributed files. For attributes where *SYSVAL is specified, the system value on the remote system is used for the remote job. This option requires that, if CHGQRYA was used for this job, the remote jobs must have authority to use the CHGQRYA command.

***NO:** The CHGQRYA attributes for the job are not applied to the remote jobs. The remote jobs use the attributes associated to them on their systems.

QRYOPLIB

The QRYOPLIB parameter allows the user to specify which library currently contains or will contain the query options file (QAQQINI).

The query options file is used to set or modify the attributes used by the Query Optimizer that will determine how a query will be implemented in the job specified.

The query options file uses a system-supplied trigger program associated with the file QAQQINI in order to process any changes made to the file. A template for the file is shipped in the library QSYS with the base trigger program already attached. In order to maintain and use the query options file correctly, it is recommended that Create Duplicate Object (CRTDUPOBJ) be used to create a copy of the file QAQQINI into the library specified on the QRYOPLIB parameter.

If no library is specified for this parameter, then the library QUSRSYS is searched for the existence of the file.

For more information, refer to the SQL Programming with Host Languages topic in the Information Center or the Database Programming topic in the Information Center.

The initial value of the QRYOPLIB attribute for a job is QUSRSYS.

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

library-name: Specify the library where the query options file is or will be located.

Examples for CHGQRYA

Example 1: Changing the Query Time Limit

```
CHGQRYA QRYTIMLMT(60)
```

This command changes the query time limit to 60 seconds.

Example 2: Controlling Query and Database Parallel Processing

```
CHGQRYA DEGREE(*10)
```

This command specifies that any number of tasks may be used when the database query optimizer chooses to use I/O parallel processing for queries. SMP parallel processing is not allowed.

Example 3: Controlling Query Parallel Processing

```
CHGQRYA  DEGREE(*OPTIMIZE)
```

This command specifies that the query optimizer can choose to use any number of tasks for either I/O or SMP parallel processing to process a query, database file keyed access path build or rebuild, or database file I/O keyed access path maintenance. SMP parallel processing will only be used if the system feature DB2 Symmetric Multiprocessing is installed.

Example 4: Controlling Query Parallel Processing

```
CHGQRYA  DEGREE(*MAX)
```

This command specifies that the query optimizer can assume that all active memory in the pool can be used to process a query, database file keyed access path build or rebuild, or database file I/O keyed access path maintenance and can choose to use any number of tasks for either I/O or SMP parallel processing to process a query, database file keyed access path build or rebuild, or database file I/O keyed access path maintenance. SMP parallel processing will only be used if the system feature DB2 Symmetric Multiprocessing is installed.

Example 5: Controlling Query Parallel Processing

```
CHGQRYA  DEGREE(*NBRTASKS 12)
```

This command specifies that the 12 tasks are to be used when the query optimizer chooses to use SMP parallel processing to process a query, database file keyed access path build or rebuild, or database file I/O keyed access path maintenance. I/O parallelism will also be allowed. SMP parallel processing will only be used if the system feature DB2 Symmetric Multiprocessing is installed.

Example 6: Controlling Query Parallel Processing

```
CHGQRYA  DEGREE(*SYSVAL)
```

This command specifies that the query, database file keyed access path build or rebuild, or database file I/O keyed access path maintenance, should be optimized with the current value of system value QQRYDEGREE when the query, database file keyed access path build or rebuild, or database file I/O keyed access path maintenance is run.

Example 7: Disabling Asynchronous Job Usage for Distributed File Processing

```
CHGQRYA  ASYNCJ(*LOCAL)
```

This command prevents asynchronous jobs from being used for queries involving distributed files.

Example 8: Disabling Asynchronous Job Usage

```
CHGQRYA  ASYNCJ(*NONE)
```

This command prevents asynchronous jobs from being used for any queries. In addition, for queries involving distributed files, communication to remote systems is done in a synchronous fashion.

Example 9: Specifies Query Options File Library

```
CHGQRYA  QRYOPLIB(QUSRSYS)
```

This command specifies that library QUSRSYS is to be searched for the existence of the query options file (QAQQINI).

Note:

Use this command in addition to STRDBG
UPDPROD(*YES) and all optimizer debug messages
(local and remote) will show up in this job's job log.

**Example 10: Specifies Query Options File Library for a different job**

```
CHGQRYA QRYOPLIB(LIB41) JOB(134543/QPGMR/DSP01)
```

This command specifies that library LIB41 is to be searched for the existence of the query options file (QAQQINI) for job number 134543. The job name is DSP01 and was started by the user named QPGMR. This library may exist in more than one independent ASP (auxiliary storage pool); the library in the namespace of the originator's job will always be used.

Error messages for CHGQRYA***ESCAPE Messages****CPF1321**

Job &1 user &2 job number &3 not found.

CPF436E

Job &1 user &2 job number &3 is not active.

CPF9810

Library &1 not found.

CHGQSTDB (Change Question-and-Answer Database) Command Description

CHGQSTDB Command syntax diagram

Purpose

The Change Question-and-Answer Database (CHGQSTDB) command allows the user to change the characteristics, topics, or search words of a question-and-answer (Q & A) database. When the user enters this command, a menu appears where the user can select the part of the Q & A database to change.

Restrictions:

1. This command is shipped with public *EXCLUDE authority.
2. A user must have authority to the command and be a Q & A coordinator for any Q & A database referred to by the command.
3. This command can only be used interactively.

Optional Parameters**QSTDB**

Specifies the Q & A database to change.

***SELECT:** The user is asked to specify a Q & A* database. If only one Q & A database exists on the system, it is the default.

question-database: Specify the name of the Q & A database to change.

LIB Specifies the name of the library that contains the Q & A database.

***QSTLIB:** The library containing the specified Q & A* database is searched. If *SELECT is specified on the QSTDB parameter, any Q & A database in any library for which the user is authorized can be selected.

library-name: Specify the name of the library to be searched. If *SELECT is specified on the QSTDB parameter, any database in the library for which the user is authorized can be selected.

Example for CHGQSTDB

CHGQSTDB

This command shows the Change Q & A Database display.

Error messages for CHGQSTDB

None

CHGRCYAP (Change Recovery for Access Paths) Command Description

CHGRCYAP Command syntax diagram

Purpose

The Change Recovery for Access Paths (CHGRCYAP) command is used to change the target access path recovery time for the system or for one or more auxiliary storage pools (ASPs). The system uses no more than the specified target access path recovery time when recovering access paths during an initial program load (IPL) and during the vary on of a user ASP after an abnormal system end. Because the access path recovery time is a target, performance may range around the target.

The time taken to rebuild access paths exposed while running the Copy File (CPYF), the Reorganize Physical File Member (RGZPFM), or the Restore Object (RSTOBJ) commands is not considered in the target access path recovery time of access paths protected with this command.

You can use this command to manage the protection of access paths that are not already protected through journaling. Changes made with this command are an immediate change in policy; however, a little time may be needed for the system to adjust its performance to meet the new target.

For more information on using this command, see the Journal management article in the Information Center.

Restrictions:

1. You must have job control special authority to use this command.
2. This command is shipped with public *EXCLUDE authority, and the QPGMR and QSYSOPR user profiles have private authorities to use this command.
3. If the current access path recovery state is *OFF, you must be in a restricted state to activate system-managed access-path protection by specifying a target access path recovery time.
4. If no user auxiliary storage pools (ASPs) exist on the system, an access path recovery time for ASP 1 cannot be specified. The access path recovery time must be specified on the SYSRCYTIME parameter.

Optional Parameters

SYSRCYTIME

Specifies the target access path recovery time to be used system-wide.

Note:

Changing from *OFF to another value must be done when the system is in a restricted state.

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

***SYSDFT:** The system access path recovery time value is set to the system default value of 70 minutes.

***NONE:** The time allotted to rebuild access paths is not limited. No access path protection is provided by the system. The system continues to monitor current exposure. The time it takes to rebuild the access paths is available for review through the Display Recovery for Access Paths (DSPRCYAP) or the Edit Recovery for Access Paths (EDTRCYAP) commands.

***MIN:** Minimum access path recovery time for the system is used, which provides for the fastest access path recovery. All eligible access paths for the entire system are protected.

***OFF:** The time allotted to rebuild the access paths is not limited. No access path protection is provided by the system. The system does not monitor current exposure.

system-access-path-recovery-time: Specify the time (in minutes) to be targeted for access path recovery for the entire system. Valid values range from 10 through 1440, by tens (10, 20, 30, and so on).



Note:

The system may not be able to protect enough access paths to meet the target access path recovery time. You can review access path recovery status by using the DSPRCYAP command.

Reasons that the target access path recovery time may not be met:



1. Access paths cannot be protected if two of the underlying physical files are journaled to different journals.
2. If the system access path recovery time value was changed just prior to the system crash, the new time value may not be in effect.
3. Access paths were exposed due to the CPYF, RGZPFM, or RSTOBJ command being run.
4. Damage was done to the internal system environment which maintains the system-managed access-path protection (SMAPP) support.

ASPRCYTIME

Specifies the target access path recovery time per auxiliary storage pool. This parameter is valid and prompted only if the system has  basic  user ASPs.

Element 1: Auxiliary Storage Pool

The possible Auxiliary Storage Pool value is:

ASP-identifier: Specify the value ranging from 1 through  32  that is the identifier of the ASP to which the target access path recovery time applies. Valid values depend on the ASPs active on the system.

Note:

The value of 1 is the system ASP, any other value indicates a user ASP.

» To specify the target access path recovery time for an independent ASP, use the ASPDEVRCY parameter. «

Element 2: Target Access Path Recovery Time

The possible Target Access Path Recovery Time values are:

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

***NONE:** The access paths for the specified ASP are protected only if they need to be protected to reach the system access path recovery time specified.

***MIN:** All of the eligible access paths for the specified ASP are protected. The system uses the minimum time needed for access path recovery.

access-path-recovery-time: Specify the number of minutes to be targeted for access path recovery for the specified ASP. If both the system access path recovery time and an ASP access path recovery time are specified, the system uses the value specifying the lesser amount of time. Valid values range from 10 through 1440, by tens (10, 20, 30, and so on).

» ASPDEVRCY

Specifies the target access path recovery time per independent auxiliary storage pool. This parameter is valid and prompted only if the system has active or available independent user ASPs.

Element 1: Auxiliary Storage Pool Device

The possible Auxiliary Storage Pool value is:

ASP-device-name: Specify the name of the independent ASP that is the identifier of the ASP to which the target access path recovery time applies. Valid values depend on the ASPs active or available on the system.

Element 2: Target Access Path Recovery Time

The possible Target Access Path Recovery Time values are:

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

***NONE:** The access paths for the specified ASP are protected only if they need to be protected to reach the specified system access path recovery time.

***MIN:** All of the eligible access paths for the specified ASP are protected. The system uses the minimum time needed for access path recovery.

access-path-recovery-time: Specify the number of minutes to be targeted for access path recovery for the specified ASP. If both the system access path recovery time and an ASP access path recovery time are specified, the system uses the value specifying the lesser amount of time. Valid values range from 10 through 1440, by tens (10, 20, 30, and so on).

INCAACPTH

Specifies whether the access path recovery time specification should include only those access paths which are considered eligible for protection or include all access paths. The access paths which are not eligible for protection are:

- Access paths built over physical files which are journaled to separate journals.
- Access paths built over a physical file which is journaled to a journal whose journal state is currently *STANDBY .

- Access paths built over a physical file which was created with FRCACCPH(*YES).

Note: Access paths with *REBLD maintenance are not considered for access path protection and are not included in the ineligible time since these access paths are not recovered during an IPL.

Note: Encoded vector access paths are also not considered for access path protection and are not included in the ineligible time.

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

***ALL:** The access path recovery time specification includes all access paths, both those that are and those that are not eligible.

***ELIGIBLE:** The access path recovery time specification includes only those access paths which are considered eligible for protection. <<

Examples for CHGRCYAP

Example 1: Changing the System Recovery Time for Access Paths

```
CHGRCYAP  SYSRCYTIME(180)
```

This command changes the target access path recovery time for the entire system to 180. This protects enough access paths to limit the time needed at IPL to recover all eligible access paths on the system to 180 minutes.

>> The target access path recovery time includes access paths which are considered not eligible. <<

Example 2: Changing the User ASP Recovery Times for Access Paths >>

```
CHGRCYAP  ASPRCYTIME((2 *MIN) (3 *NONE))
          INCACCPH(*ELIGIBLE)
```

<<

This command changes the access path recovery times for user ASPs. The user ASP 2 is changed to *MIN, which protects all access paths on the ASP. The user ASP 3 is changed to *NONE, which protects access paths on the ASP only if needed to reach the system access path recovery time.

>> The target access path recovery time includes only access paths which are considered eligible.

Example 3: Changing the Independent ASP Recovery Times for Access Paths

```
CHGRCYAP  ASPRCYTIME((2 *MIN))
          ASPDEVRcy((WAREHUS1 20) (ORDERDB *MIN))
          INCACCPH(*ALL)
```

This command changes the access path recovery times for one basic user ASP and two independent user ASPs. The user ASP 2 is changed to *MIN, which protects all access paths on the ASP. The independent user ASP with ASP device name WAREHUS1 is changed to 20 minutes, which protects enough access paths on the ASP to achieve a vary on access path rebuild time of 20 minutes. The independent user ASP with ASP device name ORDERDB is changed to *MIN, which protects all access paths on the independent ASP.

All target access path recovery times for the system (not just those specified on this command) will be defined to include all access paths. More eligible access paths will be protected to account for any access paths that are not eligible. <<

Error messages for CHGRCYAP

*ESCAPE Messages

CPF70E6

ASPRCYTIME parameter not valid.

CPF70E8

ASP &1 specified more than once.

CPF70E9

ASP &1 not configured or off-line.

CPF70FA

Recovery times reset before changes completed.

CPF70FB

No authority to use command.

CPF70F4

Error occurred.

CPF70F7

Restricted system required to change recovery times.

CPF70F9

Not all recovery time changes made active.

CPF700F

Access path recovery time for &1 set to *NONE.

CPF701C

Change to system access path recovery time canceled.

CPF701D

Error occurred during change of recovery times.

CPF701E

Access path protection cannot be turned *OFF.

CPF702E

Access path recovery times set to system defaults.

>> CPF9814

Device &1 not found.

CPF9825

Not authorized to device &1.

CPFB8ED

Device description &1 not correct for operation. <<

CHGRDBDIRE (Change Relational Database Directory Entry) Command Description

CHGRDBDIRE Command syntax diagram

Purpose

The Change Relational Database Directory Entry (CHGRDBDIRE) command changes the values of an entry in the relational database directory. Values for any of the relational database's parameters, except its name, can be changed.

Note: Changes to an entry do not affect any connections that are using the relational database directory when the change is made. Changes take effect the next time a CONNECT operation is performed.



For more information on the relational database directory, refer to the Distributed Database Programming topic in the Information Center.

Restriction: If changing an entry for an SQLCI application requester driver (ARD) program using the ARDPGM parameter, you must have execute authority to the application requester driver program and library to specify the ARD program on this command.

Required Parameter

RDB Specifies the name of the relational database entry being changed. A maximum of 18 characters can be specified.

Optional Parameters

RMTLOCNAME

Specifies the name or address of the system on which the relational database is located.

***SAME:** The remote location identification does not change.

***LOCAL:** The relational database is located on the system auxiliary storage pool (ASP number 1) and configured basic user ASPs (ASP numbers 2-32) on this system. You can specify *LOCAL for only one entry in the relational database directory.

Note: If *LOCAL is specified, the DEV, LCLLOCNAME, RMTNETID, MODE, TNSPGM, and ARDPGM parameters will be ignored, and the value of the second element is forced to *IP.

***LOOPBACK:** The relational database is accessed using the internet protocol loopback or LOCAL HOST address. The use of *LOOPBACK allows a DRDA connection to a database on the local system.

Note: If *LOOPBACK is specified, the DEV, LCLLOCNAME, RMTNETID, MODE, TNSPGM, and ARDPGM parameters will be ignored, and the value of the second element is forced to *IP.



***ARDPGM:** The relational database is located by using the application requester driver program specified on the ARDPGM parameter. A remote location name is not used to locate the relational database.

Note:

If *ARDPGM is specified, the PORT, DEV, LCLLOCNAME, RMTNETID, MODE, and TNSPGM parameters will be ignored.

remote-location-name: The first element of this parameter can take several forms:

- SNA remote location name (LU name). Specify a maximum of 8 characters for the remote location name. If this form is used, the second element of this parameter must be *SNA.
- SNA remote network identifier and remote location name separated by a period. Specify a maximum of 8 characters for the remote location name, and a maximum of 8 characters for the remote network identifier. If this form of the parameter is used, the second element of this parameter must be *SNA, and any value specified for the RMTNETID parameter must agree.
- IP address in dotted decimal form. Specify an internet protocol address in the form nnn.nnn.nnn.nnn where each nnn is a number in the range 0 through 255. If this form is used, the second element of this parameter must be specified as *IP.
- IP host domain name. Specify an internet host domain name of up to 254 characters in length. If this form is used, the second element of this parameter must be specified as *IP.

If *IP is specified for the second element, the DRDA application server at the remote location must support the use of TCP/IP, and the DEV, LCLLOCNAME, RMTNETID, MODE, and TNSPGM parameters will be ignored.

If *IP is not specified, the application server must support SNA connectivity. More information about SNA remote location names can be found in APPC, APPN, and HPR topic in the Information Center.

TEXT Specifies the text that briefly describes the relational database.

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

***BLANK:** The text is changed to blanks.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

PORT Specifies the TCP/IP port that is used at the remote location to communicate with the system on which the relational database is located. This parameter will be ignored if *IP is not specified in the RMTLOCNAME parameter.

***SAME:** The port identification does not change.

***DRDA:** The DRDA well-known port of 446 will be used.

port-number: Specify a number in the range 1-65535.

service-name: Specify a maximum of 14 characters for the service name. This name must be registered in the service database file.

RMTAUTMTH

Specifies the preferred remote authentication method on a DDM/DRDA TCP/IP connection request. The actual method used depends on the outcome of the negotiation process between client and server, which depends on the cryptographic support available and the server security configuration. The CHGDDMTCPA (Change DDM TCP/IP Attributes) command can be used to configure DDM/DRDA TCP/IP security on iSeries servers. This parameter will be ignored if *IP is not specified in the **Remote location** (RMTLOCNAME parameter).

Element 1: Preferred method

Specifies the initial authentication method proposed to the server. Based on the authentication methods supported by the server and the value specified for the **Allow lower authentication** element of this parameter, an authentication method is negotiated that is acceptable to both the Application Requester and Application Server systems.

Possible values are:

***SAME** This value does not change.

***USRID** User ID only is sent on a DDM connection request. This is the lowest authentication method.

***USRIDPWD** User ID and associated password is sent on a DDM connection request. Passwords are not encrypted if this authentication method is used.

***ENCRYPTED** User ID and associated encrypted password is sent on a DDM connection request. Cryptographic support must be available on both systems for this authentication method to be used.

***KERBEROS** Authentication occurs using Kerberos. The relational database name must map to a target principal name in the Enterprise Identity Mapping (EIM) environment. Kerberos needs to be configured on both systems for this authentication method to be used.

Element 2: Allow lower authentication Specifies whether an authentication method lower than what was specified for the **Preferred method** element of this parameter will be accepted during negotiation with the Application Server system. If the Application Server system is configured to require a higher authentication method than the value specified for the **Preferred method** element of this parameter and the Application Requester system can support a higher authentication method, the negotiated authentication method can always be higher than the **Preferred method**. From highest to lowest, the authentication methods are:

*KERBEROS

*ENCRYPTED

*USRIDPWD

*USRID

Possible values are:

***SAME** This value does not change.

***ALWLOWER** Allow negotiation of a lower authentication method than what was specified for the Preferred method element of this parameter.

***NOALWLOWER** Do not allow negotiation of a lower authentication method than what was specified for the Preferred method element of this parameter.

DEV Specifies the name of the advanced program-to-program communications (APPC) device description on the local system that is used with this relational database entry. The device description does not need to exist when the entry is changed.

More information on device names is in APPC, APPN, and HPR topic in the Information Center.

***SAME:** The device description does not change.

***LOC:** If APPC is being used, the system determines which device description is used. If advanced peer-to-peer networking (APPN) support is being used, the system ignores this parameter.

device-description-name: Specify a maximum of 10 characters for the name of a device description.

LCLLOCNAME

Specifies the local location name by which this system is identified to the system on which the relational database is located. The local location name cannot be the same as the remote location name.

More information on local location names is in APPC, APPN, and HPR topic in the Information Center.

***SAME:** The local location name does not change.

***LOC:** If advanced program-to-program communications (APPC) is being used, the system determines which local location name is used. If advanced peer-to-peer networking (APPN) is being used, the system uses the default local location name defined in the network attributes.

***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 remote network identifier of the system on which the relational database is located. If this parameter is specified, the RMTLOCNAME parameter must be consistent with this RMTNETID parameter. If the RMTLOCNAME parameter specified a network ID, this parameter must agree (otherwise, an error message will be issued). If the RMTLOCNAME parameter does not specify any network ID, there is no possibility of conflict with this parameter.

More information on remote network identifiers is in APPC, APPN, and HPR topic in the Information Center.

***SAME:** The remote network identifier does not change.

***LOC:** If advanced program-to-program communications (APPC) is being used, the system determines which remote network identifier is used. If advanced peer-to-peer networking (APPN) is used, the system uses the local network identifier defined in this system's network attributes for the remote network identifier.

***NETATR:** The local network identifier defined in the local system's network attributes is used as the remote network identifier.

***NONE:** No remote network identifier is used.

remote-network-identifier: Specify a maximum of 8 characters for the remote network identifier.

More information on remote network identifiers is in APPC, APPN, and HPR topic in the Information Center.

MODE Specifies the mode name to use with the remote location name to communicate with the system on which the relational database is located.

***SAME:** The mode name does not change.

***NETATR:** The mode name defined in the network attributes is used.

BLANK: A mode name of all blanks is used.

mode-name: Specify a maximum of 8 characters for the mode name.

More information on mode names is in APPC, APPN, and HPR topic in the Information Center.

TNSPGM

Specifies the name of the transaction program to use with the relational database entry.

***SAME:** The transaction program name does not change.

***DRDA:** The Distributed Relational Database Architecture (DRDA) transaction program name, X'07F6C4C2', is used. DRDA protocol is a means by which relational databases communicate with each other over a distributed network.

transaction-program-name: Specify the transaction program name in either of the following formats:

- A 4-byte hexadecimal name, which is entered by enclosing the 8 hexadecimal digits in apostrophes with a prefix of X. For example, X'07F6C4C2' is a 4-byte hexadecimal name.

- An 8-byte character name, which is entered by specifying the name in its 8-character form.

ARDPGM

Specifies the qualified name of the application requester driver (ARD) that is the program to be called to process SQL requests directed to the relational database. The program must exist and must be of the object type *PGM.

***DRDA:** The Distributed Relational Database Architecture (DRDA) application requester is used (that is, no ARD program is used).

The possible library values are:

***LIBL:** The library list when the directory entry is added is used to locate the program name.

***CURLIB:** The current library when the directory entry is added is used to locate the program name. 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 name is located.

program-name: Specify the name of the application requester driver program to be called to process the SQL requests.

Examples for CHGRDBDIRE

Example 1: Changing an Entry for *SNA type

```
CHGRDBDIRE RDB(YOURRDB) RMTLOCNAME(NEWARK)
```

This command changes a directory entry to use Newark as the new remote location name to access YOURRDB.

Example 2: Changing an Entry for *IP type

```
CHGRDBDIRE RDB(MYRDB) RMTLOCNAME(ROCHESTER.XYZ.COM *IP)
```

This command changes a directory entry to use an internet protocol domain name to access MYRDB. The second element of RMTLOCNAME indicates that TCP/IP is to be used for connections.

Error messages for CHGRDBDIRE

*ESCAPE Messages

CPF3EC1

Change relational database directory entry failed.

CHGRMTDFN (Change Remote Definition) Command Description

CHGRMTDFN Command syntax diagram

Purpose

The Change Remote Definition (CHGRMTDFN) command changes the attributes of a remote system in the remote definition table.

Restriction: You must have *ALLOBJ authority to use this command.

Required Parameter

SYSTEM

Specifies the system name and system group of the remote system being changed.

***ANY:** The default definition, which is used by remote systems for whom attributes are not yet defined, is changed.

Element 1: System Name

system-name: Specify the name of the remote system being changed.

Element 2: System Group

system-group: Specify the group name of the remote system being changed. The system group name is blank if this value is not specified.

Optional Parameters

TEXT Specifies the text that briefly describes the remote system definition. More information is in Commonly used parameters.

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

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

MTGNTCDOC

Specifies the type of meeting notice documents accepted by the remote system.

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

***FFTDCA:** Final-form text documents are accepted. The remote system does not accept enterprise meeting notice architecture documents.

***EMN:** Enterprise meeting notice architecture documents are accepted (post-V2R1M1 AS/400 systems).

CALDTASTM

Specifies the type of calendar data stream that the local system uses when sending a request for calendar information to this remote system. Each type of calendar data stream represents a format in which remote calendar requests are made from the local system to this remote system.

Single Values:

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

***NONE:** No calendar data stream is used.

Multiple Values:

***OfficeVision:** The OfficeVision calendar data stream is used.

calendar-data-stream: Specify the name of the calendar data stream that is used. The name of the data stream can be a maximum of 10 characters.

RMTCALPWD

Specifies the password that is associated with user profile QRMTCAL on the remote system. This user profile is used to sign on to the remote system when processing a request for calendar information.

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

***NONE:** No password is used for user profile QRMTCAL.

calendar-password: Specify the password that is defined for QRMTCAL. If the password is numeric, it must begin with a Q (for example, specify Q1234 when 1234 is the password).

RMTUSRAUT

Specifies the object authority for calendar objects on the local system to be used for incoming requests for calendar information from remote system users. This parameter is used by OfficeVision calendar processing to determine authority to calendars.

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

***PRIVATE:** Private authority is used for requests from the remote system. If private authority does not exist, public authority is used.

***PUBLIC:** Public authority is used for requests from the remote system.

***MINIMUM:** The lesser of the private or the public authority is used for requests from the remote system.

***EXCLUDE:** Local system objects cannot be accessed by users on the remote system.

RMTLOCNAME

Specifies the remote location name of the remote system being updated.

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

***SYSTEM:** The name specified on the SYSTEM parameter is used for the remote location name.

remote-location-name: Specify the full name of a remote location.

LCLLOCNAME

Specifies the location name that identifies the local system to the remote system.

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

***LOC:** The local location name associated with the remote location is used.

***NETATR:** The LCLLOCNAME value specified in the system network attributes is used.

local-location-name: Specify the name of the local location.

RMTNETID

Specifies the remote network identifier (ID) of the remote system being updated.

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

***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 identifier (ID) is used.

remote-network-ID: Specify the remote network ID.

MODE Specifies the name of the mode that defines the device sessions used to request data from the remote system.

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

***NETATR:** The mode name specified in the network attributes is used.

mode-name: Specify the name of the mode.

Examples for CHGFRMTDFN

Example 1: Changing the Description of a Remote Definition

```
CHGFRMTDFN SYSTEM(ABCXYZ) TEXT('LONDON REMOTE XYZ')
```


This command changes the description of the remote system ABCXYZ to LONDON REMOTE XYZ.

Example 2: Changing the Calendar Data Stream for Undefined Systems

```
CHGRMTDFN SYSTEM(*ANY) CALDTASTM(*OV400)
```

This command changes the default definition for remote systems that do not have specific remote definitions. These systems are defined to support the OfficeVision data stream for remote calendar requests.

Error messages for CHGRMTDFN

***ESCAPE Messages**

CPF6DCA

SYSTEM parameter cannot be local system.

CPF6DCC

Remote definition for system &1 &2 not found.

CPF9899

Error occurred during processing of command.

CHGRMTJRN (Change Remote Journal) Command Description

CHGRMTJRN Command syntax diagram

Purpose

The Change Remote Journal (CHGRMTJRN) command is used to change the journal state for remote journals.

This command is used on the source system for a remote journal that is associated with a source-system journal, to change the state of the remote journal from *ACTIVE to *INACTIVE or from *INACTIVE to *ACTIVE. A journal state of *ACTIVE for a remote journal indicates that journal entries can be received from the associated journal on the source system. A journal state of *INACTIVE for a remote journal indicates that the journal is not ready to receive journal entries from a source journal. This command also allows additional attributes that are associated with the journal state to be set.

The Change Journal (CHGJRN) command can be used to modify the other journal attributes of remote journals, such as the journal message queue, deleting receivers, and text.

Restrictions:

- A user profile must exist on the target system by the same name as the user profile that is running this command on the source system. This restriction is irrespective of the selected communications protocol.
- Synchronous delivery mode is not supported when a remote journal is specified for the source system journal name parameter.
- The journal state of the remote journal to be activated cannot already be *ACTIVE.
- The journal state of the remote journal to be inactivated cannot already be *INACTIVE.
- If the remote journal state is *CTLINACT, then the remote journal cannot be inactivated by specifying a INACTOPT(*CNTRLD).
- The remote journal to be activated cannot already be replicating journal entries to other remote journals.
- A journal receiver that was one of a pair of dual receivers cannot be replicated.
- A journal receiver that was never attached to a journal after Version 4 Release 2 Modification 0 has been installed cannot be replicated because all of the required information is not contained within the receiver.

- The specified relational database directory entry (RDB) must meet the following rules:
 - The communications protocol must be one of the remote journal function supported protocols.
 - The remote location name in the RDB cannot refer to the *LOCAL database.
 - The RDB cannot use an application requester driver program (*ARDPGM) to locate the target system.

Required Parameters

RDB The name of the relational database directory entry that contains the remote location name of the target system. ➤ This name should match the name of the *LOCAL relational database directory entry on the target system. ⬅

relational-database-entry: Specify a maximum of 18 characters for the name of the relational database directory entry.

SRCJRN

The name of the source journal that is associated with the remote journal that is being changed, and the library in which it resides.

The name of the source journal 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.

source-journal-name: Specify the source journal that is associated with the remote journal that is being changed.

Optional Parameters

TGTJRN

The name of the remote journal on the target system that is being changed, and the library in which it resides.

***SRCJRN:** The target journal name is exactly the same as the source journal name.

library-name/target-journal-name: Specify the target journal that is being changed.

JRNSTATE

Specifies whether the remote journal is ready to receive journal entries from a source journal.

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

***ACTIVE:** The remote journal is ready to receive journal entries from a source journal.

***INACTIVE:** The remote journal is not ready to receive journal entries from a source journal.

DELIVERY

Whether journal entries are to be replicated synchronously or asynchronously when the remote journal is activated.

***ASYNC:** Journal entries are to be replicated asynchronously.

***SYNC:** Journal entries are to be replicated synchronously.

STRJRNRCV

The journal receiver where the replication of journal entries from the source system to the target system will start. The possible values follow:

***ATTACHED:** The replication of journal entries starts with the journal receiver that is currently attached to the remote journal on the target system. The journal entries are replicated from the corresponding journal receiver that is associated with the journal on the source system. The replication starts with the journal entries that follow the last journal entry that currently exists in the attached journal receiver on the target system.

If the remote journal on the target system does not have an attached journal receiver, the journal receiver that is currently attached to the journal on the source system is created on the target system and attached to the remote journal on the target system. Then journal entries are replicated starting with the first journal entry in the journal receiver that is currently attached to the journal on the source system.

If the journal on the source system does not have an attached journal receiver, which is only possible in the case of a remote journal that is associated with another remote journal, no journal entries can be replicated and an error is returned.

***SRCSYS:** The replication of journal entries starts with the journal receiver that is currently attached to the journal on the source system.

If the corresponding journal receiver exists and is attached to the remote journal on the target system, journal entries are replicated starting with the journal entries that follow the last journal entry that currently exists in the attached journal receiver on the target system. Otherwise, if the corresponding journal receiver exists but is not attached to the remote journal on the target system, no journal entries can be replicated and an error is returned.

If the corresponding journal receiver does not exist on the target system, the journal receiver is created on the target system and attached to the remote journal on the target system. Then journal entries are replicated starting with the first journal entry in the journal receiver that is currently attached to the journal on the source system.

If the journal on the source system does not have an attached journal receiver, which is only possible in the case of a remote journal that is associated with another remote journal, no journal entries can be replicated and an error is returned.

Starting journal receiver:

The name of the starting journal receiver 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.

starting-journal-receiver-name: Specify the journal receiver where the replication of journal should start.

If the corresponding journal receiver exists and is attached to the remote journal on the target system, journal entries are replicated starting with the journal entries that follow the last journal entry that currently exists in the attached journal receiver on the target system. Otherwise, if the corresponding journal receiver exists but is not attached to the remote journal on the target system, no journal entries can be replicated and an error is returned.

If the corresponding journal receiver does not exist on the target system, then the journal receiver is created on the target system and attached to the remote journal on the target system. Then journal entries are replicated starting with the first journal entry in the specified journal receiver on the source system.

INACTOPT

How the replication of journal entries should be ended when the remote journal is inactivated.

***CNTRLD:** A controlled inactivate of journal entry replication should be performed. A controlled inactivate means that the system should replicate all journal entries already queued to be sent from the source system to the target system before inactivating the remote journal. No additional journal entries will be queued after a request to perform a controlled inactivate. A controlled inactivate is not possible when a journal is in catch-up, or when it is being synchronously maintained. In both of these cases, the request to perform a controlled inactivate will be implicitly changed by the system to an immediate inactivate request.

***IMMED:** An immediate inactivate of journal entry replication should be performed. An immediate inactivate means that the system should not continue to replicate any journal entries that are already queued before inactivating the remote journal.

SNDTSKPTY

The priority of the sending task on the source system for asynchronously maintained remote journals. The priority is a value from 1 (highest priority) through 99 (lowest priority), which represents the importance of the task when it competes with other tasks for machine resources. This value represents the relative (not absolute) importance of the task.

***SYSDFT:** The system will choose a system default for the priority.

sending-task-priority: Specify a value between 1 and 99 for the priority of the sending task on the source system.

Examples for CHGRMTJRN

Example 1: Activating a Remote Journal to be Maintained Asynchronously

```
CHGRMTJRN RDB(CHICAGO) SRCJRN(LCLLIB/JOURNAL1)
  TGTJRN(RMTLIB/JOURNAL1) JRNSTATE(*ACTIVE)
  DELIVERY(*ASYNCR) SNDTSKPTY(*SYSDFT)
```

This command activates remote journal JOURNAL1 in library RMTLIB so that journal entries will be replicated from source journal JOURNAL1 in library LCLLIB to remote journal JOURNAL1 in library RMTLIB. The replication will occur asynchronously, and the system will set the priority of the sending task.

Example 2: Inactivating a Remote Journal

```
CHGRMTJRN RDB(CHICAGO) SRCJRN(LCLLIB/JOURNAL1)
  TGTJRN(RMTLIB/JOURNAL1) JRNSTATE(*INACTIVE)
  INACTOPT(*IMMED)
```

This command inactivates remote journal JOURNAL1 in library RMTLIB so that journal entries will no longer be replicated from source journal JOURNAL1 in library LCLLIB to remote journal JOURNAL1 in library RMTLIB. The inactivation will occur immediately.

Error messages for CHGRMTJRN

***ESCAPE Messages**

CPF69A2

State of journal &1 in &2 not changed.

CPF69A3

State of journal &1 in &2 not changed.

- CPF694D**
Unexpected journal receiver &8 found.
- CPF694F**
Communications failure.
- CPF696F**
State of journal &1 in &2 not changed.
- CPF697A**
State of journal &1 in &2 not changed.
- CPF697B**
State of journal &1 in &2 not changed.
- CPF697C**
State of journal &1 in &2 not changed.
- CPF697D**
State of journal &1 in &2 not changed.
- CPF697E**
State of journal &1 in &2 not changed.
- CPF697F**
State of journal &1 in &2 not changed.
- CPF6973**
Systems not compatible.
- CPF6974**
State of journal &1 in &2 not changed.
- CPF698A**
State of journal &1 in &2 not changed.
- CPF698B**
Unexpected journal receiver attached to &1.
- CPF698C**
State of journal &1 in &2 not changed.
- CPF698D**
Journal &1 not a remote journal.
- CPF698E**
Journal &1 not associated with source journal.
- CPF698F**
State of journal &1 in &2 not changed.
- CPF6982**
Relational database directory entry &1 not valid.
- CPF699A**
Unexpected journal receiver &8 found.
- CPF699E**
State of journal &1 in &2 not changed.
- CPF6993**
State of journal &1 in &2 not changed.
- CPF6994**
State of journal &1 in &2 not changed.

- CPF6995**
Unexpected journal receiver &8 found.
- CPF6996**
Replication of journal entries ended.
- CPF6997**
Unexpected journal receiver &8 found.
- CPF6998**
State of journal &1 in &2 not changed.
- CPF6999**
State of journal &1 in &2 not changed.
- » **CPF70A3**
Remote journal &1 in &2 not changed.
- « **CPF70DB**
Remote journal function failed.
- CPF70D9**
Changing journal state not allowed. Reason code &3.
- CPF701B**
Journal recovery of an interrupted operation failed.
- CPF9801**
Object &2 in library &3 not found.
- CPF9802**
Not authorized to object &2 in &3.
- CPF9803**
Cannot allocate object &2 in library &3.
- CPF9810**
Library &1 not found.
- CPF9814**
Device &1 not found.
- CPF9820**
Not authorized to use library &1.
- CPF9830**
Cannot assign library &1.

CHGRPYLE (Change Reply List Entry) Command Description

CHGRPYLE Command syntax diagram

Purpose

The Change Reply List Entry (CHGRPYLE) command changes a system reply list entry. Any of the attributes of a reply list entry may be changed, except for the sequence number.

The reply list is used as a source for automatic responses to predefined inquiry messages.

The reply list is only used when an inquiry message is *sent* by a job that has the system reply list attribute INQMSGRPY(*SYSRPYL) specified. The INQMSGRPY attribute can be changed with the CHGJOB command.

New entries may be added to the reply list with the Add Reply List Entry (ADDRPYLE) command; entries can be removed with the Remove Reply List Entry (RMVRPYLE) command. The entire list of entries can be shown with the Work with Reply List Entry (WRKRPYLE) command; from the display presented the user can add, change, and remove individual entries.

Restriction: This command is shipped with public *EXCLUDE authority and the QPGMR user profile has private authority to use the command.

Required Parameter

SEQNBR

Specifies the sequence number of the reply list entry being changed. The message identifier and message data of an inquiry message are matched against reply list entry message identifiers and comparison data in ascending sequence number order. The search ends when a match occurs or the last reply list entry is passed. Therefore, if more than one reply list entry matches the inquiry message identifier and comparison data, only the first entry that matches is used. If no reply list entry matches the inquiry message, the inquiry is sent, but no reply is sent unless a default reply would otherwise be sent; the job is not dumped.

Sequence numbers can range from 0001 through 9999. Duplicate sequence numbers are not allowed.

Optional Parameters

MSGID

Specifies the inquiry message identifiers for which automatic system action is taken. The message identifier may be specific or generic in scope. Only predefined messages (messages known to the system by a message identifier) can be matched by reply list entries; immediate messages cannot be used for comparison.

If no comparison data is specified, then only the message identifier is used to match the message to this reply list entry. If this is the first entry in the message reply list which matches the message, then the action specified in this entry is taken.

***SAME:** The message identifier is not changed.

***ANY:** This reply list entry matches any message identifier. Unless this reply list entry has comparison data specified, any reply list entry with a higher sequence number than this one is ignored.

message-identifier: Specify a message identifier to compare with the message identifier of an inquiry message. The message identifier must be seven characters in length and in the format, pppnnnn.

The first three characters (ppp) must be a code consisting of one alphabetic character followed by two alphanumeric (alphabetic or decimal) characters. The last four characters (nnnn) may consist of the decimal numbers 0 through 9 and the alphabetic characters A through F.

To specify a generic message identifier, enter zeros in the rightmost two or four positions of the numeric field, such as pppnn00 or ppp0000. For example, CPA0000 would match any CPA inquiry message, while CPA4200 would match any CPA42xx inquiry message.

CMPDTA

Specifies the comparison data that is used to determine whether this entry matches an inquiry message. This parameter is made up of comparison data and a start value for the message data. If the identifier of the inquiry message matches the message identifier of this reply list entry, then the message data specified for the inquiry message is compared to this data. If a message data start value has not been specified, then the first part of the message data (up through the first 28 characters or less) must exactly match the comparison data specified here before the action requested for this reply list entry is taken. However, if a start value has been specified, then the part of the message data beginning with the character position specified in the start value must

exactly match the comparison data before any requested action is taken. If the comparison data is longer than the message data, then no match occurs. If no comparison data is specified, then only the message identifier is used to match the message to this reply list entry. If this is the first entry in the message reply list that matches the message, then the action specified in this entry is taken.

Message data for an inquiry message may be specified in the MSGDTA parameter of the Send User Message (SNDUSRMSG) and Send Program Message (SNDPGMMSG) commands for the inquiry message.

Element 1: Comparison Data

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

***NONE:** No comparison data is specified. If the inquiry message has the specified identifier, the action specified by this reply list entry is taken.

'comparison-data': Specify a character string of no more than 28 characters (enclosed in apostrophes if blanks or other special characters are included). This string is compared with a string of the same length in the message data of the inquiry message, beginning with the first character (if no start value has been specified). If the comparison data string matches the inquiry message data string, the action specified by this reply list entry is taken.

Element 2: Message Data Start Position

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

***NONE:** No message comparison data is specified.

message-data-start: Specify the character position in the message's replacement text (maximum value not to exceed 999) to be the point where the comparison data starts being compared with the replacement text. A start value is not valid without a specification of comparison data.

Coded Character Set Identifier (CCSID) Considerations

The text supplied on the CMPDTA parameter that corresponds to the *CCHAR type field is assumed to be in the CCSID of the job running this command unless the CCSID parameter is coded. For more information about the *CCHAR type field see the Add Message Description (ADDMSGD) command.

RPY Specifies how to reply to an inquiry message that matches this reply list entry. The reply specified in this reply list entry is automatically sent by the system without requiring user intervention. The inquiry message does not interrupt or notify any job when the message arrives at the message queue. The inquiry message is not displayed before the reply is sent.

If a reply is not specified in this entry, a manual reply to the inquiry message must be made.

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

***DFT:** The default reply to the inquiry message is sent. If no default reply is specified in the message description of the inquiry message, the system default reply, *N, is used.

***RQD:** The inquiry message requires an explicit reply. If the message queue to which the inquiry is sent is in break mode, the message interrupts the job and is shown on the display. If the message queue is in notify mode, the job to which it is allocated is notified. No reply is automatically sent.

'message-reply': Specify a character string of up to 32 characters (enclosed in apostrophes if blanks or other special characters are included), which is sent as a reply to the inquiry message. If this reply is not valid for the inquiry message, the inquiry is sent if RPY(*RQD) has been specified.

DUMP Specifies whether the contents of the job that sent the inquiry message are printed (dumped) when the inquiry message matches this reply list entry. The dump is the same as the dump specified by DMPLST(*JOB) on the Add Message Description (ADDMSGD) command or by the command DSPJOB OUTPUT(*PRINT) for the sending job. A job dump may be requested regardless of the value specified for the RPY parameter.

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

***NO:** The job is not dumped.

***YES:** The job is dumped before control returns to the program sending the message.

CCSID

Specifies the coded character set identifier (CCSID) of the part of the CMPDTA that is of the type *CCHAR.

When an inquiry message is sent to a job that is using the system reply list, the *CCHAR compare data is converted from the CCSID specified by the Send function to the CCSID of the CMPDTA stored on the reply list. This is done before the data is compared.

All other compare data is not converted before a comparison is made. For more information about the message handler and its use of CCSIDs, see the Globalization topic in the Information Center.

Note:

When specifying a CCSID other than *HEX, all CMPDTA specified is converted from that CCSID to the job CCSID when displayed on the Work with Reply List Entries panel. This occurs even when all CMPDTA does not correspond with *CCHAR data; therefore, when using a CCSID other than *HEX, specifying the length of the *CCHAR data or any other data field is not recommended.

***SAME:** The CCSID associated with the CMPDTA does not change. If the CMPDTA is being changed, the part of the CMPDTA that is of the type *CCHAR is assumed to be the same as the CCSID used by the CMPDTA being replaced.

***JOB:** If the CMPDTA is being changed, the part of the CMPDTA that is of the type *CCHAR is assumed to be in the CCSID of the JOB executing this command. If the CMPDTA is not changing the CCSID associated with the CMPDTA does not change.

***HEX:** The CCSID associated with the CMPDTA is changed to 65535. No conversion occurs before the replacement data is compared with the CMPDTA.

coded-character-set-identifier: The CCSID associated with the CMPDTA parameter is assumed to be the CCSID value specified.

Examples for CHGRPYLE

Example 1: Changing the Message Identifier

```
CHGRPYLE  SEQNBR(20)  MSGID(RPG1299)
```

This command changes the message identifier of the reply list entry (sequence number 20) to RPG1299. Whenever an RPG1299 inquiry message is sent by a job that is using the reply list, the action previously specified for entry 20 is taken.

Example 2: Changing the Comparison Data

```
CHGRPYLE  SEQNBR(25)  CMPDTA(MYPROGRAM)
```

This command changes the comparison data of the reply list entry whose sequence number is 25 to MYPROGRAM. This entry only matches inquiry messages whose message data begins with MYPROGRAM. For example, if this entry were for the RPG1200 messages, the entry is used only when the RPG program from which the message was sent has message data named MYPROGRAM.

Example 3: Changing the Reply Sent

```
CHGRPYLE  SEQNBR(30)  RPY(C)
```


This command changes the reply sent for the reply list entry whose sequence number is 30 to C. Whenever an inquiry message which matches the message identifier and comparison data previously defined for this entry is sent by a job that is using the reply list, a 'C' reply is automatically sent.

Example 4: Printing the Job Contents

```
CHGRPYLE SEQNBR(40) DUMP(*YES)
```

This command changes the attribute defined for the DUMP parameter for the reply list entry whose sequence number is 40. Whenever this entry matches an inquiry message, the sending job is dumped before control returns to the sending program.

Example 5: Sending a Manual Reply

```
CHGRPYLE SEQNBR(45) MSGID(CPA5300) CMPDTA(*NONE)  
RPY(*RQD) DUMP(*NO)
```

This command changes some of the attributes of the reply list entry whose sequence number is 45. Whenever a CPA53xx inquiry message is sent by a job that is using the reply list, a manual reply must be issued. If the message queue to which the inquiry is sent is in break mode, the message interrupts the job. The sending job is not dumped.

Example 6: Sending an Automatic Reply

```
CHGRPYLE SEQNBR(9999) MSGID(CPA3917) RPY(R)
```

This command changes the reply list entry whose sequence number is 9999. Whenever a CPA3917 inquiry message is sent by a job that is using the reply list, an 'R' reply is automatically sent. The inquiry does not break into the message queue, and no opportunity is given to reply to the message manually.

Error messages for CHGRPYLE

***ESCAPE Messages**

CPF2435

System reply list not found.

CPF2436

System Reply List entry not added or changed.

CPF247E

CCSID &1 is not valid.

CPF2499

Message identifier &1 not allowed.

CPF2556

Sequence number &1 not defined in system reply list.

CPF2557

System reply list damaged.

CPF2558

System reply list currently in use.



CHGRSCCRQA (Change Resource Change Request Activity) Command Description

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

CHGRSCCRQA Command syntax diagram

Purpose

The Change Resource Change Request Activity (CHGRSCCRQA) command changes a resource activity in a change request description.

Restrictions:

1. You must have *CHANGE authority to the change request description and *EXECUTE authority to the library.
2. A resource other than *SYSx is not supported for iSeries managed servers.
3. The keylock switch must be in the NORMAL position or the request is rejected.
4. If a NODL value is specified, the node list can only contain entries that have a value of *SNA for the address type.

Notes:

The following notes provide information on how the command works.

1. Authorization to the product specified on the activity is not verified until the activity runs.
2. All conditions must be satisfied before the activity can run.
3. The start times indicate when the activity can be started. Actual start times can be later due to network and system delays.

Required Parameters

CRQD Specifies the change request description object name.

The possible library values are the following:

***LIBL:** All of the libraries in the user and system portions of the job's library list are searched.

***CURLIB:** The current library for the job is used to locate the object.

library-name: Specify that only the library named in this parameter is searched.

change-request-description: Specify the name of the change request description object.

ACTIVITY

Specifies the name of the activity to change in the change request description.

***LAST:** The activity is the last to run in the change request. When *LAST is specified for the activity (ACTIVITY) parameter, the condition (COND) parameter and the start time (STRTIME) parameter cannot be specified. Only one activity named *LAST can exist in the change request description.

activity-name: Specify a 10-character activity name.

ACTION

Specifies the functions to be performed on the resource.

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

***RESTART:** Use to restart the specified resource. If the resource specified is *SYS, *SYSA, or *SYSB, the managed system stops and restarts.

Optional Parameters

RSC Specifies the resource name.

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

***SYS:** The action is performed against the entire system. For the restart action, this means that the managed system is powered down and restarted. The system panel determines the IPL source.

***SYSA:** This is the same as *SYS except the IPL source is the A side.

***SYSB:** This is the same as *SYS except the IPL source is the B side.

resource-name: Specify a 16-character resource name on the managed system not supported by iSeries managed systems.

NODL Specifies that the node list parameter is the object name that contains a list of systems that are the destinations for the activity. This parameter cannot be specified if the control point name (CPNAME) parameter is also specified.

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

***NONE:** The systems on which this activity is to be performed are not specified by a node list. Individual control point names must be specified.

The library values are one of the following:

***LIBL:** All of the libraries in the user and system portions of the job's library list are searched for the node list object.

***CURLIB:** The current library for the job is used to locate the node list object.

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

node-list-name: Specify the node list object name containing the list of systems on which the activity is to be performed.

CPNAME

Specifies the APPN control point names of the managed systems on which this activity is to be performed. Control point names cannot be specified if the node list (NODL) parameter is specified.

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

***NONE:** The systems on which this activity is performed are not identified individually. A node list must be specified.

***NETATR:** The network ID of the local system is used. This is useful when the node being specified is in the same network as the local system.

network-identifier: Specify the APPN network identifier of the managed system on which the activity is to be performed.

control-point-name: Specify the APPN control point name of the managed system on which the activity is to be performed.

OPTION

Specifies how to end. It specifies whether the system allows the active subsystems to end processing of active jobs in a controlled manner, or whether the system ends the job immediately.

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

***CNTRL**: The jobs are ended in a controlled manner. If the jobs cannot be ended in a controlled manner during the delay period, they are then ended immediately.

***IMMED**: Jobs are ended immediately.

DELAY

Specifies the number of seconds the system waits for the jobs to end in a controlled manner.

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

delay-time: Specify the delay time in seconds.

3600: The system waits one hour before ending the jobs immediately.

TEXT

Specifies the activity description.

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

***GEN**: A description is generated based on the action specified.

text-description: Specify a 50-character description of the activity.

COND

Specifies which conditions must be met before this activity can be performed. Each condition identifies an activity that must run before this activity and the value the end code from that activity must have to allow this activity to run. The default condition is that the previous activity (in alphabetical order) must complete successfully before this activity can be run.

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

***NONE**: There are no conditions for this activity.

Element 1: Conditioning Activity

The activity that must be run before this activity.

***PRV**: This activity is conditioned on the previous activity. Activities are ordered alphabetically by activity name. If the activity being added is the first activity, a previous activity does not exist and any condition with ***PRV** is marked as having been met.

conditioning-activity-name: Specify the name of the activity that must run before this activity. The activity name specified in the activity (ACTIVITY) parameter cannot be specified in the conditioning activity name. An activity cannot be conditioned on itself.

generic-conditioning-activity-name*: Specify the generic name of the activities that must run before this activity.

Element 2: Relational Operator

This element is the relational operator to use when comparing the end code from a conditioning activity.

***EQ**: Equal

***GT:** Greater than

***LT:** Less than

***NE:** Not equal

***GE:** Greater than or equal

***LE:** Less than or equal

Element 3: Condition Code

This element is the value compared to the actual end code of the conditioning activity.

***SUCCESS:** The activity ended successfully (0 <= end code <= 9). This end code can only be specified with relational operator *EQ or *NE.

***FAIL:** The activity failed (10 <= end code <= 89). This end code can only be specified with relational operator *EQ or *NE.

***NOTRUN:** The activity never started (90 <= end code <= 99). This end code is only specified with relational operator *EQ or *NE.

***ANY:** The activity ended with any end code. This end code is only specified with relational operator *EQ.

end-code: Specify an integer value (0-99) that indicates the result of an activity (success or failure). The end code ranges and descriptions are:

00 Activity completed successfully.

01-09 Activity completed with warning messages.

10-29 Activity did not complete successfully.

30-39 Activity was canceled by a user before it completed.

- 30 = Activity ended with *CNTRLD option
- 35 = Activity ended with *IMMED option
- 39 = Activity ended with *FRCFAIL option

40-49 Activity was not run due to errors detected by the application.

- 40 = Activity not run for security reasons

90-99 Activity was not run because conditions or schedules are not met.

- 95 = Scheduled start time expired
- 99 = Conditions cannot be met

Element 4: Conditioning Mode

This element indicates which systems the conditioning activity must have completed on before this activity can be performed.

***ALLNODES:** The conditioning activity specified must complete on all nodes before this activity runs.

***SAMENODE:** When the conditioning activity specified completes for a given node, the activity specified on the ACTIVITY parameter can run for that same node even though the conditioning activity specified cannot have completed for all other nodes. In the case where this activity can run for that node, the condition is ignored.

STRTIME

Specifies the date and time when this activity can be started on the central site system. The current date and time values and the next date values are determined when the change request is submitted.

Element 1: Start After Time

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

***CURRENT:** This activity can start any time on or after the time when the change request is submitted.

start-after-time: Specify the time when this activity can start. The time can be entered as 4 or 6 digits (hhmm or hhmmss) where hh = hours, mm = minutes, and ss = seconds. Seconds are optional. The time can be specified with or without a time separator such as a colon (:). With a time separator, specify a string of 5 or 8 digits (hh:mm or hh:mm:ss).

Element 2: Start After Date

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

***CURRENT:** This activity can start on or after the date on which the change request is submitted.

***NEXT:** The activity can start on any date after the date the change request is submitted.

start-after-date: Specify the date after this activity can start. The date must be specified in the job date format.

Element 3: Start Before Time

This element is ignored if the start before date is *ANY.

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

***ANY:** The activity can start at any time on or before the start before date.

***CURRENT:** The activity must start before the time when the change request is submitted on the date specified on the start before data element.

start-before-time: Specify the time before which the activity must start. If the activity cannot be started before this time, it never starts. The time can be entered as 4 or 6 digits (hhmm or hhmmss) where hh = hours, mm = minutes, and ss = seconds. Seconds are optional. The time can be specified with or without a time separator such as a colon (:). With a time separator, specify a string of 5 or 8 digits (hh:mm or hh:mm:ss).

Element 4: Start Before Date

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

***ANY:** The activity can start at any time after the start after time and the start after date.

***CURRENT:** The activity must start on the date the change request is submitted.

***NEXT:** The activity must start by the day after the date the change request is submitted.

start-before-date: Specify the date before the activity must start. If the activity cannot be started by this date, it never starts. The date must be specified in the job date format.

RMTSTRTIME

Specifies the date and time when the activity can begin running on the managed system. The current date and time values and the next date values are determined when the activity begins running at the central site system based on the central site date and time.

Element 1: Time Zone

The time zone of the remote start time.

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

***LCLSYS:** The remote start time is specified in the time zone of the central site system.

***MGDSYS:** The remote start time is specified in the time zone of the managed system.

Element 2: Start After Time

This is the definition of the time after which the activity is to start.

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

***CURRENT:** This function can start on the managed system at any time on or after the time this activity is started on the central site system on the date specified in element 3.

start-after-time: Specify the time after which this function can start on the managed system. The time can be entered as 4 or 6 digits (hhmm or hhmmss) where hh = hours, mm = minutes, and ss = seconds. Seconds are optional. The time can be specified with or without a time separator. With a time separator, specify a string of 5 or 8 digits (hh:mm or hh:mm:ss).

Element 3: Start After Date

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

***CURRENT:** This function starts on the managed system on any date on or after the activity starts on the central site system.

***NEXT:** This function starts on the managed system on any date after the activity starts on the central site system.

start-after-date: Specify the date after the functions start on the managed system. The date must be specified in the job date format.

Note:

The special values *CURRENT and *NEXT cannot be specified for the date and the time when the time zone value *MGDSYS is specified.

HOLD Specifies that the activity be held when the change request is submitted.

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

***NO:** The activity is not held. It runs when all conditions and the start time are met.

***YES:** The activity is held for all nodes when the change request is submitted. It must be released by you before it runs.

Examples for CHGRSCCRQA

Example 1: Scheduling an IPL on an iSeries Managed System

```
CHGRSCCRQA CRQD(MYLIB/CR1) ACTIVITY(ACT01)
ACTION(*RESTART) RSC(*SYS)
STRTIME((04:00:00 *CURRENT)) NODL(MYLIB/STORES)
```

This activity IPLs the store systems at 4:00 a.m.

Example 2: Performing an IPL on a System

```
CHGRSCCRQA CRQD(MYLIB/CR1) ACTIVITY(ACT01)
ACTION(*RESTART) RSC(*SYSA)
CPNAME(( *NETATR SYS1))
```

This activity performs an IPL to system SYS1 immediately to the A side.

Error messages for CHGRSCCRQA

*ESCAPE Messages

None <<

CHGRTDA (Change Routed Attributes) Command Description

CHGRTDA Command syntax diagram

Purpose

The Change Routed Attributes (CHGRTDA) command is used to change configurable Routing Information Protocol (RIP) server attributes. The changes take effect the next time the Routed server is started either by the Start TCP/IP (STRTCP) command or by the Start TCP/IP Server (STRTCPSVR) command.

Restrictions:

You must have *IOSYSCFG special authority to use this command.

Optional Parameters

AUTOSTART

Specifies whether to automatically start the Routed server when TCP/IP is started by the STRTCP command. When Routed is started by the STRTCPSVR command, the AUTOSTART parameter is ignored and the Routed server is started regardless of the value of this parameter. If STRTCPSVR *ROUTED is specified, and the Routed server is already running, then the start request will be denied.

***SAME:** The AUTOSTART value does not change if it was previously set. Otherwise, *YES is used.

***YES:** Initial setup to automatically start the Routed server.

***NO:** Do not automatically start the Routed server.

SUPPLY

Specifies whether or not Routed should supply routing information in RIP packets over the network interfaces.

***SAME:** The supply option that was previously set does not change; otherwise, a value of *NO is used.

***NO:** Routed task receives and processes RIP packets normally, but does not supply periodic RIP broadcast packets to the attached networks. This value takes precedence over any supply values that may be set in the configuration file for a particular network interface.

***YES:** Routed task supplies periodic RIP broadcast packets to the attached networks. The supply of RIP packets over a particular interface may be overridden by an entry in the configuration file specifying that the supply over a particular interface is to be turned off.

Examples for CHGRTDA

Example 1: Changing the RouteD Attributes to Automatically Start the RouteD Server when the Start TCP/IP (STRTCP) CL command is issued.

```
CHGRTDA  AUTOSTART(*YES)
```

This command indicates that the next time the STRTCP command is issued to start up TCP/IP and to automatically start the TCP/IP applications, the RouteD server will be automatically started.

Example 2: Changing the RouteD Attributes to trace key actions by the RouteD server.

```
CHGRTDA  TRACE(*ACTIONS)
```

This command indicates that the trace option is active for logging key ACTIONS taken by the RouteD server. The logfile QATORLOG will be created if it does not exist or appended to if it does exist.

Error messages for CHGRTDA

***ESCAPE Messages**

CPF0011

Error detected by prompt override program.

TCP5496

Error accessing configuration attributes member.

TCP5497

File &3, library &2 not found.

TCP8050

*IOSYSCFG authority required to use &1.

TCP9503

File &3 in library &2 not available.

***STATUS Messages**

CPF5001

End of file &2 detected in library &3.

CHGRTGE (Change Routing Entry) Command Description

CHGRTGE Command syntax diagram

Purpose

The Change Routing Entry (CHGRTGE) command changes a routing entry in the specified subsystem description. The associated subsystem can be active when the changes are made. The routing entry specifies the parameters used to start a routing step for a job.

Restriction: To use this command, the user must have object operational and object management authorities for the subsystem description being changed.

Required Parameters

SBSD Specifies the qualified name of the subsystem description containing the routing entry being changed.

The name of the subsystem 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.

subsystem-description-name: Specify the name of the subsystem description that contains the routing entry.

SEQNBR

Specifies the sequence number of the routing entry that is added or changed. Specify the sequence number, ranging from 1 through 9999, of the routing entry.

Optional Parameters

CMPVAL

Specifies a value that is compared with the routing data to determine whether this is the routing entry to be used for starting a routing step. Optionally, a new starting position in the routing data character string can be specified for the comparison. If CMPVAL is not specified, *SAME is assumed. If a starting position value is not specified, *SAME is assumed.

Element 1: Compare Value

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

***ANY:** Any routing data is considered a match. To specify *ANY, this routing entry must also have the highest SEQNBR value of any routing entry in the subsystem description.

compare-value: Specify a new value (a character string not exceeding 80 characters) that is compared with routing data for a match. When a match occurs, this routing entry is used to start a routing step. A starting position in the routing data character string can be specified for the comparison. If no position is specified, *SAME is assumed.

Element 2: Starting Position

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

starting-position: Specify a value indicating which position in the routing data character string is the starting position for the comparison. The last character position compared must be less than or equal to the length of the routing data used in the comparison.

PGM

Specifies the qualified name of the program called as the (first) program run in the routing step. No parameters can be passed to the specified program. The program name can either be explicitly specified in the routing entry or extracted from the routing data. If a program name is specified in a routing entry, selection of that routing entry results in the routing entry program being called (regardless of the program name passed in an EVOKE request). If the program specified in the EVOKE request is called, PGM(*RTGDTA) must be specified in the routing entry.

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

***RTGDTA:** The program name is taken from the routing data supplied and matched against this entry. A program name is taken from the routing data in the following manner: the program name is extracted from positions 37 through 46, and the library name is extracted from positions 47 through 56. Care should be used to ensure that routing entries that specify *RTGDTA are selected only for EVOKE requests on jobs that have specified the program name in the correct position in the routing data.

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 qualified name of the program called and run in the routing step. If the program does not exist when this routing entry is changed, a library qualifier must be specified because the program name is retained in the subsystem description.

CLS Specifies the qualified name of the class used for the routing steps started through this routing entry. The class defines the attributes of the running environment for processing the routing step associated with this routing entry. If the class does not exist when this routing entry is changed, a library qualifier must be specified because the class name is retained in the subsystem description. More information on this parameter is in Commonly used parameters.

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

***SBSD:** The class having the same name as the subsystem description, specified by the SBSDB parameter, is used for routing steps started through this entry.

The name of the class 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.

class-name: Specify the qualified name of the class used for routing steps started through this routing entry.

MAXACT

Specifies the maximum number of routing steps (jobs) that can be active at the same time through this routing entry. In a job, only one routing step is active at a time. When a subsystem is active and the maximum number of routing steps is reached, any subsequent attempts to start a routing step through this routing entry fails. If the routing data is entered interactively, an error message is sent to the user. Otherwise, the job is ended and a message is sent by the subsystem to the job's log. More information on this parameter is in Commonly used parameters.

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

***NOMAX:** There is no maximum number of jobs that can be active at the same time.

maximum-active-jobs: Specify a value for the new maximum number of routing steps that can be active at the same time through this routing entry. If a routing step would exceed this number if it were started, the job is implicitly ended.

POOLID

Specifies the pool identifier of the storage pool in which the program runs. The pool identifier specified here relates to the storage pools in the subsystem description.

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

pool-identifier: Specify the identifier of another existing storage pool in which the routing step is to run. Valid values range from 1 through 10.

Examples for CHGRTGE

Example 1: Changing Class and Pool ID

```
CHGRTGE SBSDB(LIB5/ORDER) SEQNBR(1478) CLS(LIB6/SOFAST)
        POOLID(3)
```

This command changes routing entry 1478 in the subsystem description ORDER found in library LIB5. The same program is used, but now it runs in storage pool 3 using class SOFAST in library LIB6.

Example 2: Changing the Name of the Program Called

```
CHGRTGE SBSDB(T7/PGMR) SEQNBR(157) PGM(T7/INTDEV)
```

This command changes routing entry 157 in the subsystem description PGMR found in library T7. The program INTDEV in library T7 is now called whenever this routing entry is selected. The other routing entry parameters are not changed.

Error messages for CHGRTGE

*ESCAPE Messages

CPF1619

Subsystem description &1 in library &2 damaged.

CPF1691

Active subsystem description may or may not have changed.

CPF1697

Subsystem description &1 not changed.

CHGRWSPWD (Change RWS Controller Password) Command Description

CHGRWSPWD Command syntax diagram

Purpose

The Change RWS Controller Password (CHGRWSPWD) command changes the password for the specified remote workstation controller. The remote workstation controller password is used to access certain 5494 Utility Program functions.

Restrictions:

1. You must have *SECADM special authority to use this command.
2. For the command to be successful, the specified remote workstation controller and associated APPC device must be active on the local system.
3. If you attempt to use this command while the 5494 Utility Program is in use with the specified controller the command will fail.

Required Parameters

CTLD Specifies the name of the 5494 remote workstation controller description.

RMTPWD

Specifies the new password to set in the remote control unit. The new password will replace the old password if a password already exists.

Optional Parameters

LCLLOCNAME

Specifies the local location name used to establish a conversation with the remote workstation controller.

***LOC:** The location name used is the same as the local location name identified in the APPC device associated with the remote workstation controller.

local-location-name: Specify a location name to identify the local system to the remote workstation controller. When the session maximum has been reached on the mode used for nonprogrammable workstations, the location name specified must be different than the local location name identified in APPC device associated with the remote workstation controller, otherwise the command will fail.

Note: If you specify a local location name which does not exist on the system, a local configuration list entry is automatically created for the specified local location name.

MODE Specifies the mode name used to establish a conversation with the remote workstation controller.

***LOC:** The mode depends on the value specified for the local location name (LCLLOCNAME) parameter. If the value specified for LCLLOCNAME is *LOC, then the mode is the same as the mode used for nonprogrammable workstation sessions. Otherwise, the mode is #INTER.

***NETATR:** The mode in the network attributes is used.

mode-name: Specify a mode name. Specify BLANK for a mode name consisting of eight blank characters.

Note: SNASVCMG and CPSVCMG are reserved names and cannot be specified.

Examples for CHGRWSPWD

```
CHGRWSPWD CTLD(L5494RMT) RMTPWD(NEWPASS)
```

This command changes the 5494 remote workstation controller password to NEWPASS.

Error messages for CHGRWSPWD

*ESCAPE Messages

CPF2625

Not able to allocate object &1.

CPF2634

Not authorized to object &1.

CPF2703

Controller description &1 not found.

CPF8104

Controller description &4 damaged.

CPF8105

Device description &4 damaged.

CPF90A8

*SECADM special authority required to do requested operation.

CPF91E0

Operation on controller &2 failed with reason code &1.

CHGSAVF (Change Save File) Command Description

CHGSAVF Command syntax diagram

Purpose

The Change Save File (CHGSAVF) command changes the attributes of a specified save file. The changes become a permanent part of the file and are kept until the file is either changed or deleted.

Restrictions:

1. The user of this command must have object operational authority and object management authority for the save file.
2. The user of this command must have read authority for the specified library.

Required Parameter

FILE Specifies the qualified name of the save file whose attributes are changed.

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 file that is to be used.

Optional Parameters

MAXRCDS

Specifies the maximum number of records the save file can reach. The size of the save file is estimated in bytes at about $8192 + (512 \times \text{number of records in the save file})$.

There is room for approximately two thousand 512-byte records in 1 megabyte of space. For example, to ensure that the save file does not exceed approximately 20 megabytes (20 x 2000), specify MAXRCDS (40000).

Note:

The maximum amount of data that a save file can contain is approximately one terabyte (1,099,511,627,776 bytes).

If the current number of records in the save file is greater than the new MAXRCDS, an error message is sent, the command ends, and the save file is not changed.

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

***NOMAX:** The system maximum is used.

number-of-records: Specify the maximum number of records that the save file can contain. Valid values range from 1 through 2146762800.

WAITFILE

Specifies the number of seconds that the program waits for the file resources and session resources to be allocated when the file is opened, or for the device or session resources to be allocated when an acquire operation is performed to the file. If those resources are not allocated within the specified wait time, an error message is sent to the program. More information on this parameter is in Commonly used parameters.

Note: An immediate allocation of the device by the device resource is required when an acquire operation is performed to the file.

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

***IMMED:** The program does not wait; when the file is opened, an immediate allocation of the file resources is required.

***CLS:** The job default wait time is used as the wait time for the file resources being allocated.

number-of-seconds: Specify the number of seconds that the program waits for the file resources to be allocated. Valid values range from 1 through 32767 seconds.

SHARE

Specifies whether the open data path (ODP) for the save file is shared with other programs in the routing step. When an ODP is shared, the programs accessing the file share facilities such as the file status and the buffer.

More information on shared database files is in the Database Programming topic in the Information Center.

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

***NO:** The ODP created by the program with this attribute is not shared with other programs in the routing step. Every time a program opens the file with this attribute, a new ODP to the file is created and activated.

Note: This includes multiple opens in the same program.

***YES:** The ODP created with this attribute is shared with each program in the routing step that also specifies SHARE(*YES) when it opens the file.

Note: When SHARE(*YES) is specified and control is passed to a program, a read operation in that program retrieves the next input record. A write operation produces the next output record.

TEXT Specifies the text that briefly describes the save file. More information on this parameter is in Commonly used parameters.

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

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Examples for CHGSAVF

Example 1: File Resources Allocated Immediately

```
CHGSAVF FILE(ONLINE) WAITFILE(*IMMED)
```

This command changes the save file named ONLINE so that when it is opened the file resources must be available immediately, or an error message is sent. No other files are changed.

Example 2: Changing Maximum Number of Records

```
CHGSAVF FILE(ONLINE) MAXRCDS(20000)
```

This command changes the save file named ONLINE so that it can have up to 20,000 records (approximately 10 megabytes).

Error messages for CHGSAVF

*ESCAPE Messages

CPF7304

File &1 in &2 not changed.

CHGSCHIDX (Change Search Index) Command Description

CHGSCHIDX Command syntax diagram

Purpose

The Change Search Index (CHGSCHIDX) command is used to change a search index. A search index refers to help information contained in one or more panel groups. The user can access help information panel groups through data description specifications (DDS) by pressing the HELP key, or through the information search function.

Restriction: The user must have *CHANGE authority for the search index that is being changed.

Required Parameter

SCHIDX

Specifies the qualified name of the search index being changed.

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 being changed.

Optional Parameters

TITLE Specifies the title to appear at the top of the panel on which the search information is presented.

***SAME:** The title of the search index does not change.

'panel-title': Specify no more than 55 characters of text, enclosed in apostrophes.

CHRID

Specifies the graphic character set and code page values to be used for the search index. This value can be changed only when there are no entries in the search index. The value for this parameter must match the TXTCHRID value of panel groups added to this search index.

***SAME:** The character set and code page values do not change.

***SYSVAL:** The QCHRID system value contains the values to be used to interpret search index values.

Element 1: Character Set

character-set: Specify the graphic character set values that match the code page of the synonyms used in the search index.

Element 2: Code Page

code-page: Specify the code page values that match the code page of the synonyms used in the search index.

TEXT Specifies the text that briefly describes the search index. More information on this parameter is in Commonly used parameters.

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

***TITLE:** The first 50 characters of the title are used as the title for the search index.

***BLANK:** No text is specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CHGSCHIDX

```
CHGSCHIDX  SCHIDX(ACCOUNTING)
           TITLE('Accounting Help Index')
           TEXT('Accounting Help Index')
```

This command changes the search index ACCOUNTING in the current library.

Error messages for CHGSCHIDX

*ESCAPE Messages

CPF6E38

Character set and code page cannot be changed.

CHGSECA (Change Security Attributes) Command Description

CHGSECA Command syntax diagram

Purpose

The Change Security Attributes (CHGSECA) command changes the security attributes of a system. This command can be issued to:

- Change the starting value for user ID numbers (UID) that are generated for user profiles.
- Change the starting value for group ID number (GID) that are generated for user profiles.

When the UID (user ID number) is being changed, a search is made for the first available user ID number, starting at the specified value. When the GID (group ID number) is being changed, a search is made for the first available group ID number, starting at the specified value. If the maximum number is reached before an available number is found, the search will wrap and continue searching starting at 101. These numbers will then be used the next time a UID or GID is generated, for example, when the Create User Profile (CRTUSRPRF) command is issued and *GEN is specified for the UID parameter or the GID

parameter, or when profiles are restored. Each subsequent time a UID or GID is generated, the search starts with the last used UID or GID that was generated.

If the UID or GID parameter is not entered or *SAME is entered, no change will be made to the starting value.

You can use this command to set the starting point for generating UIDs or GIDs on an iSeries 400 to one value (for example 3000) and the starting point on a different system could be set to a different value (for example 5000). This facilitates generating unique UID or GID values on multiple systems in a network.

The Change User Profile (CHGUSRPRF) command or the Change User Profile UID or GID (QSYCHGID) API can be used to specify the same UID for profiles on different systems or to specify the same GID for profiles on different systems.

Restrictions:

You must have *SECADM special authority to use this command.

Optional Parameters

UID Specifies the new starting value at which a search for an available user ID (UID) number will begin.

***SAME:** No change is made to the starting value for generated UIDs.

user-ID-number: Specifies the new starting value at which a search for an available UID number will begin. This can be from 101 to 4294967294.

GID Specifies the new starting value at which a search for an available group ID (GID) number will begin.

***SAME:** No change is made to the starting value for generated GIDs.

group-ID-number: Specifies the new starting value at which a search for an available GID number will begin. This can be from 101 to 4294967294.

Example for CHGSECA

```
CHGSECA UID(2000) GID(3000)
```

User ID numbers generated after this command has run will start with the first available user ID number found with the search starting at 2000. Group ID numbers generated after this command has run will start with the first available user ID number found with the search starting at 3000.

Error messages for CHGSECA

*ESCAPE Messages

CPFB304

User does not have required special authorities.

CHGSECAUD (Change Security Auditing Values) Command Description

CHGSECAUD Command syntax diagram

Purpose

The Change Security Auditing (CHGSECAUD) command allows you to change the current settings for the system values that control what is being audited on the system. If the security audit journal, QAUDJRN, does not exist when the command is issued, the security journal and its initial journal receiver are created by this command.

Restrictions: You must have *ALLOBJ and *AUDIT special authorities to use this command.

Optional Parameters

QAUDCTL

The setting for the system value QAUDCTL.

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

***ALL:** The QAUDCTL system value is given the value of *OBJAUD, *AUDLVL, and *NOQTEMP.

***NONE:** No auditing of objects selected by the CHGOBJAUD command or user action auditing selected by the QAUDLVL system value or the CHGUSRAUD command AUDLVL keyword is done.

***OBJAUD:** Auditing of objects that have been selected for audit using the Change Object Auditing (CHGOBJAUD) command is done.

***AUDLVL:** Auditing of user actions controlled by the QAUDLVL system value and the Change User Auditing (CHGUSRAUD) command AUDLVL keyword are done.

***NOQTEMP:** Actions against objects in library QTEMP will not be audited.

QAUDLVL

Specifies the setting for the system value QAUDLVL.

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

***DFTSET:** The QAUDLVL system value is given the value of *AUTFAIL, *CREATE, *DELETE, *SECURITY, and *SAVRST.

***ALL:** All values for QAUDLVL are selected.

***NONE:** The QAUDLVL system value is given the value of *NONE.

***AUTFAIL:** The QAUDLVL system value is given the value of *AUTFAIL.

***CREATE:** The QAUDLVL system value is given the value of *CREATE.

***DELETE:** The QAUDLVL system value is given the value of *DELETE.

***JOBDTA:** The QAUDLVL system value is given the value of *JOBDTA.

***NETCMN:** The QAUDLVL system value is given the value of *NETCMN.

***OBJMGT:** The QAUDLVL system value is given the value of *OBJMGT.

***OFCSRVR:** The QAUDLVL system value is given the value of *OFCSRVR.

***OPTICAL:** The QAUDLVL system value is given the value of *OPTICAL.

***PGMADP:** The QAUDLVL system value is given the value of *PGMADP.

***PGMFAIL:** The QAUDLVL system value is given the value of *PGMFAIL.

***PRTDTA:** The QAUDLVL system value is given the value of *PRTDTA.

***SAVRST:** The QAUDLVL system value is given the value of *SAVRST.

***SECURITY:** The QAUDLVL system value is given the value of *SECURITY.

***SERVICE:** The QAUDLVL system value is given the value of *SERVICE.

***SPLFDTA:** The QAUDLVL system value is given the value of *SPLFDTA.

***SYSMGT:** The QAUDLVL system value is given the value of *SYSMGT.

INLJRNRCV

Specifies the qualified name of the journal receiver that is created as the initial journal receiver when the security audit journal is created. This parameter is ignored if the security audit journal already exists.

The possible library values are:

QGPL: The journal receiver will be created in library QGPL.

***CURLIB**: The current library for the job is used to create the journal receiver. If no library is specified as the current library for the job, QGPL is used.

library-name: Specify the library where the journal receiver is to be created.

QAUDRCV0001: The initial journal receiver for the security audit journal will be named QAUDRCV0001.

journal-receiver-name: Specify the initial journal receiver name.

Example for CHGSECAUD

```
CHGSECAUD  QAUDCTL(*AUDLVL)  QAUDLVL(*DFTSET)
```

This command will activate system security auditing by ensuring the security journal exist, setting the QAUDCTL system value to *AUDLVL, and setting the QAUDLVL system value to the default set of values.

Error messages for CHGSECAUD

*ESCAPE Messages

CPF304

User does not have required special authorities.

CHGSVRAUTE (Change Server Authentication Entry) Command Description

CHGSVRAUTE Command syntax diagram

Purpose

The Change Server Authentication Entry (CHGSVRAUTE) command changes existing authentication information entries for a user profile. The authentication information is for use by application requesters in connecting to application servers.

Restrictions:

You must have *SECADM special authority, and *OBJMGT and *USE authorities to the user profile for which the server authentication entry is being changed, or else be signed on under that user profile, to run this command.

Required Parameters

USRPRF

Specifies the user profile for which the server authentication entry will be changed.

***CURRENT:** Specifies that the server authentication entry for the current user will be changed.

user-profile-name: Specify the name of the user for which to change the server authentication entry.

SERVER

Specifies the name of the application server.

'server-name': Specify the name for the particular application server for which the entry is being changed. Specify no more than 200 characters.

Optional Parameters

USRID

Specifies the user name for which requests will be made to the application server.

***SAME:** The user ID specified on connection requests to the server does not change.

***USRPRF:** Specifies that the name specified in the user profile parameter will be the user ID specified on connection requests to the server.

'user-name': Specify the user ID to be used on connection requests. Specify no more than 1000 characters.

PASSWORD

Specifies the password to be used to authenticate the user when the client attempts to connect to the server.

Note:

If the retain server security data (QRETSVRSEC) system value is set to 0 (do not retain data), then the password will not be saved in the entry.

***SAME:** Specifies that the password does not change.

***NONE:** Specifies there is to be no password supplied

'password': Specify the password associated with the user ID. Specify no more than 696 characters.

Examples for CHGSVRAUTE

Example 1: Changing a default remote user ID and password for the current user

```
CHGSVRAUTE USRPRF(*CURRENT)
SERVER(*ANY)
USRID('JOHN') PASSWORD('XU53W4')
```

This command changes a server authentication entry for the currently signed on user specifying that for connection requests to any server for which there is no specific authentication entry, a remote user ID of JOHN and a password of XU53W4 is to be used.

Example 2: Changing an entry for another user for a specific server

```
CHGSVRAUTE USRPRF('SUSAN')
SERVER('MPLS_RDB') USRID(*SAME)
PASSWORD('S23084')
```

This command changes the password for the user SUSAN when connecting to the server named MPLS_RDB.

Error messages for CHGSVRAUTE

***ESCAPE Messages**

CPF2204

User profile &1 not found.

CPF2213

Not able to allocate user profile &1.

CPF2222

Storage limit is greater than specified for user profile &1.

CPF225E

Server authentication entry does not exist.

CPF225F

Not all information stored.

CPF226C

Not authorized to perform function.

CHGSRVA (Change Service Attributes) Command Description

CHGSRVA Command syntax diagram

Purpose

The Change Service Attributes (CHGSRVA) command is used to specify:

- Whether problem analysis routines are run automatically when a failure occurs
- How the specified service provider is notified of problems
- When a program temporary fix (PTF) is installed
- Where critical system messages are sent

The values specified on the parameters of this command are saved when the Save System (SAVSYS) command is run, and can be restored to the system when the operating system is reinstalled.

Restrictions:

1. This command is shipped with public *EXCLUDE authority, which authorizes SECOFR, QSRV, or QSRVBAS profiles to use it. A user having one of these profile types may authorize other users to use this command.
2. The system specified on the RPTSRVPVD parameter must currently exist on the list of service providers (use the Work with Service Providers (WRKSRVPVD) command to display the list of service providers defined for your system). If the system specified is not defined on the list of service providers, an error message is returned, and the values of all parameters remain unchanged.
3. The user profiles that are specified on the CRITMSGUSR parameter must currently exist on the system; otherwise, an error message is returned and the values remain unchanged. The Work with User Profiles (WRKUSRPRF) command can be used to display a list of user profiles that exist on the system.

Optional Parameters

SYSDSBRPT

Specifies the complete electronic connection number used for automatic reporting to external support when this system is disabled.

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

connection-name: Specify the entire sequence of numbers required to dial including international access codes, country or region codes, area codes, and exchange codes.

SYDSBCB

Specifies the complete electronic connection number used to call this system from external support when this system is disabled.

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

connection-name: Specify the entire sequence of numbers required to dial including international access codes, country or region codes, area codes, and exchange codes.

ANZPRBAUTO

Specifies whether problem analysis routines run automatically at the time of failure. Problem analysis routines are programs that attempt to isolate or correct the problem. If problem analysis routines are run automatically, they will be run at the time of failure as a background batch job. If problem analysis routines are not run automatically at the time of failure, they can be run manually from the QSYSOPR message queue, or by using the Work with Problems (WRKPRB) command.

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

***NO:** Problem analysis routines do not run automatically at the time of failure.

***YES:** Problem analysis routines run automatically at the time of failure.

RPTPRBAUTO

Specifies whether notification of problems that have been automatically analyzed are sent to the service provider specified on the RPTSRVPVD parameter.

If automatic problem notification is specified, it is run as a background batch job at the time of failure. If automatic problem notification is not specified, problems can be manually reported to a service provider from the QSYSOPR message queue, or by using the Work with Problems (WRKPRB) command.

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

***NO:** The service provider does not automatically receive notification of local system problems.

***YES:** The service provider automatically receives notification of local system problems.

RPTSRVPVD

Specifies the name of the service provider to receive automatic notification of problems.

Notification of problems are automatically sent to the system specified on this parameter when RPTPRBAUTO(*YES) is specified. This system must be in the list of service providers. Use the Work with Service Providers (WRKSRVPVD) command to see the service providers defined for your system.

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

***IBMSRV:** IBM Service Support is the service provider.

***SELECT:** A list of service providers is shown from which the user can select the control point name and network ID.

Element 1: Control Point Name

control-point-name: Specify the control point name of the service provider to be notified of local system problems.

Element 2: Network ID

***LCLNETID:** The network ID of the service provider is the same as that of the local system.

network-ID: Specify the network ID of the service provider to be notified of local system problems.

SRVPVDCNN

Specifies the complete electronic connection number to the service provider.

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

connection-name: Specify the entire sequence of numbers required to dial.

PTFINSTYP

Specifies when a PTF is applied. The value specified on this parameter is used when applying a PTF using either the Install Program Temporary Fix (INSPTF) command, or the Program Temporary Fix (PTF) menu (option 7 or 8).

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

***DLYIPL:** All PTFs are marked for delayed apply, and a system IPL is done.

***DLYALL:** All PTFs are marked for delayed apply, and a system IPL is not done.

***IMMONLY:** All immediate PTFs are applied. Delayed PTFs are not marked for delayed apply, and a system IPL is not done.

***IMMDLY:** All immediate PTFs are applied, and delayed PTFs are marked for delayed apply, but a system IPL is not done.

SNDDTAPKT

Specifies whether additional data collected by the program that detects the problem is sent to the service provider when a problem is reported.

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

***YES:** A maximum of 2000 bytes of additional data is sent to the service provider when a problem is reported.

***NO:** Additional data is not sent to the service provider when a problem is reported.

CRITMSGUSR

Specifies users, or classes of users, that can receive a break message when the system detects a critical condition, such as a direct-access storage device (DASD) failure.

The values specified on this parameter should be specified sequentially, in order of priority (highest to lowest). If the system detects a critical condition, it attempts to send a break message indicating the nature of the problem to the user, or class of users, indicated by the value with the highest priority.

When a user name is specified, a break message is sent only if the user is signed on. When a user class is specified, a break message is sent to all users of that class that are currently signed on.

If none of the users indicated by the value are currently signed on, the next value specified is checked. This process continues until either a break message can be sent, or the last value is checked.

Note:

This parameter is valid only if ANZPRBAUTO(*YES) is specified.

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

***SYSOPR:** All users of the system operator (*SYSOPR) user class receive a message when a critical message is sent.

***SECOFR:** All users of the security officer (*SECOFR) user class receive a message when a critical message is sent.

***SECADM:** All users of the security administrator (*SECADM) user class receive a message when a critical message is sent.

***PGMR:** All users of the programmer (*PGMR) user class receive a message when a critical message is sent.

***USER:** All users of the user (*USER) user class receive a message when a critical message is sent.

user-name: Specify the name of the user profile to receive a message when a critical message is sent.

Examples for CHGSRVA

Example 1: Specifying no Automatic Problem Analysis

```
CHGSRVA ANZPRBAUTO(*NO)
```

This command changes the analyze problem automatically flag. Problem analysis will no longer be run at the point of failure.

Example 2: Changing the Service Provider

```
CHGSRVA RPTSRVPVD(PARIS *LCLNETID)
```

This command changes the name of the service provider. The new service provider has a control point name of PARIS, and the same network ID as the local system.

Error messages for CHGSRVA

*ESCAPE Messages

CPF8C66

Service attributes not changed.

CPF8C98

No authority to change certain service attributes.

CPF9899

Error occurred during processing of command.

CHGSRVPGM (Change Service Program) Command Description

CHGSRVPGM Command syntax diagram

Purpose

The Change Service Program (CHGSRVPGM) command changes the attributes of a service program without requiring that it be recompiled. The user can also force re-creation of a service program even if the attributes being specified are the same as the current attributes.

Restrictions:

1. The user must have *USE authority for the library for the service program that is being changed.
2. The user must have *USE and *OBJMGT authority for the service program that is being changed.
3. The user must have *USE, *DLT, and *ADD authority for the library to change the optimization attribute (OPTIMIZE), performance collection attribute (ENBPFRCOL), profiling data attribute (PRFDTA), Licensed Internal Code options (LICOPT), enable teraspace storage (TERASPACE), or to force service program re-creation by specifying FRCCRT(*YES).

4. Only the service program owner, or a user with *SECADM and *ALLOBJ authority, can change the user profile attribute (USRPRF) or the use adopted authority attribute (USEADPAUT).
5. Service programs in library QSYS and QGDDM cannot be changed unless the only indicated change is a removal of observability.
6. The STGMDL of the program and all bound modules must be *SNGLVL to change a program to TERASPACE(*NO).

Required Parameter

SRVPGM

Specifies the service programs whose attributes are being changed. *USRLIBL cannot be specified or defaulted for the library qualifier when a generic name or *ALL is specified for the program qualifier.

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

***USRLIBL**: Only the libraries in the user portion of the job's library list are searched.

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

***ALL**: All service programs in the specified library to which the user has some authority (for example, *USE authority) are selected for change.

service-program-name: Specify the name of the service programs whose attributes are being changed.

generic-service-program-name*: Specify the generic name of the service program. 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

OPTIMIZE

Specifies whether the service program is optimized. This parameter removes redundant instructions from the specified programs. Changing the current optimization level of a service program causes the system to re-create the service program with the new optimization level.

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

***NONE or 10**: The service program is not optimized. Variables can be displayed and changed when debugging ILE service programs at this optimization level.

***BASIC or 20**: Some optimization is performed on the code. When debugging ILE service programs at this level, variables may be displayed but not changed.

***FULL or 30**: More optimization is performed in addition to the optimization performed at level 20. Variables cannot be changed but can be displayed while the program is being debugged. However, the displayed value of the variable during debugging may not be its actual value.

40: This level includes all the optimization performed at optimization level 30. In addition, it includes optimization that disables call and instruction tracing. Thus, tracing of modules created at this optimization level cannot be performed.

USRPRF

Specifies whether the authority checking done while this service program is running includes only the user who is running the service program (*USER) or both the user running the service program and the service program owner (*OWNER). The profiles of the service program user or both the service program user and the service program owner are used to control which objects can be used by the service program, including the authority the service program has for each object. Only the service program owner or a user with QSECOFR authority can change the user profile attribute.

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

***USER:** The service program runs under the user profile of the service program's user.

***OWNER:** The user profiles of both the service program's owner and the service program's user are used when the service program is processed. The collective sets of object authority in both user profiles are used to find and access objects during service program processing. Authority from the owning user profile's group profile is not included in the authority for the running service program.

USEADPAUT

Specifies whether service program adopted authority from previous programs or service programs in the call stack are used as a source of authority when this service program is running.

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

***YES:** Program or service program adopted authority from previous recursion levels is used when this service program is running.

***NO:** Program or service program adopted authority from previous recursion levels is not used when this service program is running.

RMVOBS

Specifies whether the observable information associated with service programs is removed.

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

***ALL:** All of the observable information associated with the service program is removed, if possible. If the service program requires the observable information to ensure that it runs correctly, that information is not removed.

Notes:

1. If block order profiling data has previously been applied to this ILE service program, specifying *ALL on the RMVOBS parameter will also remove *BLKORD observability.
2. *ALL cannot be specified if the ILE service program is enabled to collect profiling data.

***NONE:** None of the observable information associated with the service program is removed.

***DBGDTA:** All of the observable information necessary to allow the service program to be debugged is removed.

***CRTDTA:** All of the observable information necessary to allow the service program to be re-created, to change the optimization level, to change the performance collection attribute, or to change the profiling data attribute, is removed.

Notes:

1. *CRTDTA cannot be specified if the ILE service program is enabled to collect profiling data.
2. *CRTDTA observability is required to convert service programs to a different hardware technology. For example, between CISC (Complex Instruction Set Computer) and RISC (Reduced Instruction Set Computer) technology.

3. If the service program was created for a release earlier than V3R6M0, and is currently in RISC format or FRCCRT(*YES) is specified, removing *CRTDTA will cause the service program to no longer be able to be saved for a release earlier than V3R6M0.

***BLKORD:** Information is removed that allows the system to re-apply block order profiling data when the service program is re-created.

***PRCORD:** Information is removed that allows the system to re-apply procedure order profiling data when the service program is re-created or updated.

ENBPFRCOL

Specifies whether collection of performance data is enabled.

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

***NONE** or ***PEP:** 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.

Element 1: Collection level

***FULL:** Performance data is collected for procedure entry and exit. Performance data is also collected before and after calls to external procedures.

***ENTRYEXIT:** Performance data is collected for procedure entry and exit.

Element 2: Procedures

***ALLPRC:** Performance data is collected for all procedures. This is useful to capture information on all procedures.

***NONLEAF:** Performance data is collected for procedures that are not leaf procedures and for the PEP. This is useful to capture information on most routines but not at the expense of destroying the 'leaf-ness' of the leaf procedure.

PRFDTA

Specifies the profiling data attribute for service programs.

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

***NOCOL:** The collection of profiling data is not enabled and profiling data is not applied.

***COL:** The collection of profiling data is enabled.

Note: Specifying *COL will remove all applied profiling data if the service program has profiling data applied.

***CLR:** All previously collected profiling data is discarded. The service program remains enabled to collect profiling data.

***APYBLKORD:** Block order profiling data is applied to every module bound into this service program previously enabled to collect profiling data. The collection of profiling data is no longer enabled.

***APYPRCORD:** Block order and procedure order profiling data is applied. The collection of profiling data is no longer enabled.

***APYALL:** Block order and procedure order profiling data is applied. The collection of profiling data is no longer enabled.

LICOPT

This parameter allows individual Licensed Internal Code compile-time options to be selected, and is intended for the advanced programmer who understands the potential benefits and drawbacks of each selected type of compiler option. Changing the Licensed Internal Code options of an Integrated Language Environment (ILE) service program to any value other than *SAME causes the system to re-create the ILE service program with the specified Licensed Internal Code options.

***SAME:** If the service program object is re-created, the existing Licensed Internal Code compile-time options are input to object re-creation. Otherwise, the Licensed Internal Code compile-time options do not change.

Licensed-Internal-Code-options: Specifies one or more Licensed Internal Code compile-time options. Changing the Licensed Internal Code options of an Integrated Language Environment (ILE) service program causes the system to re-create the ILE service program with the specified Licensed Internal Code options for all the bound modules. Note: Additional information about the

LICOPT options can be found in the ILE Concepts  book.

***NONE:** Service program re-creation is forced and no Licensed Internal Code options are used for all the bound modules.

TERASPACE

This parameter allows the teraspace storage enablement to be changed to the specified value for all the bound modules in the service program. Changing the enable teraspace storage parameter to any value other than *SAME causes the system to re-create the service program.

***SAME:** The teraspace storage enablement of the bound modules does not change.

***NO:** The teraspace storage enablement of eligible bound modules is changed to no. This requires the bound modules to be single level storage model.

***YES:** The teraspace storage enablement of the eligible bound modules is changed to yes. This requires the bound modules to be at least V4R4M0 or later.

FRCRRT

Specifies whether service program re-creation is forced.

***NO:** Service program re-creation is not forced unless the optimization level (OPTIMIZE), use adopted authority (USEADPAUT), user profile (USRPRF), enable performance collection (ENBPFRCOL), profiling data (PRFDTA), Licensed Internal Code options (LICOPT), or enable teraspace storage (TERASPACE) parameters are changed. This option allows the system to determine whether a change is required.

***YES:** Service program re-creation is forced whether or not the optimization level (OPTIMIZE), use adopted authority (USEADPAUT), user profile (USRPRF), enable performance collection (ENBPFRCOL), profiling data (PRFDTA), Licensed Internal Code options (LICOPT), or enable teraspace storage (TERASPACE) parameters are changed.

***NOCRT:** No service program re-creation is done. If a value other than *SAME is specified for OPTIMIZE, USEADPAUT, USRPRF, ENBPFRCOL, PRFDTA, LICOPT or TERASPACE parameter, a command syntax error is sent and the command is not run.

TEXT Specifies the text that briefly describes the service program. More information on this parameter is in Commonly used parameters.

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

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Examples for CHGSRVPGM

Example 1: Optimizing a Service Program

```
CHGSRVPGM SRVPGM(PROG1/SERVICE) OPTIMIZE(*FULL)
          USRPRF(*OWNER)
```

The service program SERVICE in library PROG1 is optimized, and the user profile under which it is processed is changed to include the service program owner's user profile. Only the owner of service program PROG1/SERVICE, or a user with security officer authority, can change the USRPRF attribute. The service program is re-created only if the attributes specified differ from those of the current service program.

Example 2: Changing Text for a Service Program

```
CHGSRVPGM PGM(*USRLIBL/KNUTE)
          TEXT('Service program description')
```

This command changes the text for service program KNUTE. The user portion of the library list is used to find the service program.

Example 3: Optimizing Multiple Service Programs

```
CHGSRVPGM SRVPGM(PROG1/ACE*) OPTIMIZE(40)
```

All service programs in library PROG1 whose names begin with ACE, are optimized to level 40 or their maximum optimization level.

Example 4: Changing Text of Multiple Service Programs

```
CHGSRVPGM SRVPGM(PROG2/*ALL) TEXT('Generic Text')
```

This command changes the text of all service programs in library PROG2 to Generic Text.

Example 5: Enabling collection of profiling data

```
CHGSRVPGM SRVPGM(PROG1/PROFPGM) PRFDTA(*COL)
```

This command enables the collection of profiling data for service program PROFPGM in library PROG1. If PROFPGM in library PROG1 had profiling data applied prior to issuing this command, all applied profiling data will be removed.

Example 6: Applying profiling data

```
CHGSRVPGM SRVPGM(PROG1/PROFPGM) PRFDTA(*APYALL)
```

This command applies block order and procedure order profiling data to service program PROFPGM in library PROG1. The collection of profiling data is no longer enabled for service program PROFPGM library PROG1.

Error messages for CHGSRVPGM

*ESCAPE Messages

CPF223C

Not authorized to change the use adopted authority (USEADPAUT) attribute for &1 in &2 type *&3.

CPF223E

Authority check for use adopted authority attribute failed.

CPF5CEB

Service program &1 in library &2 not found.

CPF5CEC

&1 changed. &2 did not require change. &3 not changed.

CPF5CED

No service programs changed.

CPF5CEE

Service programs in libraries QSYS and QGDDM cannot be changed.

CPF5CEF

*USRLIBL not allowed with generic name or *ALL.

CPF5CF0

User &3 not authorized to change &1.

CPF5CF1

Cannot remove observable information.

CPF5CF2

User &3 not authorized to change &1.

CPF5CF3

Service program &1 in library &2 not changed.

CPF5CF4

Service program &1 in &2 not changed.

CPF5D04

Not authorized to service program &1 in library &2.

CPF9803

Cannot allocate object &2 in library &3.

CPF9804

Object &2 in library &3 damaged.

CPF9806

Cannot perform function for object &2 in library &3.

CPF9810

Library &1 not found.

CPF9818

Object &2 in library &3 not created.

CPF9819

Object &2 in library &3 not created.

CPF9820

Not authorized to use library &1.

CPF9830

Cannot assign library &1.



CHGSRVPVDA (Change Service Provider Attributes) Command Description

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

CHGSRVPVDA Command syntax diagram

Purpose

The Change Service Provider Attributes (CHGSRVPVDA) command displays and changes the configuration attributes of the service provider.

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

LOGRMPRB

Specifies when remote problem log entries are created.

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

***NONE:** Problem log entries are not created when service requests or alerts are received.

***SRVRQS:** A problem log entry is created when a service request is received.

***ALERT:** A problem log entry is created when a remote alert is received.

***ALL:** A problem log entry is created when an alert, service request, or both are received from a managed system.

SNDPTFAUTO

Specifies that program temporary fixes (PTFs) are sent automatically in response to a PTF order or service request.

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

***NO:** A response to a PTF or a service request is not automatically sent.

***YES:** A response to a PTF or a service request is automatically sent.

MSGQ

Specifies the qualified name of the message queue to which messages are sent.

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

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.

message-queue-name: Specify the name of the message queue being changed.

MAXDST

Specifies the maximum number of kilobytes (KB) that can be used for each PTF order or service request that receives a response.

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

***NOMAX:** Any number of kilobytes can be transmitted.

maximum-number-of-kilobytes: Specify the maximum number of kilobytes per PTF or service request. Specify a value ranging from 1 through 5000.

HLDPTF

Specifies that PTFs that are received are marked as held or are available for distribution.

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

***NO:** PTFs that are received are not held and are available for distribution.

***YES:** PTFs are held and are not available for distribution.

CVRLTRLNG

Specifies the cover letter language to be used.

cover-letter-language: Specify the cover letter language to be sent or retrieved with a PTF.

FWDQRSAUTO

Specifies whether requests should be automatically forwarded to the next service provider.

***SAME:** The decision to forward requests automatically does not change.

***NO:** Requests are not forwarded. They are handled at this service provider.

***YES:** Requests are forwarded. They are handled at the next service provider.

Examples for CHGSRVPVDA

Example 1: Creating Remote Log Entries

```
CHGSRVPVDA LOGRMTPRB(*ALERT)
```

This command creates remote problem log entries when alerts are received.

Example 2: Directing Messages to Another Queue

```
CHGSRVPVDA MSGQ(USERLIB/MSGQ)
```

This command directs all messages created on the service provider, as a result of receiving alert messages or service requests, to the message queue named MSGQ in the library named USERLIB.

Example 3: Holding PTFs

```
CHGSRVPVDA HLDPTF(*YES)
```

This command specifies that all PTFs received through electronic customer support or from distribution media are to be held. They are not available for distribution. You can specify the RLSPTF command to release a PTF for distribution.

Example 4: Specifying Maximum Size for Distribution

```
CHGSRVPVDA MAXDST(1000)
```

This command specifies that PTFs can have a maximum size of only 1000 bytes for distribution through electronic customer support.

Error messages for CHGSRVPVDA

***ESCAPE Messages**

None <<

CHGSSNMAX (Change Session Maximum) Command Description

CHGSSNMAX Command syntax diagram

Purpose

The Change Session Maximum (CHGSSNMAX) command is used to dynamically change the maximum number of sessions the local location allows to an advanced program-to-program communications (APPC) mode. When a change to the MAXSSN parameter is made, the remote system is informed and allowed to negotiate for a lower session maximum. The remote system cannot negotiate a session maximum higher

than the value specified for the local number of sessions specified. The resulting session maximum value is the *current session maximum*. Neither system may activate more sessions than the current session maximum. If the requested session maximum is accepted or negotiated by the remote system, the value requested on the CHGSSNMAX command is stored as the *local session maximum*; the remote system is not allowed to increase the current session maximum above the value stored as the local session maximum. This new value for the local session is only used the next time a new session maximum needs to be negotiated. The current session maximum, which controls how many sessions can be active between the local and remote location, is not changed if the command fails.

If the request to change the session maximum is rejected by the remote system, the CHGSSNMAX command ends abnormally and the local session maximum is changed as follows: If it is increasing, it is changed to the value specified; if it is decreasing, it is not changed.

This command is normally used by the system operator to control the number of sessions that can be active at the same time with a remote system. This command is used only when the remote location is active and the mode is in a *started* state. If the current number of active sessions is greater than the maximum number specified on the command, no new sessions are created until the number of active sessions falls below that specified on the command. If the current number of active sessions is less than the maximum number specified, sessions are not created until jobs requiring them are started.

The value created by the systems remains in effect until another CHGSSNMAX command or an End Mode (ENDMOD) command is run for the same mode, or until all the devices for the local location are varied off.

Many CHGSSNMAX commands can be sent before the maximum number of sessions is made active. The number specified the last time the command was called is the *local session maximum* value. If the device is varying off, this command ends with an error.

Notes:

1. When this command is used to reduce the number of sessions with a remote system, the sessions that are ended first are the available locally controlled sessions, followed by any other available sessions. If the new session count is still not reached, other sessions are ended as jobs using them are completed or are canceled.
2. When the CHGSSNMAX command is used to increase the maximum number of sessions that can be created with a remote system, the locally controlled sessions are made available first (depending on the negotiated values), and then other sessions are made available.
3. The CHGSSNMAX command does not change the value specified for the MAXSSN parameter in the mode description; the Change Mode Description (CHGMODD) command must be used to permanently change the value. When the device is next varied on, the MAXSSN value from the mode description is used to limit the number of sessions instead of the MAXSSN value specified on a previous CHGSSNMAX command.

The APPC, APPN, and HPR topic in the Information Center has more information on this command.

Required Parameters**RMTLOCNAME**

Specifies the name of the remote location that is used with this object.

MAXSSN

Specifies the number of sessions allowed with the remote system. This value represents the desired maximum session number for the specified mode name. It must be less than or equal to the MAXSSN parameter limit defined in the mode description. This value can be negotiated to a lower value by the remote system; therefore, the value specified here is not necessarily the value that is used. Valid values for this parameter are 1 through 512.

Optional Parameters

DEV Specifies the name of the device description used with the remote location.

***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. More information on device names is in APPC, APPN, and HPR topic in the Information Center.

MODE Specifies the name of the mode that is changed. The mode name cannot be SNASVCMG or CPSVCMG; these mode names are reserved for system use.

***NETATR:** The mode name specified in the network attributes is used.

***BLANK:** The mode name consisting of 8 blank characters is used.

mode-name: Specify a value, no more than 8 characters, used to identify the mode that is changed.

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 local location name associated with the remote location.

RMTNETID

Specifies the remote network ID that is used with the remote location.

***LOC:** The remote network identifier (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 identifier (ID) is used.

remote-network-ID: Specify a remote network ID for the remote location.

Example for CHGSSNMAX

```
CHGSSNMAX RMTLOCNAME(APPCRLOC) DEV(APPCDEV)
          MODE(APPC2) MAXSSN(3)
```

This command changes the maximum number of sessions allowed by remote location APPCRLOC for mode APPC2 to a maximum of three.

Error messages for CHGSSNMAX

***ESCAPE Messages**

CPF598B

The &1 command failed for one or more modes.


CHGSHRPOOL (Change Shared Storage Pool) Command Description

CHGSHRPOOL Command syntax diagram

Purpose

The Change Shared Storage Pool (CHGSHRPOOL) command changes the size, activity level, or tuning values for a shared pool. If the user has the authority to use this command, then a shared pool can be changed. The change to a shared pool takes effect immediately if the shared pool is active, that is, in use by a subsystem or active job. The immediate effect also depends on whether storage is available at the time the shared pool is changed. If a shared pool is not active, the change takes effect as soon as a subsystem is started using a shared pool.

Required Parameter

POOL Specifies the shared storage pool being changed. More information about storage pools is in the Work Management  book and the Backup and Recovery topic in the Information Center.

***MACHINE:** The machine pool used for Licensed Internal Code. Only the size can be changed for the machine pool. This is the same as using the Change System Value (CHGSYSVAL) command to change the QMCHPOOL system value.

***BASE:** The base pool. Only the activity level can be changed for the base pool. This is the same as using the Change System Value (CHGSYSVAL) command to change the QBASACTLVL system value.

***INTERACT:** The shared pool for interactive work.

***SPOOL:** The shared pool used for spooled writers.

***SHRPOOLnn:** A general-purpose shared pool is changed. There are sixty general-purpose shared pools, identified by special values *SHRPOOL1 to *SHRPOOL60.

Optional Parameters

SIZE Specifies the size of the storage pool expressed in kilobytes (1K= 1024 bytes). This is the amount of main storage that can be used by a pool. A value of at least 256 (256 K) must be specified for the storage size.

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

***NOSTG:** No storage or activity level is defined for the pool. A pool cannot be changed to *NOSTG if it is being used by an active subsystem or active job or if the pool has reserved storage.

storage-size: Specify the size of the storage pool.

ACTLVL

Specifies the maximum number of jobs that can run at the same time in a pool.

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

activity-level: Specify the activity level for the pool.

PAGING

Specifies the paging option associated with the pool. The paging option determines whether the system dynamically adjusts the paging characteristics for the storage pool for optimum performance.

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

***FIXED:** The system default values are used. The system does not dynamically adjust the paging characteristics for the storage pool.

***CALC:** The system dynamically adjusts the paging characteristics for the storage pool to ensure optimum performance.

MINFAULT

Specifies the minimum page faults per second to use as a guideline for this storage pool. This value is used by the system if the QPFRADJ system value is set to 2 or 3.

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

***DFT:** The minimum faulting rate guideline is set to the system default value for this pool.

minimum-faults: Specify the minimum page faults per second to use for the paging guideline for this pool.

JOBFAULT

Specifies the page faults per second for each active thread to use as a guideline for this storage pool. Each job is comprised of one or more threads. A thread is counted as active if it used any cpu time in the last 20 seconds. This value is used by the system if the QPFRADJ system value is set to 2 or 3.

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

***DFT:** The guideline for the page faults per second for each active thread is set to the system default value for this pool.

thread-faults: Specify the page faults per second for each active thread to use for the paging guideline for this pool.

MAXFAULT

Specifies the maximum page faults per second to use as a guideline for this storage pool. This value is used by the system if the QPFRADJ system value is set to 2 or 3.

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

***DFT:** The maximum faulting rate guideline is set to the system default value for this pool.

maximum-faults: Specify the maximum page faults per second to use for the paging guideline for this pool.

PTY Specifies the priority of this pool relative to the priority of the other storage pools. The valid range for priority is 1-14, where 1 is the best priority and 14 is the worst priority. This value is used by the system if the QPFRADJ system value is set to 2 or 3.

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

***DFT:** The storage pool priority is set to the system default value for this pool.

priority: Specify the priority of the storage pool.

MINPCT

Specifies the minimum amount of storage to allocate to this storage pool (as a percentage of total main storage). This value is used by the system if the QPFRADJ system value is set to 2 or 3.

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

***DFT:** The minimum pool size is set to the system default value for this pool.

minimim-percent: Specify a percentage of total main storage to use as a minimum size for this storage pool.

MAXPCT

Specifies the maximum amount of storage to allocate to this storage pool (as a percentage of total main storage). The maximum size of a pool is determined by this percentage and the amount of storage allocated to the other active pools. This value is used by the system if the QPFRADJ system value is set to 2 or 3.

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

***DFT:** The maximum pool size is set to the system default value for this pool.

maximum-percent: Specify a percentage of total main storage to use as a maximum size for this storage pool.

TEXT Specifies the text that briefly describes the shared pool. More information on this parameter is in Commonly used parameters.

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

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CHGSHRPOOL

```
CHGSHRPOOL POOL(*INTERACT) SIZE(4200) ACTLVL(*SAME)
           PAGING(*SAME)
```

This command changes the size of the interactive pool to 4200 Kilobytes. The activity level and paging option remains the same.

Error messages for CHGSHRPOOL

*ESCAPE Messages

CPF1001

Wait time expired for system response.

CPF1076

Specified value not allowed for system value &1.

CPF1078

System value &1 not changed.

CPF113A

Sum of MINFAULT and JOBFAULT parameters exceeds MAXFAULT parameter.

CPF113B

Minimum size percentage exceeds maximum size percentage.

CPF113C

Private pool attributes not changed.

CPF1157

Shared pool &1 not changed to *NOSTG.

CPF1165

Specified parameter not allowed for *MACHINE pool.

CPF1166

Specified parameter not allowed for *BASE pool.

CPF1167

ACTLVL not specified for pool &1.

CPF1225

SIZE not specified for pool &1.

CPF1831

User not authorized to change system value &1.

CPF1864

User not authorized to change system value &1.

CHGSNMPA (Change SNMP Attributes) Command Description

CHGSNMPA Command syntax diagram

Purpose

The Change SNMP Attributes (CHGSNMPA) command changes values and options used by the OS/400 SNMP agent. The command also is used to specify which SNMP managers receive traps generated by the local iSeries 400.

The SNMP agent is shipped with the following values for the SNMP attributes.

Keyword	Value
SYSCONTACT	*NONE
SYSLOC	*NONE
SNDAUTTRP	*YES
AUTOSTART	*NO
OBJACC	*READ
LOGSET	*NO
LOGGET	*NO
LOGTRP	*NO
TRPMGR	*NONE

Optional Parameters

SYSCONTACT

Specifies the name of the contact person for this iSeries 400, along with information on how to contact this person. This value is used only by SNMP-specific functions. This value also may be read or modified by an authorized SNMP manager.

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

***NONE:** No system contact exists.

***CNTINF:** The value is obtained from the service contact information specified by using the Work with Contact Information (WRKCNTINF) command. The value obtained consists of the contact person and the contact telephone numbers.

system-contact: Specify the name of the contact person and other contact information. All of the characters specified must be able to be translated into the ASCII character set.

SYSLOC

Specifies the physical location of this iSeries 400. This value is used only by SNMP-specific functions. This value also may be read or modified by an authorized SNMP manager.

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

***NONE:** No system location information exists.

***CNTINF:** The value is obtained from the service contact information specified by using the Work with Contact Information (WRKCNTINF) command. The value obtained consists of the mailing address.

system-location: Specify the physical location of the system. All of the characters specified must be able to be translated into the ASCII character set.

SNDAUTTRP

Specifies whether the SNMP agent may send any authenticationFailure traps to any defined SNMP managers. An authenticationFailure trap is sent by the SNMP agent if a request is received from an SNMP manager that contains a community name that is not recognized by the SNMP agent. This trap is only sent when SNDAUTTRP is *YES and when at least one trap manager has been defined. This value may also be read or modified by an authorized SNMP manager.

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

***YES:** authenticationFailure traps may be sent.

***NO:** authenticationFailure traps are not sent.

AUTOSTART

Specifies whether the SNMP agent is started when the STRTCP command runs.

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

***YES:** The SNMP agent is started when the STRTCP command runs.

***NO:** The SNMP agent is not started when the STRTCP command runs.

OBJACC

Specifies the default object access for SNMP communities.

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

***READ:** Allow SNMP managers that are part of a community to read all management information base (MIB) objects. Modification of MIB objects by SNMP managers is not permitted.

***WRITE:** Allow SNMP managers that are part of a community to modify all MIB objects that can be modified. Specifying ***WRITE** implies ***READ** access.

***NONE:** Do not allow SNMP managers that are part of a community to modify any MIB objects.

LOGSET

Specifies the default value for whether set requests from SNMP managers in a community are logged in journal QSNMP in library QUSRSYS.

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

***YES:** Set requests are logged.

***NO:** Set requests are not logged.

LOGGET

Specifies the default value for whether get requests and get-next requests from SNMP managers in a community are logged in journal QSNMP in library QUSRSYS.

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

***YES:** Get requests and get-next requests are logged.

***NO:** Get requests and get-next requests are not logged.

LOGTRP

Specifies whether traps are logged in journal QSNMP in library QUSRSYS.

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

***YES:** Traps are logged.

***NO:** Traps are not logged.

TRPMGR

Specifies which SNMP managers receive traps generated by this iSeries 400.

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

***NONE:** No SNMP managers receive traps.

Element 1: Manager Internet Address

manager-internet-address: Specify the internet address of the SNMP manager. The address must be of the form *nnn.nnn.nnn.nnn*, where *nnn* is a decimal number ranging from 0 to 255. This address is independent of the manager internet address specified on the ADDCOMSNMP and CHGCOMSNMP commands.

Element 2: Community Name

community-name: Specify the SNMP community name to be placed in the traps sent to this SNMP manager. The community name specified in this element is independent of the community name specified on the ADDCOMSNMP, CHGCOMSNMP, and RMVCOMSNMP commands. The name may contain characters that cannot be displayed.

Element 3: Translate Community Name

***YES:** The community name is translated to ASCII characters when a trap is sent to the SNMP manager. This value should be specified when the community name consists entirely of characters that can be displayed. An error message is sent if the community name cannot be translated to ASCII characters.

***NO:** The community name is not translated to ASCII characters when a trap is sent to the SNMP manager. This value should be specified when the community name contains one or more characters that cannot be displayed.

Examples for CHGSNMPA

Example 1: Changing System Contact and Automatic Start

```
CHGSNMPA  SYSCONTACT('JOE SMITH, PHONE 555-1212')
          AUTOSTART(*NO)
```

This command changes the system contact information and specifies that the SNMP agent should not start when the STRTCP command runs. All other values are unchanged.

Example 2: Changing Trap Managers

```
CHGSNMPA  TRPMGR(('9.8.7.6' 'TRAPCOMMUNITY')
                ('9.8.7.5' 'TRAPCOMMUNITY2'))
```

This command causes any traps generated by the local iSeries 400 to be sent to SNMP managers that have internet protocol addresses 9.8.7.6 and 9.8.7.5. Community name TRAPCOMMUNITY is placed in traps sent to 9.8.7.6, and community name TRAPCOMMUNITY2 is placed in traps sent to 9.8.7.5. For both managers the community name is translated to ASCII characters before being placed in the trap.

Error messages for CHGSNMPA

*ESCAPE Messages

TCP4001

Error occurred accessing SNMP configuration information.

TCP8050

*IOSYSCFG authority required to use &1.

CHGSRCPF (Change Source Physical File) Command Description

CHGSRCPF Command syntax diagram

Purpose

The Change Source Physical File (CHGSRCPF) command changes the attributes of a source physical file and its members. The changed attributes are also used for all members subsequently added to the file.

Restrictions:

1. To change a source physical file, the user must have object management authority or object alter authority for the file and execute authority to the library.
2. For the user to change the file, an exclusive lock is necessary; no one may be using the file for any purpose.

Required Parameter

FILE Specifies the qualified name of the source physical file that is changed.

The name of the source physical 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.

source-physical-file-name: Specify the name of the source physical file being changed.

Note:

If a DDM file is specified, the source physical file specified on the RMTFILE parameter of the Create Distributed Data Management File (CRTDDMF) command is changed on the remote system specified on the RMTLOCNAME parameter on the CRTDDMF command. More information is outlined in the SYSTEM parameter of this command.

Optional Parameters

SYSTEM

Specifies whether the source physical file is changed on the local system or the remote system.

***LCL:** The source physical file is changed on the local system.

***RMT:** The source physical file is changed on a remote system using DDM. The source physical file name specified on the FILE parameter must be the name of the DDM file (created by using the Create Distributed Data Management File (CRTDDMF) command). The DDM file contains the name of the source physical file to be changed (RMTFILE parameter on the CRTDDMF command) and the name of the remote system (RMTLOCNAME parameter on the CRTDDMF command) on which the file is to be changed.

***FILETYPE:** If the name specified on the FILE parameter is a DDM file, the source physical file is changed on the remote system specified by the RMTLOCNAME parameter of that DDM file. Otherwise, the name specified on the FILE parameter to be changed must be the name of a local source physical file.

EXPDATE

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

Note:

An attempt to open a file member that has exceeded its expiration date causes an error message to be sent. The date must be specified in the format defined by the job attributes, QDATFMT and QDATSEP, and must be enclosed in apostrophes, if special characters are used in the format.

***SAME:** The expiration date of the file does not change.

***NONE:** No expiration date is specified.

expiration-date: Specify the date after which the member is not used.

MAXMBRS

Specifies the maximum number of members that the physical file can have at any time. The maximum number of members specified must be greater than or equal to the current number of members in the file.

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

***NOMAX**: The system maximum is used.

maximum-members: Specify the value for the maximum number of members that the physical file can have. Valid values range from 1 through 32767.

ACCPHSIZ

Specifies the maximum size of auxiliary storage that can be occupied by access paths that are associated with keyed source physical files. This parameter does not apply to access paths that are created for logical files or for queries that refer to the data in a source physical file.

Performance Tip	<p>For optimum performance, consider whether there is high contention for keys within the access path when selecting the value on this parameter:</p> <ul style="list-style-type: none">• When there is little or no contention for keys, specifying the *MAX4GB value generally provides better performance.• When there is high contention for keys, specifying the *MAX1TB value generally provides better performance.
-----------------	---

***MAX4GB**: The access paths associated with this file can occupy a maximum of four gigabytes (4,294,966,272 bytes) of auxiliary storage. This value provides compatibility with releases of the operating system earlier than Version 3 Release 6 Modification 0.

***MAX1TB**: The access paths associated with this file can occupy a maximum of one terabyte (1,099,511,627,776 bytes) of auxiliary storage.

MAINT

Specifies the type of access path maintenance used for all members of the physical file. This parameter is valid only if a keyed access path is used.

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

***IMMED**: The access path is maintained for each physical file member whether the source physical file is opened or closed. The access path is changed whenever a record is updated, added to, or deleted from a member of this file or a logical file member based on a member of this file.

***REBLD**: The access path is rebuilt when a file member is opened during the running of the program. The access path is continuously maintained until the member is closed; then the access path maintenance is ended.

***DLY**: The maintenance of the access path is delayed until the member is opened for use. Then the access path is changed only for records that are added, deleted, or changed since the file was last closed. (While the file is open, all changes made to based-on members are immediately reflected in the access paths of the members of the opened files, no matter what is specified for MAINT.) To prevent a lengthy rebuild time when the file is opened, *DLY should be specified only when the number of changes to the access path between a close and the next open are small (when key fields in records for this access path change infrequently).

If the number of changes saved reaches approximately 10% of the access path size, the system stops saving changes and the access path is completely rebuilt the next time the file is opened.

RECOVER

Specifies, for files having immediate or delayed maintenance on their access paths, when recovery processing of the file is done if a system failure occurs while the access path is being changed.

The access path having immediate or delayed maintenance is rebuilt during initial program load (IPL) (before any user can run a job), after the IPL is completed (while other jobs are running), or the next time the file is opened. While the access path is being rebuilt, the file cannot be used by any job.

During the IPL, an Override Access Path Recovery display will list those access paths that must be recovered and what the RECOVER parameter value is for each. The user can override the RECOVER parameter value on this display. More information is in the Backup and Recovery topic in the Information Center.

The access path having rebuild maintenance is rebuilt the next time its file is opened, the time that it normally is rebuilt. This parameter is valid only for files with a keyed access path.

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

***NO:** The access path of the file is not rebuilt. The file's access path, if not valid, is rebuilt the next time the file is opened.

***AFTIPL:** The access path of the file is rebuilt after the IPL operation is completed. This option allows other jobs not using this file to start processing immediately after the IPL has been completed. If a job tries to open the file while its access path is being rebuilt, a file open exception occurs.

***IPL:** The access path of the file is rebuilt during the IPL. This ensures that the file's access path is rebuilt before the first user program tries to use it; however, no jobs can start running until after all files that specify RECOVER(*IPL) have their access paths rebuilt.

FRCACPTH

Specifies, for files with keyed access paths only, whether access path changes are forced to auxiliary storage along with the associated records in the file whenever the access path is changed. FRCACPTH(*YES) minimizes (but does not remove) the possibility that an abnormal job end can cause damage to the access path, which then requires it to be rebuilt.

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

***NO:** The access path and changed records are not forced to auxiliary storage whenever the access path changes.

***YES:** The access path and changed records are forced to auxiliary storage whenever the access path is changed. If this value is specified, MAINT(*REBLD) cannot be specified.

FRCACPTH(*YES) slows the response time of the system if the access path is changed in an interactive job. If the access path is changed frequently, the entire performance of the system is affected.

SIZE Specifies the initial number of records in each member of the file, the number of records in each increment that is automatically added to the member size, and the number of times the increment can be automatically applied.

A change to the initial number of records takes effect when a new member is added to the file or when a current member is cleared, restored, or reorganized. A change to the number of records added for each increment, or to the number of times an increment can be automatically applied, takes effect the next time a member of the file needs an increment.

The total size of the member (initial number of records plus the product of the number of records added per increment times the number of increments) must be larger than the current size of the member. If it is smaller, an error message is issued, and the size does not change.

Element 1: Number of Records

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

number-of-records: Specify the number of records (ranging from 1 through 16777215) that can be inserted before an automatic extension occurs. If automatic extensions are not wanted, enter zeros for the second and third values in the list.

Element 2: Increment Value

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

increment-value: Specify the number of additional records (ranging from 0 through 32767) which, if greater than 10% of the size of the member when the maximum number of records is reached, are to be added to the member during an automatic extension.

If the number specified is not greater than 10% of the member size and not equal to zero, the member size is increased by 10%.

Specify 0 to prevent automatic extensions. This value must be 0 if the value for the number of increments is 0.

Element 3: Maximum Number of Increments

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

number-of-increments: Specify the maximum number of increments (ranging from 0 through 32767) that can be automatically added to the member. Enter 0 to prevent automatic extensions. If the increment value is 0, the number of increments must be 0.

Other Single Values

***NOMAX:** The system maximum is used. This option cannot be specified if ALLOCATE(*YES) is in effect.

ALLOCATE

Specifies whether storage space is allocated for the initial number of records (SIZE parameter) for each physical file member when it is added. This change takes effect the next time a new member is added to the file or when a current member is cleared, restored, or reorganized.

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

***NO:** When a new member is added, or when an existing member is cleared, restored, or reorganized, the system determines whether additional space is needed and allocates that amount.

***YES:** The amount of storage space specified in the first value of the SIZE parameter is allocated each time a new member is added or an existing member is cleared, restored, or reorganized. If that amount of storage space is not available, the member is not added, and a message is sent to the user. If this parameter value is used, SIZE(*NOMAX) must not be in effect.

UNIT This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 3 Release 6 Modification 0 of the AS/400 system. For information on using auxiliary storage pools (ASPs), refer to the Backup and Recovery topic in the Information Center.

You can specify the value *SAME, the value *ANY, or a value ranging from 1 through 255 on this parameter.

FRCRATIO

The force write ratio parameter specifies the number of inserted, updated, or deleted records that are processed before they are forced to auxiliary (permanent) storage. More information on this parameter is in Commonly used parameters.

If the physical file is being journaled, a larger force write ratio or *NONE should be specified. More information on Journal Management is in the Journal management article in the Information Center.

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

***NONE:** There is no force write ratio; the system determines when the records are written to auxiliary storage.

number-of-records-before-force: Specify the number of inserted, updated, or deleted records that are processed before they are explicitly forced to auxiliary storage.

WAITFILE

Specifies the number of seconds that the program waits for the file resources and session resources to be allocated when the file is opened, or for the device or session resources to be allocated when an acquire operation is performed to the file. If those resources are not allocated within the specified wait time, an error message is sent to the program. More information on this parameter is in Commonly used parameters.

Note:

An immediate allocation of the device by the device resource is required when an acquire operation is performed to the file.

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

***IMMED:** The program does not wait; when the file is opened, an immediate allocation of the file resources is required.

***CLS:** The job default wait time is used as the wait time for the file resources being allocated.

number-of-seconds: Specify the number of seconds that a program waits for the file resources to be allocated to the job. Valid values range from 1 through 32767 seconds.

WAITRCD

Specifies the number of seconds that a program waits for a record to be updated or deleted, or for a record read in the commitment control environment with LCKLVL(*ALL) specified. More information on record locking is in the Database Programming topic in the Information Center. If the record is not allocated in the specified wait time, an error message is sent to the program.

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

***IMMED:** The program does not wait; when a record is locked, an immediate allocation of the record is required.

***NOMAX:** The system maximum is used.

number-of-seconds: Specify the number of seconds that a program waits for the file resources to be allocated to the job. Valid values range from 1 through 32767 seconds.

SHARE

Specifies whether the open data path (ODP) for the source physical file is shared with other programs in the routing step. When an ODP is shared, the programs accessing the file share facilities such as the file status and the buffer.

More information on shared database files is in the Database Programming topic in the Information Center.

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

***NO:** The ODP created by the program with this attribute is not shared with other programs in the routing step. Every time a program opens the file with this attribute, a new ODP to the file is created and activated.

***YES:** The ODP created with this attribute is shared with each program in the routing step that also specifies SHARE(*YES) when it opens the file, provided the scope specified on the OPNSCOPE keyword for the subsequent open of the file is compatible with the scope of the

original open.

Note: When SHARE(*YES) is specified and control is passed to a program, a read operation in that program retrieves the next input record. A write operation produces the next output record.

DLTPCT

Specifies the maximum percentage of deleted records that any member in the physical file can have. The percentage is based on the number of deleted records compared with the total record count in a member. This change takes effect the next time the file is opened and closed.

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

***NONE:** No percentage is specified; the number of deleted records in the file members is not checked when a member is closed.

deleted-records-threshold-percentage: Specify the largest percentage of deleted records (ranging from 1 through 100) that any member in the file can have. If a value is larger than this percentage, a message is sent to the system history log (QHST) when the file is closed.

CCSID

Specifies the coded character set identifier (CCSID) used to describe character data in the fields of the file.

Note: The CCSID cannot be changed if:

- There are any logical files defined over the source physical file.
- Any explicit field- or file-level CCSIDs are specified on the CCSID keyword in DDS, or on the CCSID parameter of the CRTSRCPF and CRTPF commands, for fields in the physical file.
- Another file shares the physical file's format.

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

***HEX:** The CCSID 65535 is used, which indicates that the character data in the fields is treated as bit data and is not converted.

coded-character-set-identifier: Specify the CCSID being used. If a DBCS field is in the source physical file, the CCSID specified must have a corresponding mixed CCSID. More information on valid CCSIDs is in the Globalization topic in the Information Center.

TEXT Specifies the text that briefly describes the source physical file. More information on this parameter is in Commonly used parameters.

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

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Examples for CHGSRCPF

Example 1: Changing the Expiration Date

```
CHGSRCPF FILE(QGPL/INV) EXPDATE('10/31/88')
```

This command changes the expiration date of all members in file INV to October 31, 1988.

Example 2: Changing Text

```
CHGSRCF FILE(QGPL/DDMF) TEXT('Inventory File')
        SYSTEM(*RMT)
```

This command changes the text of file INV located in the QGPL library on the remote system. Prior to specifying the above command, this user had created a DDM file by specifying the command, CRTDDMF FILE(QGPL/DDMF) RMTFILE(QGPL/INV) RMTLOCNAME(AS400).

Error messages for CHGSRCPF

*ESCAPE Messages

CPF326A

Operation not successful for file &1 in library &2.

CPF327F

Operation not successful for file &1 in library &2.

CPF7304

File &1 in &2 not changed.


CHGSPLFA (Change Spooled File Attributes) Command Description

CHGSPLFA Command syntax diagram

Purpose



The Change Spooled File Attributes (CHGSPLFA) command changes the attributes of a spooled file while it is on an output queue. The changes affect only the current processing of the file. The next time the job runs and the file is produced, the file attributes are derived from the device file description, the program, and any override commands.



If the file is currently being produced on an output device, the only parameters that can be changed are COPIES, RESTART, and SAVE. An attempt to change any other parameter results in an error, and no file attributes are changed. However, if the file is being held on an output queue because of spooling attribute errors, this command can be used to change the attributes, and a spooling writer can then be started to produce the file.

See the Printer Device Programming  book for more information about changing spooled file attributes.

Required Parameter

FILE Specifies the name of the spooled file whose attributes are being changed.

***SELECT:** All spooled files that meet the selection values specified in the SELECT keyword are changed. This value is mutually exclusive with the  JOB, SPLNBR, JOBSYSNAME, and CRTDATE parameters .

spooled-file-name: Specify the name of the spooled file. If *SELECT is specified, the  JOB, SPLNBR, JOBSYSNAME, and CRTDATE  keywords are ignored.

Optional Parameters

JOB Specifies the name of the job that created the spooled file.

A job identifier is a qualified name with up to three elements. For example:

job-name
user-name/job-name
job-number/user-name/job-name

More information on this parameter is in Commonly used parameters.

*****: The job that issued this CHGSPLFA command is the job that created the spooled file. If no job qualifier is given, 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 in the job whose attributes are being changed. 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.

➤ ***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. ⬅

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

spooled-file-number: Specify the number of the spooled file having the specified file name whose attributes are being changed.

➤ 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 that 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. <<

SELECT

Specifies which group of files have their attributes changed. Files can be selected based on user, device, form type, and user data. Only files that meet each of the specified requirements are selected.

Element 1: User Values

***CURRENT:** Only files created by the user running this command are selected.

***ALL:** Files created by all users or on any output queue are selected.

user-name: Specify only files created by the named user.

Element 2: Device Values

***ALL:** Files queued for any device are selected.

***OUTQ:** All files not queued for a device are selected. These files are on output queues not associated with printers.

device-name: Specify only files queued for the specified device name.

Element 3: Form Type Values

***ALL:** Files for all form types are selected.

***STD:** Only files that specify the standard form type are selected.

form-type: Specify only files with the specified form type.

Element 4: User Data Values

***ALL:** Files with a user data tag specified are selected.

user-data: Specify only files with the specified user data tag.

DEV

Specifies the name of the printer on which the file is printed.

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

***OUTQ:** The file is not assigned to a specific printer. It is placed on the output queue specified on the OUTQ parameter.

device-name: Specify the name of the printer that prints the file.

PRTSEQ

Specifies whether the file is next on the output queue to be printed. To move the file to the top of the queue, the following steps are taken:

1. If the file is held, it is released
2. The SCHEDULE attribute changes to *IMMED
3. The output priority (OUTPTY) changes to a priority that places it at the top of the queue

Because of these actions, PRTSEQ is mutually exclusive with the SCHEDULE and OUTPTY parameters.

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

***NEXT:** The attributes of the file are changed to move it to the top of the output queue. If PRTSEQ(*NEXT) is specified when the SELECT parameter is specified, files with selection values are moved ahead of the files that do not meet the requirements. Two files that are both moved may change their relative positions on the output queue.

OUTQ Specifies the qualified name of the output queue.

Note: If the spooled file is currently on an output queue for which DSPDTA(*OWNER) was specified on the Create Output Queue (CRTOUTQ) or Change Output Queue (CHGOUTQ) command, the user must own the file or have *SPLCTL authority to move it.

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

***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 to which the file is moved.

FORMTYPE

Specifies the type of form on which the output is printed. The identifiers used to indicate the type of forms are user-defined and can be a maximum of 10 characters in length.

Note: *SAME must be specified if the output file is a diskette file.

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

***STD:** The standard form type is used. The output is printed on the form type specified in the printer file for the printers selected. The printer file contains information that controls how the document is printed on a particular printer.

form-type: Specify the forms identifier for the forms used to produce the output of this spooled file. Up to 10 alphanumeric characters can be specified. Strings with embedded blanks must be enclosed in apostrophes.

COPIES

Specifies, for spooled files, the number of copies being printed.

Note:

Specifying a value while a file is being printed causes the specified number of copies to print in addition to the number of copies that have already been printed.

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

number-of-copies: Specify the number of copies to print. Valid values range from 1 through 255.

FILESEP

Specifies the number of separator pages to produce at the beginning of each printed output file to separate the file from the other files being spooled to an output device. The identifying information included on each file separator is the file name and number, the job name and number, and the user's name. *SAME must be specified if the spooled file is a diskette file.

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

number-of-file-separators: Specify the number of pages, ranging from 0 through 9, used as file separators.

PAGERANGE

Specifies the page range to print for each copy of the file to be printed.

Element 1: Starting Page to Print

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

***ENDPAGE:** The page on which to start printing is the same as the page on which to end printing.

starting-page: Specify the page on which to start printing.

Element 2: Ending Page to Print

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

***END:** The last page in the file is printed.

ending-page: Specify the page on which to end printing.

RESTART

Specifies the page on which to restart printing. Specifying a value while a file is being printed causes the printer writer to stop printing the file and restart on the page specified by the user. If the file is not being printed, the change occurs when the first copy is printed. After the printer writer is repositioned to the page specified on this parameter, the value is reset to RESTART(*STRPAGE).

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

***STRPAGE:** The starting page specified on the PAGERANGE parameter is the page on which printing is restarted. This value is the default value that is used when a spooled file is created. Also, RESTART is reset to *STRPAGE after the printer writer repositions to the page specified on this parameter.

***ENDPAGE:** The ending page is the page on which to restart printing. Therefore, only the ending page is printed.

***NEXT:** This value is valid only when a spooled file has been interrupted while it is being printed by the HLDSPLF command where OPTION(*PAGEEND) is specified or the ENDWTR command where OPTION(*PAGEEND) is specified.

restart-page: Specify the page on which to restart printing.

SCHEDULE

Specifies when the output file is available to the writer.

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

***JOBEND:** The spooled file is available to the writer only after the entire job is completed.

***FILEEND:** The spooled file is available to the writer as soon as the file is closed in the program.

***IMMED:** The spooled file is made available to the writer as soon as the file is opened in the program.

SAVE Specifies whether the spooled file is saved after it has been written to an output device.

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

***NO:** The spooled file data is not retained on the output queue after it has been produced.

***YES:** The spooled file data is retained on the output queue until the file is deleted. After the file is produced, the number of copies (COPIES parameter) is set to 1, and the status of the file is changed from WTR to SAV. Refer to the RLSSPLF command description for information on how to produce the spooled file.

OUTPTY

Specifies the output priority assigned to the spooled file.

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

***JOB:** The output priority associated with the job that created the spooled file is used.

output-priority: Specify the assigned output priority. Valid values range from 1 (high priority) through 9 (low priority).

USRDTA

Specifies, for spooled output only, the user-specified data that identifies the file.

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

user-data: Specify up to 10 characters of data assigned to the spooled file.

ALIGN

Specifies whether to verify forms alignment on this file. This parameter is used only by print writers which were started with the ALIGN(*FILE) option, and can be changed only on spooled files which are to be printed. *SAME must be specified for diskette files.

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

***NO:** The forms alignment is not verified.

***YES:** The forms alignment is verified.

PRTQLTY

Specifies the quality of the print produced. Refer to the CRTPRTF (Create Printer File) command description for a list of printers supporting the PRTQLTY parameter.

Note:

The user can also specify PRTQLTY(*NLQ) for the 5219 and 4214 Printers to get the best print quality.

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

***STD:** The output is printed with standard quality.

***DRAFT:** The output is printed with draft print quality.

***NLQ:** The output is printed with near letter quality.

***DEV D:** The output is printed with the default print quality for the printer.

***FAST DRAFT:** The output is printed at a higher speed and with lower quality than it would be if you specified ***DRAFT**.

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.

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

***DEV D:** The forms are fed into the printer in the manner specified in the device description.

***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.

***CONT:** Continuous forms are used by the printer (the tractor feed attachment must be present).

***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.

***CUT:** Single-cut sheets are used by the printer. Each sheet must be manually loaded. For cut sheets, the forms alignment message is not issued.

DRAWER

Specifies the source drawer used when single-cut sheets are fed into the printer (specified by FORMFEED(*AUTOCUT)).

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

***E1:** The envelopes are fed from the envelope drawer on the sheet-feed paper handler.

***FORMDF:** The form definition specifies the drawer from which paper is fed.

source-drawer: Specify the drawer from which the paper is fed. Valid values range from 1 through 255.

MULTIUP

Specifies, for spooled output only, whether multiple pages of output are printed on a single physical page. This parameter is used only when the printer device type is *SCS, *IPDS, or *AFPDS and the spooled file was created on the iSeries 400.

Note:

This parameter cannot change when the value for Reduce output (REDUCE) is *NONE. You can determine the value of Reduce output by using the Work with Spooled File Attributes (WRKSPLFA) command.

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

1: One page of output is printed on one physical sheet of paper.

2: Two pages of output are printed on 1 physical sheet of paper.

4: Four pages of output are printed on 1 physical sheet of paper.

PAGDFN

Specifies the qualified name of the page definition to be used to format line data.

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

***NONE:** No page definition is specified.

Because PSF/400 requires a page definition when *LINE or *AFPDSLINe is specified, an inline page definition is built from the print file parameters and passed to PSF/400 when *NONE is specified.

The name of the page 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.

page-definition-name: Specify the name of the page definition that must exist in the library specified. Valid values range from 1 to 8 characters. Device type *AFPDSLINe or *LINE must be specified when using a page definition.

FORMDF

Specifies the form definition to use when printing the file. A form definition is a resource object that defines the characteristics of the form, including overlays, position of page data on the form, and number of copies of pages and modifications to pages. The form definition is located inline with the file being printed, or in a library.

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

***NONE:** No form definition is used.

Because PSF/400 requires a form definition, an inline form definition is built from the print file parameters and passed to PSF/400 when *NONE is specified.

***DEVd:** The name of the form definition is specified in the printer device description.

***INLINE:** The form definition is searched for inline. If no inline form definition exists, the file will not print.

***INLINED:** The form definition is searched for inline. If none exists, the *DEVd form definition is used.

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.

form-definition-name: Specify the name of the form definition that must exist in the library specified. Valid values range from 1 to 8 characters.

AFPCHARS

Specifies one or more AFP characters (coded fonts) to be used with line data and a page definition.

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

***NONE:** No AFP character (coded fonts) specified.

coded-font-name: Specify up to four 4-byte names of coded fonts to be specified with line data and a page definition. The 4-byte names would be concatenated to X0 to identify up to four coded fonts which are to be used when TBLREFCHR is being used within the data.

DUPLEX

Specifies whether output is printed on one side or two sides of the paper.

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

***NO:** The output is printed on one side of the paper.

***YES:** The output is printed on both sides of the paper with the top of each printed page at the same end of the paper.

***TUMBLE:** The output is printed on both sides of the paper with the top of one side at the opposite end of the top of the other side. This is usually used for output that will be bound at the top.

***FORMDF:** The duplex value specified in the form definition file is used. This value is valid only with printer device types of *AFPDS, *AFPDLINE, or *LINE.

FRONTOVL

Specifies the qualified name of the object that contains both the overlay that is printed on the front side of the page and the offset, down and across, from the point of origin used when the overlay is printed. This parameter is used only when the printer device type is *SCS or *IPDS.

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

***NONE:** No overlay is used.

The name of the overlay 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: Overlay Name

overlay: Specify the name of the overlay.

Element 2: Offset Down

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

offset-down: Specify the offset down from the point of origin at which to begin printing the overlay. If UOM(*CM) was specified on the CRTPRTF command when this file was created, valid values range from 0 through 57.79, and if UOM(*INCHES) was specified, valid values range from 0 through 22.57.

Element 3: Offset Across

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

offset-across: Specify the offset across from the point of origin at which to begin printing the overlay. If UOM(*CM) was specified on the CRTPRTF command when this file was created, valid values range from 0 through 57.79, and if UOM(*INCHES) was specified, valid values range from 0 through 22.57.

BACKOVL

Specifies the qualified name of the object that contains both the overlay that is printed on the BACK side of the page and the offset, down and across, from the point of origin used when the overlay is printed. This parameter is used only when the printer device type is *SCS or *IPDS.

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

***FRONTOVL**: The values specified on the FRONTOVL parameter are used.

***NONE**: No overlay is used.

The name of the overlay 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: Overlay Name

overlay: Specify the name of the overlay.

Element 2: Offset Down

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

offset-down: Specify the offset down from the point of origin at which to begin printing the overlay. If UOM(*CM) was specified on the CRTPRTF command when this file was created, valid values range from 0 through 57.79, and if UOM(*INCHES) was specified, valid values range from 0 through 22.57.

Element 3: Offset Across

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

offset-across: Specify the offset across from the point of origin at which to begin printing the overlay. If UOM(*CM) was specified on the CRTPRTF command when this file was created, valid values range from 0 through 57.79, and if UOM(*INCHES) was specified, valid values range from 0 through 22.57.

Element 4: Constant Back

The constant back function allows the user to print overlays on blank pages without adding blank pages to the print application. Specifying the constant back function would cause blank pages to be generated onto which the specified back overlay could be printed. The generated blank pages are called constant forms because no variable data from the user's print application is printed on the pages. This value is not changeable if MULTIUP is not 1. The constant back function is only supported for duplex printing. It is ignored when DUPLEX(*NO) is specified on the printer file.

Note that the offset down and offset across values are ignored when *CONSTANT is specified for constant back. An offset of 0.0 is assumed for these values.

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

***NOCONSTANT:** The constant back function is not performed.

***CONSTANT:** The constant back function is performed.

FIDELITY

Specifies the print fidelity that is maintained for this file when printing to an AFP enabled printer.

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

***ABSOLUTE:** Print the file exactly as intended. Stop printing the file immediately if an error is encountered in the data stream.

***CONTENT:** Try to override any errors in the data stream and attempt to continue printing the file.

VOL

Specifies, for diskette output files only, one or more volume identifiers of the diskettes on which this spooled file is written. The diskettes (volumes) must be placed in the device in the same order as the identifiers are specified in this parameter; a message is sent to the system operator if the order is different. More information on this parameter is in Commonly used parameters.

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

***NONE:** No diskette volume identifiers are specified. This output file is written on the first available diskette, based on the diskette writer's current position. No volume identifier checking is performed.

volume-identifier: Specify the identifiers of one or more volumes in the order in which they are inserted and used for this output file. No more identifiers can be specified than were initially specified for the diskette device file.

Each volume identifier contains up to six characters. A blank is used as the separator character when listing multiple identifiers. The number of volumes possible in the list is 50, but if more than 10 volume names are specified when the file is first opened, then only that number of files can be entered on the change command. Up to 10 volumes can be specified.

LABEL

Specifies, for diskette output files only, the data file identifier of the data file written on diskette from this spooled file. The data file identifier is stored in a label in the volume label area of the diskette.

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

data-file-identifier: Specify the identifier (up to 8 characters) assigned to the data file being written on diskette from this spooled file.

EXCHTYPE

Specifies the exchange type used to write the spooled file. This parameter must be coded EXCHTYPE(*SAME) if the spooled file is not a diskette file.

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

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

***BASIC:** The basic exchange type is used.

***H:** The H exchange type is used.

***I:** The I exchange type is used.

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).

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

***EBCDIC:** The extended binary-coded decimal interchange code (EBCDIC) character set code is used.

***ASCII:** The ASCII character set code is used.

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.

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

***NONE:** No user-defined options are 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.

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

***NONE:** No user-defined object 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:

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.

object-name: Specify 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 Object

***USRIDX**

User Index

***USRQ**

User Queue

***USRSPC**

User Space

IPDSPASTHR

Specifies whether IPDS (intelligent printer data stream) pass-through is done for the spooled file.

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

***DEV:** The value specified for IPDSPASTHR in the PSF configuration object specified for a printer device description is used. If no PSF configuration object is specified for the device, a value of *NO is used.

***NO:** No IPDS pass-through is done.

***YES:** Specifies that IPDS pass-through is to be done if the spooled file is eligible for IPDS pass-through.

Note:

Not all SCS or IPDS spooled files are eligible for IPDS pass-through. They may contain special functions that require transform to AFPDS for correct printing. Specifying IPDS pass-through on the printer file allows only those spooled files eligible for IPDS pass-through to bypass the extra transforms. Those spooled files not eligible for IPDS pass-through will still undergo the transforms to AFPDS and back to IPDS.


IPDS pass-through will not be valid for all PSF/400 supported printers. Any printer (or attachment) that does not support resident fonts can not support IPDS pass-through. This is because the resident font references in the data stream must be mapped to host fonts which are downloaded to the printer. All IBM IPDS printers, except for the following, can be supported with IPDS pass-through: 3820, 3825, 3827, 3828, 3829, 3831, 3835, 3900-001 and any printer attached using Print Services Facility for OS/2's Distributed Print Function.

For V3R7, V4R1 and V4R2, IPDSPASTHR can be specified with the USRDFNDDTA parameter in a printer file. You may continue using this support with existing printer files and PSF configuration objects by specifying IPDSPASTHR(*DEV) in the printer file. If you specify a value of anything other than *DEV for the IPDSPASTHR parameter, any IPDS pass-through value in the USRDFNDDTA parameter is ignored.

FNTRSL

Specifies the resolution PSF/400 should use to print the spooled file when printing to a multiple resolution printer and the spooled file does not specify the font metrics and resolution with which to print the spooled file or the font is not available at that resolution.

For more information regarding the algorithm used for searching a library list for a font resource,

see the Printer Device Programming  book section entitled "User and Device Resource Library Lists" in the chapter called "Working With PSF Configuration Objects."

Valid values are:

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

***DEVD:** The value specified in the FNTRSL parameter of the PSF configuration object for the device is used. If no PSF configuration object is specified for the device, a value of *SEARCH is used.

***SEARCH:** Specifies to search the library list for the first occurrence of a host font with a name match. The resolution of that font is used to print the spool file. Message PQT3546 is sent to specify the resolution of the font that was selected.

240: The font resolution is 240 pels per inch.

300: The font resolution is 300 pels per inch.

Examples for CHGSPLFA

Example 1: Moving a File to Another Queue

```
CHGSPLFA FILE(SALES) JOB(000147/JONES/BILLING)
        OUTQ(QPRINT2) FORMTYPE('1140-6')
```

This command moves the file named SALES (of the BILLING job numbered 000147) from the present queue to the QPRINT2 queue. It also changes the forms identifier to 1140-6, which means that this form type is used in the printer.

Example 2: Changing Number of Output Copies

```
CHGSPLFA FILE(DEPT511) COPIES(2) FILESEP(5)
```

This command changes the attributes of the spooled file DEPT511 that is produced by the submitter's job. It changes the number of output copies to 2 and specifies that five separator pages precede each copy.

Example 3: Changing Starting and Ending Pages to Print

```
CHGSPLFA FILE(DEPT481) PAGERANGE(99 100)
```

This command changes the attributes of the spooled file, DEPT481. It changes the starting and ending pages that are to be printed. Now, only pages 99 and 100 of each copy of the file is printed.

Example 4: Starting on a Specific Page

```
CHGSPLFA FILE(DEPT481) RESTART(5)
```

This command restarts printing spooled file DEPT481 on page 5. All of the copies that follow are printed from the specified starting page to ending page. If the file is in WTR status, the writer stops printing the current copy and restarts printing on page 5. The page specified on the RESTART parameter must be within the range specified on the PAGERANGE parameter.

Example 5: Restarting on the Next Page

```
CHGSPLFA FILE(DEPT481) RESTART(*NEXT)
```

This command restarts the printing job on the page following the last page printed when the job was interrupted. All of the copies that follow are printed from the specified starting page to ending page. The file must not be in WTR status. If the file is in WTR status, this command is rejected and a message is sent to the user. RESTART(*NEXT) is not valid when a file is being processed by a writer.

Error messages for CHGSPLFA

*ESCAPE Messages

CPD3351

&1 parameter allowed only for print files.

- CPD3352**
Page definition &1 in library &2 not found.
- CPD3353**
Form definition &1 in library &2 not found.
- CPD3354**
Parameter DRAWER conflicts with parameter FORMFEED.
- CPD3355**
FORMDF(*NONE) conflicts with parameter DRAWER.
- CPD3356**
DRAWER parameter not allowed with diskette parameters.
- CPD3357**
PAGDFN parameter not allowed with diskette parameters.
- CPD3358**
AFPCHARS parameter not allowed with diskette parameters.
- CPD3359**
FORMDF parameter not allowed with diskette parameters.
- CPF2207**
Not authorized to use object &1 in library &3 type *&2.
- CPF33AD**
Target spooled file &1 not last spooled file in ready status. Source spooled file not moved.
- CPF33A6**
Spooled file &1 selected by writer. Spooled file not moved.
- CPF33A7**
Spooled file &1 number &2 in job &5/&4/&3 not moved.
- CPF33A8**
Spooled file &1 specified more than once. Spooled file not moved.
- CPF33A9**
Target spooled file &1 changed output queue. Source spooled file not moved.
- CPF33C2**
Moving spooled files to the top allowed only for output queues with SEQ(*FIFO).
- CPF33C3**
Priority required to move spooled file exceeds user's limit.
- CPF33C4**
Spooled file &1 held by HLDJOB command. Spooled file not moved.
- CPF33C5**
Target spooled file &1 selected by writer. Source spooled file not moved.
- CPF33C6**
Priority required to move file exceeds user's limit.
- CPF33C7**
Cannot move file ahead of other users' files.
- CPF33D0**
Printer &1 does not exist.
- CPF33D1**
User &1 does not exist.

CPF33F0

Not authorized to move spooled file.

CPF3303

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

CPF3309

No files named &1 are active.

CPF3330

Necessary resource not available.

CPF3335

File &1 number &2 attributes not changed.

CPF334A

Specified user defined object &1 not valid. See previous messages.

CPF3340

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

CPF3341

File &1 number &2 attributes not changed.

CPF3342

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

CPF3343

Duplicate job names found.

CPF3344

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

CPF3401

Cannot change COPIES for files in PRT or SND status.

CPF3464

Not authorized to output queue &1 in library &2.

CPF3492

Not authorized to spooled file.

CHGSBSD (Change Subsystem Description) Command Description

CHGSBSD Command syntax diagram

Purpose

The Change Subsystem Description (CHGSBSD) command changes the operational attributes of the specified subsystem description. You can change the subsystem description while the subsystem is active. However, you cannot specify the *RMV value on the POOLS parameter while the subsystem is active, because the job may become suspended.

Restrictions:

1. The user of this command must have object operational authority and object management authority for the subsystem description before it can be changed. The user must also have object operational authority for the library containing the subsystem description.
2. You cannot specify the *RMV value on the POOLS parameter while the subsystem is active, because the job may become suspended.

Required Parameter

SBSD Specifies the qualified name of the subsystem description to which changes are made.

The name of the subsystem 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.

subsystem-description-name: Specify the name of the subsystem description being changed.

The name of the IBM-supplied controlling subsystem, QCTL, must not be specified for this parameter. The CRTSBSD command, however, can be used to create a similar subsystem description, and the user can specify it as the controlling subsystem by specifying its name in the QCTLSBSD system value instead of the QCTL library.

Optional Parameters

POOLS

Specifies the identifiers of one or more storage pool definitions and the changes that are made to them.

When an existing pool definition is removed, the subsystem must be inactive.

The size and activity level of each existing pool definition that is not specified does not change. More information about storage pools is in the Backup and Recovery topic in the Information

Center and the Work Management  book.

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

Element 1: Pool Identifier

pool-identifier: Specify the pool identifier, ranging from 1 through 10, of the storage pool definition added or deleted, or whose attributes are changed. If more than one pool definition is specified, the attributes of each definition must follow its identifier.

Element 2: Pool Definition Options

***BASE:** The specified pool definition is the system base pool, which can be shared with other subsystems. The minimum size and activity level of the base pool are specified in the system values, QBASPOOL and QBASACTLVL.

***NOSTG:** No storage and no activity level are assigned to the pool at the present time.

***INTERACT:** The shared pool used for interactive work.

***SPOOL:** The shared pool used for spooled writers.

***SHRPOOLnn:** The specified pool definition is defined to be a general-purpose shared pool. There are sixty general-purpose shared pools, identified by special values *SHRPOOL1 to *SHRPOOL60.

The size and activity level of a shared pool are specified using the Change Shared Storage Pool (CHGSHRPOOL) command.

***RMV:** The specified pool definition is removed from the subsystem description.

storage-size activity-level: Specify the storage size (in kilobytes) of the specified storage pool. The storage pool identifier and size must be specified. A value of at least 256 kilobytes must be specified for the storage size. For activity level, specify the maximum number of jobs that can run in the pool at the same time. Active jobs running in a pool must finish before the pool can be deallocated by the system. When this command is used to change a pool size allocation, the existing jobs in the pool continue to process until they have finished.

If the subsystem is active, and if a save and/or restore operation is using some of the storage allocated to the specified pool, a request to reduce a pool allocation may not take effect immediately. In that case, the pool size allocation is changed when the machine cancels the storage being used. Use the Display System Status (DSPSYSSTS) command to determine the amount of storage reserved for save/restore operations.

MAXJOBS

Specifies the maximum number of jobs that can be active at the same time in the subsystem controlled by this subsystem description. The maximum applies to all jobs that are started and are waiting or running, but not to jobs on the job queue or jobs that have finished running.

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

***NOMAX:** There is no maximum number of jobs that can be active at the same time.

maximum-subsystem-jobs: Specify the maximum number of active jobs allowed in this subsystem.

SGNDSPF

Specifies the qualified name of the sign-on display file that is used when showing sign-on displays at work stations allocated to the subsystem. If the specified sign-on display file does not exist when the subsystem description is changed, the user must specify a library qualifier because the sign-on display file name is kept by the system. The sign-on display file must contain a record format named SIGNON. More information on display files is in the Application Display

Programming  book.

Note:

The sign-on display file can be changed when the subsystem is active. However, the new sign-on display file is not used until the next time the subsystem is started.

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

***QDSIGNON:** The sign-on display file QDSIGNON in QSYS is used when showing sign-on displays at work stations that are allocated to the subsystem.

The name of the sign-on display 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.

If the file is found, its library name is placed in the subsystem description.

display-file-name: Specify the name of the sign-on display file used.

SYSLIBLE

Specifies a library that is specified ahead of other libraries on the system library list. This parameter allows the user to change a secondary language library, causing messages and displays to appear in the user's spoken language.

Note:

This parameter can be used while the subsystem is active. Any changes the user makes to this parameter take effect for new jobs that are started. The library list of active jobs within the subsystem is not changed.

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

***NONE:** The secondary language library is removed from the system library list.

library-name: Specify the name of the library being added to the system library list.

TEXT Specifies the text that briefly describes the subsystem description. More information on this parameter is in Commonly used parameters.

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

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Examples for CHGSBSD

Example 1: Changing Storage Size and Activity Level

```
CHGSBSD SBSD(QGPL/PAYCTL) POOLS((2 1500 3))
SGNDSPF(QGPL/COMPANYA)
```

This command changes the definition of storage pool 2 that is used by subsystem PAYCTL to a storage size of 1500K and an activity level of 3. The sign-on display file is changed to display file COMPANYYA and is located in the QGPL library. If the subsystem is active when this command is issued, COMPANYYA is not used until the next time the subsystem is started.

Example 2: Changing Multiple Attributes

```
CHGSBSD SBSD(LIB6/ORDER)
POOLS((1 *BASE)(2 750 4)(3 *RMV)(4 *NOSTG)
MAXJOBS(5))
```

This command changes the maximum number of jobs that subsystem ORDER can support to five. (The description of the subsystem is stored in library LIB6.) The definition of storage pool 1 is changed to the shared system pool, the definition of pool 2 is changed to have a storage size of 750K and an activity level of 4, the definition of pool 3 is removed from the subsystem, and the definition of pool 4 is changed to have no storage and no activity level.

Example 3: Changing the Language Library

```
CHGSBSD SBSD(QGPL/SPANISH)
SGNDSPF(QSYS2931/QDSIGNON)
SYSLIBLE(QSYS2931)
```

This command changes subsystem description SPANISH to a Spanish secondary language.

Error messages for CHGSBSD

***ESCAPE Messages**

CPF1619

Subsystem description &1 in library &2 damaged.

CPF1691

Active subsystem description may or may not have changed.

CPF1697

Subsystem description &1 not changed.

CHGSYSDIRA (Change System Directory Attributes) Command Description

CHGSYSDIRA Command syntax diagram

Purpose

The Change System Directory Attributes (CHGSYSDIRA) command changes system directory attributes used when working interactively with the directory and the directory shadow systems.

An override program is provided that fills in the values of these directory attributes.

Restrictions:

1. You must have security administrator (*SECADM) or all object (*ALLOBJ) special authority to use this command.
2. You must have all object (*ALLOBJ) special authority to change the search (SCHPGM), the verification (VRFPGM), or the supplier (SUPPGM) user exit program.

Optional Parameters

SCHTYPE

Specifies the type of search to be applied to the Search System Directory display. The search attribute specified on this parameter applies to the system.

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

***EXACT:** The system searches for the exact text string specified on the Search System Directory display. This value includes the ability to specify an asterisk (*) as part of the string to find generic values.

***GENERIC:** The system searches for the text string specified on the Search System Directory display, but makes the end of the string an automatic generic search. An asterisk (*) does not need to be specified at the end of a string to find generic values.

SCHPGM

Specifies the user exit program that performs a customized search from the Search System Directory display. More information about the user exit program is in Application Program Interfaces (APIs) topic in the Information Center.

If a user exit program is specified, it must exist.

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

***NONE:** No search user exit program is specified.

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 user exit program that performs the user search.

VRFPGM

Specifies the user exit program that verifies a change, add, or delete operation for directory entries, departments, and locations that are local or shadowed. This program is called from both a local data entry and from directory shadowing. More information about the user exit program is in Application Program Interfaces (APIs) topic in the Information Center.

Changes are always verified by the system. If a user exit program is not supplied, no additional verification checking is required by the system. When a user exit program is supplied, the user exit program is called and then system validation is performed.

If a user exit program is specified, it must exist.

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

***NONE:** No verification user exit program is specified.

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 user exit program that verifies the modification.

SUPPGM

Specifies the user exit program that decides whether a change, add, or delete operation for directory entries, departments, and locations is to be shadowed to a collector system. This program is called from directory shadowing. More information about the user exit program is in Application Program Interfaces (APIs) topic in the Information Center.

If a user exit program is not supplied, all changes are sent to the collector system. When a user exit program is supplied, the user exit program is called and then directory shadowing is performed.

If a user exit program is specified, it must exist.

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

***NONE:** No supplier user exit program is specified.

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 user exit program that decides which records to supply during directory shadowing.

RTYITV

Specifies the number of minutes to wait after an unsuccessful shadow before attempting to shadow again.

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

retry-interval: Specify the interval (in minutes) to wait before attempting to shadow the directory data again. Valid values range from 1 through 999.

RTYLMT

Specifies the number of times to retry a directory shadow before the operation fails.

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

number-of-retries: Specify the number of retries to perform before ending the directory shadow attempt. Valid values range from 0 through 9.

ALWDSPNUI

Specifies whether to allow all network user IDs to be displayed or printed by all users. The network user IDs are always displayed or printed for system administrators or for users who display or print their own directory entries.

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

***YES:** All network user IDs are displayed to all users.

***NO:** Network user IDs are not displayed to all users.

MSGQ

Specifies the qualified name of the shadowing message queue to which shadowing messages are sent.

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

The name of the shadowing 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.

message-queue-name: Specify the name of the shadowing message queue to which shadowing messages are sent.

RMTSHD

Specifies whether to supply additions, changes, or deletions of locally-defined remote directory entries during directory shadowing. Locally-defined remote directory entries are added locally, but

have a system name that is different from the local system name. Changes are always supplied for local directory entries and for shadowed entries.

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

***YES:** Additions, changes, and deletions to all directory entries are supplied to collecting systems during directory shadowing.

***NO:** Additions, changes, or deletions of locally-defined remote directory entries are not supplied during directory shadowing. Updates to local directory entries or shadowed entries are supplied to collecting systems during directory shadowing.

RMVJOBLOG

Specifies whether to delete job logs created during previous directory shadow collections from a specific supplier system. More information about this parameter is in the SNA Distribution Services



book.

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

***YES:** The job log created when the local system collected from a remote system is automatically deleted when the local system collects from that supplier system again.

***NO:** The job log created when the local system collected data from a remote system is not automatically deleted.

ALWSCH

Specifies whether to allow search on the system distribution directory.

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

***NO:** Search data is not created for the system distribution directory.

***YES:** Search data is created for the system distribution directory. When this option is specified, the search file cannot be shared while the search data is being created. After the search data is created, all updates to the system distribution directory will update the search data. After this option is successfully run, the system distribution directory can be searched.

USRDFNLD

Specifies the user-defined field names, function, field type and maximum field length on the user-defined field names. You can add, remove, or change user-defined field names in the system distribution directory for the system with this keyword.

If the specified user-defined field name exists on a supplier shadowing system, the data is automatically initialized on your system the next time you collect from that supplier system. After the initialization, any changes made to that field on other shadowing systems are updated on your system when it is shadowed. If there are user-defined fields on other shadowing systems that are not defined on your system, then these fields and their value are passed through to the other shadowing systems so the data is not lost.

If the user-defined field name does not exist on a supplier system but exists in the network, the user-defined field will not get initialized. To get the user-defined field initialized on your system, add it to the supplier system where the supplier system shadows data from a system with the user-defined field.

Up to 100 user-defined fields can be specified.

***SAME:** The user-defined fields as specified on the system do not change.

Element 1: User-Defined-Field Name

field-name: Specify up to 10 characters for the user-defined field name.

Element 2: User-Defined-Field Product ID

***NONE:** No user-defined field product ID is specified.

product-ID: Specify up to 7 characters for the user-defined field product ID.

Element 3: User-Defined-Field Function

***KEEP**: Indicates that the system should keep the user-defined field that is specified above.

***ADD**: Indicates that the system should add the user-defined field that is specified above.

***RMV**: Indicates that the system should remove the user-defined field that is specified above. This removes it from this system and not from the shadowing systems.

***CHG**: Indicates that the system should change the user-defined field that is specified above. The maximum length value and the field type can be changed. The field name and product ID cannot be changed.

Element 4: Field Type

Field type is required for function *ADD and optional for *CHG. It will be ignored for function *KEEP and *RMV.

***DATA**: Indicates that the user-defined field contains data for the user.

***MSFSRVLVL**: Indicates that the user-defined field contains a mail server framework service level value. By specifying this value, this user-defined field can be used to store information for a service level for the mail server framework. Also, this type of field will be displayed in the list when F4 is pressed on the Add and Change Directory Entry panels for the 'Mail service level' field.

***ADDRESS**: Indicates that the user-defined field contains an address. By specifying this field, it indicates that this field can be used as a preferred address by the user. Also, this type of field will be displayed in the list when F4 is pressed on the Add and Change Directory Entry panels for the 'Preferred address' field.

Element 5: User-Defined-Field Maximum length

maximum-length: Specify between 1 and 512 bytes for the maximum length of the user-defined field. Maximum field length is required for function *ADD and optional for *CHG. It will be ignored for function *KEEP and *RMV.

Examples for CHGSYSDIRA

Example 1: Changing the Search Type to Generic

```
CHGSYSDIRA  SCHTYPE(*GENERIC)
```

This command searches the Search System Directory display to find all matches that begin with the specified text string. For example, a search for Smith may result in Smith, Smithsonian and Smithton.

Example 2: Changing the Shadowing Retry Attributes

```
CHGSYSDIRA  RTYITV(10)  RTYLMT(3)
```

This command changes the attributes that control the available options when shadowing fails. The interval between failures is 10 minutes with a maximum of three retries for this example.

Error messages for CHGSYSDIRA

*ESCAPE Messages

CPF898C

*ALLOBJ special authority required to do requested operation.

CPF90F7

System directory attributes not changed.

CHGSYSJOB (Change System Job) Command Description

CHGSYSJOB Command syntax diagram

Purpose

The Change System Job (CHGSYSJOB) command allows the user to change the run priority of a system job.

Restriction:

Only a user with job control (*JOBCTL) and all object (*ALLOBJ) special authority can change a system job.

JOB Specifies the name of the system job whose attributes are being changed.

job-name: Specify the name of the system job. The list of valid job names will be displayed when F4 is pressed while prompting for this parameter.

Optional Parameters

RUNPTY

Specifies the run priority for the routing step. Machine run priority is a value, ranging from 0 (highest priority) through 99 (lowest priority), that represents the importance of the routing step when it competes with other routing steps for machine resources. This value represents the relative (not the absolute) importance of the routing step. For example, a routing step with a run priority of 25 is not twice as important as one with a run priority of 50.

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

***IPL:** Use the run priority at which the system job was started at IPL time.

machine-running-priority: Specify the run priority, ranging from 0 through 99, that the routing step uses.

Example for CHGSYSJOB

```
CHGSYSJOB JOB(QDBSRVXR2) RUNPTY(20)
```

This command changes the run priority of the system job QDBSRVXR2 to 20.

Error messages for CHGSYSJOB

*ESCAPE Messages

CPF1070

Job &3/&2/&1 not found.

CPF137A

Not authorized to change system job.

CPF1379

Job &1 cannot be changed.

CHGSYSLIBL (Change System Library List) Command Description

CHGSYSLIBL Command syntax diagram

Purpose

The Change System Library List (CHGSYSLIBL) command changes the system portion of the library list for the job in which the command is entered. The user can specify if the library is added to the beginning of the system portion of the library list, or removed from that list.

Restrictions:

1. This command is shipped with public *EXCLUDE authority.
2. The library QSYS cannot be added to or removed from the system portion of the library list.
3. The CHGSYSLIBL command is authorized only to the security officer or a user with the *ALLOBJ special authority. The QSYSLIBL system value cannot be changed without such authority. However, the security officer can authorize individual users to the command, or can provide programs that adopt the security officer profile and can add a library on the system portion of the library list.

Required Parameter

LIB Specifies the name of the library that either is added to, or is removed from, the system portion of the job's library list.

Optional Parameter

OPTION

Specifies whether the library is added to, or removed from, the system portion of the library list.

***ADD:** The specified library is added to the beginning of the system portion of the library list.

***REMOVE:** The specified library is removed from the system portion of the library list.

Example for CHGSYSLIBL

```
CHGSYSLIBL LIB(PAYROLL) OPTION(*ADD)
```

This command adds the library PAYROLL to the beginning of the system portion of the library list.

Error messages for CHGSYSLIBL

***ESCAPE Messages**

CPF2103

Library &1 already exists in library list.

CPF2106

Library list not changed.

CPF2110

Library &1 not found.

CPF2113

Cannot allocate library &1.

CPF2118

Library &1 not added.

CPF2128

Library &1 not in system portion of library list.

CPF2176

Library &1 damaged.

CPF2182

Not authorized to library &1.

CHGSYSVAL (Change System Value) Command Description

CHGSYSVAL Command syntax diagram

Purpose

The Change System Value (CHGSYSVAL) command changes the current value of the specified system value. System values are provided as part of the system. They are used by the system to control certain operations in the operating system and to communicate the status of certain conditions to the user. Changes to some system values take effect immediately, some do not take effect until new jobs are started, and others do not take effect until the next IPL. Note that if a change is made to a date or time system value during any operation that measures the length of time, a negative value may be set if the end time is less than the start time. More information about system values is in the Work Management



book.


Restrictions:

1. This command is shipped with public *EXCLUDE authority and the QPGMR, QSYSOPR, and QSRV user profiles have private authorities to use the command.
2. You must have *ALLOBJ and *SECADM special authorities to change security related system values.

Required Parameters


SYSVAL

Specifies the name of the system value whose value is being changed. Most of the system values can be specified; however, some cannot have their values changed by this command. More

information on which values can be specified is in the Work Management  book.

VALUE

Specifies the new value of the system value. Some system values, such as QUSRLIBL and QCTLSBSD, may be made up of multiple character strings. These strings must be separated by blanks; apostrophes must surround the entire contents of the VALUE parameter. For system values that accept alphabetic characters, with the exception of QPRTTXT, letters that are entered in lowercase (a-z) are translated into uppercase (A-Z) even if they are enclosed in apostrophes. Some system values, such as QDATE and QDBRCVYWT, are zoned-decimal values (character in nature) and must also be enclosed in apostrophes when specified in this parameter. For numeric system values, apostrophes cannot be used. Descriptions of all system values are in the Work

Management  book. Enter the new values that meet the type, length, and range requirements for that system value.

Examples for CHGSYSVAL

Example 1: Changing the System Value of a Character Variable

```
CHGSYSVAL  SYSVAL(QHOUR)  VALUE('12')
```

This command changes the value of the system value QHOUR (which is a subvalue of the QTIME system value) to 12. Because QHOUR is a character variable, 2 characters long, the system value is set to the character representation of 12, which is hex F1F2 and, therefore, must be enclosed in apostrophes. Also, the QTIME system value is updated with this value because QHOUR is a subvalue of QTIME.

Example 2: Changing a System Value to Contain Multiple Character Strings

```
CHGSYSVAL  SYSVAL(QUSRLIBL)  
  VALUE('INVLIB STOCKLIB MYLIB')
```

This command changes the value of the system value QUSRLIBL, which specifies the default list of libraries in the user portion of the library list to be used for a job at the time the job is started. The user portion of the library list contains the libraries INVLIB, STOCKLIB, and MYLIB.

Error messages for CHGSYSVAL

***ESCAPE Messages**

CPF1001

Wait time expired for system response.

CPF1028

&1 not valid for parameter SYSVAL.

CPF1030

System value &1 cannot be changed.

CPF1058

VALUE parameter not correct for system value &1.

CPF1059

Length of value not correct for &1.

CPF1074

SYSVAL(QMONTH) not valid for Julian date format.

CPF1076

Specified value not allowed for system value &1.

CPF1078

System value &1 not changed.

CPF1079

Too many or too few values listed for &1.

CPF1127

Device specified for QPRTDEV not printer device.

CPF1132

Name specified for system value &1 not valid.

CPF1203

Keyboard identifier &1 not correct.

CPF18A4

User not authorized to change system value &1.

CPF1830

Specified values not valid for system value &1.

CPF1831

User not authorized to change system value &1.

CPF1832

Cannot change system value &1 during IPL.

CPF1842

Cannot access system value &1.

CPF1852

System value &1 not changed.

CPF1856

Filter type &4 not correct for system value &1.

CPF1857

Specified value for &1 not a code font.

CPF1864

User not authorized to change system value &1.

CPF210C

Library &1 not changed.

CPF268D

Unable to access system value &1.

CHGS36 (Change System/36) Command Description

CHGS36 Command syntax diagram

Purpose

The Change System/36 (CHGS36) command allows the user to change or update the description of the System/36 environment configuration. The original description of the System/36 environment is supplied by IBM.

There are no parameters for this command.

Example for CHGS36

CHGS36

This command allows the user to change the System/36 Environment description. This command allows the user to change display stations, printers, tapes, diskettes, 3270 device emulation, general environment values, and, if authorized, MRT security values.

Error messages for CHGS36***ESCAPE Messages****SSP0520**

System/36 environment is not active.

SSP0521

Command is not allowed in first-level procedure.

SSP0522

System/36 procedure is not active.

CHGS36A (Change System/36 Attributes) Command Description

CHGS36A Command syntax diagram

Purpose

The Change System/36 Attributes (CHGS36A) command allows the user to change the attributes of the System/36 environment configuration while the iSeries 400 is running in the System/36 environment.

Optional Parameters

SLIB Specifies the name of the default session library for users running jobs in the System/36 environment.

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

session-library-name: Specify the name of the default session library.

FLIB Specifies the default files library for users running jobs in the System/36 environment.

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

files-library-name: Specify the name of the default files library.

LIBL Specifies whether the library list is used when specifying database files for System/36 environment jobs.

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

***YES:** The library list is used to search for database files.

***NO:** The library list is not used to search for database files.

DATDIFF

Specifies whether jobs running in the System/36 environment can use files of the same name, distinguished by creation date.

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

***YES:** Jobs can use files of the same name if the files have different creation dates.

***NO:** Jobs cannot use files of the same name. Each file must have a unique name.

S36ESHARE

Specifies whether the System/36 environment opens database files in a way to allow an open data path (ODP) to be shared by multiple programs processing in the same job.

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

***YES:** Programs share an ODP to database files opened during the job. The shared files are held open between job steps.

***NO:** Programs do not share an ODP to database files opened during the job. Files are closed between job steps.

RCDBLK

Specifies whether the System/36 environment uses record blocking for sequential database files that share an ODP.

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

***YES:** Jobs running use record blocking for shared sequential files.

***NO:** Jobs running do not use record blocking for shared sequential files.

CACHEDLTF

Specifies whether database files deleted by the System/36 environment are stored in a cache.

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

***YES:** The deleted files are stored in a cache.

***NO:** The deleted files are not stored in a cache.

LPPAGE

Specifies the default number of lines printed on a page for all printers for jobs running in the System/36 environment when no lines-per-page are specified in the SET command or the FORMS or PRINTER OCL statement.

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

lines-per-page: Specify the number of lines per page. Valid values range from 1 through 112.

FORMTYPE

Specifies the form type of the default printer form which is used for System/36 printouts when no

form type is specified in the SET command or in the FORMS or PRINTER OCL statement. The form types used to indicate different printer forms are user-defined and can be a maximum of 4 characters in length.

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

***STD:** The standard form type is used.

form-type: Specify a user-defined form type.

DFTMSGACN

Specifies the default action used for escape messages issued by CL commands in procedures running in the System/36 environment. The default action is used for messages not in the message list and when there is no message list. The default action is not used if the message list contains a message ID.

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

***CONTINUE:** Processing continues with the next statement after the CL command. The ID of the escape message is saved and can be retrieved by the message ID substitution expression (?MSGID?).

***HALT:** The procedure is stopped. Processing continues as specified on the HALTOPT parameter.

***IGNORE:** The error is ignored and processing continues with the statement after the CL command. The ID of the escape message is not saved.

***CANCEL:** The procedure is canceled.

HALTOPT

Specifies a list of continuation options available when *HALT is specified for the default message action parameter. The list of options is a value consisting of up to 4 options with values ranging from 0 through 3, each of which represents an allowed response. If no options are specified, options 0 and 3 (value 03) are allowed. The meanings for the numbers assigned to the options are:

- 0** Continue. The message ID is saved for retrieval.
- 1** Retry the command. The message ID is not saved.
- 2** Cancel the job step. The message is saved for retrieval.
- 3** Cancel the job.

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

halt-options: Specify up to four continuation options. Multiple options must be specified in ascending order and each option must be unique. Each digit must be the character 0, 1, 2, or 3 (blanks are ignored).

EVKJOBINIT

Specifies how EVOKE jobs or job steps are started within the System/36 environment.

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

***IMMED:** The job queue is bypassed when starting jobs.

***JOBQ:** Jobs are started from the job queue.

EVKJOBPOL

Specifies the storage pool used for an EVOKE job that bypassed the job queue when starting to run in the System/36 environment.

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

***BASE:** The job uses the subsystem's base pool storage area.

***CURRENT:** The job uses the same storage pool as the submitting job.

EVKJOBPTY

Specifies the priority level at which an EVOKE job in the System/36 environment must be started when it bypasses the job queue.

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

***SUBMITTER:** The job is started with the same run priority as the submitting job.

priority-level: Specify a priority level. Valid values range from 1 through 99.

SRCRCLEN

Specifies the record length in bytes for System/36 source files QS36PRC and QS36SRC. These source files are created by System/36 environment utilities.

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

record-length: Specify the source file record length. Valid values range from 40 through 120 bytes (not including the extra 12 bytes required for the source sequence and date fields of each record).

CHGACT

Specifies whether the configuration object can be updated using the CHGS36 command while others are signed onto the System/36 environment.

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

***YES:** Allow users to change configuration information with the CHGS36 command while others are signed on to the System/36 environment.

***NO:** Do not allow users to change configuration information with the CHGS36 command while others are signed on to the System/36 environment.

ADDS36ONLY

Specifies when workstation devices should be added to the System/36 environment configuration.

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

***YES:** Add workstation devices to the configuration only when that device signs onto the System/36 environment.

***NO:** Add workstation devices to the configuration when that device is created.

ICFSUBST

Specifies if data received on an intersystem communications function (ICF) start request is scanned for substitution expressions.

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

***YES:** The data received on an ICF start request is scanned for substitution expressions, unless it is an ICF start request from a retail device or a finance device.

***NO:** The data received on an ICF start request is not scanned for substitution expressions. This value is preferable if the data may contain question marks that should not be treated as substitution expressions.

MRTUSRPRF

Specifies the user profile under which the Multiple Requester Terminal (MRT) program runs to check security in the System/36 environment.

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

***OWNER:** The MRT program runs under the profile of the MRT program owner.

***FRSTUSR:** The MRT program runs under the profile of the user that starts the program.

MRTAUT

Specifies which users are checked for their authority to obtain access to files used by the MRT program in the System/36 environment.

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

***ALLUSR:** All users are checked for their authority to obtain access to the files.

***FRSTUSR:** Only users who start MRT programs are checked for their authority to obtain access to the files.

MRTDLY

Specifies the time (in seconds) that the system delays (waits) before ending the MRT program in the System/36 environment. The specified value is not valid if the program is a never-ending program (NEP).

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

seconds-to-wait: Specify the number of seconds the system waits before ending the program. Valid values range from 0 to 32767 seconds.

MRTJOBINIT

Specifies how an MRT job is started in the System/36 environment.

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

***IMMED:** The job queue is bypassed when starting the job.

***JOBQ:** The job is started from the job queue.

MRTJOBPOL

Specifies the storage pool used for an MRT job started without using the job queue in the System/36 environment.

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

***BASE:** The job uses the subsystem's base pool storage area.

***CURRENT:** The job uses the same storage pool as the submitting job.

MRTJOBPTY

Specifies the priority level for starting an MRT job that bypasses the job queue.

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

***SUBMITTER:** The job starts with the same priority level as the submitting job.

priority-level: Specify the priority level for starting the job. Valid values range from 1 through 99.

Example for CHGS36A

```
CHGS36A  FLIB(MYLIB)  CACHEDLTF(*YES)  LPPAGE(66)
```

This command changes the value of the default files library to MYLIB for users running jobs in the System/36 environment. Storage for deleted files is changed to a cache. The number of lines printed on a page is changed to 66.

Error messages for CHGS36A

*ESCAPE Messages

None.

CHGS36MSGL (Change System/36 Message List) Command

Description

CHGS36MSGL Command syntax diagram

Purpose

The Change System/36 Message List (CHGS36MSGL) command determines the action taken for specific escape messages issued by Control Language (CL) commands in a procedure running in the System/36 environment. It is also used to set the default action for escape messages that are not specified.

This command is allowed to be external to a procedure only when SCOPE(*JOB) or SCOPE(*SESSION) is specified. It is not allowed in CL programs. It is valid only when the System/36 Environment is active.

For System/36 environment jobs that are started by the JOBQ command, the // JOBQ OCL statement, or the // EVOKE OCL statement, the initial message default action is taken from the job level of the submitting job. For other jobs, it is taken from the System/36 environment configuration. The Change System/36 Configuration (CHGS36) command can be used to set the initial message default action in the configuration.

Optional Parameters

MSGL Specifies a list of message IDs and the action that is taken for each message. One or more message IDs can be specified, along with the action that is taken for it. When a CL command issues an escape message, the message list is searched for the message ID and the specified action is taken. If the message ID is not found in the message list, the default action is taken.

The MSGL parameter can be specified only if SCOPE(*CURPRC) or SCOPE(*PRVPRC) is specified.

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

***NONE:** The message list is removed.

Element 1: Message ID Added to List

***ANY:** The specified action is taken for any message ID not previously found in the message list. Because this value matches any message, it should be the last message ID specified in the list. Message IDs specified after this value are ignored.

message-ID: Specify the message ID being added to the list. Each message ID must be exactly 7 characters in length and must conform to the rules for message IDs. Generic message IDs can be specified by ending the message ID with either 00 or 0000. For example, CPF1200 would match all messages beginning with CPF12, and CPF0000 would match all messages beginning with CPF.

The message list is searched in the order that it is specified on the command. Therefore, if the message list contains more than one message ID that matches the message ID being searched for, the first one is used. For example, if the message list contains CPF1200 followed by CPF1234, and the message CPF1234 is being searched for, the generic message ID is found first, and the action specified for that message ID is taken.

Element 2: Action Taken for Message ID

***CONTINUE:** Processing continues with the next statement after the CL command. The ID of the escape message is saved and can be retrieved by the ?MSGID? substitution expression.

***IGNORE:** Processing continues with the next statement after the CL command. The ID of the escape message is not saved, and the ?MSGID? substitution expression is null.

***HALT-options:** A halt with options is issued. This value may optionally be followed by a list of options allowed on the halt. If the options allowed are not specified, options 0 (continue) and 3 (cancel) are allowed.

The list of options is a value consisting of up to 4 numbers ranging from 0 through 3, each of which represents an option that is allowed in response to the halt. The meaning of each possible value in the list follows:

- 0 Continue. The ?MSGID? substitution expression is set.
- 1 Retry the command. The ?MSGID? substitution expression is not set.
- 2 Cancel the job step. The ?MSGID? substitution expression is set.
- 3 Cancel the job.

***CANCEL:** The procedure is canceled as if a // CANCEL statement had been processed.

***GOTO-label:** Control continues at the TAG label specified. This value must be followed by a label of up to 8 characters. If the specified label is not found in the procedure, message SYS3783 (TAG statement missing) is issued.

DFTACN

Specifies the default action that is taken for escape messages issued by CL commands in procedures running in the System/36 environment. The default action is taken for any message that is not in the message list and when there is no message list. The default action is not used if the message list contains a message ID of *ANY.

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

***CONTINUE:** Processing continues with the next statement after the CL command. The ID of the escape message is saved and can be retrieved by the ?MSGID? substitution expression.

***IGNORE:** Processing continues with the next statement after the CL command. The ID of the escape message is not saved, and the ?MSGID? substitution expression is null.

***HALT-options:** A halt with options is issued. This value may be followed by a list of options allowed on the halt. If the options to be allowed are not specified, options 0 (continue) and 3 (cancel) are allowed.

A list of options is a value consisting of up to 4 numbers ranging from 0 to 3, each of which represents an option that is allowed in response to the halt. The meaning of each possible value in the list follows:

- 0 Continue. The ?MSGID? substitution expression is set.
- 1 Retry the command. The ?MSGID? substitution expression is not set.
- 2 Cancel the job step. The ?MSGID? substitution expression is set.
- 3 Cancel the job.

***CANCEL:** The procedure is canceled as if a // CANCEL statement had been processed.

***GOTO-label:** Control continues at the TAG label specified. This value must be followed by a label of up to 8 characters. If the specified label is not found in the procedure, message SYS3783 (TAG statement missing) is issued.

SCOPE

Specifies the scope of the message list and default action entered on the command.

***CURPRC:** The message list and default action apply only to the procedure in which the command is placed. It is not propagated to lower level procedures, and it is not used after the procedure ends. This value can be entered only in a procedure.

***PRVPRC:** The message list and default action apply only to the procedure that called the procedure in which the command is placed. This value can be entered only in a procedure below first-level.

***JOB:** The default action applies to all procedures in the current System/36 job. The action takes effect immediately, and remains in effect until the first-level procedure ends. The default action specified applies to all procedures in the current job that do not have a default action set.

***SESSION:** The default action applies to all procedures run in the current session. It takes effect immediately, and remains in effect until the user signs off, enters the ENDS36 command, or issues another CHGS36MSGL command with SCOPE(*SESSION) specified.

Examples for CHGS36MSGL

Example 1: Setting Up a Message List

```
CHGS36MSGL MSGL((CPF9801 *GOTO NOTEXIST)
  ((CPF9802 CPF9820) *GOTO NOTAUT) (*ANY *HALT 3))
CHKOBJ ?2?/?1? *PGM
// GOTO OK
// TAG NOTEXIST
  (code to handle object does not exist messages)
// GOTO OK
// TAG NOTAUT
  (code to handle not authorized to object messages)
// TAG OK
CHGS36MSGL MSGL(*NONE)
```

This command sets up a message list to go to label NOTEXIST if message CPF9801 is issued, and to label NOTAUT if either message CPF9802 or CPF9820 is issued. If any other message is entered, a halt with only option 3 (cancel) is issued. The second CHGS36MSGL command removes the message list.

Example 2: Setting the ?MSGID? Substitution Expression

```
CHGS36MSGL MSGL((CPF2105 *IGNORE) (*ANY *CONTINUE))
DLTF ?FLIB?/?1?
// IFF ?MSGID?/ ... (handle error)
```

In this example, message CPF2105 (object not found) is ignored; that is, the ?MSGID? substitution expression is not set. For any other messages, the ?MSGID? substitution expression is set to the message ID. The procedure is attempting to delete a file that may or may not exist. Because the object not found exception is not considered an error in this case, it is ignored. Any other message is handled as an error.

Error messages for CHGS36MSGL

*ESCAPE Messages

SSP0520

System/36 environment is not active.

SSP0521

Command is not allowed in first-level procedure.

SSP0522

System/36 procedure is not active.

CHGS36PRCA (Change System/36 Procedure Attributes) Command Description

CHGS36PRCA Command syntax diagram

Purpose

The Change System/36 Procedure Attributes (CHGS36PRCA) command changes the attributes of the specified procedure.

Required Parameter

MBR Specifies the name of the procedure member that will have its attributes changed.

Optional Parameters

FILE Specifies the qualified name of the physical file containing the procedure member.

The name of the physical 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.

QS36PRC: The name of the default source physical file that contains the procedure member.

source-file-name: Specify the name of the source physical file containing the procedure member.

MRT Specifies whether the procedure is a multiple requester terminal (MRT) procedure.

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

***NO:** The procedure is not a multiple requester terminal procedure.

***YES:** The procedure is a multiple requester terminal procedure.

MRTDLY

Specifies whether the procedure uses the default MRT delay value.

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

***NO:** The procedure does not use the default MRT delay value.

***YES:** The procedure uses the default MRT delay value.

LOG Specifies whether the OCL statements are logged to the job log.

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

***NO:** The OCL statements are not logged to the job log.

***YES:** The OCL statements are logged to the job log.

PGMDTA

Specifies whether the procedure passes inline data to a program.

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

***NO:** The procedure passes parameters to the program.

***YES:** The procedure does not pass inline data to a program.

RCDLEN

Specifies the logical record length of the statements in the procedure member (used by the Save System/36 Library Member (SAVS36LIBM) command).

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

***FILE:** The maximum record length of the file containing the procedure member is used.

record-length: Specify the logical record length of the statements in the member. Valid values range from 40 through 120 and must be less than or equal to the record length of the file.

REFNBR

Specifies the reference number assigned to the procedure member.

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

***NEXT:** The current reference number is incremented by one. If the current reference number is 999999, then the reference number is returned to 0.

reference-number: Specify the reference number of the procedure member. Valid values range from 0 through 999,999.

Example for CHGS36PRCA

```
CHGS36PRCA MBR(RPGPROC) FILE(RPGLIB/QS36PRC)
MRT(*YES) RCDLEN(*FILE) REFNBR(*NEXT)
```

This command changes procedure RPGPROC in file QS36PRC in library RPGLIB to be an MRT procedure with a logical record length the same as the QS36PRC file, and increments the current reference number by one.

Error messages for CHGS36PRCA

***ESCAPE Messages**

CPF2C0A

Member &3 attributes not changed.

CPF2C0B

Changing attributes not allowed for SSP member &3.

CPF2C08

File &1 is not a source file.

CPF9803

Cannot allocate object &2 in library &3.

CPF9812

File &1 in library &2 not found.

CPF9815

Member &5 file &2 in library &3 not found.

CPF9820

Not authorized to use library &1.

CPF9822

Not authorized to file &1 in library &2.

CPF9826

Cannot allocate file &2.

CHGS36PGMA (Change System/36 Program Attributes) Command Description

CHGS36PGMA Command syntax diagram

Purpose

The Change System/36 Program Attributes (CHGS36PGMA) command changes the attributes of the specified program.

Required Parameter

PGM Specifies the qualified name of the program having its attributes changed.

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.

Optional Parameters

MRTMAX

Specifies the maximum number of multiple requester terminals that can be attached to the program.

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

number-of-requesters: Specify the maximum number of requesters for a program. Valid values range from 1 through 256. The value cannot be increased beyond the current value.

NEP Specifies whether the program is a never-ending program (NEP). NEP is defined as a long-running program.

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

***NO:** The program is not a never-ending program.

***YES:** The program is a never-ending program.

Example for CHGS36PGMA

```
CHGS36PGMA PGM(RPGLIB/RPGPGM) MRTMAX(3) NEP(*YES)
```

This command changes program RPGPGM in RPGLIB to allow up to three MRTs and to be a never-ending program.

Error messages for CHGS36PGMA

*ESCAPE Messages

- CPF2C01**
Program &1 attributes not changed.
- CPF2C02**
Changing attributes not allowed for SSP program &1.
- CPF2C03**
MRTMAX parameter value &3 not correct.
- CPF2C05**
Program name *ALL not allowed with library *LIBL.
- CPF9803**
Cannot allocate object &2 in library &3.
- CPF9811**
Program &1 in library &2 not found.
- CPF9820**
Program &1 in library &2 not found.
- CPF9830**
Cannot assign library &1.

CHGS36SRCA (Change System/36 Source Attributes) Command Description

CHGS36SRCA Command syntax diagram

Purpose

The Change System/36 Source Attributes (CHGS36SRCA) command changes the attributes of the specified source member.

Required Parameters

MBR Specifies the name of the source member whose attributes are being changed.

Optional Parameters

FILE Specifies the qualified name of the source physical file that contains the source member.
The name of the physical 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.

QS36SRC: The name of the default source physical file that contains the source member.

source-file-name: Specify the name of the source physical file that contains the source member.

SRCTYPE

Specifies the source type of the source member.

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

source-type: Specify the value for the source type of the member.

Value Type of member

ARS36	Automatic response member
ASM36	Assembler member
BAS36	BASIC member
BASP36	BASIC procedure (source member)
BGC36	Business graphics utility chart member
BGD36	Business graphics utility data member
BGF36	Business graphics utility format member
CBL36	COBOL member
DFU36	Data file utility member
DSPF36	Display format member
DTA36	Data member
FOR36	FORTTRAN member
MNU36	Menu member
MSGF36	Message member
PHL36	Phone list member
RPG36	RPG member
RPT36	RPG auto report member
SRT36	Sort member
WSU36	Work station utility member
UNS36	Unspecified

REFNBR

Specifies the reference number assigned to the source member.

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

***NEXT:** The current reference number is increased by one. If the current reference number is 999,999, then the reference number returns to 0.

reference-number: Specify the reference number of the source member. Valid values range from 0 through 999,999.

RCDLEN

Specifies the logical record length of the statements in the source member (used by the Create System/36 Message File (CRTS36MSGF), Create System/36 Menu (CRTS36MNU), and Save System/36 Library Members (SAVS36LIBM) commands).

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

***FILE:** The record length of the file specified by the FILE parameter is used.

record-length: Specify the logical record length of the statements in the member. Valid values range from 40 through 120 and must be less than or equal to the record length of the file.

MAXDEV

Specifies the maximum number of devices for a SFGR display file (used by the Create System/36 Display File (CRTS36DSPF) command).

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

number-of-devices: Specify the maximum number of devices for a source member. Valid values range from 1 through 256.

DFRWRT

Specifies that the writing of data to the display file is delayed until a read request is made. This parameter is used by the CRTS36DSPF (Create System/36 Display File) command when creating a display file from SFGR source located in this member. Control is returned to the requesting program immediately after the data is received for output. This may result in improved performance.

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

***YES:** When a write request is made to the display file, control is returned after the buffer is processed. The data might not be shown immediately; the actual display of the data might take place later when a read or combined write/read operation is performed. The buffer is then available for the next read or combined write/read operation.

***NO:** After a write operation to the display file, the entire input/output request is completed before returning control to the requesting program. All input/output feedback information will be available.

Examples for CHGS36SRCA

Example 1: Specifying Maximum Devices and Record Length

```
CHGS36SRCA MBR(SFGRSRC) FILE(SDALIB/QS36SRC)
REFNBR(*NEXT) RCDLEN(80) MAXDEV(5)
```

This command changes source member SFGRSRC in file QS36SRC in library SDALIB to allow up to five devices and to have a record length of 80. It also increases the current reference number by one.

Example 2: Turning Off the Defer Write Attribute

```
CHGS36SRCA MBR(SFGRSRC) FILE(SDALIB/QS36SRC)
REFNBR(*NEXT) RCDLEN(80) MAXDEV(5) DFRWRT(*NO)
```

This command changes source member SFGRSRC in the file QS36SRC in library SDALIB to allow up to five devices and to have a record length of 80. It also increases the current reference number by one and turns off the defer write attribute.

Error messages for CHGS36SRCA

*ESCAPE Messages

CPF2C0A

Member &3 attributes not changed.

CPF2C0B

Changing attributes not allowed for SSP member &3.

CPF2C08

File &1 is not a source file.

CPF9803

Cannot allocate object &2 in library &3.

CPF9812

File &1 in library &2 not found.

CPF9815

Member &5 file &2 in library &3 not found.

CPF9820

Not authorized to use library &1.

CPF9822

Not authorized to file &1 in library &2.

CPF9826

Cannot allocate file &2.

CHGTAPCTG (Change Tape Cartridge) Command Description

CHGTAPCTG Command syntax diagram

Purpose

The Change Tape Cartridge (CHGTAPCTG) command changes the specified cartridge from any category to the specified category.

Required Parameters

- DEV** Specifies the name of the library device to be used. The device name must have been created previously on the system using the Create Device Media Library (CRTDEVMLB) command.
- CTG** Specifies the cartridge identifiers that are to have their corresponding categories changed.

Note:

The cartridge identifier should represent the external identifier if the library device has a bar code scanner to read external identifiers.

***ALL:** All tape cartridges in the device are changed.

generic-cartridge-identifier:* Specify the generic name of the cartridge 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 cartridge identifiers with names that begin with the generic prefix. If an asterisk is not included with the generic (prefix) name, the system assumes it to be the complete cartridge identifier. See generic names for additional information.

cartridge-identifier: Specify a maximum of 40 cartridge identifiers to be changed.

Optional Parameter

CGY Specifies the category to which the tape cartridge is changed.

Note:

The category cannot be changed with this command if it is a *NOSHARE category unless the command is issued from the system that owns the rights of the *NOSHARE.

Element 1: Category Name

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

***NOSHARE**: The cartridge identifiers are changed to the *NOSHARE category. A cartridge with this identifier cannot be shared with other systems.

***IPL**: The cartridge identifiers are changed to the *IPL category. A cartridge with this identifier can be used for an alternate IPL.

***NL**: The cartridge identifiers are changed to the *NL category. A cartridge with this identifier is used as a non-labeled tape.

category-name: Specify the name of a user-defined category to which the cartridge identifiers are to be changed.

Element 2: Category System

The system name is obtained from the pending system name field of a Display Network Attributes (DSPNETA) command. If there is no pending system name, the current system name attribute is used.

Attention:

If the system name is changed, all category information associated with all tape cartridges in library devices owned by the system are no longer valid.

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

***CURRENT**: The category belongs to the system currently running the command.

system-name: Specify the name of the system to which the category belongs.

Single Value:

***SHARE400**: The cartridge identifiers are changed to the *SHARE400 category. A cartridge in this category can be shared with other systems attached to the same device.

Example for CHGTAPCTG

CHGTAPCTG DEV(LIB01) CTG(VOL1) CGY(*SHARE400)

This command changes the category associated with the cartridge identifier VOL1 to the category *SHARE400.

Error messages for CHGTAPCTG

*ESCAPE Messages

CPF6708

Command ended due to error.

CPF6711

Command not allowed

CPF6718

Cannot allocate device &1.

CPF6745

Device &1 not a media library device.

CPF67A6

Category does not exist

CPF67D2

Cartridge does not exist

CPF67D4

Category not available

CPF67E4

Library device function not successful

CPF67EA

Function not successful

CPF67F5

Duplicate cartridge ID found

CPF67F9

&6 cartridges not changed

CPF9814

Device &1 not found.

CPF9825

Not authorized to device &1.

CHGTAPF (Change Tape File) Command Description

CHGTAPF Command syntax diagram

Purpose

The Change Tape File (CHGTAPF) command changes, in the file description, one or more of the attributes of the specified tape device file.

Required Parameter

FILE Specifies the qualified name of the tape device file whose description is being changed.

The name of the tape device 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-device-file-name: Specify the name of the file being changed.

Optional Parameters

DEV Specifies the names of one or more tape devices or one media library device used with this tape device file to perform input and output data operations. A media library device is a tape storage device that contains one or more tape drives, tape cartridges, and a part (carriage and picker assembly) for moving tape media between the cartridge storage slots and the tape drives.

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

***NONE:** No device name is specified. The name of the tape device must be specified later in a CHGDSPF or OVRDSPF command, or in the HLL program that opens the file.

device-name: Specify the names of one or more devices (no more than four) or the name of one media library device used with this tape device file. The order in which the device names are specified is the order in which tapes on the devices are processed. When more volumes are processed than the number of devices in the DEV list, the devices are used in the same order specified, wrapping around to the first device as needed. Each device name must be known on the system by a device description before this device file is created.

VOL Specifies one or more volume identifiers used by the file. The volumes must be installed in the same order as the identifiers are specified here (and as they are specified on the DEV parameter). If the file is opened for read backward, then the volume identifiers in the list are processed from last to first (while the devices in the device list are used in first-to-last order). If a list of volume identifiers is provided for the file, operator messages indicate the name of the required volume. More information on this parameter is in Commonly used parameters.

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

***NONE:** No tape volume identifiers are specified for this file. They can be supplied before the device file is opened, either in a CHGTAPF or OVRTAPF command or in the high-level language program. If volume identifiers are not specified before the device file is opened, volume checking is not performed beyond verifying that the correct label type volume is on the device, and volume names are not provided in operator messages. The maximum number of reels processed for an *NL, *NS, *BLP, or *LTM input file when VOL(*NONE) is specified is determined by the REELS(number-of-reels) parameter value.

volume-identifier: Specify the identifiers of one or more volumes in the order in which they are placed on the device. Each volume identifier contains a maximum of 6 alphanumeric characters. Use a blank as a separator character when listing multiple identifiers. Up to 50 volume identifiers can be specified. These identifiers are used in messages sent to the operator during processing. The maximum number of reels processed for an *NL, *NS, *BLP, or *LTM input file is determined by the number of volume identifiers in the list.

Note:

If the VOL parameter value used for the file specifies a list of identifiers rather than VOL(*NONE), the number-of-reels part of the REELS parameter is ignored regardless of where it is specified. A description of how the parameter values for the file are determined when overrides are used, the high-level language interface, and the device file when the file is opened is in the File Management topic in the Information Center. To ensure that the number-of-reels part of the REELS parameter is used (rather than a VOL identifier list) to control the volumes processed by the tape device file, specify VOL(*NONE) in the same command in which the REELS parameter is specified.

REELS

Specifies the type of labeling used on the tape reels and the maximum number of reels processed if both a list of volume identifiers is not specified (VOL parameter) and this device file is used with either *NL, *NS, *LTM, or *BLP input files. When the number of reels is specified as the second element of this parameter, the volume identifiers on the volumes are ignored if labeled tapes are being processed; instead, the order in which the reels are installed on the device must be checked by the operator.

The number-of-reels value is not a limiting value for standard-label or output files. For a standard-label *input* file, the data file labels limit the number of volumes processed by indicating end-of-file. For an *output* file, the number-of-reels value is ignored; the system requests that additional volumes be kept on the device until the file is closed.

The system checks the first record following the load point on the tape to see (1) whether it has exactly 80 bytes for EBCDIC or at least 80 bytes for ASCII and (2) whether the first 4 bytes contain the values VOL and 1. If so, the reel contains a standard-label tape. *SL and *BLP files require standard-label tape volumes. *NL, *NS, and *LTM tape files cannot process standard-label volumes.

Note:

The values *SL, *NL, and *LTM can be specified if the device file is used for either reading or writing on tapes. The values *NS and *BLP are valid only if the device file is used to read tapes.

Element 1: Type of Labels

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

***SL:** The volumes have standard labels. If a list of volume identifiers is specified (with the VOL parameter), the system checks that the correct tape volumes are on the device in the specified sequence.

- If no volume identifier list is given and the file is opened for *output*, any standard-label volumes may be installed on the device.
- If no volume identifier list is given and the file is opened for *input*, the first volume may have any volume identifier, but if the file is continued, the system requires the correct continuation volumes to be processed (verified by checking the data file labels). For an input file, the end-of-file message is sent to the program being used when the labels on the last volume processed indicate that it is the last volume for the data file.

***NL:** The volumes are not labeled. On a nonlabeled volume, tape marks are used to indicate the end of each data file and the end of the volume. For an *input* file, the end-of-file message is sent

to the program when the number of volumes specified in the volume list have been processed, or, if no list of volume identifiers is provided, when the number of reels specified in the REELS parameter are processed.

***NS:** The volumes have nonstandard labels. Each volume must start with some kind of label information, optionally preceded by a tape marker and always followed by a tape marker. This nonstandard label information is ignored. The system spaces forward to a point beyond the tape marker that follows the nonstandard labels and positions the tape at the file's data. Each reel must have a tape marker at the end of the file's data. Information beyond this ending tape marker is ignored. Only a single data file can exist on a nonstandard tape. Standard-label volumes *cannot* be processed by using the *NS label processing.

For an *input* file, the end-of-file message is sent to the program using the file when the number of volumes specified in the volume list have been processed, or, if no list of volume identifiers is provided, when the number of reels specified in the REELS parameter are processed.

***BLP:** Standard-label processing is bypassed. Each reel *must* have standard labels. Although each reel is checked for a standard volume label and each file must have at least one standard header label (HDR1) and one standard trailer label (EOV1 or EOF1), most other label information (such as the data file record length or block length) is ignored. The sequence number of each file on the volume is determined only by the number of tape markers between it and the start of tape (in contrast to *SL processing in which the file sequence number stored in the header and trailer labels of each file are used to locate a data file).

Most of the information in the data file trailer label is ignored, but if an end-of-file (EOF) trailer label is found, the end-of-file message is sent to the program using the tape file. If no end-of-file trailer label is encountered by the time the specified number of volumes or reels have been processed (volume identifier list and REELS parameter), the end-of-file message is immediately sent to the program using the tape file. Bypass label processing can be used when the user does not know the name of the file used or when some file label information is incorrect.

***LTM:** The volumes have no labels but do have a single leading tape marker before the first data file. REELS(*LTM) is processed the same as REELS(*NL) except that when SEQNBR(1) is specified for an output file to create the first data file on the tape, a leading tape marker is written at the start of the tape before the first data block.

Element 2: Number of Reels

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

number-of-reels: Specify the maximum number of reels to be processed for an *NL, *LTM, *NS, or *BLP input tape operation when a list of volume identifiers is not specified (VOL parameter). If the next reel is not on the device when the end of the currently-processing tape is reached, a message is sent to the operator requesting that the next tape be installed on the next tape device. The number-of-reels value is ignored for a standard-label (*SL) file or for any output file.

SEQNBR

Specifies the sequence number of the data file on the tape being processed.

- When standard-label tapes are used, the four-position file sequence number is read from the first header label of the data file.
- When bypass label processing is used or when standard-label tapes are not used, the system counts the tape markers from the start of the tape to locate the correct sequence number data file to be processed.
- When multiple-file, multiple-volume tapes are processed using REELS(*SL), the file sequence numbers continue consecutively through the volumes; thus, each new data file has a sequence number one greater than the previous file, regardless of its volume location.

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

***END:** The file is written on the end of the tape. This value is used only for files that are written to tape.

An error message is shown on the display when a tape device file is used to read from a tape and the *END special value is specified in the tape device file.

***NEXT:** The next file in the sequence is processed. This value is used for files read from tape. If the tape is currently in a position that is prior to the first file, the first file on the tape is processed.

An error message is shown on the display when a tape file is used to write to a tape and the *NEXT special value is specified in the tape file.

file-sequence-number: Specify the sequence number of the file that is used. Valid values range from 1 through 65535.

LABEL

Specifies the data file identifier of the data file processed by this tape device file. An identifier is defined only for standard-label tapes and is stored in the header label immediately before the data file.

If a data file identifier is specified for any type of label processing other than *SL, it is ignored.

An identifier is required for a standard label output file, but is optional for an input file because the sequence number uniquely identifies the data file to process.

For an input file or output file with EXTEND(*YES) specified, this parameter specifies the identifier of the data file on the tape. The specified identifier must match the one in the labels of the data file that the SEQNBR parameter specifies; otherwise, an error message is sent to the program using this device file. For output files with EXTEND(*NO) specified, this parameter specifies the identifier of the data file to be created on the tape. More information on this parameter is in *Commonly used parameters*.

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

***NONE:** The data file identifier is not specified.

data-file-identifier: Specify the identifier (17 alphanumeric characters maximum) of the data file used with this tape device file. If this identifier is for a tape written in the basic exchange format, and is used on a system other than an iSeries 400, up to eight characters or a qualified identifier having no more than eight characters per qualifier must be used.

RCDLEN

Specifies, in bytes, the length of the records contained in the data file processed with this device file. The system always uses the record length and block length specified in the data file labels for any standard-label input file or output file with EXTEND(*YES) specified (if a second header label (HDR2) is found on the tape and *BLP label processing has not been specified).

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

***CALC:** No record length is specified for the data file being processed. If *CALC is specified, the system will attempt to calculate an appropriate record length when the file is opened. RCDLEN(*CALC) can be used for nonlabeled tapes or when there is no HDR2 label if a BLKLEN value other than *CALC is specified for the file and RCDBLKFMFMT does not specify spanned or blocked records. In this case, the system calculates an appropriate record length from the block length, record block format, and buffer offset (for an ASCII file) specified for the file. In any other case, the actual record length must be specified by a CHGTAPF command or OVRTAPF command, or in the high-level language program that opens the device file.

record-length: Specify a value ranging from 1 through 32767 bytes that indicates the length of each record in the data file. The minimum and maximum record length allowed for a file is dependent on the record block format, block length, buffer offset (for an ASCII file), and recording code. The *EBCDIC Record Length Values* and *ASCII Record Length Values* tables (at the end of this parameter description) show the minimum and maximum record length values allowed for each record block format, assuming the block length value is large enough to support the maximum record length.

Figure 1. EBCDIC Record Length Values (RCDLEN Parameter)

EBCDIC RCDLEN Ranges		
RCDLKFMT	FILETYPE(*DATA)	FILETYPE(*SRC)
*F *FB *U	18 - 32767	30 - 32767
*V *VB	1 - 32759	13 - 32767
*VS *VBS	1 - 32759	13 - 32767

ASCII RCDLEN Ranges		
RCDLKFMT	FILETYPE(*DATA)	FILETYPE(*SRC)
*F *FB *U	18 - 32767	30 - 32767
*D *DB	1 - 9995	13 - 10007
*VS *VBS	1 - 32759	13 - 32767

Figure 2. ASCII Record Length Values (RCDLEN Parameter)

ASCII RCDLEN Ranges		
RCDLKFMT	FILETYPE(*DATA)	FILETYPE(*SRC)
*F *FB *U	18 - 32767	30 - 32767
*D *DB	1 - 9995	13 - 10007
*VS *VBS	1 - 32759	13 - 32767

BLKLEN

Specifies, in bytes, the maximum length of the data blocks transferred to or from the tape for output or input operations. The system uses the block length and record length specified in the data file labels for any standard-label input file or output file with EXTEND(*YES) specified (if a second header label (HDR2) is found on the tape and *BLP label processing has not been specified).

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

***CALC:** No block length is specified for the data file to be processed. If *CALC is specified, the system attempts to calculate an appropriate block length when the file is opened. BLKLEN(*CALC) can be used for nonlabeled tapes or when there is no HDR2 label if a RCDLEN value other than *CALC is specified for the file and RCDLKFMT does not specify spanned or blocked records. In this case, the system calculates an appropriate block length from the record length, record block format, and buffer offset (for an ASCII file) specified for the file. In any other case, the actual block length must be specified by a CHGTAPF command or OVRTAPF command, or in the high-level language program that opens the device file.

block-length: Specify a value, not exceeding 524288 bytes, that specifies the maximum length of each block in the data file to be processed. The minimum block length that can be successfully processed is determined by the tape device hardware and iSeries 400 machine support functions.

- The maximum block length is always 524288 bytes for an input file, but is limited to 9999 bytes if block descriptors must be created for an ASCII output file.
- The following table shows the minimum and maximum block length values allowed for an output file:

CODE	BUFOFSET	Minimum BLKLEN	Maximum BLKLEN
*EBCDIC	Ignored	18	524288
*ASCII	0	18	524288
*ASCII	*BLKDSC	18	9999

BUFOFSET

Specifies the buffer offset value for the start of the first record in each block in the tape data file. A buffer offset value can be used for any record block format ASCII file, and is ignored for an EBCDIC tape file. The system uses the buffer offset specified in the data file labels for any standard-label input file or output file with EXTEND(*YES) specified if a value is contained in the second header label (HDR2) on the tape, and *BLP label processing has not been specified.

The buffer offset parameter specifies the length of any information that precedes the first record in the block. For record block formats *D, *DB, *VS, and *VBS, each record or record segment is preceded by a descriptor that contains the length of the record or segment. A buffer offset value is used to indicate that there is information *ahead* of the descriptor word for the first record in each block, or *ahead* of the data of the first fixed-length record or undefined format record in each block.

This parameter is not needed for a standard-label file processed for input if the tape includes a second file header label (HDR2) that contains the buffer offset value. A buffer offset value must be provided by the Create Tape File (CRTTAPF) command, Change Tape File (CHGTAPF) command, or Override Tape File (OVRTAPF) command, or by the file labels for an input file that contains any information (such as a block descriptor) ahead of the first record in each block. If the user does not specify a buffer offset value when a tape file is created, it is not necessary to specify an offset value when the file is read.

The only buffer offset values allowed for an output file are zero and *BLKDSC. An existing standard-label data file with a buffer offset value in the HDR2 label can be extended only if the buffer offset value is either 0 or 4. A buffer offset value of 0 in the HDR2 label adds data blocks with *no* buffer offset. BUFOFSET(*BLKDSC) must be specified to extend an existing tape data file that contains an offset value of 4 in the HDR2 label.

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

***BLKDSC:** Creates 4-byte block descriptors in any tape file created by using this device file. Any input file read by using this device file should assume 4 bytes of buffer offset information preceding the first record in each data block. This value is valid only for a record block format *D or *DB file. The contents of the buffer offset information of each output data block when BUFOFSET(*BLKDSC) is specified is the actual length of the data block, expressed in zoned decimal format.

buffer-offset: Specify a value ranging from 0 through 99 bytes that specifies the length of the buffer offset information that precedes the first record in each data block.

RCDBLKFMNT

Specifies the type and blocking attribute of records in the tape data file being processed.

Record block format *V and *VB records can be processed only for an EBCDIC file; *D and *DB records can be processed only for an ASCII file. If a standard-label tape (label type *SL or *BLP)

is being processed and an inconsistent record block format is specified for the volume code, the correct record type is assumed (V or D) for the volume code and a warning message is sent to the program that opens the file. If the record type and code are inconsistent for a nonlabeled volume (label type *NL, *LTM, or *NS), an error message is sent and the file is *not* opened, because there are no labels to verify the correct volume code.

If a valid record length, block length, and buffer offset value (for an ASCII file) are specified for fixed-length records but the block attribute is incorrect, the correct block attribute is assumed (changing record block format *F to *FB or record block format *FB to *F), and a warning message is sent to the program that opens the file.

If a block length is specified that is longer than required to process a maximum length record, then record block format *V, *D, or *VS is changed to *VB, *DB, or *VBS and a warning message is sent to the program that opens the file.

The *Required RCDLEN/BLKLEN/BUFOFSET Relation* table, at the end of this parameter description, shows the required relationship between the record length, block length, and buffer offset (for ASCII) file parameters for an output file or an input file where the file parameters are not determined from a second file header label (HDR2).

Note:

When BUFOFSET(*BLKDSC) is specified for the file, a value of 4 should be used for the BUFOFSET part of any BLKLEN calculations, unless existing file labels on the tape specify a different value.

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

***FB:** Fixed-length, blocked, unspanned records in either EBCDIC or ASCII code are processed. The system may change this record block format to *F, based on other file parameters.

***F:** Fixed-length, unblocked, unspanned records in either EBCDIC or ASCII code are processed. The system may change this record block format to *FB, based on other file parameters.

***V:** Variable-length, unblocked, unspanned records in EBCDIC type V format are processed. The system may change this record block format to *VB, *D, or *DB, based on other file parameters.

***VB:** Variable-length, blocked, unspanned records in EBCDIC type V format are processed. The system may change this record block format to *DB, based on the volume code.

***D:** Variable-length, unblocked, unspanned records in ASCII type D format are processed. The system may change this record block format to *DB, *V, or *VB, based on other file parameters.

***DB:** Variable-length, blocked, unspanned records in ASCII type D format are processed. The system may change this record block format to *VB, based on the volume code.

***VS:** Variable-length, unblocked, spanned records in either EBCDIC or ASCII code are processed. The system may change this record block format to *VBS, based on other file parameters. Note that the representation of spanned records on the tape is different for EBCDIC and ASCII files, but the system selects the correct format based on the file code.

***VBS:** Variable-length, blocked, spanned records in either EBCDIC or ASCII code are processed. Note that the representation of spanned records on the tape differs for EBCDIC and ASCII files, but the system selects the correct format based on the file code.

***U:** Undefined format records in either EBCDIC or ASCII code are processed. RCDBLKFM(*U) records are processed as variable-length records, and each record written or read is in a separate tape block. This format can be useful for processing tape files that do not have the formatting requirements of any other record block format.

Figure 3. Required RCDLEN/BLKLEN/BUFOFSET Relation

Table 1. Required RCDLEN/BLKLEN/BUFOFSET Relation

CODE	RCDBLKFM	BLKLEN ¹
*EBCDIC	*F *U	= RCDLEN
*ASCII	*F *U	= RCDLEN + BUFOFSET
*EBCDIC	*FB	= RCDLEN * n
*ASCII	*FB	= (RCDLEN * n) + BUFOFSET
		(where n is the number of records in a maximum-length block)
*EBCDIC	*V	= RCDLEN * 8
*ASCII	*D	= RCDLEN * 4 + BUFOFSET
*EBCDIC	*VB	>= RCDLEN + 8
*ASCII	*DB	>= RCDLEN + 4 + BUFOFSET
*EBCDIC	*VS *VBS	>= 18
*ASCII	*BS *VBS	>= 6 + BUFOFSET (18 minimum)

¹ Block length (BLKLEN) is a function of record length (RCDLEN) and buffer offset (BUFOFSET).

EXTEND

Specifies, for output operations to tape, whether new records are added to the end of a data file currently on the tape. The specific data file is identified by the SEQNBR parameter and, for a standard-label file, the LABEL parameter. If the data file is extended, it becomes the last file on the tape volume; data files that follow it are overwritten as the specified file is extended.

Note:

This parameter is not valid for 1/4-inch cartridge tape devices.

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

***NO:** Records are not added to the end of the specified data file. If there is already a data file with the specified SEQNBR on the tape, a new data file is created by overwriting the existing data file and any files that follow it.

Element 1: Adding Records to Data File

***YES:** New records are added to the end of the specified data file on tape when this device file is used.

Element 2: Checking Active Files

***NOCHECK:** The file is extended without being checked to see whether the file is active.

***CHECK:** Before the file is extended, the file is checked to see whether it is active.

DENSITY

Specifies the density of the data that is written on the tape volume when this device file is created.

This parameter is used only for tape files being written to tape; it is ignored for tape files being read from the tape (in the case of files being read from tape, the density on the tape is used).

The density of a standard-label volume is specified on the INZTAP command, which initializes tapes as standard-label volumes by writing volume labels on them. If the density specified on this parameter is different than the density of a standard-labeled tape, the density currently on tape is used and a warning message is sent. The density of a standard-label volume can only be changed by re-initializing the tape.

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

***DEVTYPE:** The highest capacity density or format supported by the tape device will be used.

Tape device

Highest capacity density or format

2440 6250

3422 6250

3430 6250

3480 *FMT3480

3490E *FMT3490E

3570-BXX

*FMT3570

3570-CXX

*FMT3570E

3580-001

*ULTRIUM1

3590 *FMT3590

3590-Exx

*FMT3590E

6335 *QIC3040

6341 *QIC120

6342 *QIC525

6343 *QIC1000

6344 *QIC2GB

6346 *QIC120

6347 *QIC525

6348 *QIC1000

6349 *QIC2GB

6366 *QIC120

6368 *QIC1000

6369 *QIC2GB

6378 *QIC525

6379 *QIC1000

6380 *QIC2GB

6381 *QIC2DC

6382 *QIC4DC
6383 *QIC5010
6385 *QIC5010
6386 *MLR3
6387 *SLR100
6390 *FMT7GB
7207-122
 *QIC4DC
7208-002
 *FMT2GB
7208-012
 *FMT5GB
7208-222
 *FMT7GB
7208-342
 *FMT20GB
9346 *QIC120
9347 3200
9348 6250

***CTGTYPE:** The highest capacity density or format supported by the device for the mounted cartridge type will be used. If the device does not support special cartridge type information, *DEVTYPE is used.

tape-density: Specify the density or format to use.

1600 The data density on the tape volume is 1,600 bits per inch, which is used for 1/2 inch reel tapes.

3200 The data density on the tape volume is 3,200 bits per inch, which is used for 1/2 inch reel tapes.

6250 The data density on the tape volume is 6,250 bits per inch, which is used for 1/2 inch reel tapes.

***FMT3480**

The format of this tape is FMT3480. The data density on this tape volume is formatted to support a 3480 device. This density is used for 1/2 inch cartridge tapes.

***FMT3490E**

The format of this tape is FMT3490E. The data density on this tape volume is formatted to support a 3490E device. This density is used for 1/2 inch cartridge tapes.

***FMT3570**

The format of this tape is FMT3570. The data format is written on the tape volume with a 3570 device.

***FMT3570E**

The format of this tape is FMT3570E. The data format is written on the tape volume with a 3570E device.

***FMT3590**

The format of this tape is FMT3590. The data format is written on the tape volume with a 3590 device. This density is used for 1/2 inch cartridge tapes.

***FMT3590E**

The format of this tape is FMT3590E. The data format is written on the tape volume with a 3590E device. This density is used for 1/2 inch cartridge tapes.

***QIC120**

The format of this tape is QIC120, which is used for 1/4 inch cartridge tapes that can hold 120 megabytes of data.

***QIC525**

The format of this tape is QIC525, which is used for 1/4 inch cartridge tapes that can hold 525 megabytes of data.

***QIC1000**

The format of this tape is QIC1000, which is used for 1/4 inch cartridge tapes that can hold 1200 megabytes of data.

***QIC2GB**

The format of this tape is QIC2GB. It is used by 1/4 inch tape devices which can store 2.5 gigabytes of data on a standard length QIC2GB cartridge.

***QIC2DC**

The format of this tape is QIC2DC. It is used to write compacted data to a 1/4 inch cartridge that supports the QIC2GB format.

***QIC4GB**

The format of this tape is QIC4GB. It is used by 1/4 inch tape devices which can store 4 gigabytes of data on a standard length QIC4GB cartridge.

***QIC4DC**

The format of this tape is QIC4DC. It is used to write compacted data to a 1/4 inch cartridge that supports the QIC4GB format.

***QIC3040**

The format of this tape is QIC3040, which is used for 1/4 inch minicartridge tapes that can hold 840 megabytes of data.

***QIC5010**

The format of this tape is QIC5010, which is used for 1/4 inch cartridge tapes that can hold 13.5 gigabytes of data.

***MLR3**

The format of this tape is MLR3. It is used by 1/4 inch tape devices which can store 25 gigabytes of data on a standard length MLR3 cartridge.

***SLR100**

The format of this tape is SLR100. It is used by 1/4 inch tape devices which can typically store 100 gigabytes of compacted data on a standard length SLR100 cartridge.

***FMT2GB**

The format of this tape is FMT2GB, which is used for 8 millimeter cartridge tapes that can hold 2 gigabytes of data.

***FMT5GB**

The format of this tape is FMT5GB, which is used for 8 millimeter cartridge tapes that can hold 5 gigabytes of data.

***FMT7GB**

The format of this tape is FMT7GB, which is used for 8 millimeter cartridge tapes that can hold 7 gigabytes of data.

***FMT20GB**

The format of this tape is FMT20GB. It is used by 8 millimeter tape devices that can store 20 gigabytes of data on a standard length cartridge.

***ULTRIUM1**

The format of this tape is ULTRIUM1. It is used by 1/2 inch cartridge tape devices that can store 100 gigabytes of data on a standard length cartridge.

Note: Some of the density values shown can only be specified when a tape device which supports that density is attached to the system.

Note: Self-configured tape devices may define additional valid values for the density parameter. Use iSeries 400 Operations Navigator (Configuration and Service) (Hardware) (Tape Units) (Properties) to find additional valid density values for a specific device, or use the F4=Prompt key on the Tape density field of the CL command to see a list of all valid density values for the attached tape devices.

COMPACT

Specifies whether device data compaction is performed. If the tape devices being used do not support data compaction, this parameter will be ignored when the file is opened.

***SAME:** The value specified in the device file description does not change.

***DEVD:** Device data compaction is performed if the devices being used support data compaction.

***NO:** Device data compaction is not performed.

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).

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

***EBCDIC:** The extended binary-coded decimal interchange code (EBCDIC) character set code is used.

***ASCII:** The ASCII character set code is used.

CRTDATE

Specifies, for tape input data files and for tape output for which EXTEND(*YES) is specified, the date when the data file was created (written on tape).

Note: The data file creation date is stored in file labels on the tape. If a creation date is specified for any type of label processing other than standard-label (*SL), it is ignored. If the creation date written on the tape containing the data file does not match the date specified in this device file description, an inquiry message is sent to the operator.

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

***NONE:** The creation date is not specified. It is not checked unless it is supplied before the device file is opened, either in a OVRTAPF command or CHGTAPF command, or in the high-level language program.

creation-date: Specify the creation date of the data file used by this device file. The date must be specified in the format defined by the job attributes DATFMT and, if separators are used, DATSEP.

EXPDATE

Specifies, for tape output data files only, and only when standard-labeled tapes are used, the expiration date of the data file used by this device file. If a date is specified, the data file is protected and cannot be overwritten until after the specified expiration date. The files cannot be overwritten until after the expiration date.

Note:

The data file expiration date is stored in file labels on the tape. If an expiration date is specified for any type of label processing other than *SL, it is ignored.

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

***NONE:** No expiration date for the data file is specified; the file is not protected. An expiration date is written in the data file labels so the file can be used as a scratch data file.

***PERM:** The data file is permanently protected. An expiration date of 999999 is assigned.

expiration-date: Specify the date on which the data file expires, after which it can be overwritten with new data. The expiration date must be later than or equal to the current date. The date must be specified in the format defined by the job attributes QDATFMT and, if separators are used, QDATSEP.

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.

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

***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.

This option is used to reduce the time required to position the tape if the next tape file that opens to this device uses a data file that is on this volume.

Note:

Even if ENDOPT(*LEAVE) is specified, the next tape file opened to this reel is positioned at the beginning of some data file on the volume (or at the end of a data file, for either read backward or for output that extends an existing data file on the volume). A tape file is always positioned at the start or end of a data file when it is opened.

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

USRLBLPGM

Specifies the qualified name of the user program that processes user tape labels. On an output file, the user label program will pass the user labels that are written to tape. On an input file, the user labels are passed to the user label program.

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

***NONE:** There is no user label program for this device file.

The name of the user label 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-label-program-name: Specify the name of the user program that processes the user tape labels. If no library qualifier is given, *LIBL is used to find the file.

IGCDTA

Specifies whether the file processes double-byte character set (DBCS) data.

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

***YES:** The file processes DBCS data.

***NO:** The file does not process DBCS data.

WAITFILE

Specifies the number of seconds that the program waits for the file resources and session resources to be allocated when the file is opened, or for the device or session resources to be allocated when an acquire operation is performed to the file. If those resources are not allocated within the specified wait time, an error message is sent to the program. More information on this parameter is in Commonly used parameters.

Note:

An immediate allocation of the device by the device resource is required when an acquire operation is performed to the file.

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

***IMMED:** The program does not wait; when the file is opened, an immediate allocation of the file resources is required.

***CLS:** The job default wait time is used as the wait time for the file resources being allocated.

number-of-seconds: Specify the number of seconds that the program waits for the file resources to be allocated to the tape file when the file is opened, or the wait time for the device allocated when an acquire operation is performed to the file. Valid values range from 1 through 32767 seconds.

SHARE

Specifies whether the open data path (ODP) for the tape file is shared with other programs in the routing step. When an ODP is shared, the programs accessing the file share facilities such as the file status and the buffer.

More information on shared database files is in the Database Programming topic in the Information Center.

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

***NO:** The ODP created by the program with this attribute is not shared with other programs in the routing step. Every time a program opens the file with this attribute, a new ODP to the file is created and activated.

***YES:** The ODP created with this attribute is shared with each program in the routing step that also specifies SHARE(*YES) when it opens the file.

Note: When SHARE(*YES) is specified and control is passed to a program, a read operation in that program retrieves the next input record. A write operation produces the next output record.

TEXT Specifies the text that briefly describes the tape device file. More information on this parameter is in Commonly used parameters.

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

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Examples for CHGTAPF

Example 1: Changing the Tape File Description

```
CHGTAPF FILE(TAPE01) LABEL(TUESDAY)
```

This command changes the description of the tape device file named TAPE01. The LABEL parameter now contains the data file identifier TUESDAY.

Example 2: Enabling a Tape File to Process DBCS Data

```
CHGTAPF FILE(IGCLIB/IGCTAP) IGCDA(*YES)
```

This command changes the tape file IGCTAP, which is stored in the library IGCLIB, so that the file processes double-byte character set data.

Error messages for CHGTAPF

*ESCAPE Messages

CPF7304

File &1 in &2 not changed.

CHGTCPA (Change TCP/IP Attributes) Command Description

CHGTCPA Command syntax diagram

Purpose

The Change TCP/IP Attributes (CHGTCPA) command is used to change the TCP, UDP, IP, and ARP protocol layer attributes. The changes take effect immediately.

Restriction: You must have *IOSYSCFG special authority to use this command.

Optional Parameters

TCPKEEPALV

Specifies the amount of time, in minutes, that TCP waits before sending out a probe to the other side of a connection. The probe is sent when the connection is otherwise idle, even when there is no data to be sent.

Note:

The transmission of keep-alive packets is controlled by individual sockets applications through use of the `SO_KEEPALIVE` socket option.

***SAME:** The keep-alive time interval value does not change from its current setting.

***DFT:** The keep-alive time interval value of 120 minutes is used.

TCP-keep-alive: Specify a keep-alive time interval in minutes. Valid values range from 1 through 40320 minutes (28 days).

TCPURGPTR

Specifies which convention to follow when interpreting which byte the urgent pointer in the TCP header points to. The urgent pointer in the TCP header points to either the byte immediately following the last byte of urgent data (BSD convention) or the last byte of the urgent data (RFC convention).

Note:

This value must be consistent between the local and remote ends of a TCP connection. Socket applications that use this value must use it consistently between the client and server applications. This value is set on a system basis. All applications using this system will use this value.

***SAME:** The urgent pointer value does not change from its current setting.

***BSD:** Use the BSD defined convention. The TCP urgent pointer points to the byte immediately following the last byte of urgent data. This is the initial value.

***RFC:** Use the RFC defined convention. The TCP urgent pointer points to the last byte of the urgent data.

TCPRCVBUF

Specifies what to allocate for the default receive buffer size. The TCP receive window size is based on this value. Decreasing this value decreases the amount of data that the remote system can send before being read by the local application. Decreasing this value may improve performance in situations where many retransmissions occur due to the overrunning of a network adapter.

Notes:

1. User Datagram Protocol (UDP) does not have a configurable receive buffer size.
2. This value is also used as the default receive buffer size by IP over SNA processing.
3. Setting this parameter does not guarantee the size of the TCP receive buffer. This is the default buffer size that is used for initial TCP connection negotiations. An individual application can override this value by using the `SO_RCVBUF` socket option.

***SAME:** The TCP receive buffer size does not change from its current value.

***DFT:** The default TCP receive buffer size of 8192 (8K) is used.

TCP-receive-buffer-size: Specify the TCP receive buffer size. Valid values range from 512 through 8388608 (8MB) bytes.

Note: Setting the TCPRCVBUF size to a large value, 8388608 for example, can cause storage allocation problems on your machine. This is because every TCP connection allocates 8MB of storage for its receive buffer.

TCPSNDBUF

Specifies the TCP send buffer size. This parameter informs TCP what to use for the default send buffer size. The TCP send buffer size provides a limit on the number of outgoing bytes that are buffered by TCP. Once this limit is reached, attempts to send additional bytes may result in the application blocking until the number of outgoing bytes buffered drops below this limit. The number of outgoing bytes buffered is decremented when the remote system acknowledges the data sent.

Notes:

1. This value is used also as the default send buffer size by IP over SNA processing.
2. UDP does not have a configurable send buffer size.
3. Setting this parameter does not guarantee the size of the TCP send buffer. This is the default buffer size that is used for initial TCP connection negotiations. An individual application can override this value by using the SO_SNDBUF socket option.

***SAME:** The TCP send buffer size does not change from its current value.

***DFT:** The default TCP send buffer size of 8192 (8K) is used.

TCP-send-buffer-size: Specify the TCP send buffer size. Valid values range from 512 through 8388608 (8MB) bytes.

TCPR1CNT

Specifies the TCP R1 retransmission count value. This parameter is a counter that specifies the number of TCP retransmissions that will be attempted before TCP requests a different network route from IP.

Note: The R1 retransmission count value must be less than the R2 retransmission count value.

***SAME:** The TCP R1 retransmission count does not change from its current value.

***DFT:** The default TCP R1 retransmission count value of 3 is used.

TCP-R1-retransmission-count-value: Specify the TCP R1 retransmission count value. Valid values range from 1 through 15.

TCPR2CNT

Specifies the TCP R2 retransmission count value. This parameter is a counter that specifies the total number of TCP retransmissions that will be attempted before TCP assumes that the connection has been lost and stops retransmitting.

Note: The R2 retransmission count value must be greater than the R1 retransmission count value.

***SAME:** The TCP R2 retransmission count does not change from its current value.

***DFT:** The default TCP R2 retransmission count value of 16 is used.

TCP-R2-retransmission-count-value: Specify the TCP R2 retransmission count value. Valid values range from 2 through 16.

» TCPMINRTM

Specifies the TCP minimum retransmit time value which is the lowest amount of time (expressed in milliseconds) to elapse before TCP decides that a transmitted packet is lost and needs to be sent again.

***SAME:** The TCP minimum retransmit time value does not change from its current value.

***DFT:** The default TCP minimum retransmit time value of 250 milliseconds is used.

TCP-minimum-retransmit-time-value: Specify the TCP minimum retransmit time value. Valid values range from 100 through 1000 milliseconds. «

TCPCLOTIMO

Specifies the TCP closed connection wait timeout value. This parameter indicates the amount of time, in seconds, for which a socket pair (client IP address and port, server IP address and port) cannot be reused after a connection is closed. The maximum value possible is 14400 seconds.

Note: Setting the wait timeout value to 0 means that a timer will not be used.

***SAME:** The timeout value does not change from its current value.

***DFT:** The default timeout value of 120 seconds is used.

TCP-closed-connection-wait-timeout-value: Specify the TCP closed connection wait timeout value. Valid values range from 0 through 14400 seconds (4 hours).

» TCPCNNMSG

Specifies whether abnormally closed TCP connections will be logged via messages to the QTCP message queue. TCP connections could be abnormally closed for the following reasons:

- TCP connection closed due to the 10 minute Close_Wait time_out.
- TCP connection closed due to the R2 retry threshold being exceeded.
- TCP connection closed due to the keepalive time-out value being exceeded.

***SAME:** The value does not change from its current value.

***THRESHOLD:** At most, one abnormally closed TCP connection message per minute will be logged. TCPCNNMSG(*THRESHOLD) is the initial value.

***NONE:** Abnormally closed TCP connections will not be logged.

***ALL:** All abnormally closed TCP connections will be logged. Note that there are some conditions that could cause MANY closed connection messages to be logged at the same time. «

UDPCKS

Specifies whether UDP processing should generate and validate checksums. It is strongly recommended that you specify UDPCKS(*YES) to use UDP checksum processing. If you are concerned about obtaining the best possible performance and are not concerned with the protection provided by UDP checksum processing, specify UDPCKS(*NO).

***SAME:** The status of checksum protection for UDP data does not change from its current value.

***YES:** Checksum protection is provided for UDP data. UDPCKS(*YES) is the initial value.

***NO:** Checksum protection is not provided for UDP data.

IPDTGFWD

Specifies whether the IP layer forwards Internet Protocol (IP) datagrams between different networks. It specifies whether the IP layer is acting as a gateway.

Note:

IP does not forward datagrams between interfaces on the same subnet.

The iSeries 400 implementation of TCP/IP does not include full gateway function as defined in RFC1009. A subset of the gateway functions are supported. One of the gateway functions supported is IP datagram forwarding capabilities.

***SAME:** The IP datagram forwarding status does not change from its current value.

***NO:** IP datagrams are not forwarded. IPDTGFWD(*NO) is the initial value.

***YES:** IP datagrams are forwarded.

IPRSBTIMO

Specifies, in seconds, the IP datagram reassembly time. If this time is exceeded, a partially reassembled datagram is discarded and an ICMP time exceeded message is sent to the source host.

***SAME:** The assembly time does not change from its current setting.

***DFT:** The default assembly time of 10 seconds is used.

IP-reassembly-time-out: Specify an IP reassembly time in seconds. Valid values range from 5 through 120 seconds.

IP TTL Specifies the default TTL value. The IP datagram time-to-live value specifies a relative limit on the number of hops across which an IP datagram remains active. The time-to-live value acts as a “hop count” that is decremented by each gateway to prevent internet routing loops.

Note:

Even though this parameter is specified as a time-to-live value, it is not used as a time value. It is used as a counter. The standard description is *time to live* as specified in RFCs.

Note:

This default IP datagram time-to-live value is not used for datagrams sent to an IP multicast group address. The default IP datagram time-to-live value for datagrams sent to an IP multicast group is always 1 as specified by the Internet standards. Individual multicast applications may override this default using the IP_MULTICAST_TTL socket option.

***SAME:** The time-to-live value does not change from its current setting.

***DFT:** The default time-to-live value of 64 is used.

IP-time-to-live: Specify an IP time-to-live value. Valid values range from 1 through 255.

IPSRCRTG

Specifies whether the IP layer will support source routing.

***SAME:** The IP source routing status does not change from its current value.

***YES:** IP source routing is allowed. IPSRCRTG(*YES) is the initial value.

***NO:** IP datagrams found with IP source routing turned on will be rejected.

IPPATHMTU

Specifies whether the path Maximum Transmission Unit (MTU) discovery function will be enabled on this system. Path MTU discovery allows for dynamic MTU adjustment, on a per connection basis, in order to maximize network throughput.

Element 1: Path MTU Discovery Enablement

***SAME:** The path MTU discovery enablement status and path MTU discovery time interval do not change from their current values.

***DFT:** The default path MTU discovery enablement status is *YES and the default path MTU discovery time interval is 10 minutes.

***NO:** Path MTU discovery is not enabled for this system.

***YES:** Path MTU discovery is enabled for this system.

Element 2: Path MTU Discovery Interval

Specifies the amount of time, in minutes, that the TCP/IP protocol stack will cache the results of a path MTU discovery. When the time interval is exceeded, the path MTU is rediscovered.

Note: In order for the path MTU discovery interval element to be specified, the first element must be set to *YES.

Note: The use of Path MTU discovery for UDP applications is controlled by individual sockets applications through use of the SO_PATHMTU socket option.

10: A path MTU discovery interval of 10 minutes is used.

***ONCE:** Once a path MTU is discovered, it is not recalculated.

IP-path-MTU-interval: Specify a path MTU discovery interval in minutes. Valid values range from 5 through 40320 minutes (28 days).

IPQOSEN

Specifies whether Quality of Service (QoS), IP Type of Service (TOS), or neither of the two are enabled.

***SAME:** The QoS enablement value does not change from its current setting.

***TOS:** Use TOS byte in the IP header.

***YES:** Use QoS.

***NO:** Do not use QoS or TOS. This is the initial value.

IPQOSBCH

Specifies the type of datagram batching used by Quality of Service (QoS). This parameter determines to what extent QoS will batch datagrams so as to optimize performance at the risk of increasing jitter, or delay. The *NORMAL setting maximizes performance by doing more batching

of datagram packets. The *MINDELAY setting minimizes delay by doing less batching of datagram packets and just sending them when they are ready. This parameter is only in effect if IPQOSEN(*YES) is defined.

***SAME:** The QoS datagram batching value does not change from its current setting.

***NORMAL:** Maximize performance with a longer delay to allow more batching of datagram packets. This is the initial value.

***MINDELAY:** Minimize delay by reducing the amount of time that datagram packets are held for batching before being transmitted.

IPQOSTMR

Specifies the Quality of Service (QoS) timer resolution value. This parameter influences the amount of control possible over delay variations. A higher timer resolution value contributes to more jitter (delay), and a lower timer resolution uses more CPU time. This value is given in milliseconds. The timer resolution value that can be tolerated is very dependent on the application. For example, video is highly sensitive to large delay variations. In order to achieve a smooth rate of flow, timers need to use small timer increments. The smaller the resolution, the smoother the data flow but at a higher cost in terms of system overhead to manage timers. This parameter is only in effect if IPQOSEN(*YES) is defined.

***SAME:** The QoS timer resolution value does not change from its current setting.

***DFT:** The default QoS timer resolution value of 100 milliseconds is used.

IP-QoS-timer-resolution: Specify an IP QoS timer resolution value. Valid values range from 5 through 5000 milliseconds.

IPDEADGATE

Specifies whether dead gateway detection will be enabled on this system. Dead gateway detection is a mechanism which involves polling all attached gateways. If no reply is received to the polls then all routes using that gateway are inactivated. Gateways marked as dead will continue to be polled and when they respond again all routes using that gateway will be reactivated.

Element 1: Dead Gateway Detection Enablement

***SAME:** The dead gateway detection enablement status and dead gateway detection time interval do not change from their current values.

***DFT:** The default dead gateway detection enablement status is *YES and the default dead gateway detection time interval is 2 minutes.

***NO:** Dead gateway detection is not enabled for this system.

***YES:** Dead gateway detection is enabled for this system.

Element 2: Dead Gateway Detection Interval

Specifies the amount of time, in minutes, that the TCP/IP protocol stack will wait between dead gateway detection polls. When the time interval is exceeded, the gateways are polled.

Note:

In order for the dead gateway detection interval element to be specified, the first element must be set to *YES.

2: A dead gateway detection interval of 2 minutes is used.

IP-dead-gateway-detection-interval: Specify a dead gateway detection interval in minutes. Valid values range from 1 through 60 minutes (1 hour).

ARPTIMO

Specifies, in minutes, the ARP cache time-out value. The time-out value's purpose is to flush out-of-date cache entries from the ARP cache.

***SAME:** The default ARP cache time-out interval does not change from its current setting.

***DFT:** The default ARP cache time-out interval of 15 minutes is used.

ARP-cache-timeout: Specify an ARP cache time-out interval in minutes. Valid values range from 1 through 1440 minutes (24 hours).

» NFC

Specifies whether the Network File Cache (NFC) function will be enabled on this system. The Network File Cache is used for the support of FRCA (Fast Response Cache Accelerator). FRCA dramatically improves the performance of serving non-secure static content by Web and other TCP servers.

Element 1: Network File Cache Enablement

***SAME:** The NFC enablement status does not change from its current value.

***YES:** Network File Cache is enabled for this system.

***NO:** Network File Cache is not enabled for this system.

Element 2: Network File Cache Timeout

Specifies the maximum amount of time, in seconds, that a file can be cached in the Network File Cache. This ensures that a file is refreshed at a regular interval.

Note:

A cache time can be specified when NFC is not enabled; however, the cache time will not take affect until NFC is enabled.

***SAME:** The cached file timeout does not change from its current value.

***NOMAX:** Cached file entries will NOT timeout.

cached-file-timeout: Specify a file cache time in seconds. Valid values range from 30 through 604800 seconds (1 week).

Element 3: Network File Cache Size

Specifies the maximum amount of storage that may be used by the NFC for the entire system. This is the accumulative storage used by all TCP servers for loading files.

Note:

A cache size can be specified when NFC is not enabled; however, the cache size will not take affect until NFC is enabled.

***SAME:** The cache size does not change from its current value.

cache-size: Specify a file cache size, in megabytes. Valid values range from 10 through 100000 megabytes (100GB).

Single Values

***DFT:** The default NFC enablement status is *YES with a default cache size of 10MB and a cache timeout of 300 seconds.

***CLEAR:** Specifies to immediately clear the entire network file cache. After the cache is cleared, the previous Network File Cache values will be retained. <<

LOGPCLERR

Specifies log protocol errors. This parameter enables a user to log protocol errors that occur during the processing of TCP/IP data. These TCP/IP stack layer functions use this parameter to determine if they log protocol-specific errors: IP, ICMP, ARP, and NAM. TCP and UDP do not log protocol errors.

The 7004 error reference code is logged when the LOGPCLERR(*YES) option is specified and inbound datagrams are silently discarded. Silently discarded means that an ICMP message is not returned to the originating host when a datagram is discarded because of header errors. Examples of such datagrams include those with invalid checksums and invalid destination addresses.

The error reference code is for information only. No action should be taken as a result of this error reference code. It is generated to assist with remote device or TCP/IP network problem determination.

Note: These error conditions cannot be processed using an APAR.

The log protocol errors parameter should be used when error conditions require the logging of TCP/IP data, such as datagrams, to determine network problems.

The data is logged in the system error log. This error log is available through the Start System Service Tools (STRSST) command.

***SAME:** The status of logging protocol errors does not change from its current value.

***NO:** Protocol errors are not logged. This is the initial value.

***YES:** Protocol errors are logged.

Examples for CHGTCPA

Example 1: Using TCP/IP with UDP Checksum Verification

```
CHGTCPA UDPCS(*YES)
```

This command indicates that UDP checksumming is done for UDP data.

Example 2: Using Selected IP Parameters

```
CHGTCPA IPDTGFW(*YES) IPTTL(5)
IPRSBTIMO(60)
```

This command indicates that TCP/IP has the following characteristics:

- IP datagrams are forwarded between interfaces on different subnets.
- IP time to live (TTL) is set to 5.
- IP reassembly time-out is set to 60 seconds.

Example 3: Using Selected TCP Parameters

```
CHGTCPA TCPKEEPALV(100) TCPURGPTR(*RFC)
TCPRCVBUF(16000)
```

This command indicates the following:

- TCP probes the other side of a connection every 100 minutes.
- The TCP urgent pointer in the TCP header points to the last byte of the urgent data (RFC convention).
- The TCP default receive buffer size is 16000 bytes.

Example 4: Turning off IP source routing

```
CHGTCPA IPSRCRTG(*NO)
```

This command indicates that IP source routing will no longer be allowed. Any IP datagrams found with IP source routing turned on will be rejected.

Example 5: Changing R1/R2 Counts and QoS Attributes

```
CHGTCPA TCPRICNT(3) TCPR2CNT(10) TCPCLOTIMO(300)
IPQOSEN(*YES) IPQOSBCH(*MINDELAY) IPQOSTMR(500)
IPDEADGATE(*YES)
```

This command indicates the following:

- TCP is set to request a different network route after 3 unacknowledged transmissions.
- TCP is set to stop retransmitting an unacknowledged packet after 10 unsuccessful attempts.
- TCP is set to wait 300 seconds (5 minutes) before reusing a closed connection socket pair.
- Quality of Service (QoS) is enabled.
- QoS datagram batching is set to minimize delay in network transmissions.
- The QoS timer resolution value is set to 500 milliseconds to lower CPU usage.
- Dead gateway detection is enabled.

Error messages for CHGTCPA

***ESCAPE Messages**

CPF9801

Object &2 in library &3 not found.

CPF9802

Not authorized to object &2 in &3.

CPF9803

Cannot allocate object &2 in library &3.

CPF9807

One or more libraries in library list deleted.

CPF9808

Cannot allocate one or more libraries on library list.

CPF9810

Library &1 not found.

CPF9820

Not authorized to use library &1.

CPF9830

Cannot assign library &1.

TCP1D03

&1 member record length not correct.

TCP1D04

Error occurred processing member &1 of &2/&3.

TCP15A3

TCP/IP attributes not changed.

TCP15A5

Error accessing member &3

TCP15A6

Attribute file keyword &4 missing

TCP15A7

Attribute file keyword &4 not valid.

TCP8050

*IOSYSCFG authority required to use &1.

TCP9503

File &3 in library &2 not available.

TCP9999

Internal system error in program &1.

CHGTCPDMN (Change TCP/IP Domain) Command Description

CHGTCPDMN Command syntax diagram

Purpose

The Change TCP/IP Domain Information command is used to allow the user to change the host/domain names and server information.

Restrictions: You must have *IOSYSCFG special authority to use this command.

Optional Parameters

HOSTNAME

The host name of this system. This name should also be defined in the local host table or at the domain name server.

***SAME:** The HOSTNAME value does not change if it was previously set.

host-name: Specify the host name to be used.

DMNNAME

The name of the TCP/IP domain this system is a member of.

***SAME:** The DMNNAME value does not change if it was previously set.

domain-name: Specify the domain name to be used.

DMNSCHLIST

Specifies the TCP/IP domains to search when fully-qualified domain names (FQDN) are not given. The first name in the search list is the default domain name on all searches.

***SAME:** The DMNSCHLIST value does not change if it was previously set; otherwise, *DFT is used.

***DFT:** The default behavior is to search the local domain tree. The local domain tree is the DMNNAME and each parent domain with two or more parts to the domain. DMNNAME is the default domain name on all searches.

'domain-search-list': Specify the list of domain names to be searched. Up to six domain names may be specified, separated by spaces and enclosed in apostrophes. The first domain name in the search list is the default domain name on all searches. Note that if a domain search list is defined then the local domain name (DMNNAME) will not automatically be used in the search list. If you wish to include the local domain name you must specify it as part of the search list. Parent domains for the domains defined in the search list will not be searched. If you want parent domains to be searched then they must be explicitly defined in the search list.

HOSTSCHPTY

Specifies whether to search the domain name server or the local host table first for host name resolution.

***SAME:** The HOSTSCHPTY value does not change if it was previously set; otherwise, *REMOTE is used.

***REMOTE:** Specify *REMOTE to contact a domain name server first. The local host table is not searched until all attempts to reach a remote name server have failed.

***LOCAL:** Specify *LOCAL to always search the local host table prior to contacting a remote name server.

INTNETADR

The internet address of the domain name server host. The dotted decimal form is used. A maximum of three domain name servers can be specified. If the domain name server is contacted and either it does not respond, or returns with a non-authoritative response then the next domain name server in the list will be contacted.

***SAME:** The INTNETADR value does not change if it was previously set.

internet-address: Specify the internet address to be used.

PORT The remote port number used to contact the domain name server listed in INTNETADR. Care should be taken in changing this value to something other than port number 53, which is the domain name server well-known port.

***SAME:** The PORT value does not change if it was previously set; otherwise, 53 is used.

port-number: Specify the remote port number to be used. Valid values range from 1 to 65535.

PROTOCOL

The protocol used to contact a remote name server. Care should be taken in changing this value from *UDP, which is the protocol typically used by domain name servers.

***SAME:** The PROTOCOL value does not change if it was previously set; otherwise, *UDP is used.

***UDP:** The User Datagram Protocol is used to communicate with a domain name server.

***TCP:** The Transmission Control Protocol is used to with communicate a domain name server.

INLDMNSVR

Specifies the initial domain name server selection method. This option determines whether the first configured domain name server should always be queried first, or if the first name server to be queried should be rotated in a round robin fashion if more than one is configured. This rotation provides a simple form of load balancing on the configured name servers.

***SAME:** The INLDMNSVR value does not change if it was previously set; otherwise, *FIRST is used.

***FIRST:** The first configured domain name server is queried first. Always query the name servers in order as configured.

***ROTATE:** Rotate through the configured name servers in a round robin fashion to determine which to query first.

DMNSVRRTY

The number of retry attempts that are made to contact each domain name server listed in INTNETADR, and the number of seconds this iSeries 400 waits for a response from each attempt to contact a name server.

Element 1: Number of Retries

***SAME:** The number of retries does not change if it was previously set; otherwise, 2 is used.

number-retries: Specify the number of retries to be attempted. Valid values range from 0 to 99.

Element 2: Time Interval

***SAME:** The time interval does not change if it was previously set; otherwise, 2 is used.

time-interval: Specify the number of seconds between retries. Valid values range from 0 to 99. If a number of retries is set, the time interval should be set to something other than 0.

Examples for CHGTCPDMN

Example 1: Change host and domain names

```
CHGTCPDMN HOSTNAME(rs021) DMNNAME(endicott.ibm.com)
```

This command changes the host name and domain name.

Example 2: Change Domain Search List

```
CHGTCPDMN DMNSCHLIST('endicott.ibm.com  
                    rochester.ibm.com ibm.com')
```

This command changes the domain search list to be three domain names: endicott.ibm.com, rochester.ibm.com, and ibm.com.

Example 3: Change Domain Name Server Rotation

```
CHGTCPDMN INLDMNSVR(*ROTATE)
```

This command changes the initial domain name server selection so it rotates between the configured name servers in a round robin fashion.

Error messages for CHGTCPDMN

***ESCAPE Messages**

None.



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