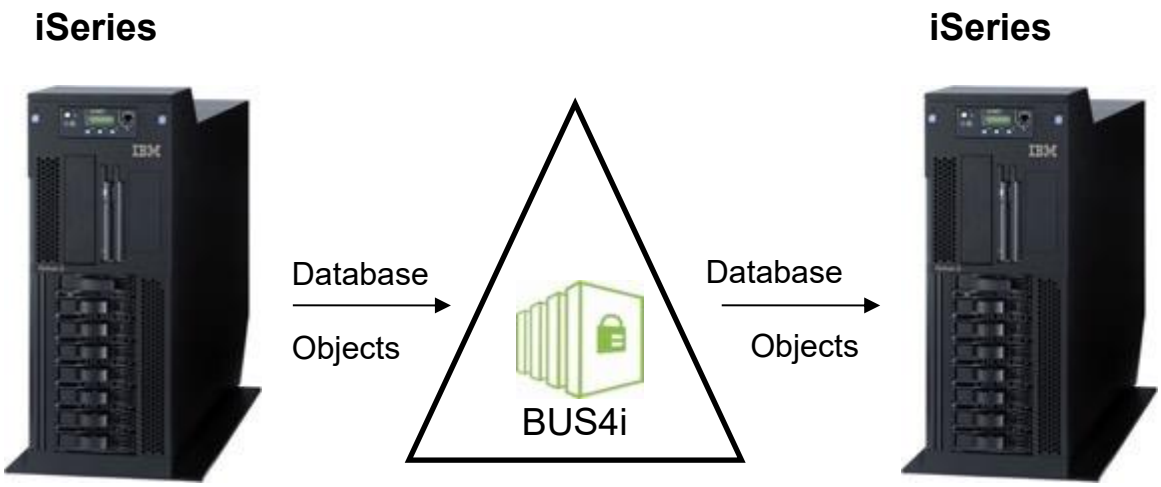
BUS4i

i/OS High Availability System

Release 8.1



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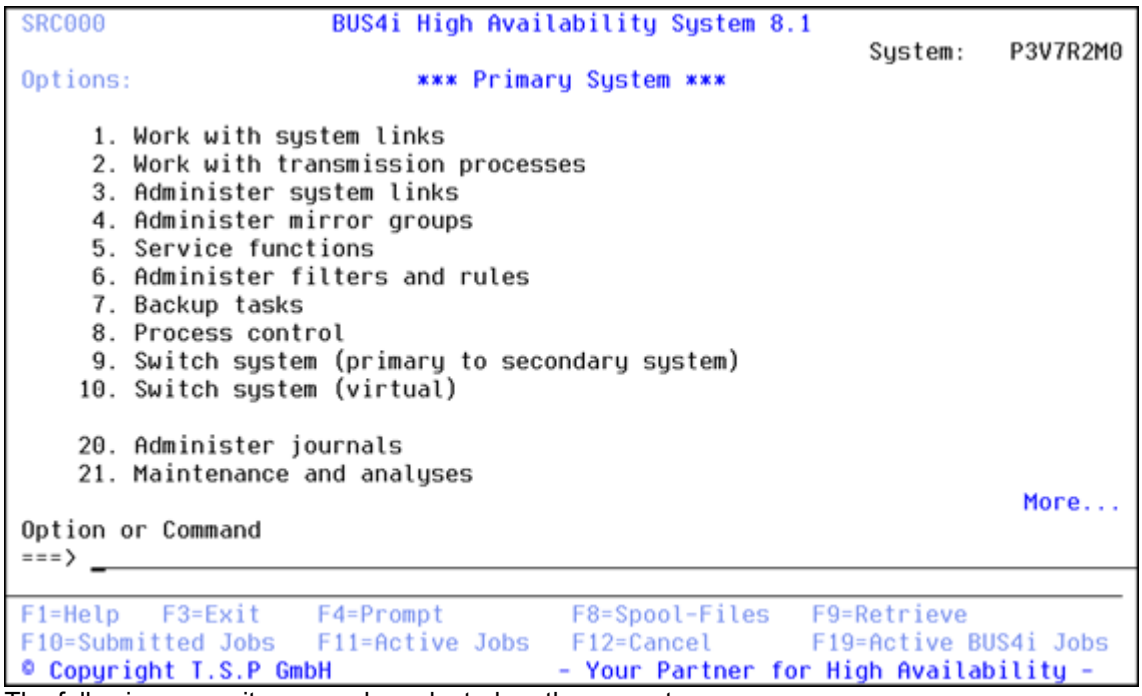
1 Starting the HA system BUS4i

The main menu of the BUS4i HA system is activated with the BUS4i (BUS4I) command, at the same time the library search list is set correctly. According to whether it is the primary or secondary system, one of the following main menus is entered.

2 Main menu of the primary system



The following menu items can be selected on the current screen:

Menu item 1: Control system links
This menu item can be called up to start, end or cancel system links. Furthermore, the user can inform himself about the current status of all **system links of** the **HA system BUS4i** or monitor them.

Menu item 2: Control send processes
This menu item can be called up to start, end or cancel send processes. Furthermore, the user can inform himself about the current status of all **mirror groups of** the **HA system BUS4i** or monitor them.

Menu item 3: Manage system links
This menu item can be used to add, delete, copy, rename system links or change or display their control parameters.

Menu item 4: Manage mirror groups
With this menu item, mirror groups can be added, deleted, copied, renamed or their control parameters can be changed or displayed. Furthermore, the files and objects to be mirrored can be managed for each mirror group.

Menu item 5: Service functions
This menu item can be used to call the journal maintenance or, in problem cases, the RESTART functions for each **mirror group.** Furthermore, an overview of the status of the comparisons can be displayed.

Menu item 6: Manage filters and rules
This menu item can be used to manage the files, objects and spool files to be mirrored for each mirror **group.**

Menu item 7: Backup tasks
This menu item is used to manage the parameters for daily, weekly and monthly backup. Lists for the backup of user libraries, folders and user directories can be created. A backup schedule can be used to define when and how backups are to be performed.

Menu item 8: Process monitoring menu
This menu item is used to manage the Process monitoring parameter. The process monitoring checks whether all processes to be controlled are active.

Menu item 9: System change (primary to secondary system)
Support of system change from primary to secondary system and secondary to primary system. The commands required for the system change can be entered. The already entered commands can be used as a template. A distinction is made between commands for switching from primary to secondary system (PRI) and commands for switching from secondary to primary system (SEC).

Menu item 10: System change (virtual)
Support of virtual system change from primary to secondary system(virtual) and secondary system(virtual) to primary system. The commands that are needed for the system change can be captured. The already entered commands can be used as a template. A distinction is made between commands for switching from primary to secondary system (virtual) (P2VS) and commands for switching from secondary system (virtual) to primary system (VS2P).

Menu item 20: Journal management
With this menu item the journal manager can be started and stopped. The journal manager data and the journals can be displayed.

Menu item 21: Maintenance and evaluations
This menu item displays the "Maintenance and evaluation" menu. There you can display the BUS4i license code and enter a new one. The configuration, parameters and mirror group assignment can be printed. You can enter the assignments of libraries to mirror groups and display the assignments of objects to mirror groups.

Menu item 90: Logout
With this menu item the application can be terminated.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview

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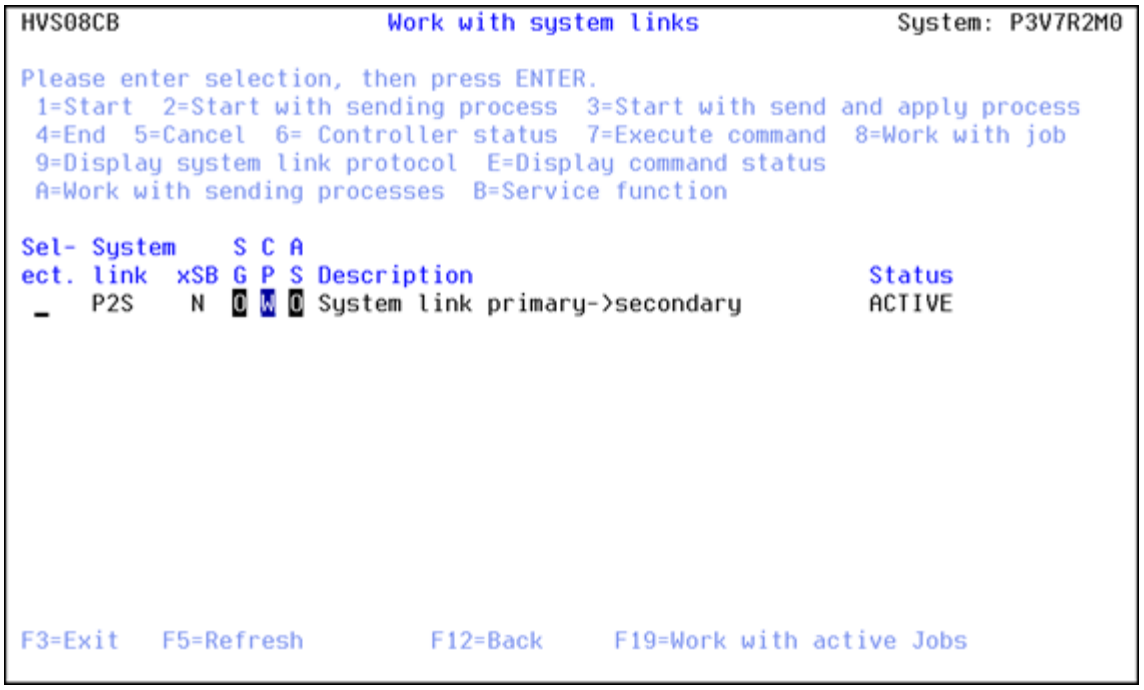
2.1 Main menu selection 1 - Control system links



This selection list offers the user the possibility to start and stop system links. Furthermore, the user can inform himself about the current status of his **HA system BUS4i** with all assigned **system links** or monitor the HA system.

Displayed:
- System Link Name
- Is the system link ISB/OSB version
- S G=Status of the mirror groups (O=Ok, W=Warning, E=Error)
- C P=Status of the comparison runs (O=Ok, W=Warning, E=Error)
- A S=Status of plate occupancy (O=Ok, W=Warning, E=Error)
- Description of the system link
- Status of the system link

The following options are possible for controlling the system links:

Selection

In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

Selection 1 - Start system link

This selection option starts the system link on the primary system and the corresponding system link on the secondary system. The system link process pending configuration changes and commands that have been recorded with selection 7.

Selection 2 - Start with send processes

This selection option starts both the system link and all associated send processes on the primary system and the receive processes on the secondary system.

Selection 3 - Start with sending/processing processes

This selection option starts both the system link and all associated send processes on the primary system and the receive processes as well as the processing processes on the secondary system.

Selection 4 - Exit

This selection option terminates both the system link on the primary system and the system link on the secondary system.

Selection 5 - Cancel

With this selection option, the system link on the primary system is abnormally terminated via the ENDJOB *IMMED command.

Selection 6 - Controller status

This option allows viewing the status of the line controllers specified in the control parameters.

Selection 7 - Transmit command

This selection option can be used to enter commands on the primary system to be executed on the secondary system.

Selection 8 - Work with Job

With this selection option it is possible to work with an active job.

Selection 9 - Display system link log

The entries of the LOG file are displayed via this menu selection. All messages that occur during processing are logged in the LOG file with time and date.

Selection E - Show command status

This function allows you to view the status of the commands to be processed by the system link.

Selection A - Control send processes

This function allows you to start and stop send processes. Furthermore the user can inform himself about the current state of his **HA system BUS4i** with all assigned **mirror groups** or monitor the HA system.

Selection B - Service functions

With this function it is possible to call up administration menus for journal management, restart functions and special displays for each mirror group.

The following command keys are valid on the current mask:

F5=Update

This command key is used for updating the selection lists. All options currently entered on the screen are deleted. The display list is rebuilt so that any list entries added or modified or deleted by other users are also displayed or removed.

F19=Work with active jobs

With this selection option, all jobs active in the system are displayed. This corresponds to the command "WRKACTJOB".

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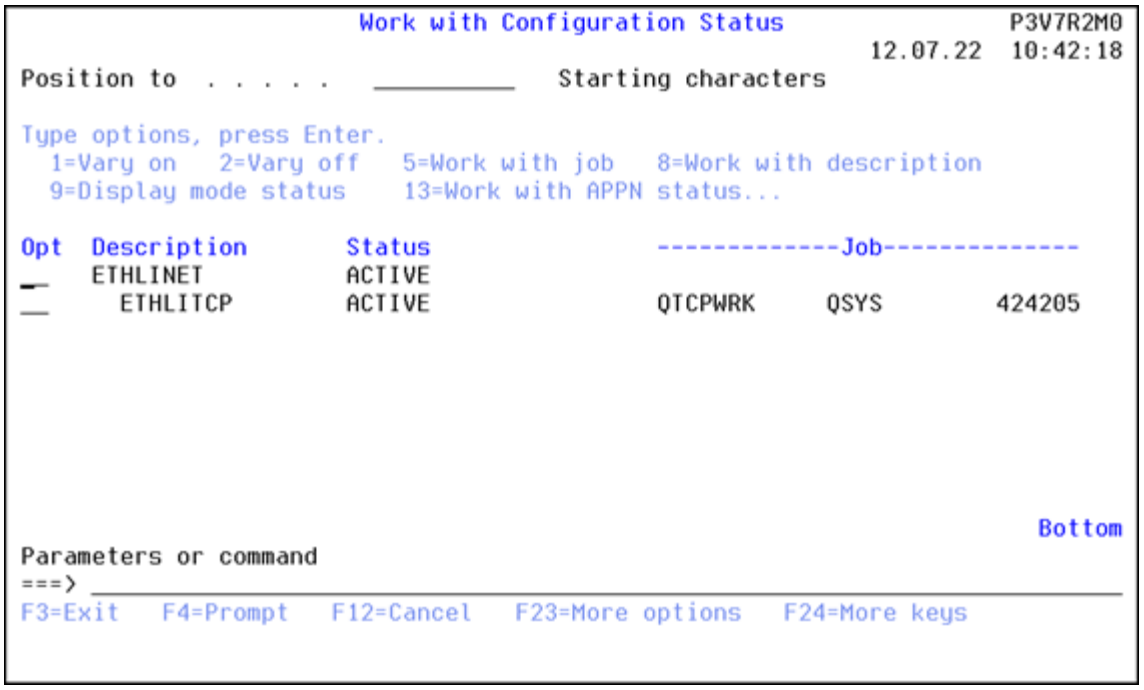
2.1.1 Selection 6 - Controller status



This display list shows status information for lines, control units, and APPC units. It also shows job tag information for the active units. For each selected line and control unit description, all associated control unit and unit descriptions are displayed. Also shown are associated mode descriptions for active APPC units.
The configuration descriptions are indented below the corresponding object.

To ensure proper operation, the line and the control unit must be attached.

The selection option is entered before the respective description name and the Enter key is pressed. Several, also different, selection options can be entered, whose functions are executed one after the other.

If the keywords for the parameters are known, the values can be specified on the command line for Selection 1 (Append), Selection 2 (Append), Selection 3 (Stop Unit), Selection 9 (Show Mode Status), or for a command. The specified values appear in the operator guidance displays.

Commands can be entered in the command input line. To get information about the command, enter the command and press the help key.
The user gets assistance in entering the command by typing the command and pressing the command key F4.

If "More ..." appears appears at the bottom right of the display, further information is available. Press the "Page forward" key (or "Page up") to page forward. Press the "Page back" key (or "Page down") to page back. If "End" appears instead of "More ... appears instead of "End", the end of the list has been reached.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

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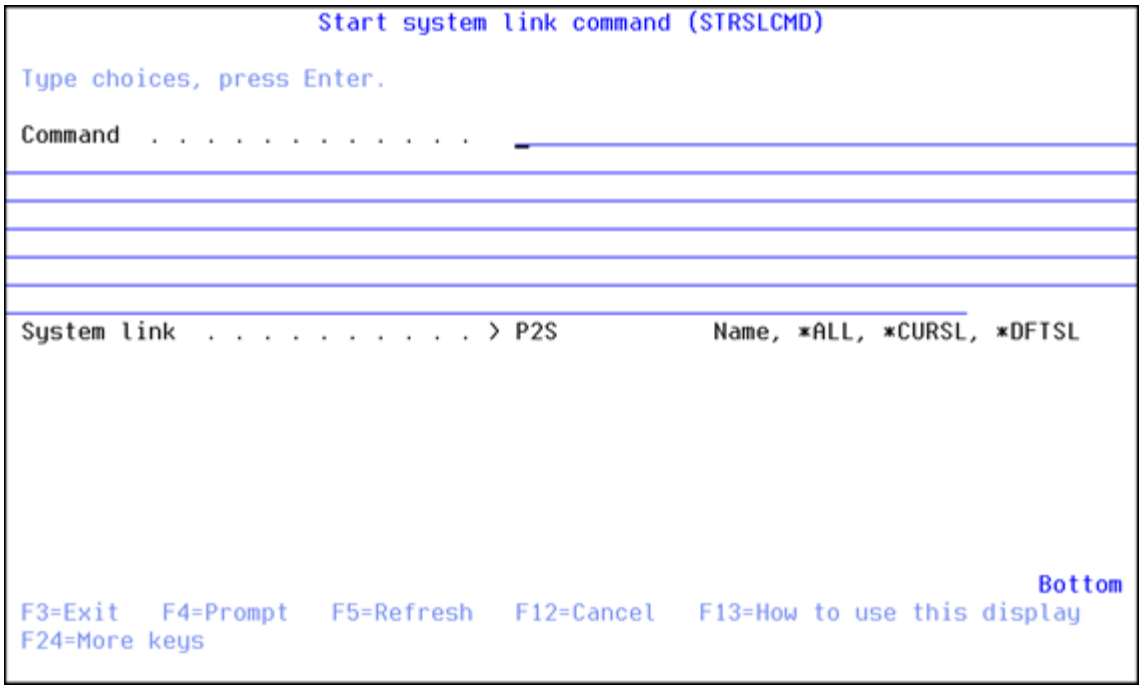
2.1.2 Selection 7 - Execute command



To create a valid command entry, the following input fields are available to the user:

Command
On the command input line, the user has the possibility to transfer any CL control command entered on the primary system to the secondary system and have it executed there. If for some reason execution on the secondary system is not possible, this is recorded in the error log file.

System link
Name of the system link for which the called command should be executed.

Valid values for the **System link** parameter are:

Name
Name of the system link for which the command is to be executed.

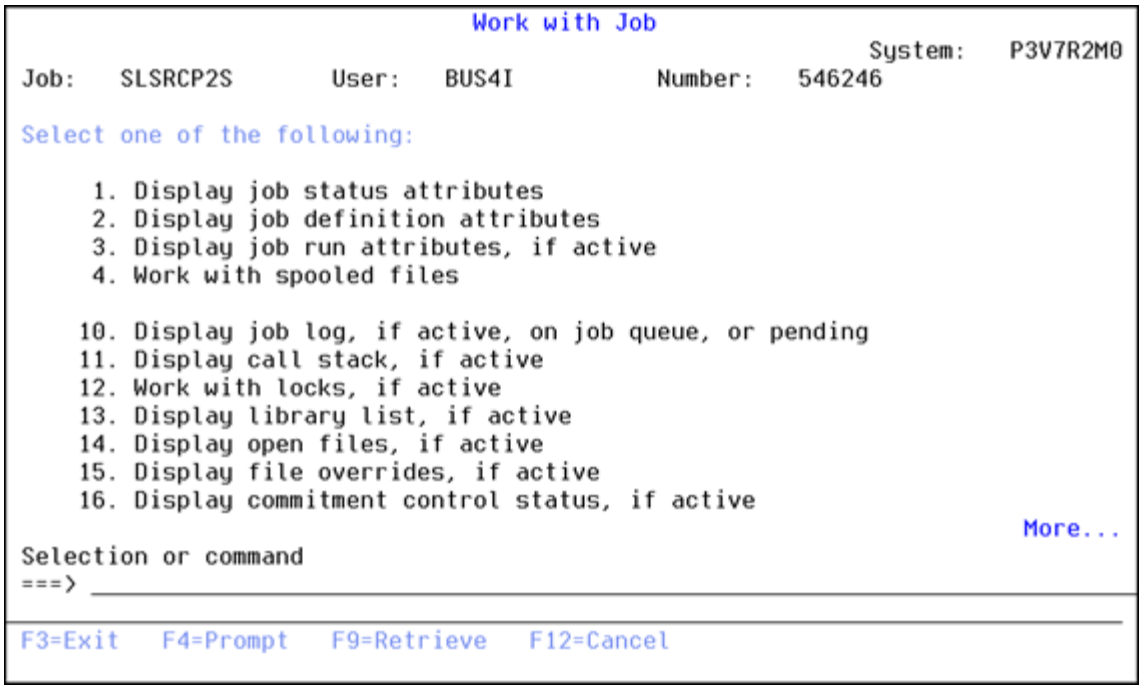
***ALL**
The command is executed on all system links.

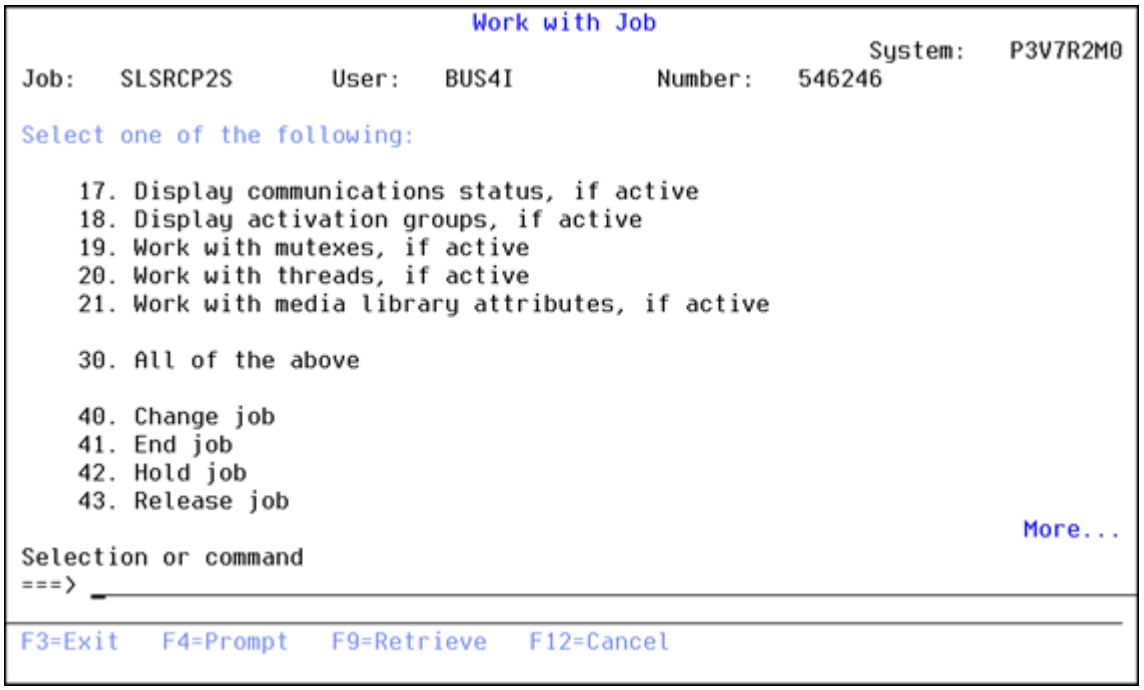
***CURSL**
The link activated as the "current" system link is used for command execution.

***DFTSL**
The link enabled as the default system link is used for command execution.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

2.1.3 Selection 8 - Work with Job





The WRKJOB system command for the selected user job is called. Information such as job log, job status attributes, open files, spool file information for the user job can be called.

2.1.4 Selection E - Show system link command status

```
HVS15CB                    Command status selection          System: P3V7R2M0

Enter selection, then press ENTER.

  System link . . . . . :   P2S__        Name

  Status. . . . . :         __           Status - 00, 90-91, 97-99

  Date (to) . . . . . :     12.07.22     DDMMYY, DD.MM.YY

  Time (to) . . . . . :     235959       HHMMSS

  Command text. . . . . :   ____________________________________________________


F3=Exit    F12=Return
```

```
HVS15CB                      Display command status          System: P3V7R2M0

Please enter selection, then pressENTER.
  5=Display

 S Sts Date     Time     Command
 l Sys-Link
 _ 90   4.07.22 18:25:59 CALL (SRCSYS/SR208CL) PARM('UPD' 'S2P_B2P    ' 'S2P  '
 _ 90   4.07.22 18:25:59 *SAVOBJSOC  HOST(*CH_001) OBJECT(JRNNM) LIB(P2S_B2P) O
 _ 90   4.07.22 18:25:59 RSTOBJSOC   HOST(*CH_001) OBJECT(JRNNM) SAVLIB(P2S_B2P
 _ 90   4.07.22 18:25:44 *SAVOBJSOC  HOST(*CH_001) OBJECT(CHKSENDP) LIB(P2S_B2P
 _ 90   4.07.22 18:25:44 RSTOBJSOC   HOST(*CH_001) OBJECT(CHKSENDP) SAVLIB(P2S_
 _ 90   4.07.22 18:25:44 *SAVOBJSOC  HOST(*CH_001) OBJECT(SYNCKZ) LIB(P2S_B2P)
 _ 90   4.07.22 18:25:44 RSTOBJSOC   HOST(*CH_001) OBJECT(SYNCKZ) SAVLIB(P2S_B2
 _ 90   4.07.22 18:25:44 CALL (TGTSYS/TG207CL) PARM('P2S  ' 'P2S_B2P    ' '14111
 _ 90   4.07.22 18:25:44 *SAVOBJSOC  HOST(*CH_001) OBJECT(*ALL) LIB(S2P_B2P) OB
 _ 90   4.07.22 18:25:44 RSTOBJSOC   HOST(*CH_001) OBJECT(*ALL) SAVLIB(S2P_B2P)
 _ 90   4.07.22 18:25:44 CRTLIB LIB(P2S_B2P) TEXT('Mirroring Backup to Prod')
 _ 90   4.07.22 18:25:44 CALL (TGTSYS/TG209CL) PARM('UPD' 'P2S_B2P    ' 'P2S  '
 _ 90   4.07.22 18:25:44 CALL (SRCSYS/SR207CL) PARM('S2P  ' 'S2P_B2P    ')
 _ 90   4.07.22 18:25:44 *SAVOBJSOC  HOST(*CH_001) OBJECT(*ALL) LIB(P2S_B2P) OB
                                                                        More...
F3=Exit    F5=Refresh         F11=Display all      F12=Return
```

The system link commands created on the primary system are displayed and can have the following statuses:

- 00 = created
- 90 = successful
- 91 = incorrectly terminated
- 99 = Command executed from wrong system link

With selection 5 further information can be displayed.

The description of the valid command keys can be found in the overview.

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2.1.5 Selection 9 - Display system link log

```
HVS14CB              Selection system link protocol          System: P3V7R2M0

Enter selection, then press ENTER.

  System link . . . . . .  P2S__          Name

  Message-ID. . . . . .    _______        MSG-ID

  Date (to) . . . . . .    12.07.22       DDMMYY, DD.MM.YY

  Time (to) . . . . . .    235959         HHMMSS

  Message text. . . . . .  ____________________


F3=Exit   F12=Return
```

```
HVS14CB              Display system link protocol            System: P3V7R2M0

Please enter selection, then press ENTER.
  5=Display

 S Date     Time     Description
 e Sys.link MSG-ID
 _ 12.07.22 11:07:12 Lengt Error: READIDSOCKH ID=00 Compr=? Set=00006 Is=-00001


F3=Exit   F5=Refresh   F11=Display all   F12=Return
```

The errors that occurred on the primary system within the system link are logged in a file. These errors can be displayed.

The description of the valid command keys can be found in the overview.

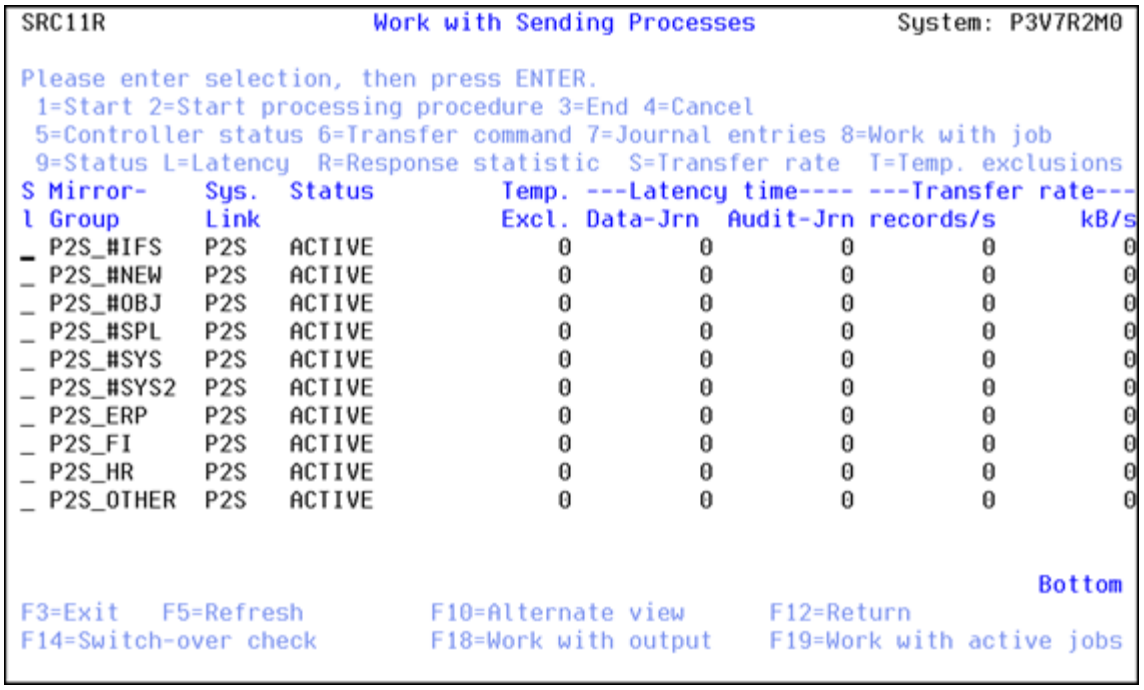
2.1.6 Selection A - Control send processes

The same program is called which is indicated in the main menu under position 2. With the exception that only the mirror groups are displayed which are assigned to the corresponding system link.

2.1.7 Selection B - Service functions

The same program is called which is indicated in the main menu under position 5.
With the exception that only the mirror groups that are assigned to the corresponding system link are displayed.

2.2 Main menu selection 2 - Control send processes



This selection list offers the user the possibility to start and stop send processes. Furthermore, the user can inform himself about the current status of his **HA system BUS4i** with all assigned **mirror groups** or monitor the HA system.

Displayed:
- Mirror group name
- System Link Name
- Mirror group status
- Number of temporary exclusions
- Data journal latency
- Audit journal latency
- Transfer rate Number of records per second
- Transfer rate Number of kilobytes per second

The following options are possible for managing the sending processes:

Selection

In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

Selection 1 - Start send process

This selection option starts the send process on the primary system and the receive process on the secondary system. The send process transfers the database changes, object changes collected in the journal receiver to the secondary system. The processing process must be started separately on the secondary system. The send process repeats the connection setup as often as specified in the communication parameter "Number of connection attempts" before sending an error message to the QSYSOPR. This means that shutdown from the primary and secondary systems no longer has to take place in a timely manner.

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Selection 2 - Start send process with processing process
This selection option starts both the sending process on the primary system and the receiving process on the secondary system (as described for selection 1) and the processing process on the secondary system.

Selection 3 - End send process
With this selection option, an "END control record" is added at the end in the journal receiver. The send process transmits the database changes, object changes up to this "END control record". After that, both the send process on the primary system and the receive process and the processing process on the secondary system are terminated.

Selection 4 - Cancel send process
With this selection option, the send process on the primary system is aborted abnormally via the ENDJOB *IMMED command.

Selection 5 - Controller status
This option allows you to view the status of the transmission line specified in the control parameters.

Selection 6 - Transmit command
This selection option can be used to enter commands on the primary system to be executed on the secondary system.

Selection 7 - Journal entries
This selection option allows you to view journal entries that are yet to be transferred.

Selection 8 - Work with Job
With this selection option it is possible to work with an active job.

Selection 9 - Overall status
With this function you have the possibility to display the overall status of the mirroring (primary and secondary system) from one system (will be displayed with the basic control parameters activated).

Selection L - Latency
This function measures the latency times of the data journal and audit journal between the last journal entry sent and the last journal entry in the journal. This is displayed in a separate list.

Selection R - Display reaction statistics
This function measures the time between the sending of a journal entry and the confirmation of the receiving process that it has received this journal entry. The display for this is in a separate list.

Selection S - Transfer rate
This function measures and logs the transfer rate at intervals of 30 minutes. This is displayed in a separate list.

Selection T - Temporary exclusions
With this function you can display the temporary exclusions of the mirror group. The temporary exclusions are divided into IFS, spool and object/file. They are displayed in a separate list.

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The following command keys are valid on the current mask:

F5=Update
This command key is used for updating the selection lists. All options currently entered on the screen are deleted. The display list is rebuilt so that any list entries added or modified or deleted by other users are also displayed or removed.

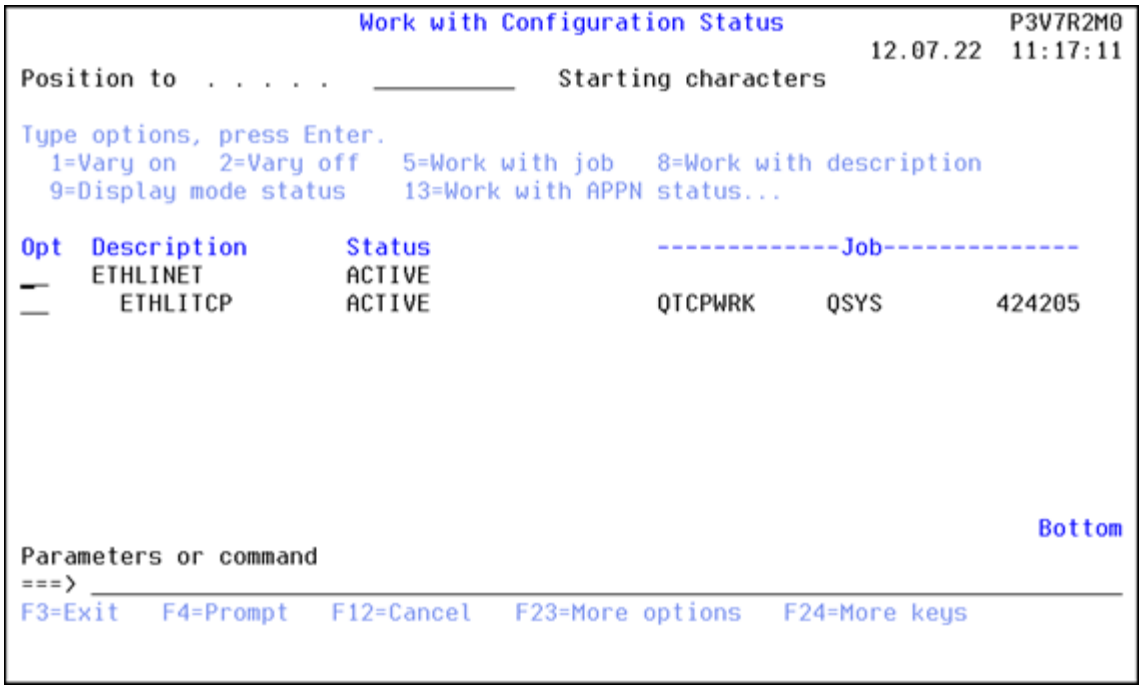
F10=Alternative view
In this view more detailed information about start and end time of the process is available.

F14=Switch-Over test
This function checks all mirror groups and marks in red those that are currently not ready for a switch-over. It is checked whether the mirror groups are active and whether there are still records that need to be processed.

F18=Work with output
Displays a list of spool files in the output queue. Values entered on the screen are not taken into account when this command key is pressed.

F19=Work with active jobs
With this selection option, all jobs active in the system are displayed. This corresponds to the command "WRKACTJOB".

2.2.1 Selection 5 - Display controller status



Via selection 5 in the selection list of the send process management you get the display "Work with configuration status".
This display list shows status information for lines, control units, and APPC units. It also shows job tag information for the active units. For each selected line and control unit description, all associated control unit and unit descriptions are displayed. Also shown are associated mode descriptions for active APPC units.
The configuration descriptions are indented below the corresponding object.

To ensure proper operation, the line and the control unit must be attached.

The selection option is entered before the respective description name and the Enter key is pressed. Several, also different, selection options can be entered, whose functions are executed one after the other.

If the keywords for the parameters are known, the values can be specified on the command line for Selection 1 (Append), Selection 2 (Append), Selection 3 (Stop Unit), Selection 9 (Show Mode Status), or for a command. The specified values appear in the operator guidance displays.

Commands can be entered in the command input line. To get information about the command, enter the command and press the help key.
The user gets assistance in entering the command by typing the command and pressing the command key F4.

If "More ..." appears at the bottom right of the display, further information is available. Press the "Page forward" key (or "Page up") to page forward. Press the "Scroll back" key (or "Page down") to scroll back. If "End" appears instead of "More ... appears instead of "End", the end of the list has been reached.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

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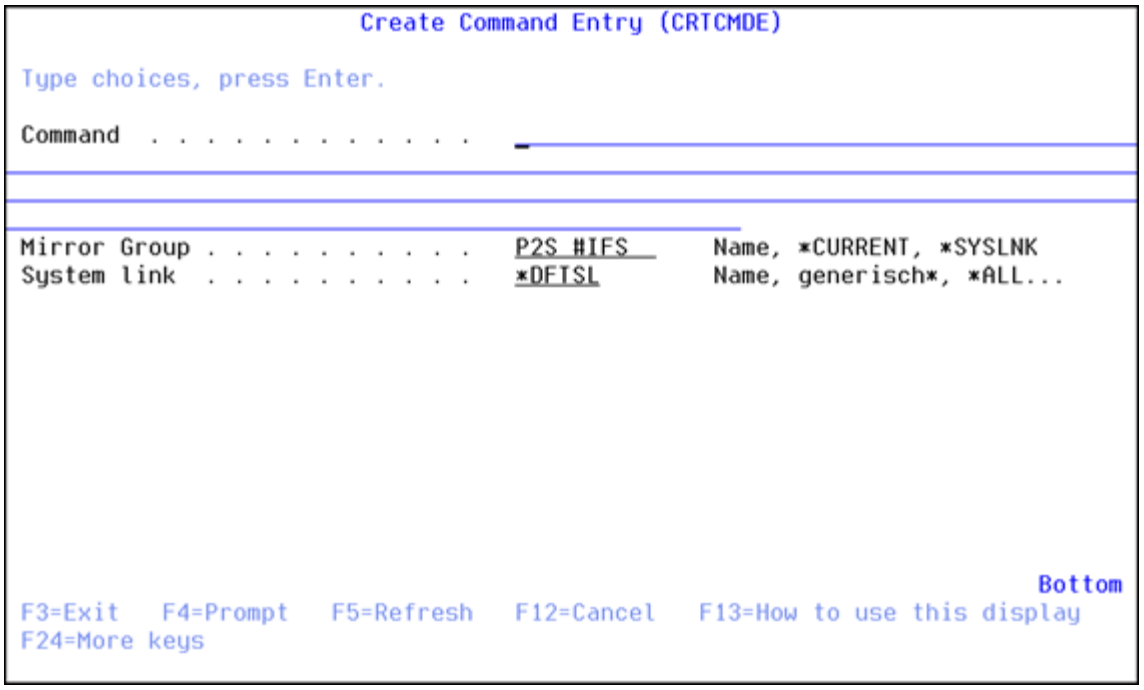
2.2.2 Selection 6 - Transmit command



To create a valid command entry, the following input fields are available to the user:

Command
On the command input line, the user has the possibility to transfer any CL control command entered on the primary system to the secondary system and have it executed there. If for some reason execution on the secondary system is not possible, this is recorded in the error log file.

If the control parameters on the secondary system have been set so that messages are transmitted via SNADS or DDM, the non-executability of a command is communicated to the user on the primary system who is entered as the recipient in the control parameters of the secondary system.

Mirror group
Name of the mirror group for which the called command is to be executed.

Valid values for the **Mirror group** parameter are:

Name
Name of the mirror group for which the command is to be executed.

***CURRENT**
The application activated as the "current" mirror group is used for the command execution.

***SYSLNK**
The mirror group, which is defined in the system link, is used for the command execution.

System link
Name of the system link for which the called command should be executed.

Valid values for the **System link** parameter are:

Name
Name of the system link for which the command is to be executed.

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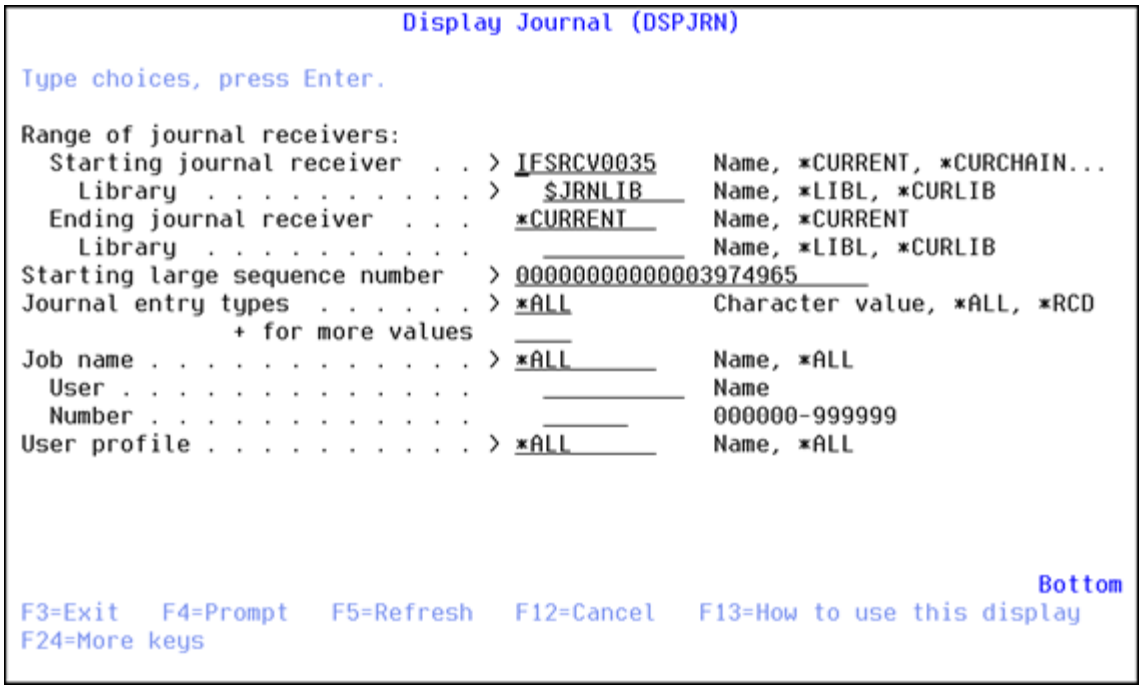
***ALL**
The command is executed on all system links.

***CURSL**
The link activated as the "current" system link is used for command execution.

***DFTSL**
The link enabled as the default system link is used for command execution.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

2.2.3 Selection 7 - Display journal entries



Specifies the first journal receiver (start) and the last journal receiver (end), i.e. the range of receivers containing journal entries to be converted for output. The system starts with the first journal receiver (specified by the first value) and works through the receiver chain until the last receiver (specified by the last value) is processed. If duplicate receivers are used, the first receiver is always used when changes are created. The WRKJRNA command (Work with journal attributes) can be used to display the sequence of recipients in the recipient chain. If an error is found in the receiver chain before the conversion (such as a damaged receiver or a receiver that cannot be found), the system tries to use the second of the duplicate receivers. If the second receiver is also damaged or not found, or the error is found only when the changes are created, the operation is terminated.

Annotation:
If the maximum number of recipients (2045) in the range is exceeded, an error occurs and no journal entries are converted.

Valid values for the **Start / End journal receiver** parameters are:

Name
Specify the name of the first journal recipient whose entries are to be converted for output.

***CURRENT**
The current recipient attached at the beginning of the journal entry conversion will be used.

***CURCHAIN**
The journal receiver chain to which the journal receiver attached at the beginning of the conversion of the journal entries belongs is used. This receiver chain does not bridge any break in the chain. If there is an interruption in the chain, the receiver range extends from the last interruption in the chain to the receiver attached at the start of the conversion of the journal entries.

Valid values for the **library** parameters are:

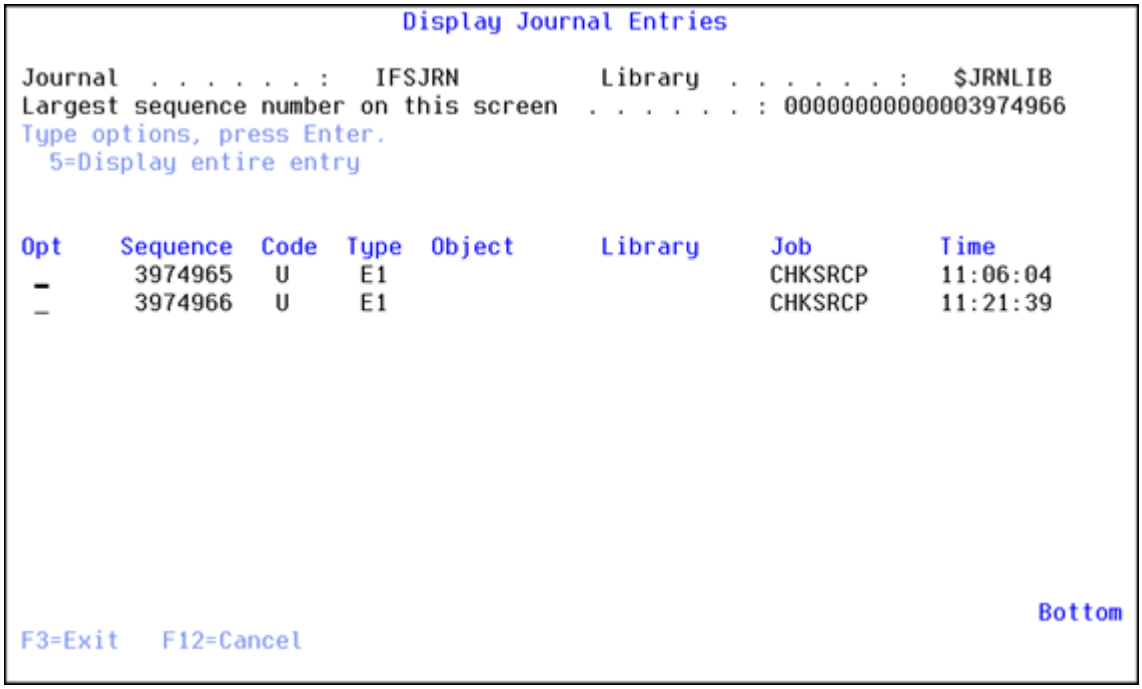
***LIBL**
All libraries in the job's library list are searched until the first match is found.

***CURLIB**
The journal recipient is searched for in the current job library. If no current library is specified for the job, QGPL is used.

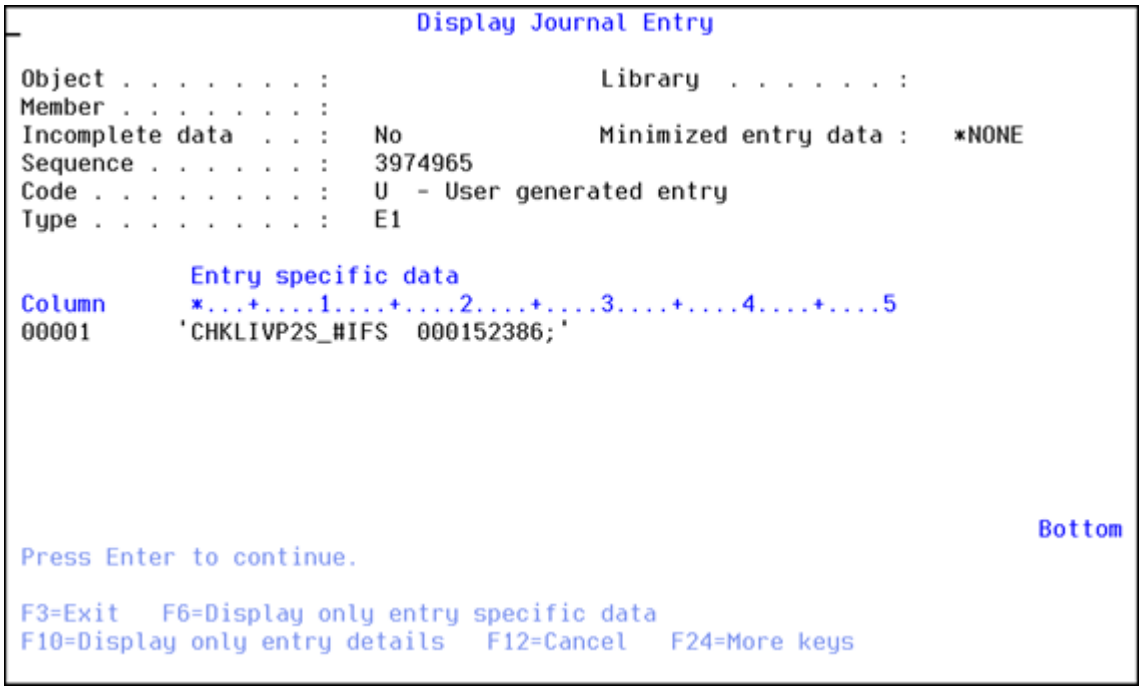
Name
Specify library where the journal recipient is located.

The Display Journal Entries display shows a requested list of journal entries. This display contains only basic information about the journal entries. All information about a specific journal entry can be retrieved from this display. To display all information for a specific journal entry, enter 5 next to the corresponding journal entries and press Enter. If multiple selections are specified, they will be executed one after the other, starting with the first selection specified in the list.

If "More..." appears at the bottom right of the display, further information is available. Press the Page down (Page forward) key to display the information.



The following mask shows the "Check-Live" as an example:


Display Journal Entry
Object . . . . . :
Library . . . . . :
Member . . . . . :
Incomplete data . . : No
Minimized entry data : *NONE
Sequence . . . . . : 3974965
Code . . . . . : U - User generated entry
Type . . . . . : E1
Entry specific data
Column *...+....1....+....2....+....3....+....4....+....5
00001 'CHKLIVP2S_#IFS 000152386;'
Bottom
Press Enter to continue.
F3=Exit F6=Display only entry specific data
F10=Display only entry details F12=Cancel F24=More keys

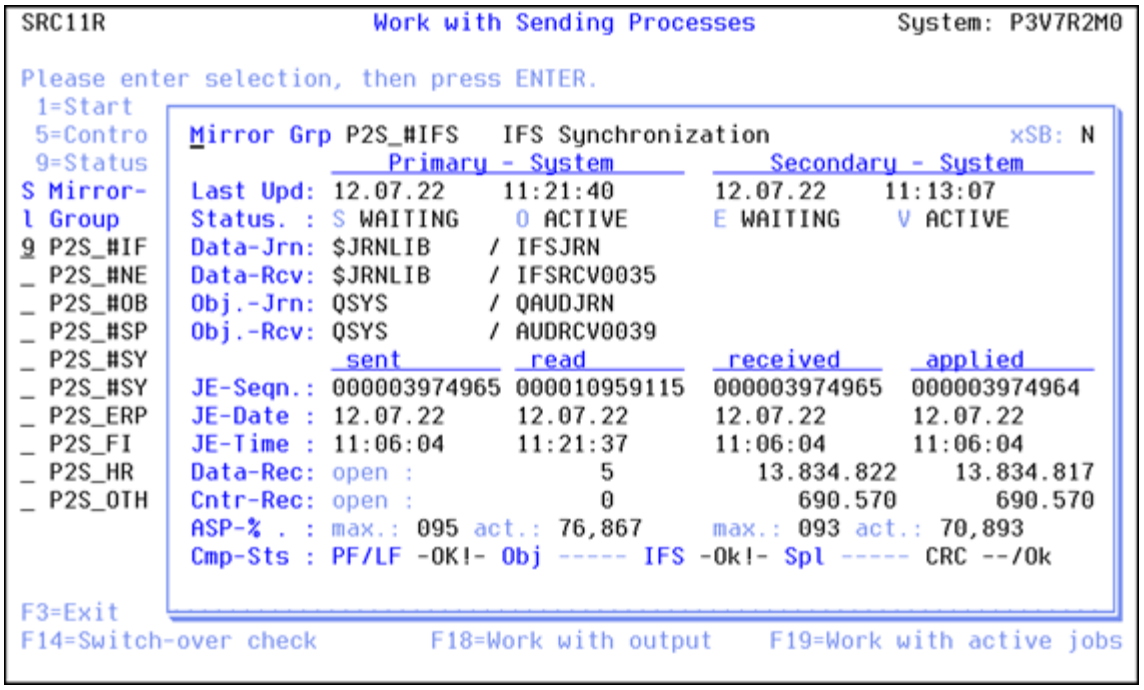
2.2.4 Selection 8 - Work with active job

```
                                Work with Job
                                                          System:   P3V7R2M0
Job:   P2S_#IFS       User:   BUS4I          Number:   555926

Select one of the following:

     1. Display job status attributes
     2. Display job definition attributes
     3. Display job run attributes, if active
     4. Work with spooled files

    10. Display job log, if active, on job queue, or pending
    11. Display call stack, if active
    12. Work with locks, if active
    13. Display library list, if active
    14. Display open files, if active
    15. Display file overrides, if active
    16. Display commitment control status, if active
                                                                        More...
Selection or command
===>

F3=Exit   F4=Prompt   F9=Retrieve   F12=Cancel
```

```
                                Work with Job
                                                          System:   P3V7R2M0
Job:   P2S_#IFS       User:   BUS4I          Number:   555926

Select one of the following:

    17. Display communications status, if active
    18. Display activation groups, if active
    19. Work with mutexes, if active
    20. Work with threads, if active
    21. Work with media library attributes, if active

    30. All of the above

    40. Change job
    41. End job
    42. Hold job
    43. Release job
                                                                        More...
Selection or command
===>

F3=Exit   F4=Prompt   F9=Retrieve   F12=Cancel
```

The WRKJOB system command is called for the selected user job. Information such as job log, job status attributes, open files and spool files for the user job can be called.

2.2.5 Selection 9 - Display status



In "Manage send processes" as well as in "Manage mirror groups", the overall status of a mirror group can be displayed on both the primary and the secondary system via selection 9. Among other things, the journal and the journal receiver for the mirror group are displayed, taking into account the number of records processed. In addition, the ASP occupancy can be checked.

The bottom line displays the status of deviations between production and backup system. This display informs about errors, warnings, OK's for part files (PF/LF), objects (Obj), IFS objects (IFS) and spool files (Spool).

Detailed information can be displayed on the secondary system by selecting 5=Service functions.

The display "-----" means that no information is available in this mirror group for the respective object type.

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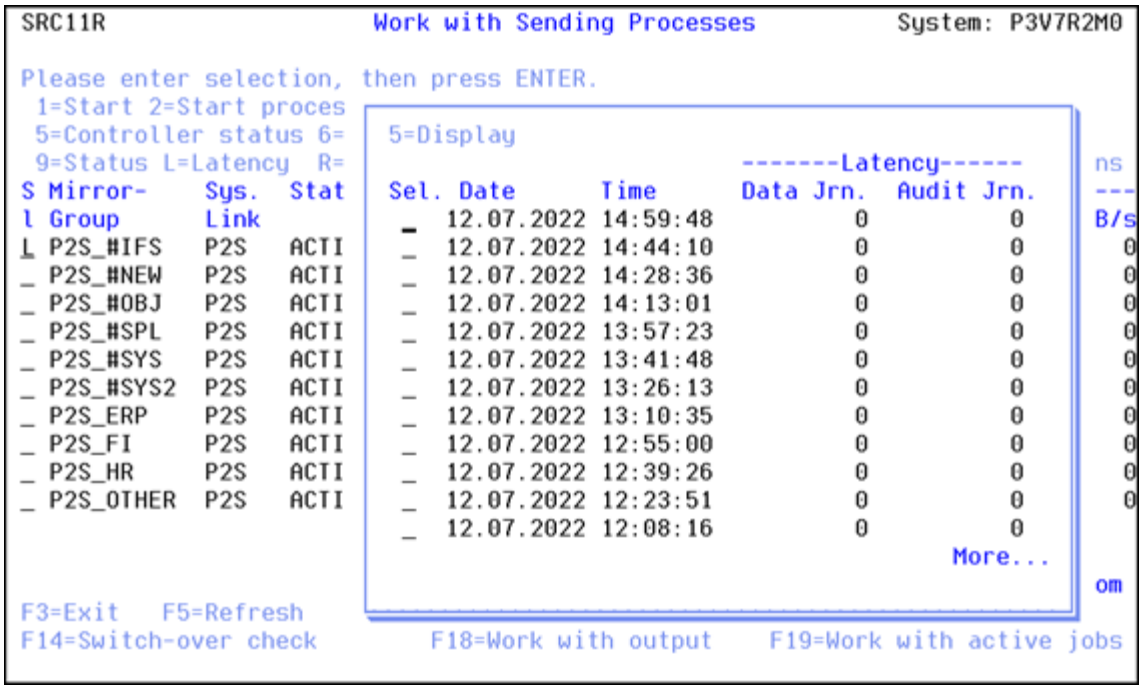
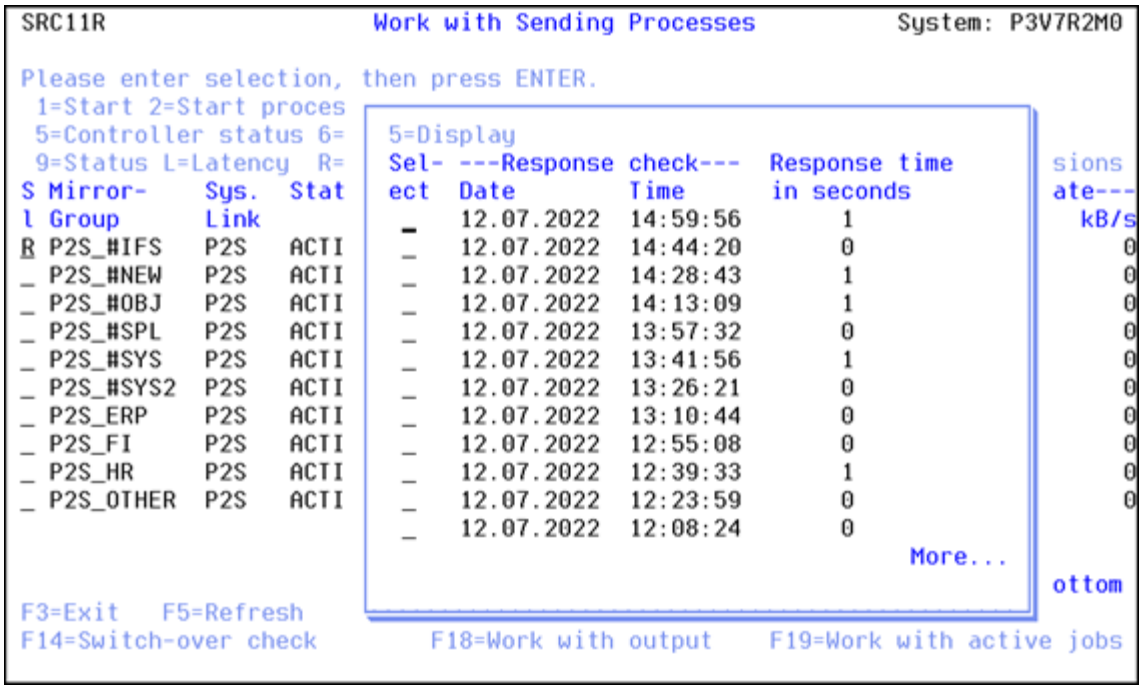
2.2.6 Selection L - Latency



In this view the latency times of the data and audit journal are logged. Logging is done in e.g. 30 minutes interval, depending on the monitoring interval of the process control.

With 5=Display you can view the latency in more detail.

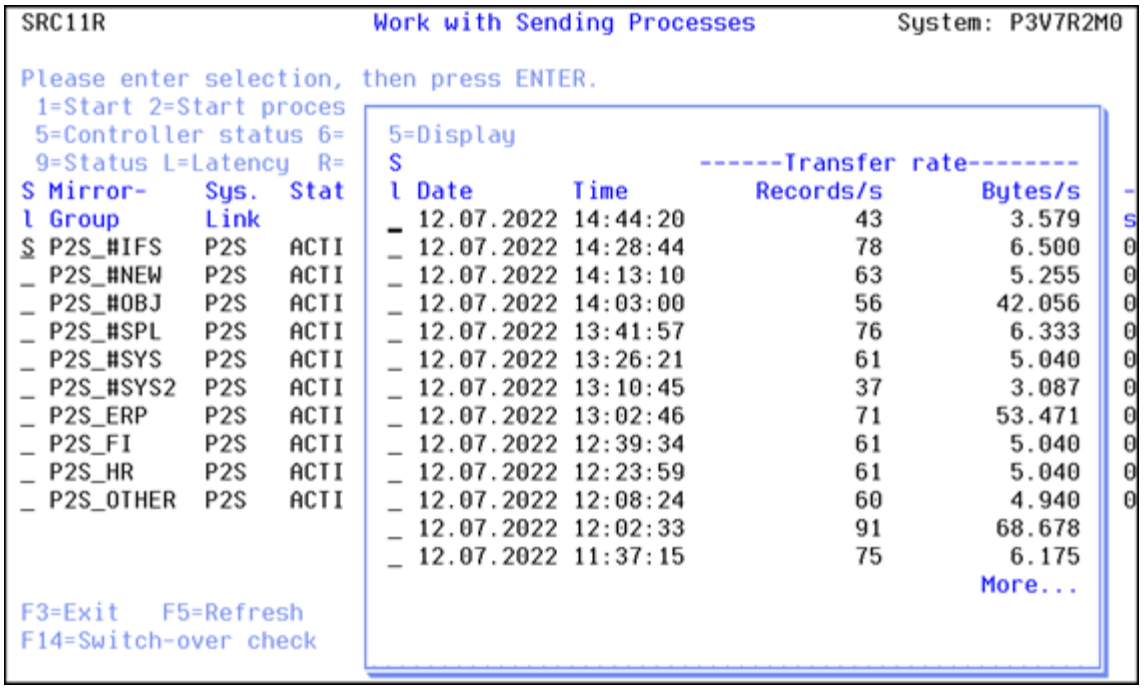
2.2.7 Selection R - Display reaction statistics



The time is measured between the sending of a journal entry and the confirmation of the receiving process that this journal entry has been received. Logging is done in e.g. 30 minutes interval, depending on the monitoring interval of the process control.

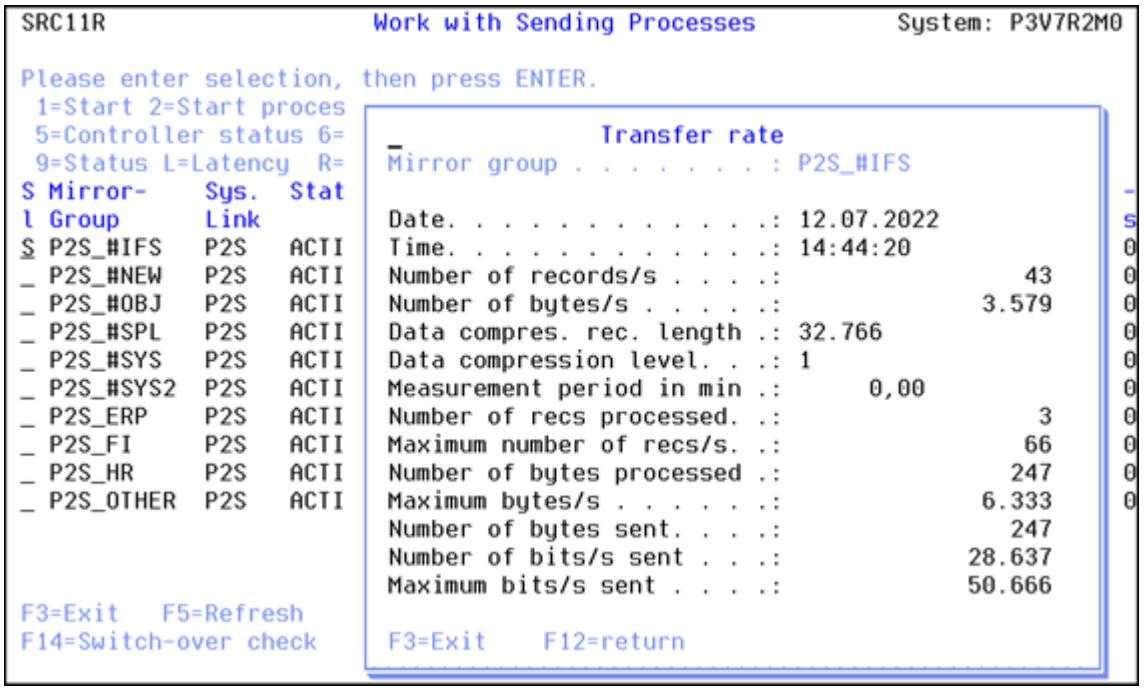
With 5=Display you can display the reaction statistics in more detail. The current and last journal receiver name and the journal sequence number are also displayed there.

2.2.8 Selection S - Transfer rate

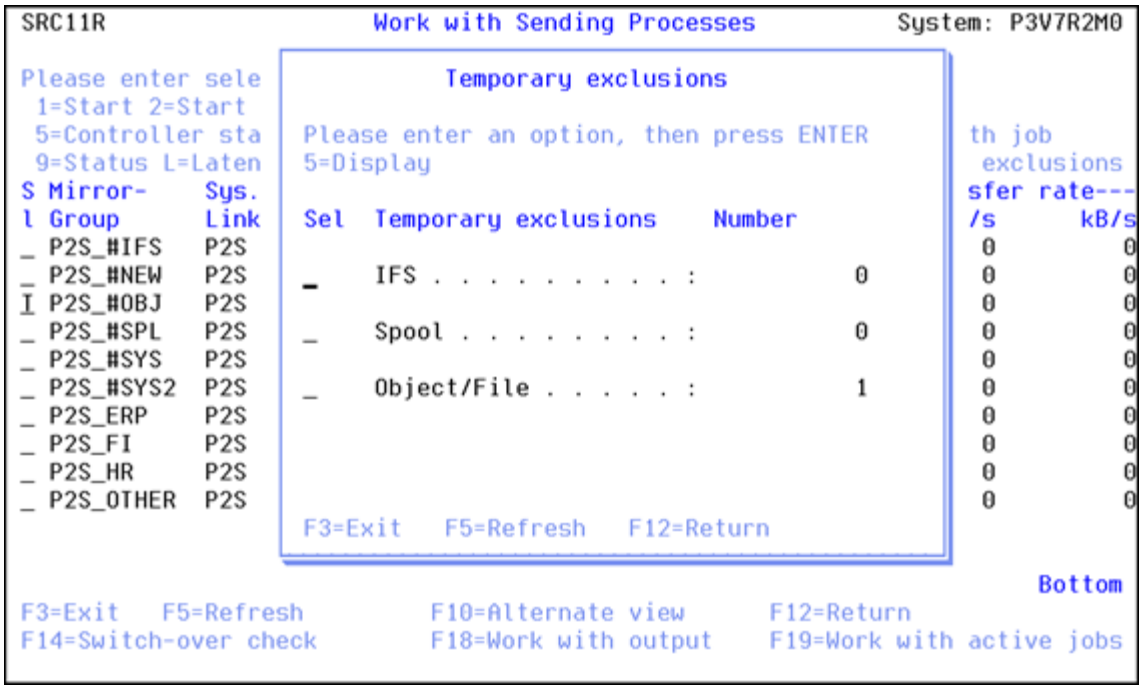


This view shows the transfer rate for records/s in bytes/s. The check runs in takes place in e.g. 30 minutes interval, depending on the monitoring interval of the process control. The data is kept for several days depending on the setting.

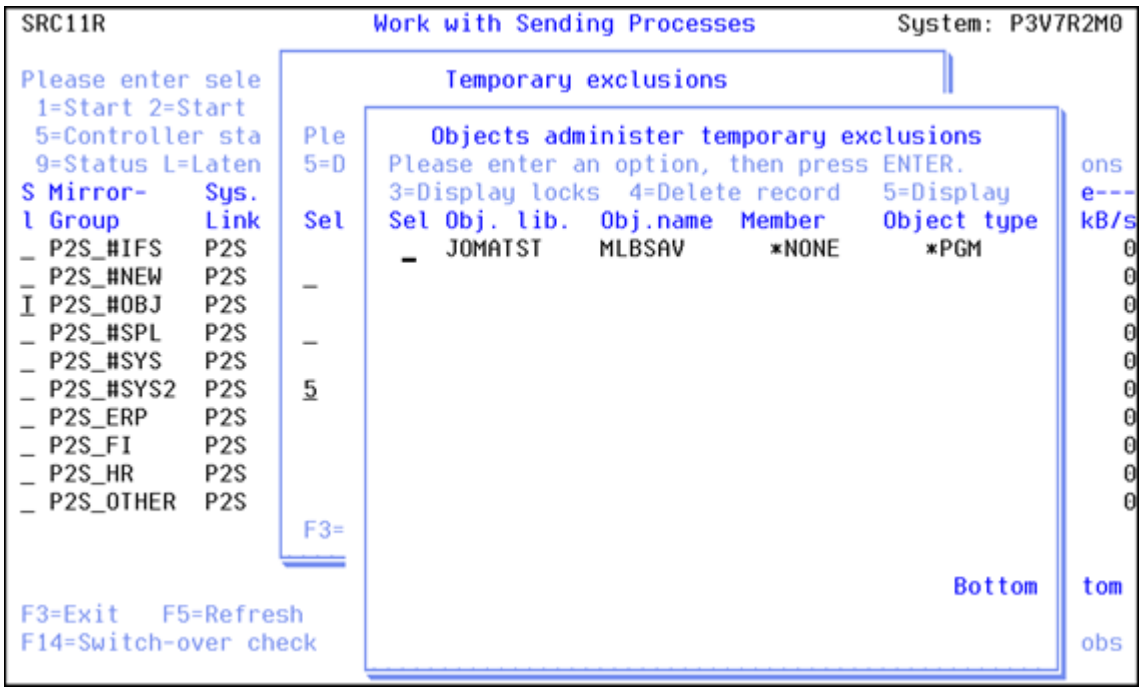
With 5-displays you get a more detailed view. There you get additional information like data compression from record length, data compression level, number of bytes processed etc.



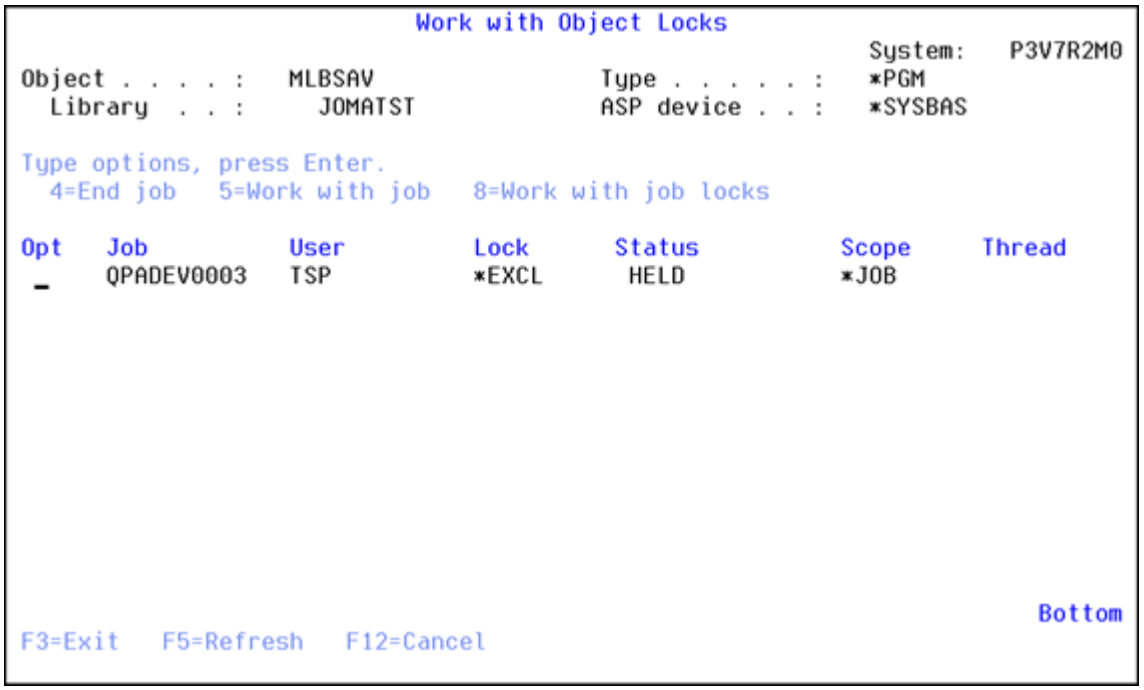
2.2.9 Selection T - Temporary exclusions



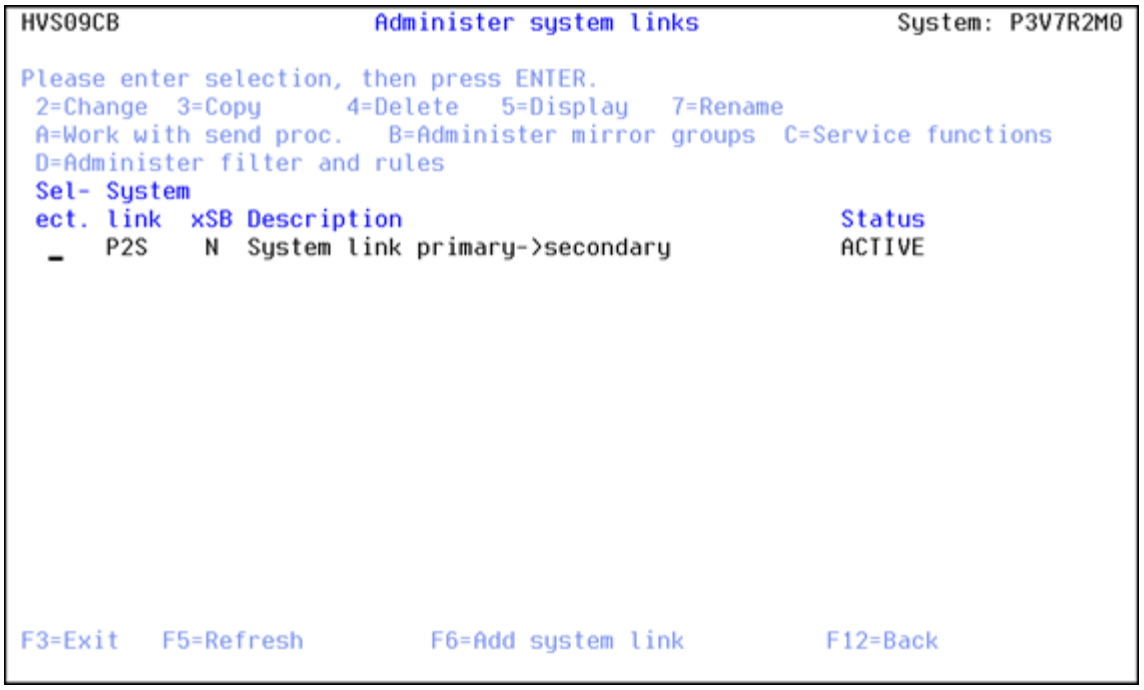
With this function you can display the temporary exclusions of the mirror group. The temporary exclusions are divided into IFS, spool and object/file. These are displayed in a separate list. With 5-displays you can display the individual exclusions in a list. There you get further information like the object type, the creation or check date/time and the check indicator.



"3=Show locks" to show the job locks on the object/file. And what kind of lock is on it.


Work with Object Locks
System: P3V7R2M0
Object . . . . : MLBSAV
Type . . . . . : *PGM
Library . . . : JOMATST
ASP device . . : *SYSBAS
Type options, press Enter.
4=End job 5=Work with job 8=Work with job locks
Opt Job User Lock Status Scope Thread
_ QPADEV0003 TSP *EXCL HELD *JOB
Bottom
F3=Exit F5=Refresh F12=Cancel

2.3 Main menu selection 3 - Manage system links



With this selection list the user can change, add, delete, copy or rename system links. Furthermore, the corresponding control parameters can be changed and the mirror groups can be controlled, managed and filters and rules for mirror groups can be managed.

The following options are possible for **managing the system links:**

Selection

In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

Selection 2 - Change

This selection option can be used to change application-specific control parameters.

Selection 3 - Copy

With this selection option system links can be copied into a new system link.

Selection 4 - Delete

With this selection option system links can be deleted.

Selection 5 - Display

This selection option can be used to display application-specific control parameters.

Selection 7 - Rename

This selection option can be used to change the name and description of a **system link.**

Selection A - Control send processes

The same program is called which is indicated in the main menu under position 2. With the exception that only the mirror groups are displayed which are assigned to the corresponding system link.

Selection B - Manage mirror groups

The same program is called which is indicated in the main menu under position 4. With the exception that only the mirror groups are displayed which are assigned to the corresponding system link.

Selection C - Service functions

The same program is called up which is specified in the main menu under position 5. With the exception that only the mirror groups are displayed which are assigned to the corresponding system link.

Selection D - Manage filters and rules

The same program is called which is indicated in the main menu under position 6. With the exception that only the mirror groups are displayed which are assigned to the corresponding system link.

The following command keys are valid on the current mask:

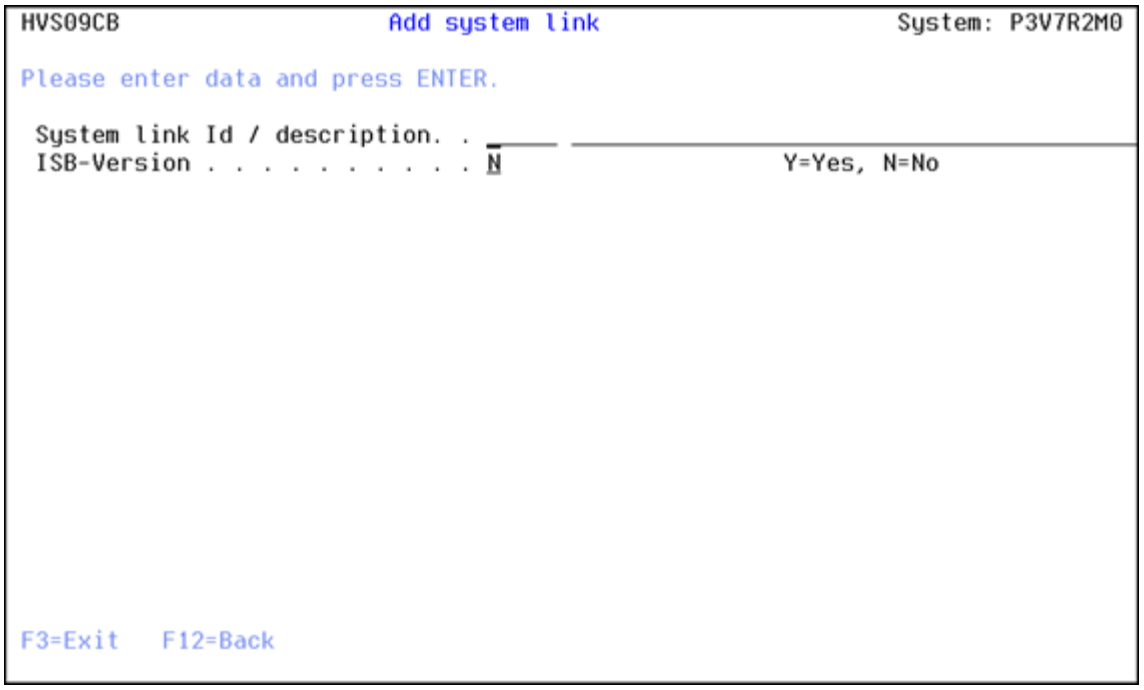
F5=Update

This command key is used for updating the selection lists. All options currently entered on the screen are deleted. The display list is rebuilt so that any list entries added, modified or deleted by other users are also displayed or removed.

F6=Add system link

This function key is used to add a new system link. The control parameters must then be entered.

2.3.1 Command key F6 - Add system link



A new system link is added to the BUS4i HA system via this input mask.
A check is made whether the specified system link already exists. If everything is in order, another mask appears where the control parameters must be entered.
These are then the same masks and inputs as in "Change system link" and is described there.

The following input fields are available to the user:

Name of the system link
In order to add new system links to the BUS4i HA system, a new system link name must be specified for unique identification. The program checks whether the specified new name already exists as a system link name or not. In case of error a message appears on the screen.

Designation
When adding a system link, a descriptive text can be additionally specified for better identification.

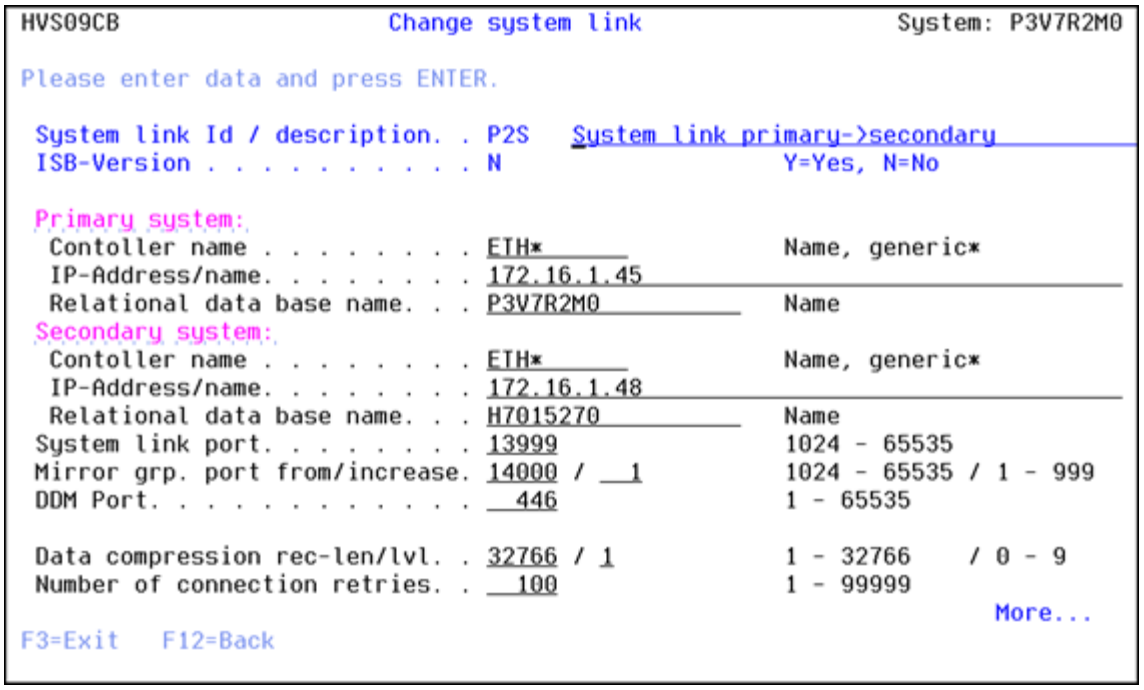
ISB version
Here you can specify whether the link is an ISB system link (In Site Backup) or a system link for an HA system. This means that an external ISB appliance can be used to store the changed data. This version is a disaster recovery solution and not a high availability solution.

The following command keys are valid on the current mask:

F3=End
This command key will exit the program.

F12=Back
This function key is used to return to the previous screen.

2.3.2 Selection 2 - Change system link



With the selection option 2 in the administration list of the system links, the user has the possibility to change application-specific control parameters. With the enter key further control parameters can be displayed. Which control parameters are to be displayed depends on whether it is an ISB version or not.

Via the selection option 5 of the management list the user gets the same display. However, the control parameters are only displayed and not changed.

System Link Id
Name of the **system link for** which the invoked command is to be executed.

IPM version
It is displayed whether the current system link is an IPM version.

The following input fields are available to the user on the current screen:

Designation
The system link can be specified by an additional descriptive text for better identification.

Primary system: controller name
The controller name specifies the unit description used to physically connect the primary and secondary systems. For the transfer process from the production system to the secondary system, the controller must be attached.

Primary system: IP address/name
IP address or name of the primary system over which the systems communicate.

Primary system: Relational database name
Name of the relational database of the primary system.

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Secondary system: controller name
The controller name specifies the unit description used to physically connect the primary and secondary systems. For the transfer process from the production system to the secondary system, the controller must be attached.

Secondary system: IP address/name
IP address or name of the secondary system over which the systems communicate.

Secondary system: Relational database name
Name of the relational database of the secondary system.

System link port
Port over which the communication of the system links between primary and secondary system takes place. Valid values are from 1024-65535.

Mirror groups Port from/Elevation
Ports over which the communication of the mirror groups between primary and secondary system takes place. The ports of the mirror groups are assigned automatically. They start from the specified from port and are assigned consecutively according to the increment. Valid values are from 1024-65535 and 1-999.

DDM Port
Port over which the DDM communication between primary and secondary system takes place. Valid values are from 1-65535.

Data compression Rec length/Lvl
This parameter controls from which data set length the built-in compression is switched on. This reduces the volume to be transferred. Savefiles are not taken into account if the record length exceeds 528.

The data compression level specifies how strongly the data to be transmitted is compressed before it is sent to the secondary system. The level can be selected between 0=no compression to 9 strong compression. The higher the compression level is set, the longer it takes, but this can have a positive effect on the transmission if the network line is slow and the system is fast. The default value is 1.

Number of connection attempts
Here you can specify how often an attempt should be made to establish a connection between the primary and secondary systems.

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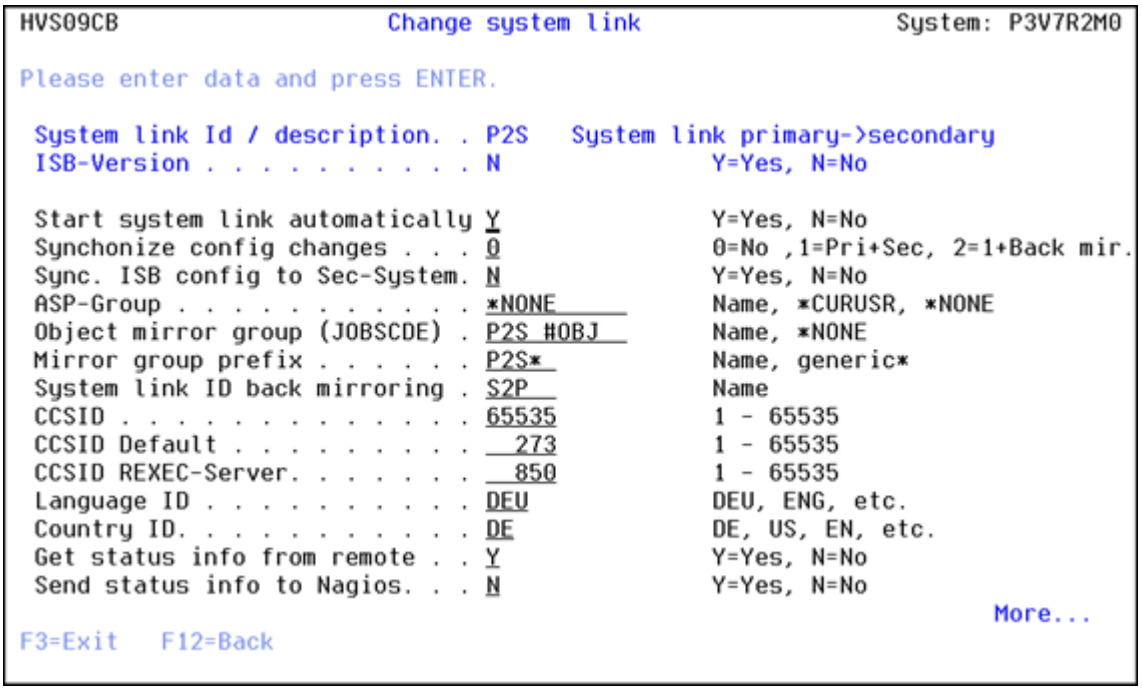

By pressing the Enter key, the user has the possibility to change the control parameters.

Via the selection option 5 of the management list the user gets the same display. However, the control parameters are only displayed and cannot be changed.

System Link Id

Name of the **system link for** which the invoked command is to be executed.

IPM version

It is displayed whether the current system link is an IPM version.

Designation

Additional descriptive text may be provided with the designation for better identification.

The following input fields are available to the user on the current screen:

Start system link automatically

Here you can define whether the system link should be started automatically by the process monitoring.

Valid values for the input parameter are:

Y=Yes

After the monitoring interval has elapsed, a check is made to see whether the system link is active. If not, the system link is started.

N=No

The system link is not started automatically.

Synchronize configuration automatically

Here you can define whether configuration changes should be automatically synchronized by BUS4i.

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Valid values for the input parameter are:

0=No
Configuration changes are not synchronized.

1=Pri+Sec
Configuration changes are automatically synchronized between the primary and secondary systems, but not the back reflection.
This setting should be selected if the IP addresses are not swapped during a switch-over, or there is no need for mirroring back in the case of a new system.

2=Pri+Sec+Backlash
Configuration changes are automatically synchronized between the primary and secondary systems and likewise the rear-view mirroring.

ISB config. synch. to sec. sys.
Here you can define whether an ISB configuration is to be synchronized to a secondary system.

Valid values for the input parameter are:

Y=Yes
An IPM configuration is synchronized to the secondary system of this system link.

N=No
An ISB configuration is not synchronized.

ASP Group
Specifies the name of the ASP (auxiliary storage pool) group for the current thread. The ASP group name is the name of the primary ASP unit within the ASP group.
The libraries of all ASPs in this ASP group are included in the library namespace.

Object mirror group (JOBSCDE)
Here the mirror group is to be specified, over which the job scheduler is sealed.
If he job scheduler is not mirrored, any object mirror group or *NONE can be specified.
However, it should be noted that some commands use this mirror group as default value.

Mirror group prefix primary
Here you have to define the prefix of all mirror groups of this system link.

System Link ID Rear View Mirror
The system link ID of the rear view mirror must be defined here.

CCSID
The CCSID used by the system link must be defined here.

CCSID Default
The CCSID default value used by the system link is to be defined here.

CCSID REXEC server
The CCSID used by the REXEC server must be defined here.

Language ID
Here you have to define the language ID used by the system link.

Country ID
Here you have to define the country ID used by the system link.

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Get status info from remote

Valid values are "Y"= Yes and "N"= No. If "Y" is set, status information is periodically sent from the
remote system, which can be retrieved via selection 9 in the "Manage send processes" program.
can be displayed.

Send status info to Nagios

Here you can define if BUS4i status messages should be sent to the defined Nagios server.

Valid values for the input parameter are:

Y=Yes

With "Y" a message with the respective status of the mirror groups is sent to the Nagios server after the monitoring interval has expired.

N=No

No BUS4i status messages are sent to the defined Nagios server.

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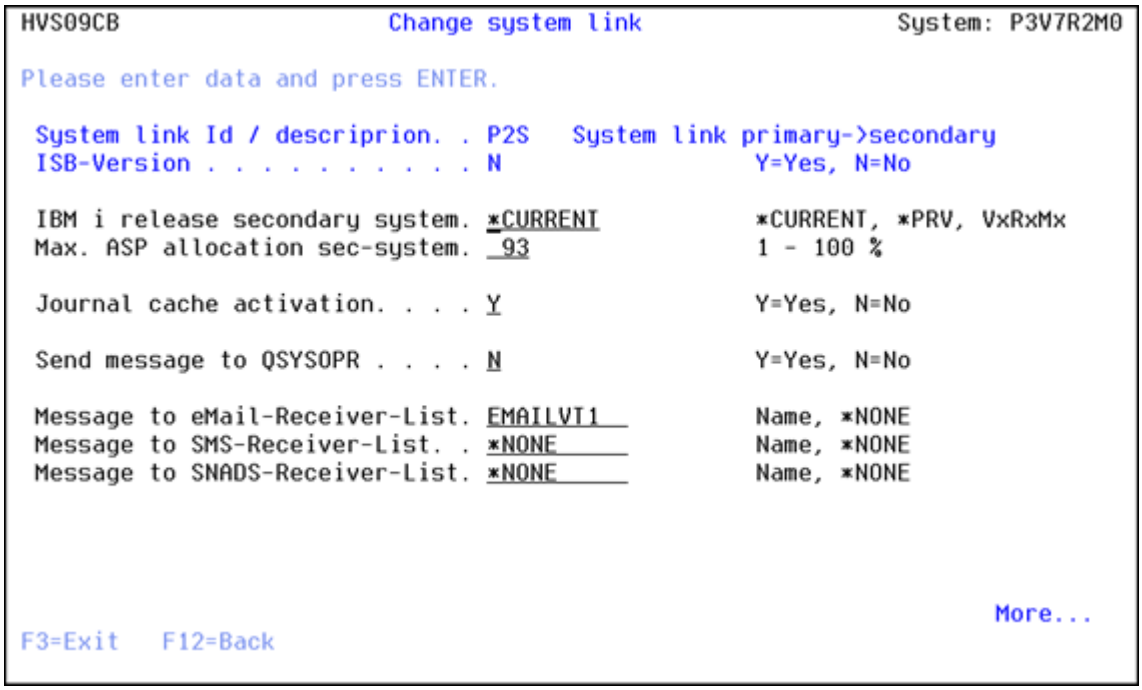

By pressing the Enter key, the user has the possibility to change the control parameters.

Via the selection option 5 of the management list the user gets the same display. However, the control parameters are only displayed and cannot be changed.

System Link Id

Name of the **system link for** which the invoked command is to be executed.

IPM version

It is displayed whether the current system link is an IPM version.

Designation

Additional descriptive text may be provided with the designation for better identification.

The following input fields are available to the user on the current screen:

IBM i Release Secondary System

The operating system version of the secondary system must be specified here.

Max. ASP occupancy sec system

If the threshold value specified here for the ASP occupancy of the secondary system is exceeded, the send process on the primary system is stopped.

Enable journal cache

Here you can define whether the cache of the journals of this system link should be activated.

Valid values for the input parameter are:

Y=Yes

When a new journal is created, the cache is automatically activated.

N=No

The cache of the journal is not activated.

Send message to QSYSOPR
If "Y"=Yes is entered, the BUS4i status messages are sent to the QSYSOPR after the test interval has elapsed.

Message to eMail distribution list ID
Specification of the unique name ID for the distribution list. An error message is sent to this distribution list in case of an error.

Message to SMS distribution ID
Specification of the unique name ID for the distribution list. An error message is sent to this distribution list in case of an error.

Message to SNADS distributor ID
Specification of the unique name ID for the distribution list. An error message is sent to this distribution list in case of an error.

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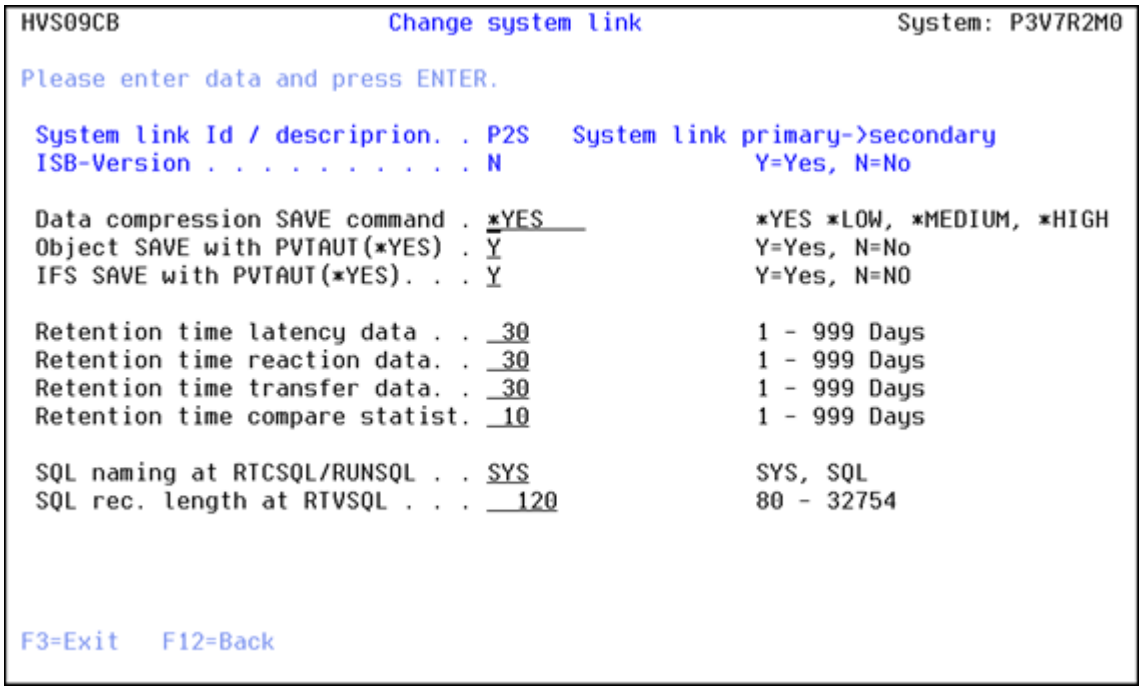

By pressing the Enter key, the user has the possibility to change the control parameters.

Via the selection option 5 of the management list the user gets the same display. However, the control parameters are only displayed and cannot be changed.

System Link Id

Name of the **system link for** which the invoked command is to be executed.

IPM version

It is displayed whether the current system link is an IPM version.

Designation

Additional descriptive text may be provided with the designation for better identification.

The following input fields are available to the user on the current screen:

Data aggregation at SAVE

Specifies whether data compaction is being performed. If the backup is performed while other jobs are active in the system, using compaction via software, the overall performance of the system may be affected.

Obj. SAVE with PVTAUT(*YES)

Specifies whether to back up personal permissions with the objects being backed up. Backing up personal permissions increases the time required to back up the objects, but simplifies restoring an object or group of objects.

IFS SAVE with PVTAUT(*YES)

Specifies whether to back up personal permissions with the objects being backed up. Backing up personal permissions increases the time required to back up the objects, but simplifies restoring an object or group of objects.

Dwell time Latency times

Specifies how long the data should be kept (in days) before it is deleted and reorganized.

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Dwell time Response times
Specifies how long the data should be kept (in days) before it is deleted and reorganized.

Dwell time Transfer statistics
Specifies how long the data should be kept (in days) before it is deleted and reorganized.

Dwell time Compare statistics
Specifies how long the data should be kept (in days) before it is deleted and reorganized.

SQL Naming with RTVSQL/RUNSQL
Specifies the naming convention used to name objects in SQL statements.

SQL Rec length for RTVSQL
Specifies the record length of the created part file used with RTVSQL.

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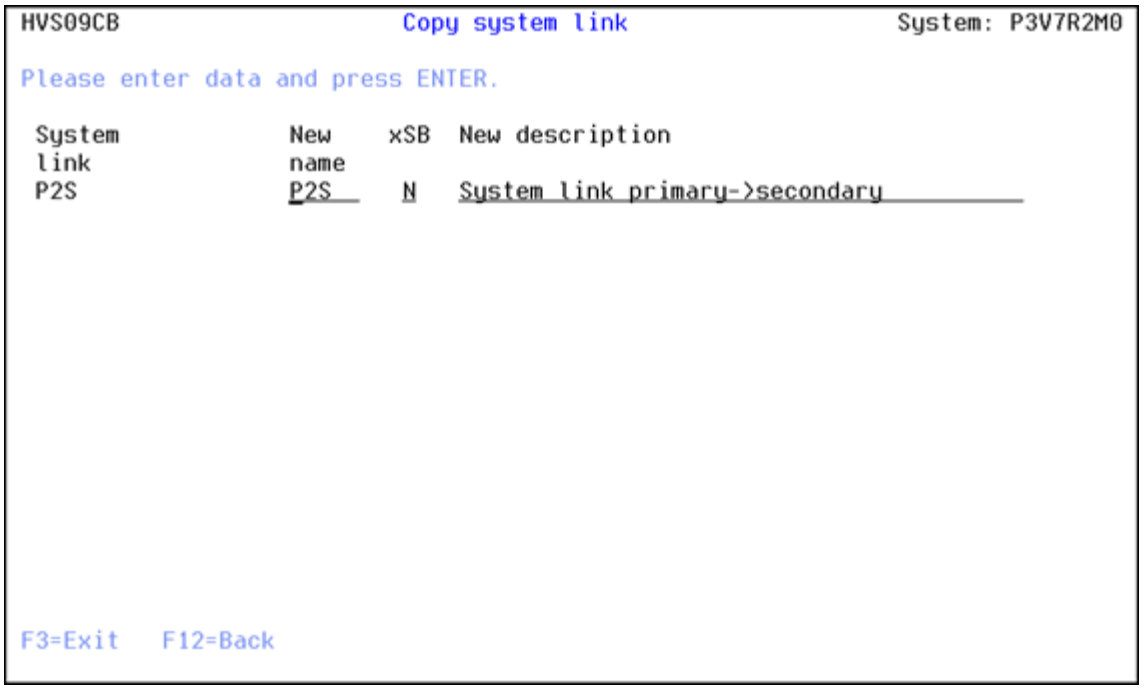
2.3.3 Selection 3 - Copy system link



With this selection, existing system links can be copied to facilitate the inclusion of a new system link in the BUS4i HA system. Here the control parameters and the objects intended for the system link are also copied.

The following input fields are available to the user:

New name
To be able to copy or rename existing **system links**, a new system link name must be specified for unique identification. The default setting is the old system link name, which must then be changed.

The program checks whether the specified new name already exists as a system link or not. In case of error, a message appears on the screen and the system link is neither copied nor renamed.

xSB
Enter a "Y" if it is an xSB version.

New description
With the copy function, a descriptive text can additionally be specified for better identification of the system link. The default setting is the old description, which must then be changed.

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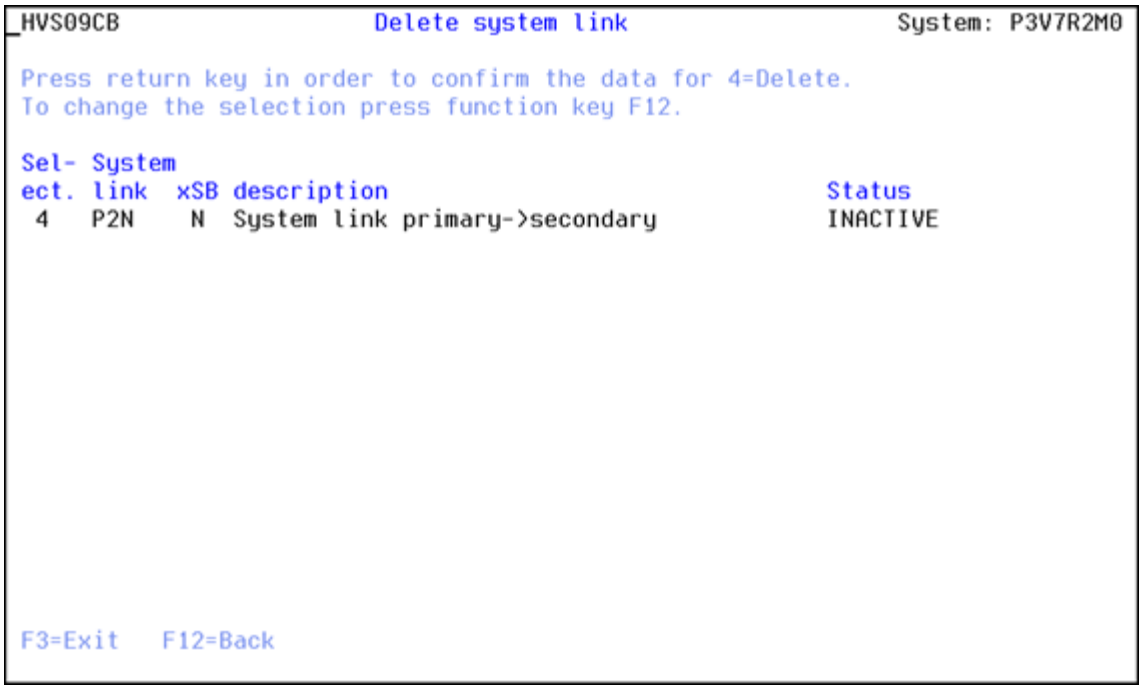
2.3.4 Selection 4 - Delete system link

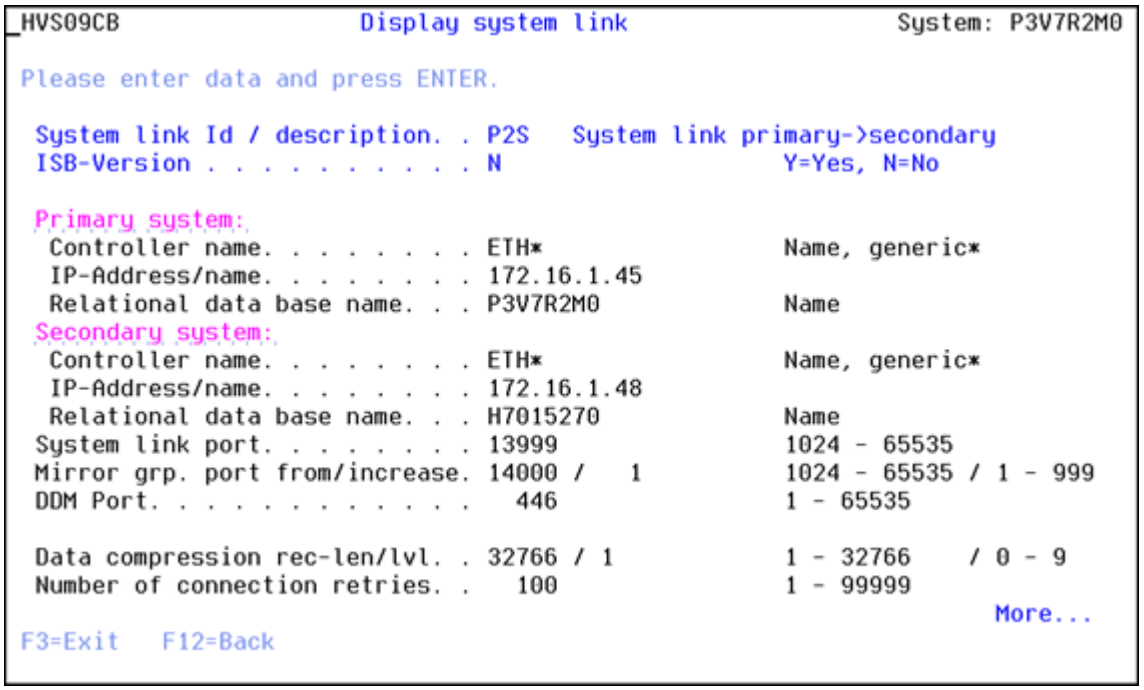


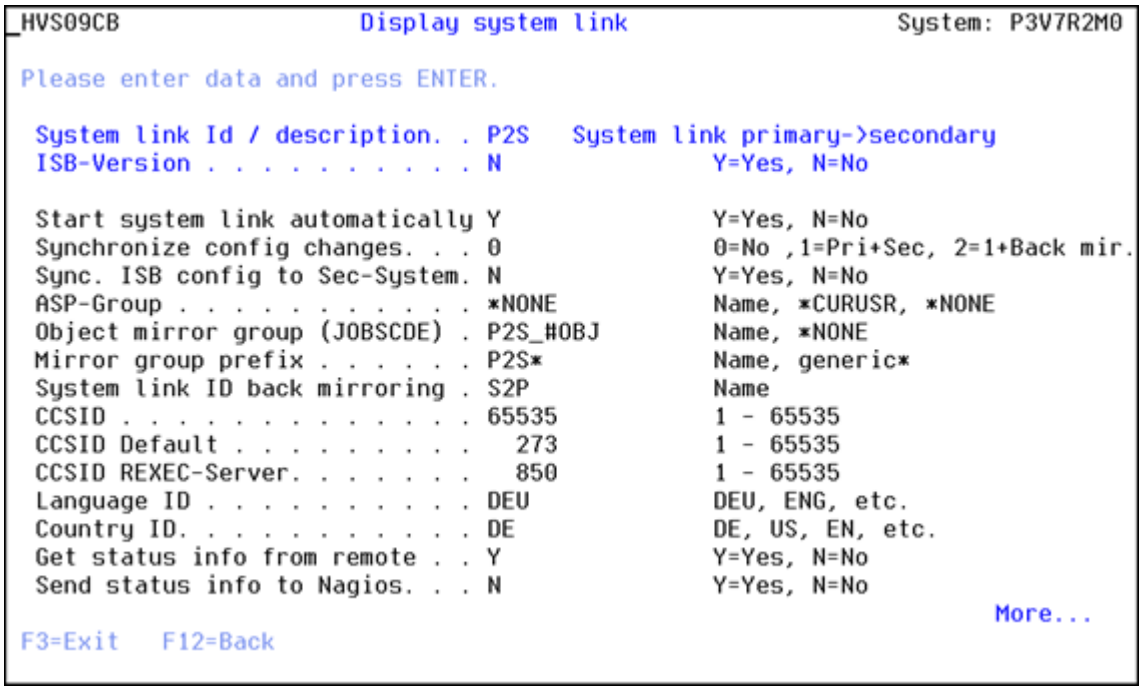
Via selection 4 in the management list of the system links, one or more system links can be deleted from the BUS4i HA system. The system links can only be removed if they are in the INACTIVE status and no mirror groups are assigned to the system link.

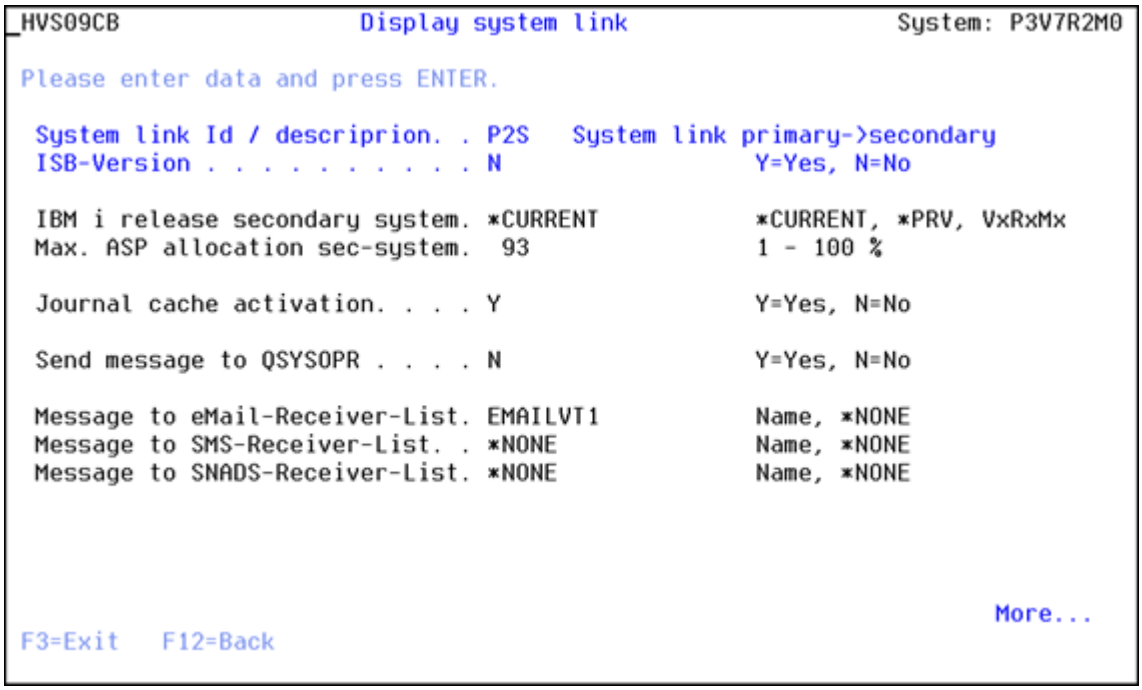
After confirming with the Enter key, the system link is deleted.

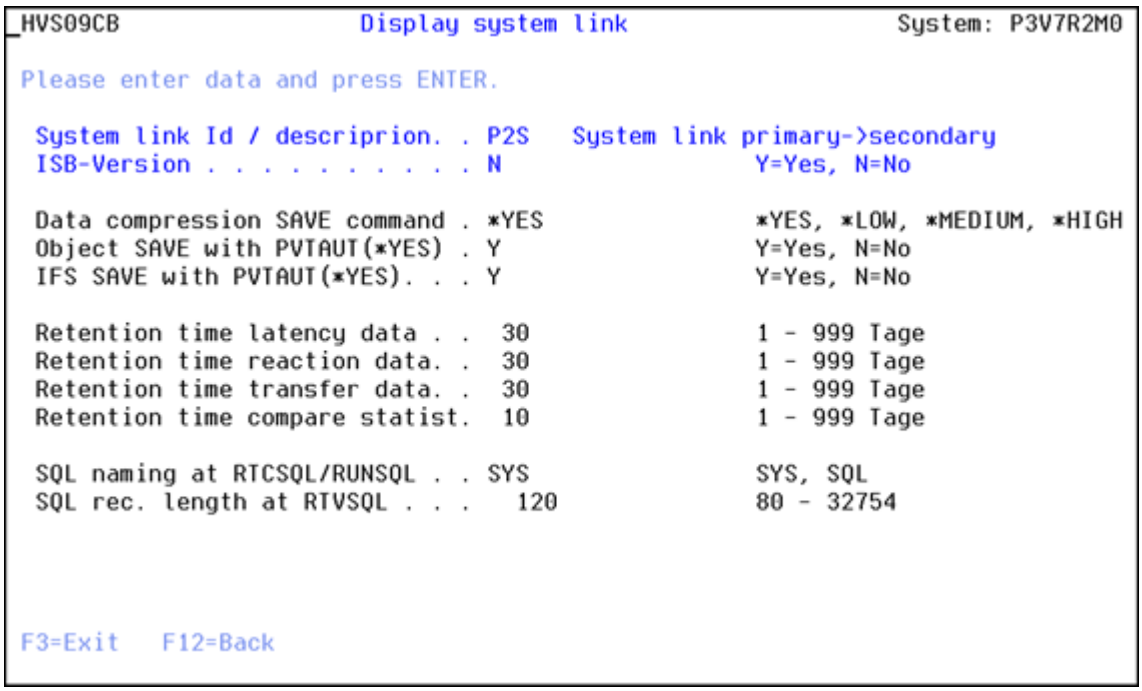
2.3.5 Selection 5 - Display system links

With selection 5 in the management list of the system links, the control parameters of a system link can be displayed and controlled in each status. The parameters are described in more detail in the section "Change system link".

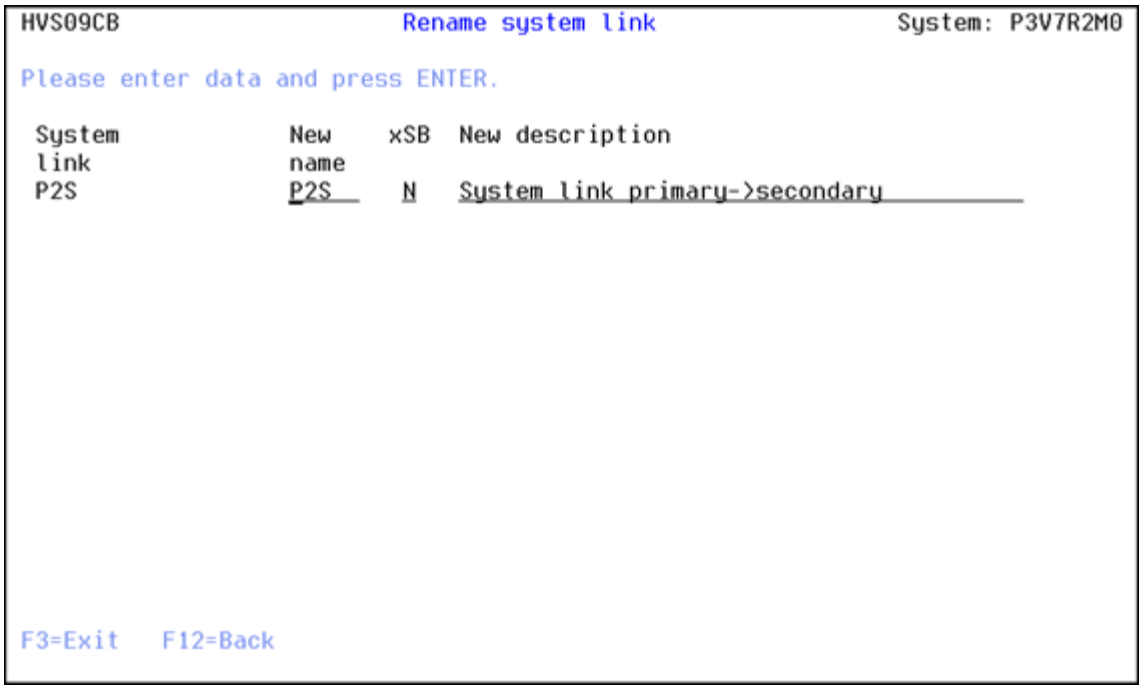





HVS09CB Display system link System: P3V7R2M0
Please enter data and press ENTER.
System link Id / descriprion. . P2S System link primary->secondary
ISB-Version . . . . . N Y=Yes, N=No
IBM i release secondary system. *CURRENT *CURRENT, *PRV, VxRxMx
Max. ASP allocation sec-system. 93 1 - 100 %
Journal cache activation. . . . Y Y=Yes, N=No
Send message to QSYSOPR . . . . N Y=Yes, N=No
Message to eMail-Receiver-List. EMAILVT1 Name, *NONE
Message to SMS-Receiver-List. . *NONE Name, *NONE
Message to SNADS-Receiver-List. *NONE Name, *NONE
More...
F3=Exit F12=Back


HVS09CB Display system link System: P3V7R2M0
Please enter data and press ENTER.
System link Id / descriprion. . P2S System link primary->secondary
ISB-Version . . . . . N Y=Yes, N=No
Data compression SAVE command . *YES *YES, *LOW, *MEDIUM, *HIGH
Object SAVE with PVTAUT(*YES) . Y Y=Yes, N=No
IFS SAVE with PVTAUT(*YES). . . Y Y=Yes, N=No
Retention time latency data . . 30 1 - 999 Tage
Retention time reaction data. . 30 1 - 999 Tage
Retention time transfer data. . 30 1 - 999 Tage
Retention time compare statist. 10 1 - 999 Tage
SQL naming at RTCSQL/RUNSQL . . SYS SYS, SQL
SQL rec. length at RTVSQL . . . 120 80 - 32754
F3=Exit F12=Back

2.3.6 Selection 7 - Rename system link



With this selection, existing system links can be renamed. The objects intended for the system link will also be renamed.

The following input fields are available to the user:

New name
To be able to copy or rename existing **system links**, a new system link name must be specified for unique identification. The default setting is the old system link name, which must then be changed.

The program checks whether the specified new name already exists as a system link or not. In case of error, a message appears on the screen and the system link is neither copied nor renamed.

xSB
Enter a "Y" if it is an xSB version.

New description
With the copy function, a descriptive text can additionally be specified for better identification of the system link. The default setting is the old description, which must then be changed.

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2.3.7 Selection A - Control send processes

The same program is called which is indicated in the main menu under position 2. With the exception that only the mirror groups are displayed which are assigned to the corresponding system link.

2.3.8 Selection B - Manage mirror groups

The same program is called which is indicated in the main menu under position 4. With the exception that only the mirror groups are displayed which are assigned to the corresponding system link.

2.3.9 Selection C - Service functions

The same program is called which is indicated in the main menu under position 5.
With the exception that only the mirror groups that are assigned to the corresponding system link are displayed.

2.3.10 Selection D - Manage filter and rule

The same program is called which is indicated in the main menu under position 6.
With the exception that only the mirror groups that are assigned to the corresponding system link are displayed.

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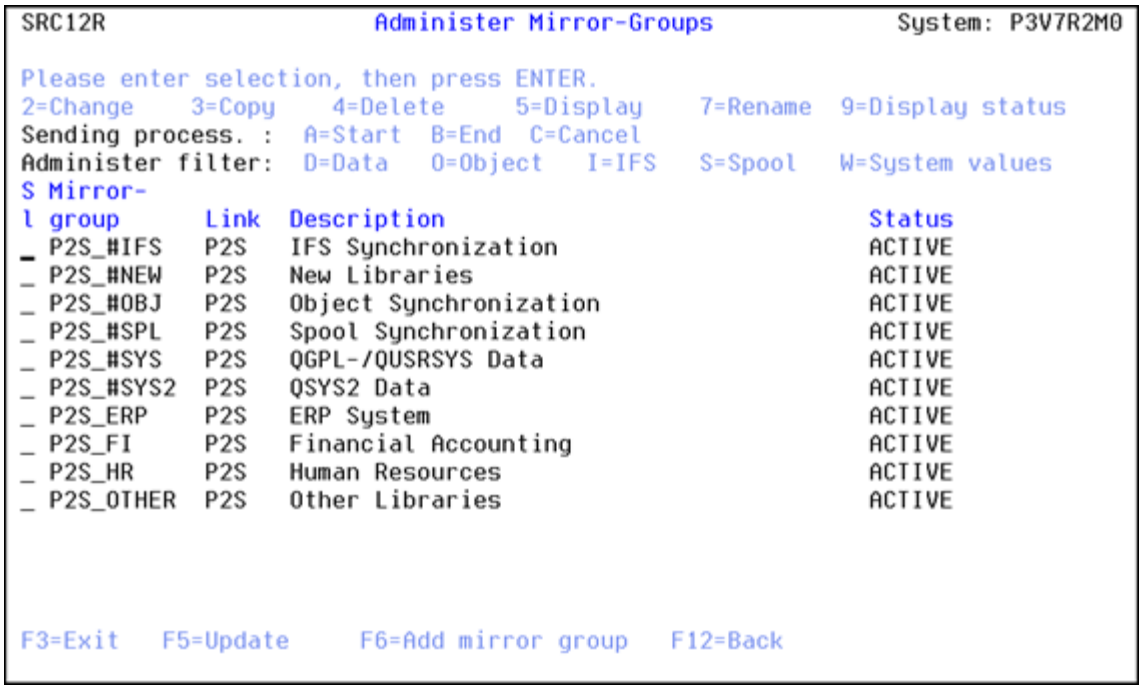
2.4 Main menu selection 4 - Manage mirror groups



With this selection list the user can change, add, delete, copy or rename mirror groups. Furthermore, the corresponding control parameters can be changed and the filters for the files, objects, spool files, IFS files and system values of a mirror group to be mirrored can be managed.

A separate library is created for each mirror group, which contains all objects that cannot be used across applications.

The following options are available for **mirror group management:**

Selection

In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

Selection 2 - Change

This selection option can be used to change application-specific control parameters.

Selection 3 - Copy

With this selection option, mirror groups can be copied into a new mirror group.

Selection 4 - Delete

This selection option can be used to delete mirror groups.

Selection 5 - Display

This selection option can be used to display application-specific control parameters.

Selection 7 - Rename

With this selection option the name and description of a **mirror group** can be changed.

Selection 9 - Display status

With this function it is possible to display the overall status of the mirror group (primary and secondary system) from one system. It is activated in the basic control parameters.

Selection A - Start send process

This selection option starts the send process on the primary system and the receive process on the secondary system. The send process transfers the database changes, object changes collected in the journal receiver to the secondary system. The processing process must be started separately on the secondary system. The send process repeats the connection setup as often as specified in the communication parameter "Number of connection attempts" before sending an error message to the QSYSOPR. This means that shutdown from the primary and secondary systems no longer has to take place in a timely manner.

Selection B - End send process

With this selection option, an "END control record" is added at the end in the journal receiver. The send process transmits the database changes, object changes up to this "END control record". After that, both the send process on the primary system and the receive process and the processing process on the secondary system are terminated.

Selection C - Cancel send process

With this selection option, the send process on the primary system is abnormally aborted via the ENDJOB *IMMED command. This also aborts the receive process on the secondary system in case of SNA connection.

Selection D - Manage mirror group data filter

This selection option can be used to manage the data objects of a mirror group whose changes are to be tracked on the secondary system.

Selection O - Manage objects

This selection option can be used to manage the objects that are to be synchronized on the secondary system.

Selection I - Manage IFS file filters

This selection option can be used to manage the IFS files that are to be synchronized on the secondary system. It is possible to enter selected folders.

Selection S - Manage spool filters

This selection option can be used to manage the spool files to be synchronized on the secondary system.

Selection W - Manage system value filter

This selection option can be used to manage the system values to be synchronized on the secondary system.

The following command keys are valid on the current mask:

F5=Update

This command key is used for updating the selection lists. All options currently entered on the screen are deleted. The display list is rebuilt so that any list entries added, modified or deleted by other users are also displayed or removed.

F6=Add mirror group

This function key is used to add a new mirror group to the BACKUP SYSTEM. Here, a library with the name of the respective mirror group is created and the application-specific objects are duplicated from the original SRCSYS library. If the library with the appropriate objects was created, the control parameters must be entered and the files, which are to be mirrored, must be administered.

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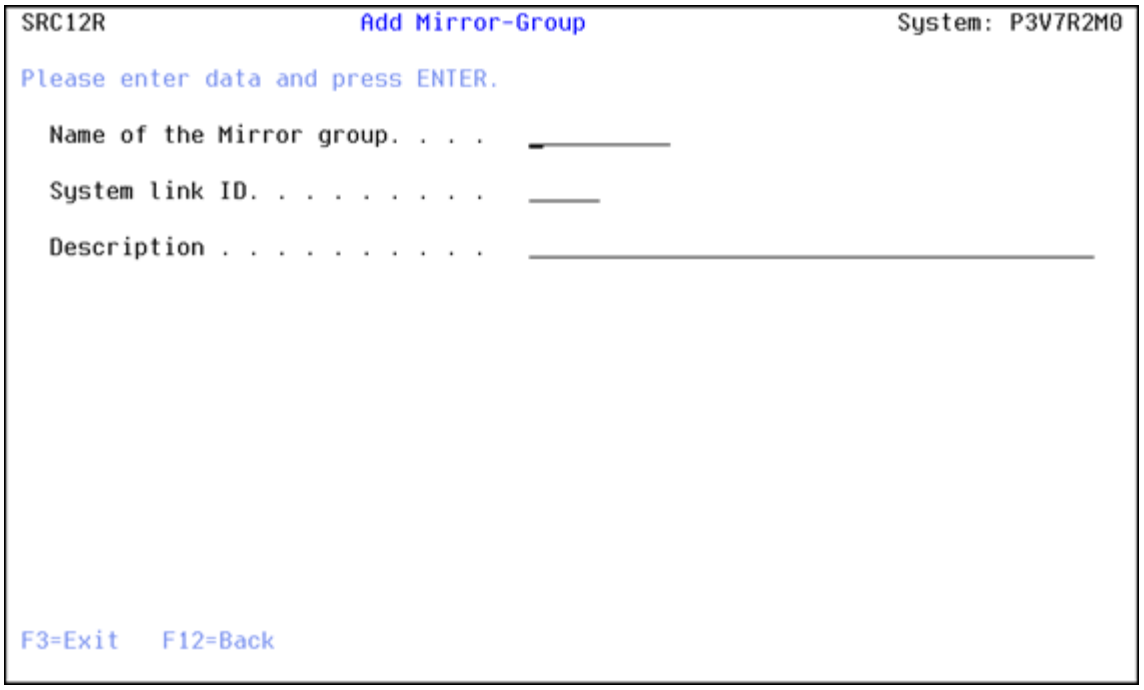
2.4.1 Command key F6 - Add mirror group



A new mirror group is added to the BUS4i HA system via this input mask. A library with the name of the respective mirror group is created and the application-specific objects are duplicated from the original library. A check is made whether the specified mirror group already exists. Once the library has been created with the corresponding objects, another screen appears where the control parameters must be entered and then a list in which the files to be mirrored must be entered.

The following input fields are available to the user:

Mirror group name
In order to add new mirror groups to the BUS4i HA system, a new mirror group name must be specified to uniquely identify the application. The program checks whether the specified new name already exists as a mirror group name or not. In case of error a message appears on the screen.

System Link ID
This assigns the mirror group to a system link.

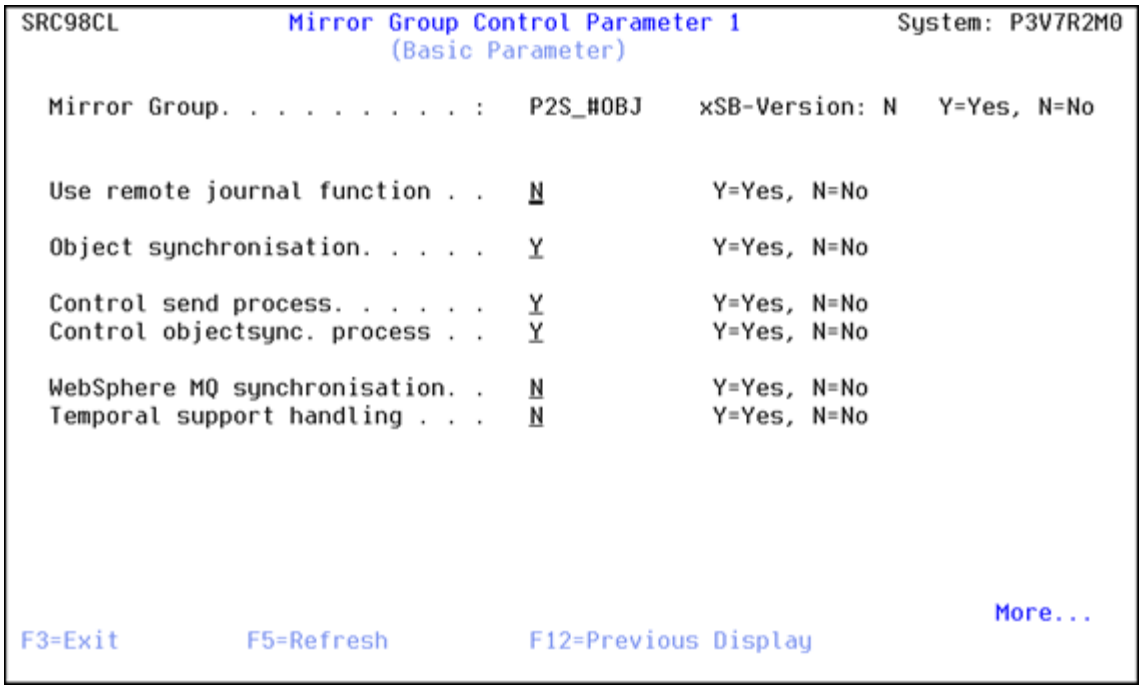
Description
When adding a mirror group, a descriptive text can be additionally specified for better identification of the mirror group name.

The following command keys are valid on the current mask:

F3=End
This command key will exit the program.

F12=Back
This function key is used to return to the previous screen.

2.4.2 Selection 2 - Change mirror groups



With the selection option 2 in the management list of the mirror groups, the user has the possibility to change application-specific control parameters. With the Enter key, further control parameters can be displayed. Which control parameters are to be displayed depends on the parameter activated on this screen, such as object synchronization.

Via the selection option 5 of the management list the user gets the same display. However, the control parameters are only displayed and not changed.

Mirror group
Name of the **mirror group for** which the called command is to be executed.

xSB version
It is displayed whether the current mirror group is an xSB mirror group.

The following input fields are available to the user on the current screen:

Using Remote Journal
Enables synchronous data transfer. On the primary system, the data is not saved and the transaction is not completed until the secondary system has logged and confirmed the change in the remote journal.

Object synchronization
This parameter can be used to switch object synchronization on or off. All objects that have been entered in the management menu via the "Manage object filter" option are checked for changes when synchronization is switched on and synchronized accordingly on the secondary system.

Valid values for the input parameter are:

Y=Yes
Object synchronization active.

N=No
No object synchronization.

Monitor send process
When activated with "Y", the send process is checked whether it is in the INACTIVE status. If "Automatic start = "Y" " is set for the process monitoring parameters, the send process is automatically restarted after the monitoring interval has elapsed if the send process is inactive. If "Start automatically = "N" " is set, a message is sent to the distribution lists when the send process is inactive.

Monitor object sync.process
When activated with "Y", the process is checked whether it is in INACTIVE status. In case of an error, a message is sent to the distribution lists.

Websphere MQ synchronization
If a Websphere MQ Manager is set up on the system, the indicator on the respective mirror groups must be set to "Y". This is required for switching from the secondary to the primary system. After switching, the command "SRCSYS/CLDSTRMQM" must be executed for these mirror groups.

Temporal Support Control
Valid values are "Y"= Yes and "N"= No. If "Y" is set, information about the temporal tables is transmitted to the secondary system and the corresponding actions are performed.

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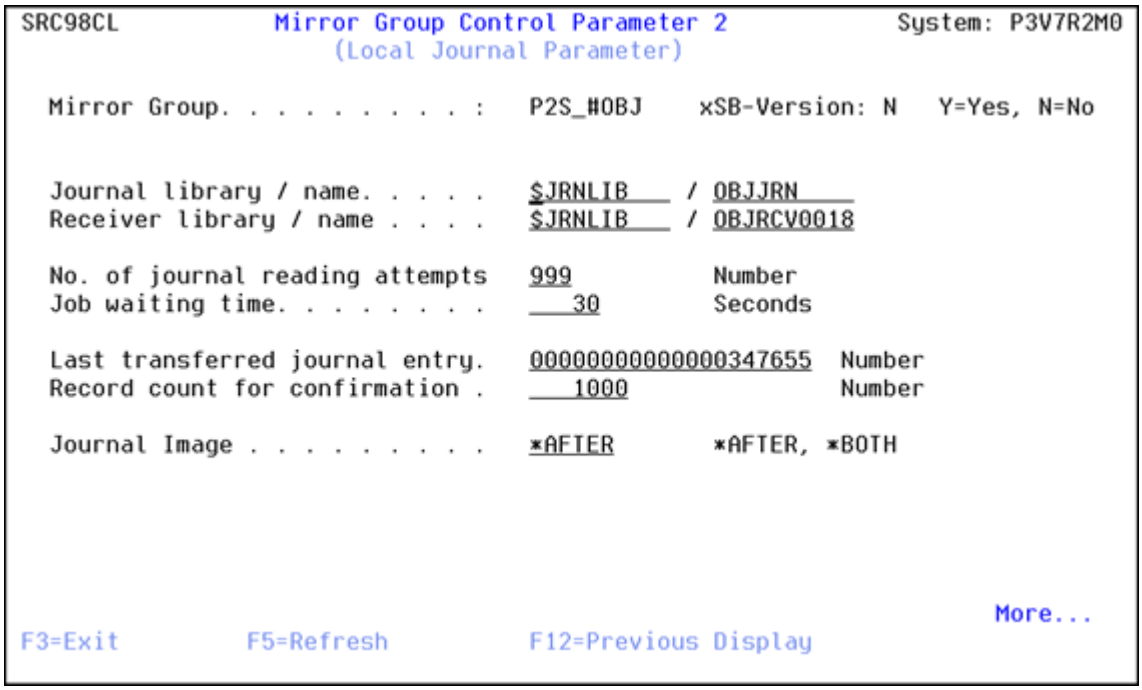


By pressing the Enter key, the user has the possibility to change the control parameters for the local journal. Via the selection option 5 of the management list the user gets the same display. However, the control parameters are only displayed and cannot be changed.

Mirror group
Name of the **mirror group for** which the called command is to be executed.

xSB version
It is displayed whether the current mirror group is an xSB mirror group.

The following input fields are available to the user on the current screen:

Journal library
Name of the library that contains the journal.

Journal Name
The Journal Name specifies a system object that is used to place entries in a journal receiver when a change is made to a database file. The system uses the journal to record information about the journal receivers and database files associated with the journal. The object type for the journal is "*JRN". The database files are assigned to the journal using the "STRJRNPF" command.

Journal receiver (Receiver) Library
Library containing the journal receivers assigned to the previously specified journal.

Journal receiver (Receiver) Name
The journal receiver name specifies a system object with journal entries that are recorded when changes are made to data in database file or the associated access paths. The system identifier for the object type is '*JRNRCV'.

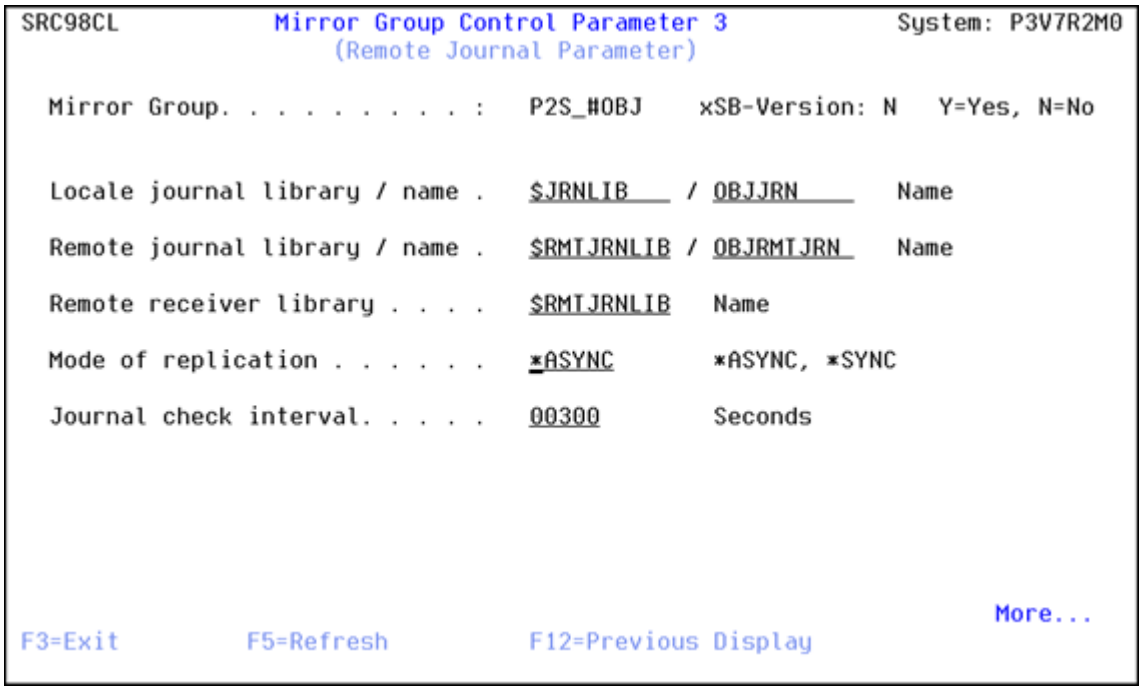
Number of journal read attempts
This specifies the maximum number of attempts that the send process should make in succession before it enters the job wait state. The duration for which the send process should be in the wait status is specified in the "Job wait time" parameter.

Job waiting time
Waiting time in seconds that the send process waits until it checks again whether journal entries to be sent exist in the journal receiver.

Last number transmitted
Number of the last properly transferred journal entry. This is confirmed by the BACKUP SYSTEM and the data area is updated.

Record interval for confirmation
The record interval for acknowledgement specifies the maximum number of records after which an acknowledgement is requested by the receiving process. The receiving process compares the number of sent records with the number of received records and confirms positively if they match. In case of positive confirmation, the "Last transmitted number" data area is updated. All unconfirmed records are sent again to the secondary system.

Journal Image
When starting the journaling of a file whose library is to be synchronized via a mirror group, the value for the journal image is used from this data area. The default value is *AFTER.



If the Remote Journal was selected in the selection option 2 in the basic parameters, this mask will be displayed. Via the selection option 5 of the management list the user gets the same display. However, the control parameters are only displayed and cannot be changed.

Mirror group
Name of the **mirror group for** which the called command is to be executed.

xSB version
It is displayed whether the current application is an xSB application.

The following input fields are available to the user on the current screen:

Local Journal Library
Name of the library containing the JOURNAL on the local system.

Journal Name
The Journal Name specifies a system object through which, entries are placed in a journal receiver when a change is made to a database file.
The system uses the journal to record information about the journal receivers and database files associated with the journal. The object type for the journal is "*JRN".
The database files are assigned to the journal using the "STRJRNPF" command.

Remote Journal Library
Name of the library that contains the journal on the remote system.

Remote Journal Name
Name of the journal via which entries are placed on the remote system.

Remote Receiver Library
If a "Y" was entered for "Use of remote journal" in the base parameter, the name of the library in which the remote journal used is located is listed here.

Replication mode
Selection for asynchronous or synchronous replication mode.

Journal test interval
The journal check interval specifies the waiting time of the processing program if there is no new journal entry in the journal receiver. The waiting time is specified in seconds.

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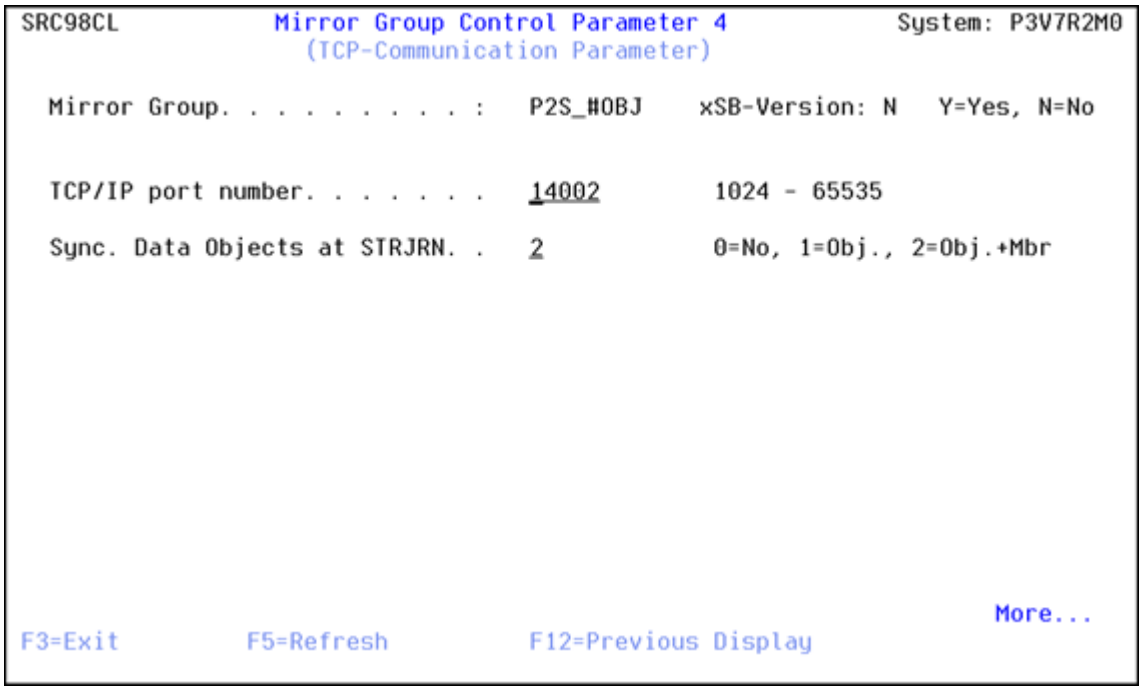

By pressing the Enter key, the user has the possibility to change the control parameters for TCP/IP communication. Via the selection option 5 of the management list the user gets the same display. However, the control parameters are only displayed and cannot be changed.

Mirror group

Name of the **mirror group for** which the called command is to be executed.

xSB version

It is displayed whether the current application is an xSB application.

The following input fields are available to the user on the current screen:

TCP / IP Port NUMBER

Port over which the communication between source and secondary system takes place. Valid values are from 1024-65535.

Sync. Data objects at STRJRN

Here you can define whether the data object should be automatically synchronized by BUS4i when journaling is started.

Valid values for the input parameter are:

0=No

The object is not synchronized.

1=Obj.

Only newly journalized objects are synchronized with SAVE/RESTORE but not partial files. This setting should be selected if there are files with very many part files in the mirror group. Saving part files for files with many part files is very time-consuming and can build up latencies.

2=Obj.+Mbr

Only newly journalized objects and partial files are synchronized with SAVE/RESTORE.

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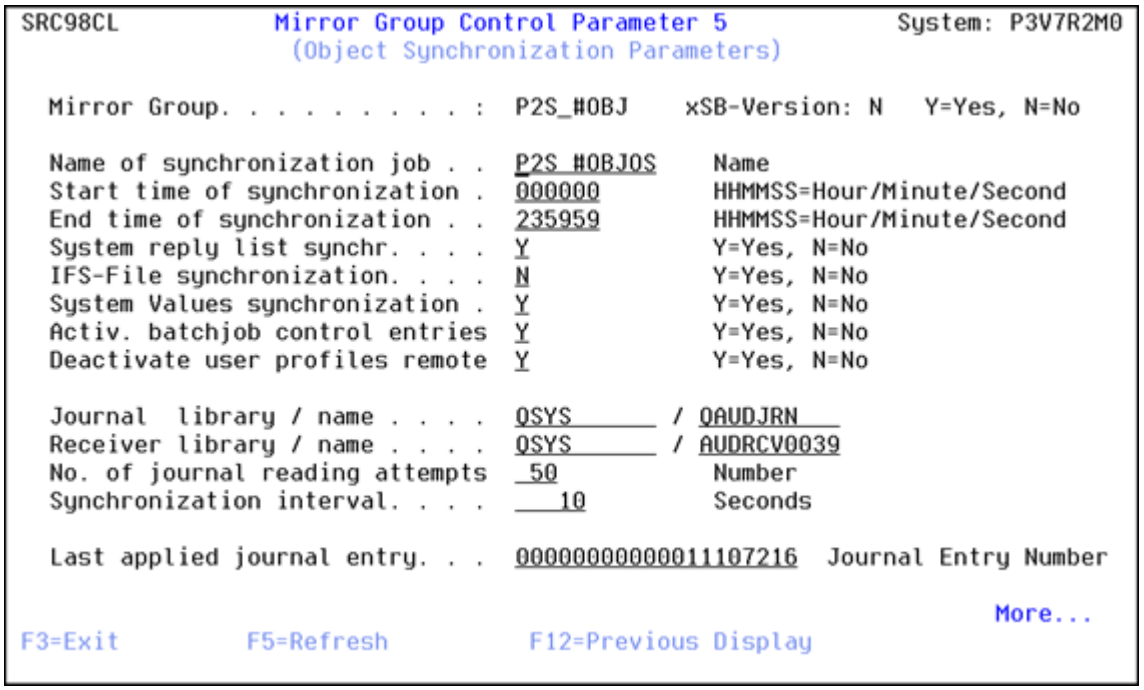

If the object synchronization was activated in the basic parameters, the user has the possibility to change the control parameters for the object synchronization by pressing the Enter key. Via the selection option 5 of the management list the user gets the same display. However, the control parameters are only displayed and cannot be changed.

Mirror group
Name of the **mirror group for** which the called command is to be executed.

xSB version
It is displayed whether the current application is an xSB application.

The following input fields are available to the user on the current screen:

Synchronization job name
Name of the object synchronization job to distinguish multiple object synchronization jobs from each other.

Synchronization start time
The start time of the synchronization can be specified here.

Synchronization stop time
The stop time of the synchronization can be specified here.

Synchronize system response list
This parameter can be used to specify whether the entries of the system response list (view possible by means of the "WRKRPYLE" command) are to be mirrored via object synchronization. If a "Y"=Yes is entered, entries are synchronized.

Synchronize IFS files
This parameter can be used to specify whether the files are to be mirrored in the IFS file system. If "Y" is entered here, you can specify a filter for the IFS file system in a separate mask.

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Synchronize system values
This parameter can be used to specify whether the system values are to be mirrored. In a separate mask (via options in the administration menu) a filter for the system values can be defined if a "Y" is entered here.

Enable batch job control
This parameter controls whether the control information is transferred to the secondary system via batch jobs.

Disable user profiles remotely
Specifies whether user profiles are "DISABLED" on the secondary system. User profiles that are not to be DISABLED can be stored in the TGTPRFP file via menu item 6 "Manage filters and rules" in the main menu and selection 1=User profiles.

Valid values for the input parameter are:

Y=Yes
The user profiles are deactivated on the secondary system.

N=No
The user profiles are not deactivated. This is the default value.

Journal library
Name of the library containing the QAUDJRN journal on the local system.

Journal Name
Changes to objects are recorded in the QAUDJRN journal.

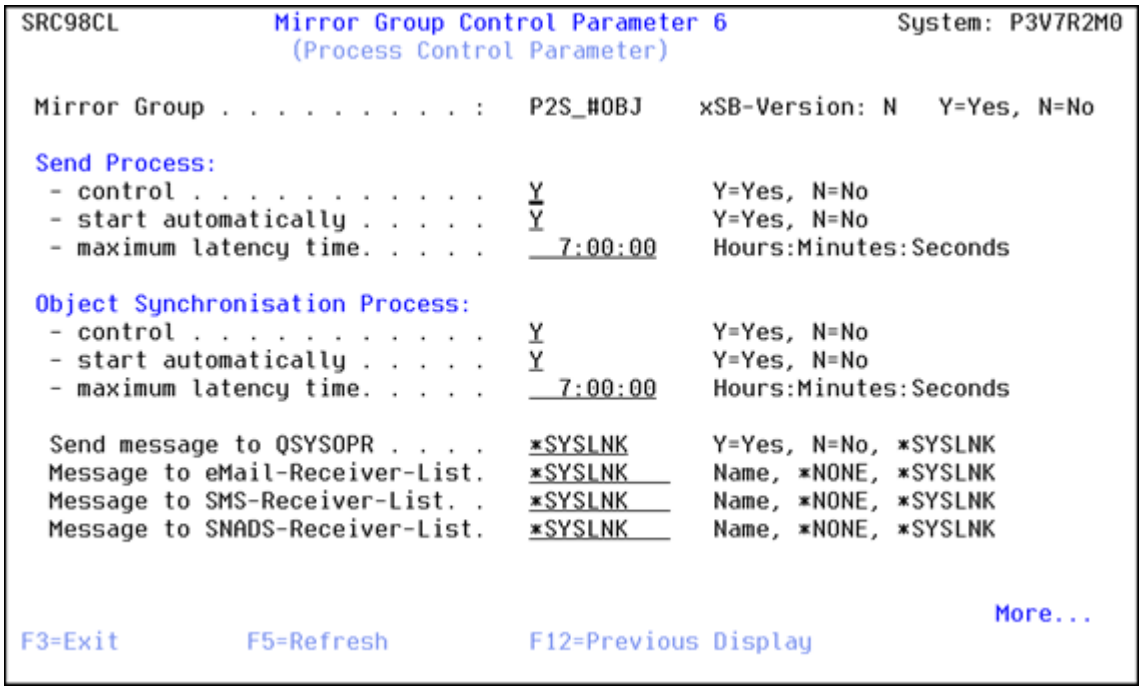
Journal receiver (Receiver) Library
Library containing the journal receivers assigned to the previously specified journal.

Journal receiver (Receiver) Name
The journal receiver name specifies a system object with journal entries that are recorded when changes are made to objects. The system identifier for the object type is '*JRNRCV'. The receiver name created for object synchronization must be specified.

Number of journal read attempts
This specifies the maximum number of attempts that the send process should make in succession before entering the job wait state.
The duration for which the object synchronization job should be in the waiting state is specified in the "Synchronization interval" parameter.

Synchronization interval
The synchronization interval specifies the waiting time of the processing program when there is no new journal entry in the journal receiver. The waiting time is specified in seconds.

Last processed number
Number of the last properly processed journal entry.



If the send process monitoring was activated at the basic parameters, the user has the possibility to change the control parameters for the process monitoring by pressing the enter key. Via the selection option 5 of the management list the user gets the same display. However, the control parameters are only displayed and cannot be changed.

Mirror group

Name of the mirror group for which the called command is to be executed.

xSB version

It is displayed whether the current application is an xSB application.

The following input fields are available to the user on the current screen:

Monitor send process

When activated with 'Y', the send process is checked to see if it is in the INACTIVE state. Is set at the process monitoring parameters "Automatic start = 'Y' ", is activated when the send process is inactive after the monitoring interval has elapsed the send process is automatically started again. If "Start automatically = 'N' " is set, a message is sent to the distribution lists when the send process is inactive.

Start send process automatically

When activated with "Y", an inactive send process is automatically restarted after a time interval.

Maximum latency

The latency of the send process is the time difference between the last journal entry and the journal entry of the data journal just read. If this time difference exceeds the defined maximum latency time, a message is sent to the participants of the distribution lists defined below.

Monitor object synchronization process

When activated with "Y", the process is checked whether it is in INACTIVE status. In case of an error, a message is sent to the distribution lists.

Start object synchronization process automatically
When activated with "Y", an inactive process for object synchronization is automatically restarted after a time interval.

Maximum latency
The latency of the object synchronization process is the time difference between the last journal entry and the just read journal entry of the system audit journal. If this time difference exceeds the defined maximum latency, a message is sent to the participants of the distribution lists defined below.

Send message to QSYSOPR
If "Y"=Yes is entered, the BUS4i status messages are sent to the QSYSOPR after the test interval has elapsed. If *SYSLNK is specified, the corresponding value in the system link is used.

Message to eMail distribution list ID
Specification of the unique name ID for the distribution list. An error message is sent to this distribution list in case of an error. If *SYSLNK is specified, the corresponding value in the system link is used.

Message to SMS distribution ID
Specification of the unique name ID for the distribution list. An error message is sent to this distribution list in case of an error. If *SYSLNK is specified, the corresponding value in the system link is used.

Message to SNADS distributor ID
Specification of the unique name ID for the distribution list. An error message is sent to this distribution list in case of an error. If *SYSLNK is specified, the corresponding value in the system link is used.

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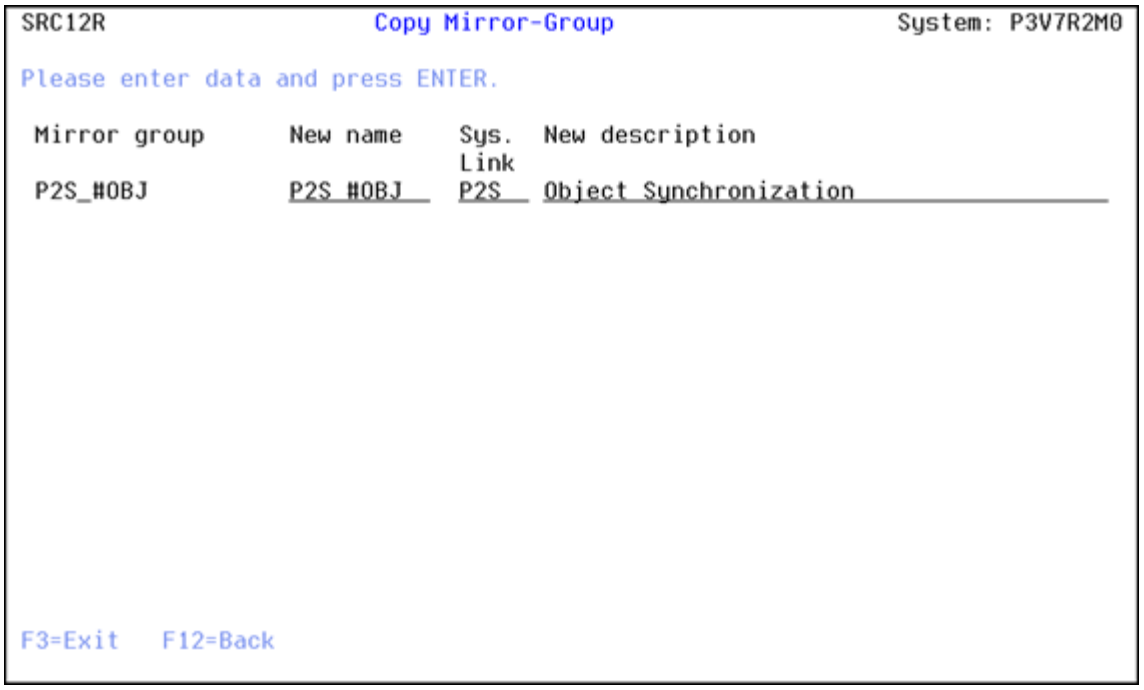
2.4.3 Selection 3 - Copy mirror group



With this selection, existing mirror groups can be copied to facilitate the inclusion of a new mirror group in the BUS4i HA system. Here, the control parameters and the files intended for mirroring are also copied.

The following input fields are available to the user:

New name
To be able to copy or rename existing **mirror groups**, a new mirror group name must be specified to uniquely identify the application. The default is the old mirror group name, which must then be changed.

The program checks whether the specified new name already exists as a mirror group name or not. In case of error, a message appears on the screen and the mirror group is neither copied nor renamed.

Sys-Link
This assigns the mirror group to a system link. The preassignment is made with the old system link, which can then be changed.

New description
With the copy function, a descriptive text can additionally be specified for better identification of the mirror group name. The default setting is the old description, which can then be changed.

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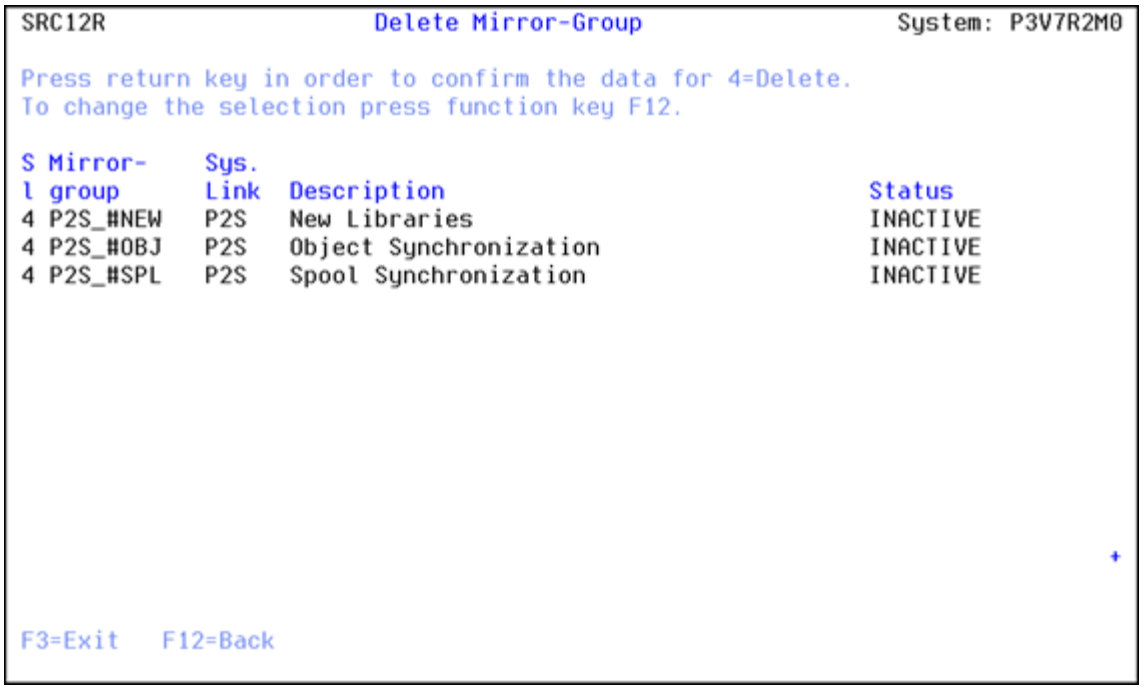
2.4.4 Selection 4 - Delete mirror groups

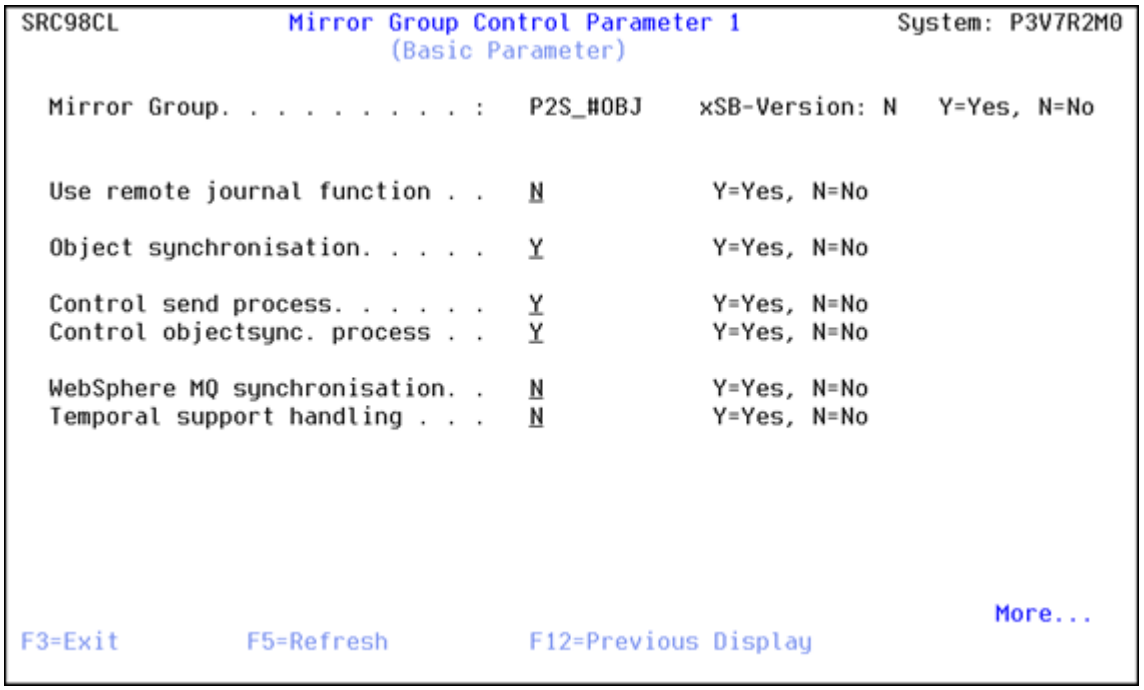


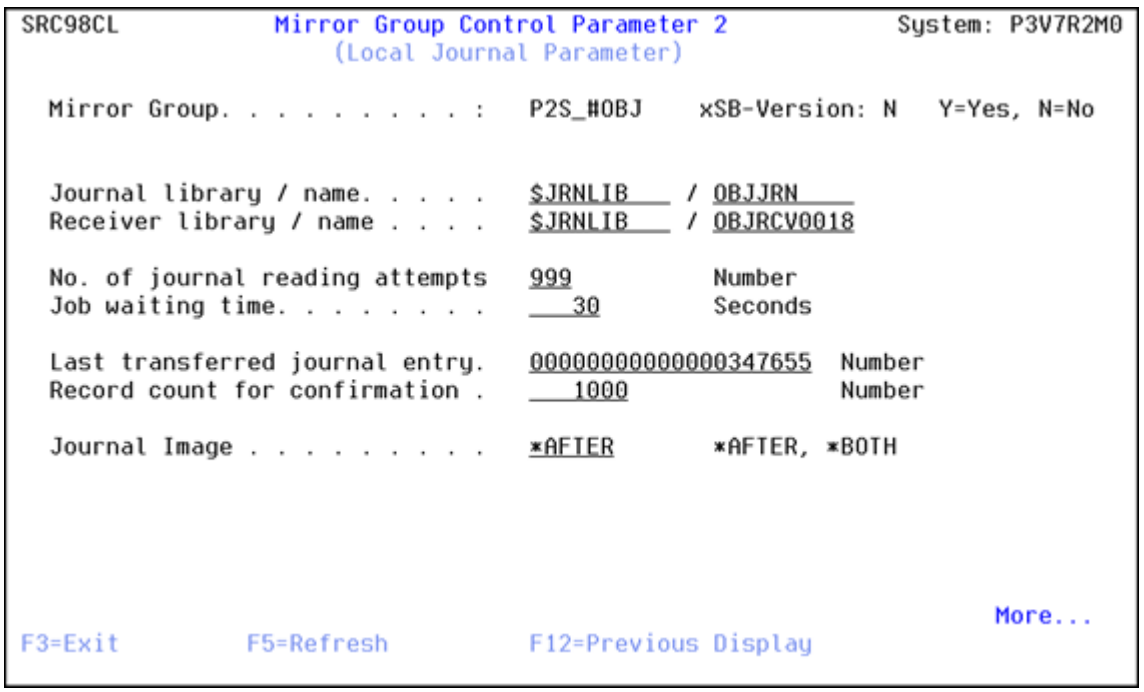
One or more mirror groups can be deleted from the BUS4i HA system via selection 4 in the mirror group management list. The mirror groups can only be removed if they are in the INACTIVE status.

After confirming with the Enter key, the mirror groups are deleted.

2.4.5 Selection 5 - Display mirror groups

With selection 5 in the management list of the mirror groups, the control parameters of a mirror group can be displayed and controlled in each status. The parameters are described in more detail in the section "Changing control parameters".



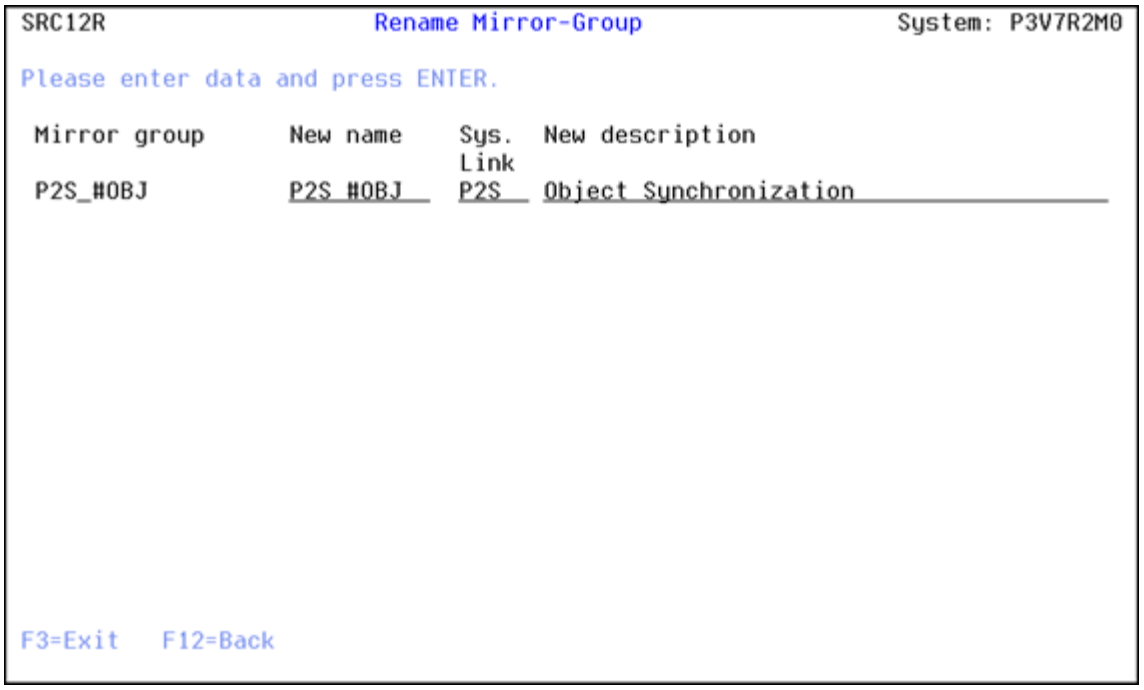


```
SRC98CL            Mirror Group Control Parameter 4            System: P3V7R2M0
                     (TCP-Communication Parameter)

  Mirror Group. . . . . . . . . :   P2S_#OBJ    xSB-Version: N   Y=Yes, N=No


  TCP/IP port number. . . . . . .   14002         1024 - 65535

  Sync. Data Objects at STRJRN. .   2             0=No, 1=Obj., 2=Obj.+Mbr

                                                                       More...
F3=Exit          F5=Refresh          F12=Previous Display
```

```
SRC98CL            Mirror Group Control Parameter 5            System: P3V7R2M0
                     (Object Synchronization Parameters)

  Mirror Group. . . . . . . . . :  P2S_#OBJ    xSB-Version: N   Y=Yes, N=No

  Name of synchronization job . .  P2S_#OBJOS     Name
  Start time of synchronization .  000000         HHMMSS=Hour/Minute/Second
  End time of synchronization . .  235959         HHMMSS=Hour/Minute/Second
  System reply list synchr. . . .  Y              Y=Yes, N=No
  IFS-File synchronization. . . .  N              Y=Yes, N=No
  System Values synchronization .  Y              Y=Yes, N=No
  Activ. batchjob control entries  Y              Y=Yes, N=No
  Deactivate user profiles remote  Y              Y=Yes, N=No

  Journal  library / name . . . .  QSYS_____ / QAUDJRN___
  Receiver library / name . . . .  QSYS_____ / AUDRCV0039
  No. of journal reading attempts   50            Number
  Synchronization interval. . . .    10           Seconds

  Last applied journal entry. . .  00000000000011107216  Journal Entry Number

                                                                       More...
F3=Exit          F5=Refresh          F12=Previous Display
```

```
SRC98CL          Mirror Group Control Parameter 6          System: P3V7R2M0
                   (Process Control Parameter)

 Mirror Group . . . . . . . . . :   P2S_#OBJ    xSB-Version: N   Y=Yes, N=No

 Send Process:
  - control . . . . . . . . . . .   Y            Y=Yes, N=No
  - start automatically . . . . .   Y            Y=Yes, N=No
  - maximum latency time. . . . .     7:00:00    Hours:Minutes:Seconds

 Object Synchronisation Process:
  - control . . . . . . . . . . .   Y            Y=Yes, N=No
  - start automatically . . . . .   Y            Y=Yes, N=No
  - maximum latency time. . . . .     7:00:00    Hours:Minutes:Seconds

  Send message to QSYSOPR . . . .   *SYSLNK      Y=Yes, N=No, *SYSLNK
  Message to eMail-Receiver-List.   *SYSLNK      Name, *NONE, *SYSLNK
  Message to SMS-Receiver-List. .   *SYSLNK      Name, *NONE, *SYSLNK
  Message to SNADS-Receiver-List.   *SYSLNK      Name, *NONE, *SYSLNK


                                                                   More...
F3=Exit          F5=Refresh          F12=Previous Display
```

2.4.6 Selection 3 - Rename mirror group



With this selection existing mirror groups can be renamed.

The following input fields are available to the user:

New name
To rename existing **mirror groups**, a new mirror group name must be specified to uniquely identify the application. The default is the old mirror group name, which must then be changed.

The program checks whether the specified new name already exists as a mirror group name or not. In case of error, a message appears on the screen and the mirror group is neither copied nor renamed.

Sys-Link
This assigns the mirror group to a system link. The preassignment is made with the old system link, which can then be changed.

New description
With the copy function, a descriptive text can additionally be specified for better identification of the mirror group name. The default setting is the old description, which can then be changed.

2.4.7 Selection A - Start send process

This selection option starts the send process on the primary system and the receive process on the secondary system. The send process transfers the database changes, object changes collected in the journal receiver to the secondary system. The processing process must be started separately on the secondary system. The send process repeats the connection setup as often as specified in the communication parameter "Number of connection attempts" before sending an error message to the QSYSOPR. This means that shutdown from the primary and secondary systems no longer has to take place in a timely manner.

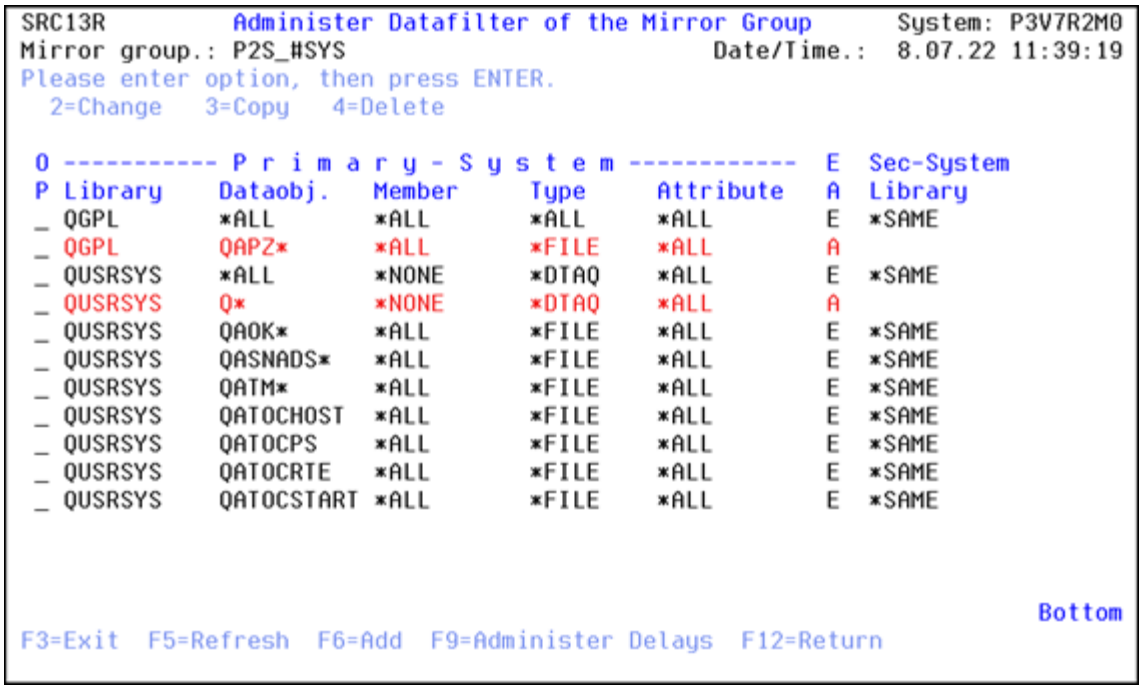
2.4.8 Selection B - Exit send process

With this selection option, an "END control record" is added at the end in the journal receiver. The send process transmits the database changes, object changes up to this "END control record". After that, both the send process on the primary system and the receive process and the processing process on the secondary system are terminated.

2.4.9 Selection C - Cancel send process

With this selection option, the send process on the primary system is abnormally aborted via the ENDJOB *IMMED command.

2.4.10 Selection D - Manage mirror group data filters



The D option in the mirror group management list provides the user with another list for managing the data filters of the mirror group whose database changes are relevant for the send process. Here the management includes the functions add, delete and copy.

The following valid input fields are available to the user:

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

The following options are possible for managing the files to be mirrored:

Selection 2 - Change
With the selection 2 the library name, the data object, the partial file name as well as the object type can be changed.

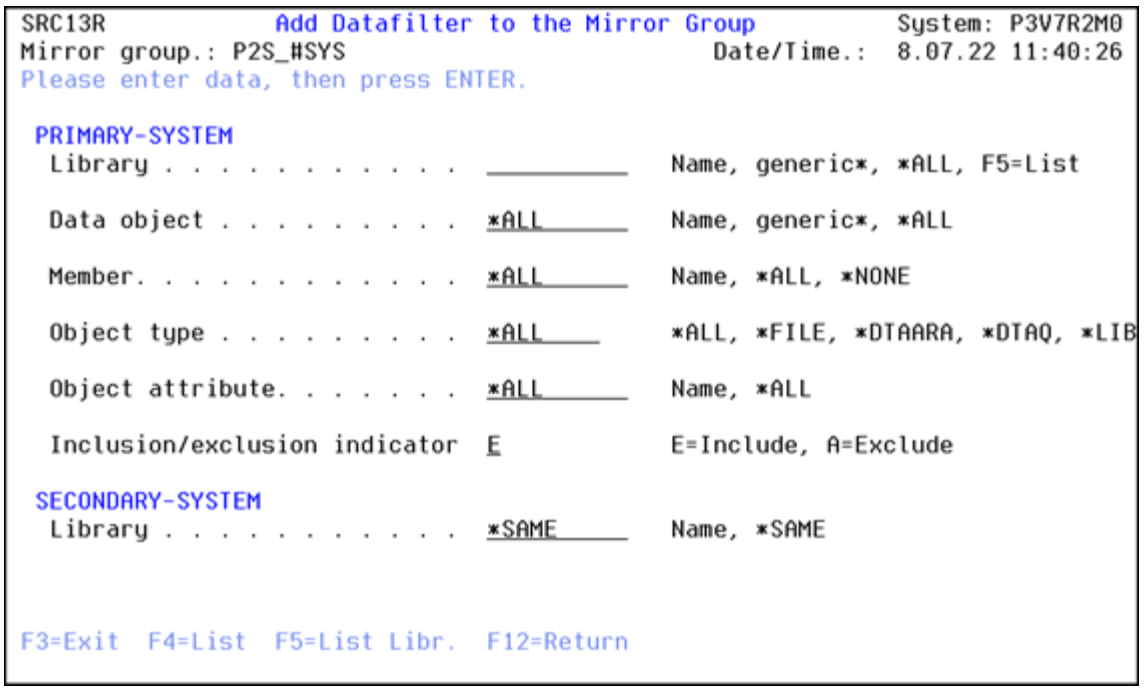
Selection 3 - Copy
With selection 3 list entries for files to be mirrored can be copied.

Selection 4 - Delete
With selection 4 an existing entry can be deleted.

F6=Add
This function key can be used to add further data objects to a mirror group that are to be mirrored.

F9=Delays used.
Delays of files can be managed analog to the command "WRKOBJDLY". If a delayed synchronization is defined for files, the display is highlighted in light blue.

2.4.10.1 Command key F6 - Add data filter to the mirror group



This input mask can be used to specify one or all data objects of a mirror group that are to be mirrored.

A maximum of 500 exclusions and 200 inclusions per mirror group can be entered in the data object list.

F5=list
A list of all libraries in the system is displayed, It may take some time until the list is displayed. (see description "Mirror group objects
add").

The following input fields are available to the user:

PRIMARY SYSTEM
Library
library on the primary system, whose data is recorded in the journal and can thus be mirrored.

Valid input values for the Library parameter are:

Name
Name of the library that contains the files to be mirrored.

generic*
Specify the generic name of the library that contains the files to be mirrored. A generic name consists of one or more characters followed by an asterisk (*). All libraries are taken whose name has the same prefix as the generic name.

***ALL**
If the value *ALL is specified instead of the library name, all database changes of a journal of a mirror group are mirrored. *ALL must then also be specified for the data object and part file parameters. If the value *ALL is entered, no further entries for data objects to be mirrored must exist in the data object list.

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Data object

Data object within the above library on the primary system that is recorded in the journal and can thus be mirrored.

Valid input values for the **Data object** parameter are:

Name
Names for a data object to be mirrored that is contained in a specified library.

generic*
Specify the generic name of the data objects to be mirrored. A generic name consists of one or more characters followed by an asterisk (*). All data objects whose names have the same prefix as the generic name are taken.

***ALL**
All data contained in the specified library will be mirrored. If the value *ALL is specified for the Data object parameter, then no other entry for the same library may exist in the data object list. If *ALL was specified for the Library parameter, then *ALL must also be specified for the data object.

Part file

Name of the part files to be mirrored by the specified data objects of the mirror group.

Valid input values for the **Part file** parameter are:

Name
The name for a part file of the specified data object to be mirrored. If the value *ALL was specified for the data object to be mirrored, no qualified name can be specified for the partial file.

***ALL**
Either all part files of a specified data object are mirrored or if the value *ALL was specified for the data object, all part files of all data objects of the specified library are mirrored. If *ALL was specified for the data object parameter, then *ALL must also be specified for the part file. If the value *ALL is specified for the partial file, no other entry for this file may exist in the same library in the data object list.

***NONE**
With data type *DTAQ or *DTAARA the part file must be *NONE.

Object type

One or more values can be specified for the displayed system object types. The object attributes of all objects in the specified libraries as well as the libraries themselves whose object type(s) are specified are displayed.

Valid input values for the **Object type** parameter are:

***ALL**
All object types are considered for the filter, with the selected libraries, object data and part files.

***DTAARA**
DTAARAs are considered in the filter with the selected libraries, object data and part files.

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***DTAQ**
Only files of type DTAQ are considered for the filled filter for the respective libraries, object data and part files.

***FILE**
If the value *File is specified, then the filter only considers files of the type *FILE for the respective libraries, object data and part files.

Object attribute
One or more values can be specified for the displayed object attributes. Of all objects in the specified libraries as well as the libraries themselves whose object attribute(s) are specified. Depending on the object type, the valid object attributes can be displayed via the F4 command key.

Valid values for the **Object attribute** parameter are *FILE for object type:

***ALL**
All types of object attributes are considered for the selected filter.

***LF**
The filter is valid only for logical files.

***LF36**
Only logical system/36 files from are affected by the filter.

***LF38**
Only logical system/38 files from are affected by the filter.

***PF**
The filter is valid only for physical files.

***PF36**
Only physical system/36 files from are affected by the filter.

***PF38**
Only physical system/38 files from are affected by the filter.

Inclusion/exclusion indicator
This flag can be used to control whether the specified library/data object/part file should be included or excluded from the mirroring process.

Valid values for the **Include/exclude flag** parameter are:

E = inclusion indicator
Include library/data object/part file in mirroring process.

A = Exclusion indicator
Exclude library/data object/part file in mirror process.

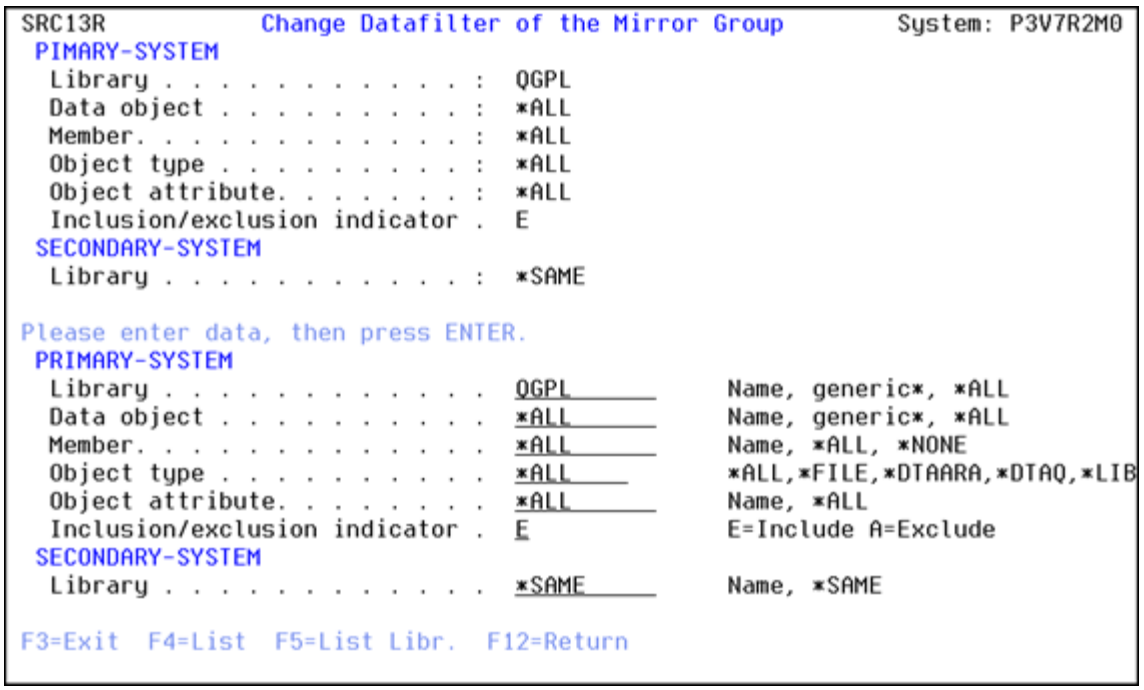
SECONDARY SYSTEM
Library
Library on the secondary system to which the data from the primary system is mirrored.

Valid input values for the **Library** parameter are:

Name
Name of the library to which the data object is mirrored. If the library is to be different from the one on the primary system.

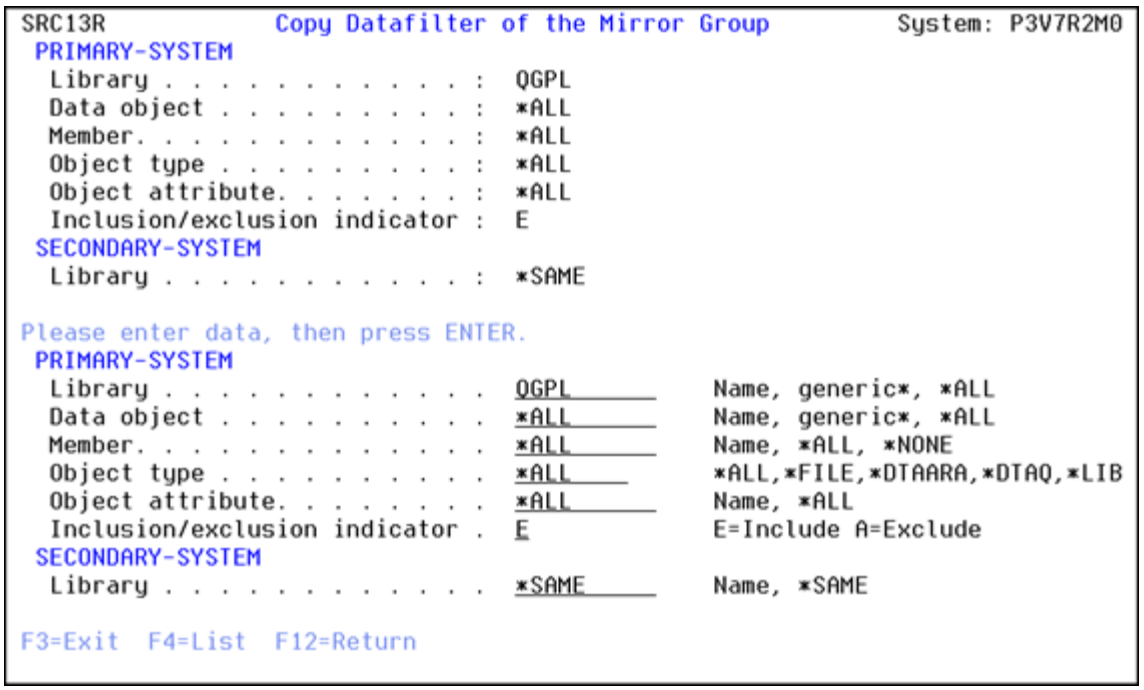
***SAME**
library on the secondary system is identical to the primary system. If the value *ALL is specified as the library name on the primary system, only *SAME can be specified on the secondary system.

2.4.10.2 Selection 2 - Change mirror group data filter



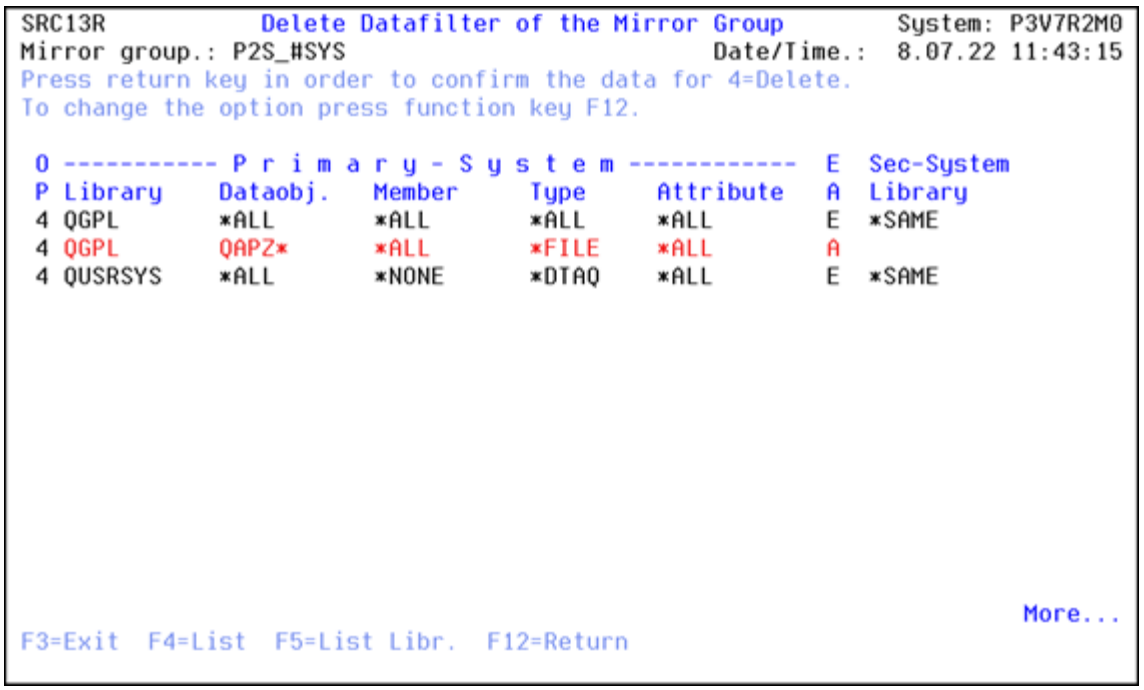
This input mask can be used to change the filter for the data mirroring of a mirror group. The parameters are described in more detail in the section "Adding a data filter to the mirror group".

2.4.10.3 Selection 3 - Copy mirror group data filter



This input mask can be used to copy list entries for data objects to be mirrored. The same rules for copying entries apply here as for the Add and Change functions.

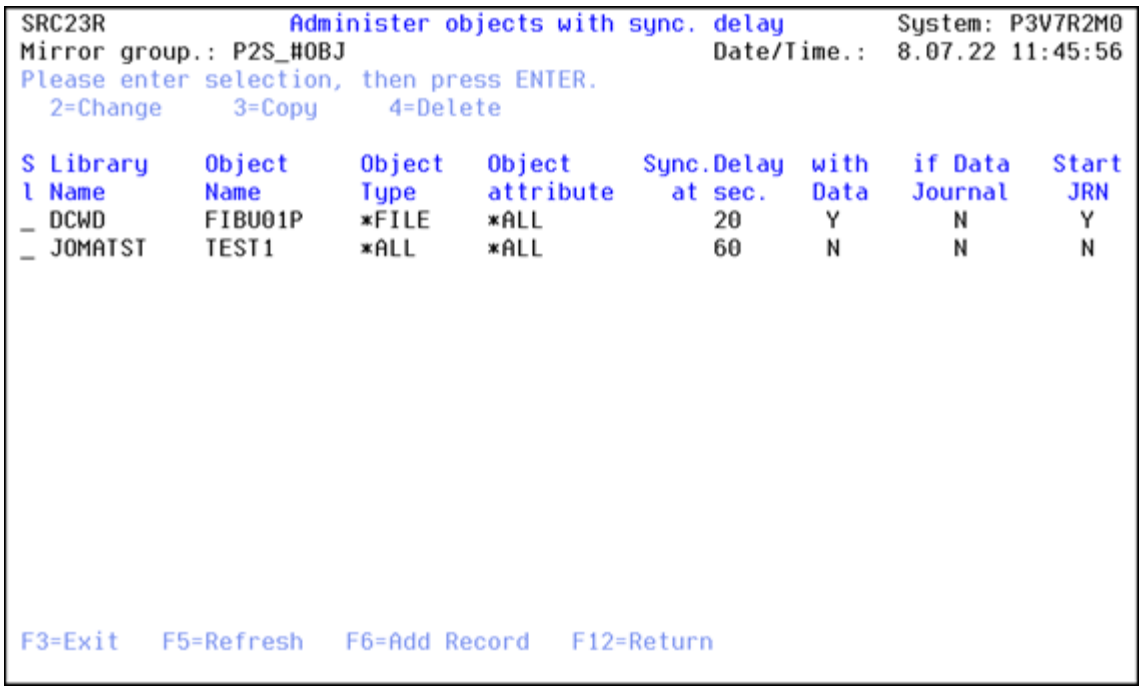
2.4.10.4 Selection 4 - Delete mirror group data filter



In the management list of the data objects of a mirror group, one or more list entries can be removed via selection option 4. This removes the data objects that were specified in the list entry from the mirroring process of the mirror group.

After confirming with the Enter key, the selected list entries are deleted from the mirror group.

2.4.10.5 Command key F9 - Manage delays



Here files can be entered, which are to be synchronized with a delay. Delays of files can be managed analog to the command "WRKOBJDLY". If a delayed synchronization is defined for files, the display is highlighted in light blue.

The following valid input fields are available to the user:

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

The following options are possible for managing the files to be delayed:

Selection 2 - Change
With the selection 2 the library name, the data object as well as the object type etc. can be changed.

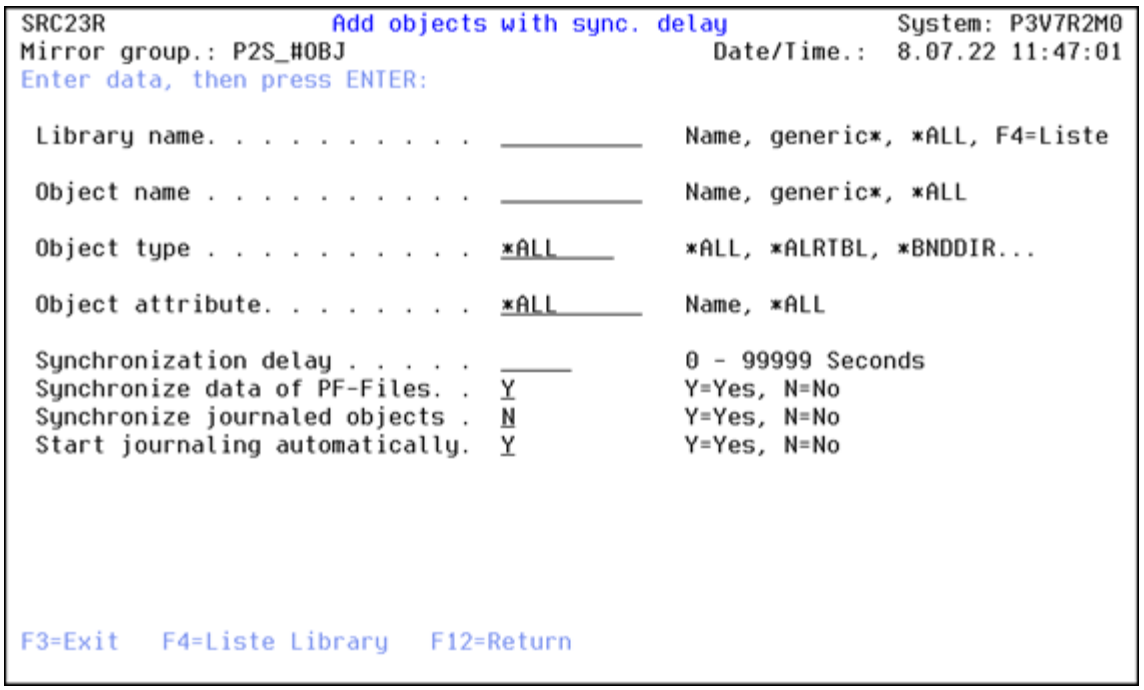
Selection 3 - Copy
With selection 3 list entries for files to be delayed can be copied.

Selection 4 - Delete
With selection 4 an existing entry can be deleted.

Valid command keys of the current masks:

F6=Add
This function key can be used to add further data objects to a mirror group that are to be delayed.

2.4.10.5.1 Command key F6 - Add objects with synchronization delay



With this mask you can add an entry to the list of objects with synchronization delay by specifying all parameters corresponding to the object to be delayed.

The following input fields are available to the user:

Library
Library on the primary system whose data will be recorded in the journal and synchronized with delay.

Valid input values for the ***Library*** parameter are:

Name
Name of the library that contains the files to be delayed.

generic*
Specify the generic name of the library that contains the files to be delayed. A generic name consists of one or more characters followed by an asterisk (*). All libraries are taken whose name has the same prefix as the generic name.

***ALL**
If the value *ALL is specified instead of the library name, all database changes of a journal of a mirror group are mirrored. For the parameter data object *ALL must be specified. If the value *ALL is entered, no further entries for data objects to be mirrored must exist in the data object list.

Object
Data object within the above library on the primary system that is recorded in the journal and should be synchronized with a delay.

Valid input values for the **Object** parameter are:

Name
Names for an object to be delayed that is contained in a specified library.

generic*
Specify the generic name of the objects to be synchronized with delay. A generic name consists of one or more characters followed by an asterisk (*). All objects whose name has the same prefix as the generic name are taken.

***ALL**
All data contained in the specified library will be synchronized with delay. If the value *ALL is specified for the Object parameter, then no other entry for the same library may exist in the data object list. If *ALL was specified for the Library parameter, then *ALL must also be specified for the object.

Object type
One or more values can be specified for the displayed system object types. The object attributes of all objects in the specified libraries as well as the libraries themselves whose object type(s) are specified are displayed. If the specified or assumed qualification characteristic for object (parameter OBJ) is *USRLIBL or *LIBL, then only one object type (not *ALL) can be specified here.

Valid input values for the **Object type** parameter are:

***ALL**
All object types are considered for the delay, with the selected libraries and objects.

Object attribute
One or more values can be specified for the displayed object attributes. Of all objects in the specified libraries as well as the libraries themselves whose object attribute(s) are specified.

Valid values for the **Object attribute** parameter are:

***ALL**
All types of object attributes are synchronized for with a delay.

Name
Name of the object attribute that is exclusively affected by the delayed synchronization.

Synchronization delay
This parameter sets the delay time in seconds. After a change on the production system to the selected object, this time is waited before the synchronization is started.

Valid values for the parameter **Synchronization delay** are:

0 - 99999 seconds
The delay can be selected between 0 and 99999 seconds. The default value is 0 seconds.

Synchronize data content
Specifies whether the data content should also be delayed, synchronized or only the object itself.

Valid values for the parameter **Synchronize data content** are:

Y = Yes
Data changes are also synchronized with delay.

N = No
Data changes are synchronized directly and only changes to the object are delayed.

Object synchronization for journalized objects
Specifies whether journalized objects should run via object synchronization or not.

Valid values for the **Object synchronization** parameter for **journalized objects** are:

Y = Yes
The journaled objects are mirrored via object synchronization.

N = No
The journaled objects are not mirrored via object synchronization.

Start journaling automatically
Specifies whether the selected objects should be journalized automatically.

Y = Yes
The objects are automatically added to the journal.

N = No
The objects are not included in the journal.

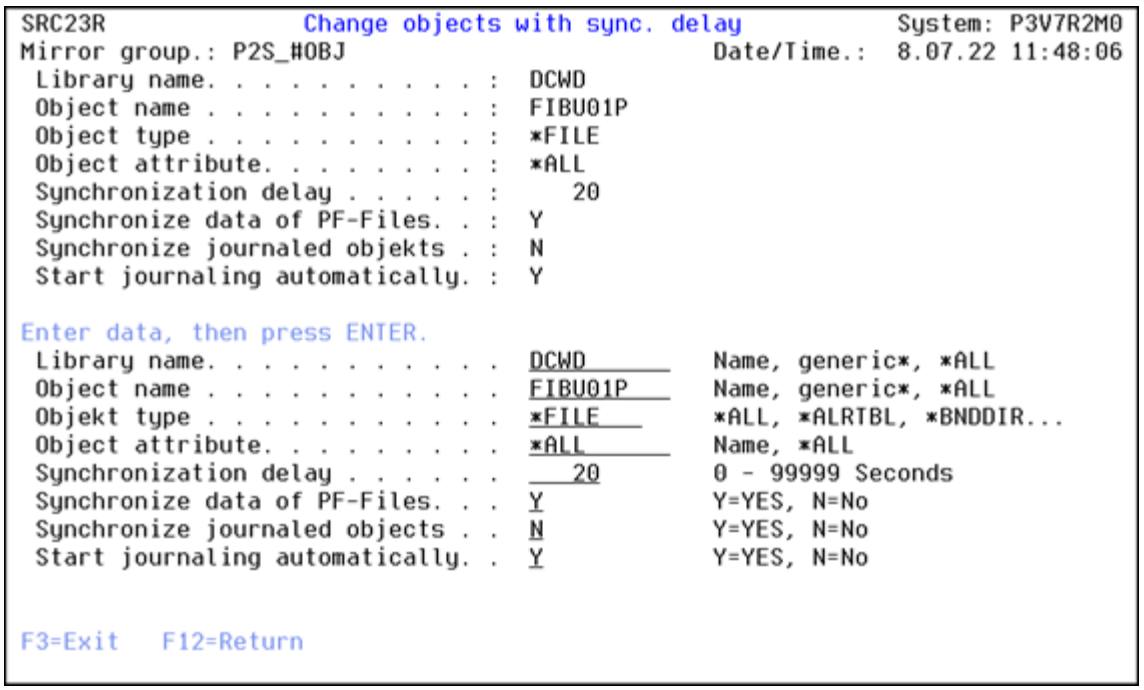
Valid command keys of the current mask:

F3=End
Exit the current application function.

F4=List
A list of all libraries in the system is displayed, It may take some time until the list is displayed.
(see description "Mirror group objects
add").

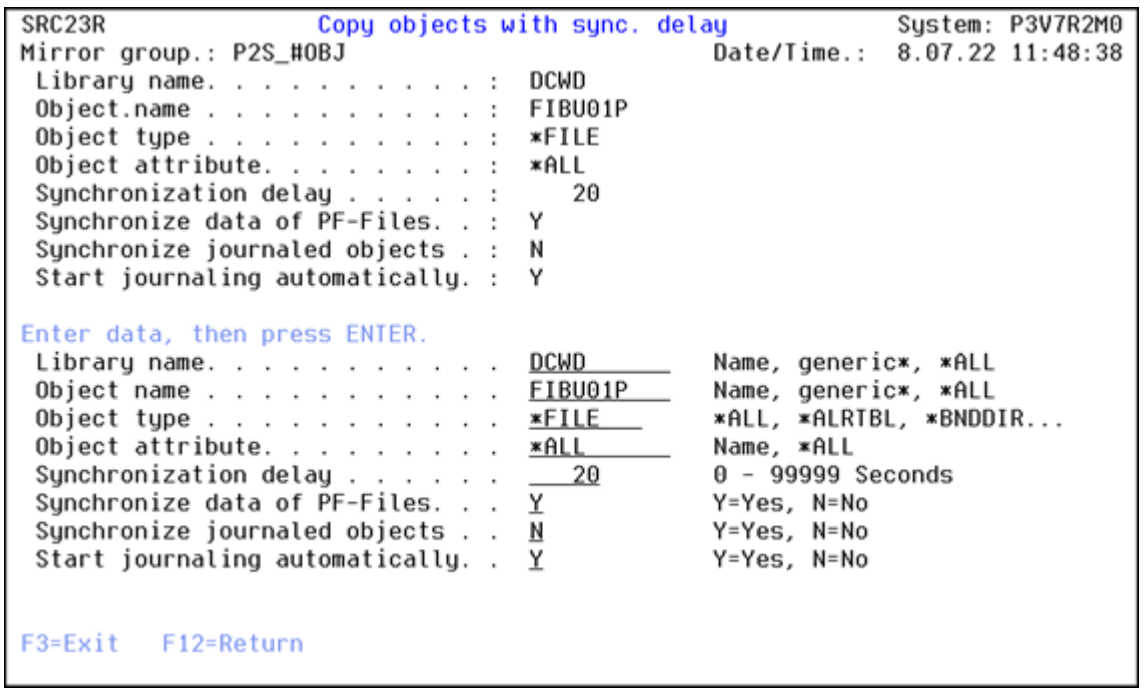
F12=Back
Back to the previous mask, all entered values of this mask will not be saved.

2.4.10.5.2 Selection 2 - Change objects with synchronization delay



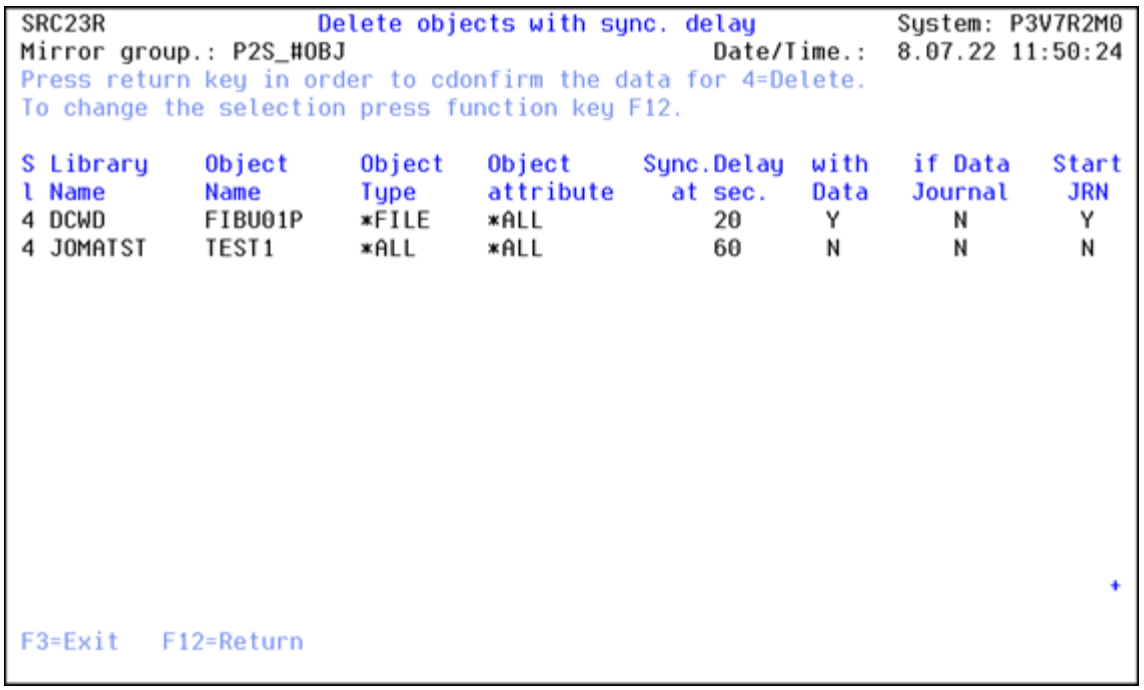
This input mask can be used to change the parameters of the synchronization delay entry. The parameters are described in more detail in the section "Adding objects with synchronization delay".

2.4.10.5.3 Selection 3 - Copy objects with synchronization delay



This input mask can be used to copy list entries for synchronization delay. The same rules for copying entries apply here as for the Add and Change functions.

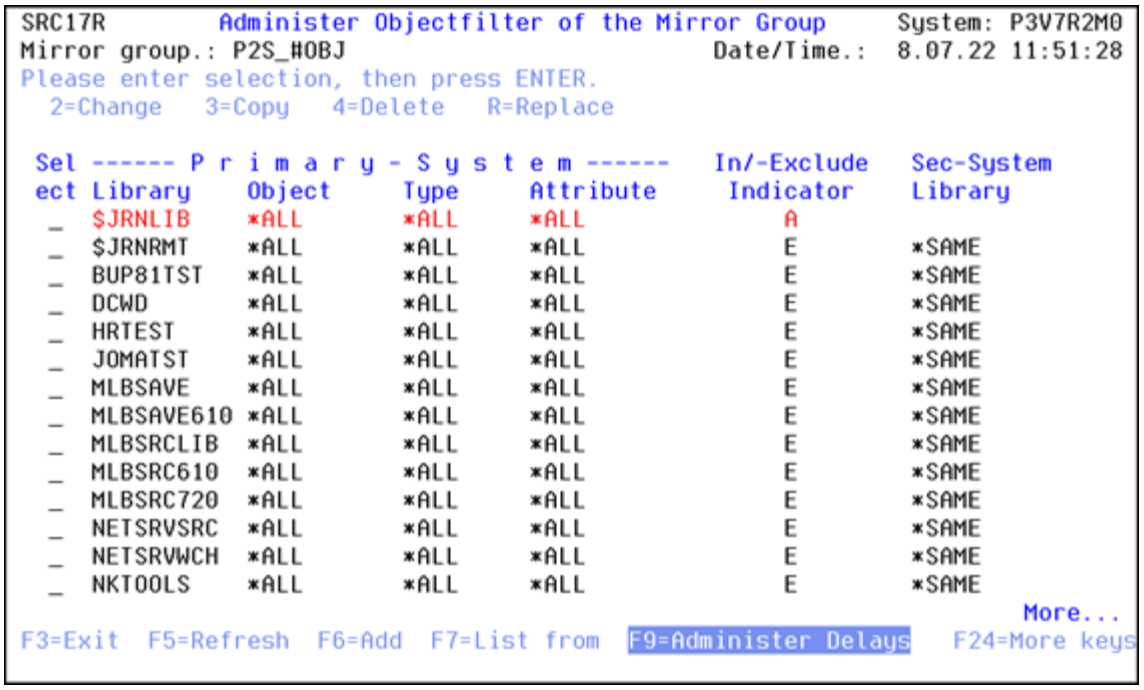
2.4.10.5.4 Selection 4 - Delete objects with synchronization delay



In the synchronization delay management list, one or more list entries can be removed via selection option 4. This removes the synchronization delays that were specified in the list entry from the list that is no longer synchronized with delay.

After confirming with the Enter key, the selected list entries are deleted from the mirror group.

2.4.11 Selection O - Manage object filter of the mirror group



The O option in the **mirror group** management list provides the user with another list to manage the objects whose changes are relevant for the sending process. Here the management includes the functions add, delete and copy.

If the QGPL is included in the filter, then exclude the following objects:

QGPL	*ALL	*SQLPKG
QGPL	QAPZ*	*FILE
QGPL	QMF*	*FILE
QGPL	QPZ*	*TBL
QGPL	QSI	*FILE

If the QUSRSYS is included in the filter, then exclude the following objects:

QUSRSYSQ*	*DTAQ

The following mirror group libraries (P2S*/S2P*) are excluded because they should not be automatically included in the object mirroring during creation:

QSYS	P2S*	*LIB
QSYS	S2P*	*LIB
QSYS	SRCSYS*	*LIB
QSYS	TGTSYS*	*LIB

The following system libraries are excluded because they should not be automatically included in the object synchronization during creation:

QSYS	Q*	*LIB

The following objects of the mirror groups (P2S*/S2P*) are excluded from object synchronization:

P2S*	*ALL	*ALL
S2P*	*ALL	*ALL

The following valid input fields are available to the user:

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

The following options are available for managing the objects to be mirrored:

Selection 2 - Change
With selection 2, the library name, the object name and the object type as well as the inclusion/exclusion indicator can be changed for the primary system. For the secondary system, the library name can be changed.

Selection 3 - Copy
With selection 3 an existing entry can be copied.

Selection 4 - Delete
With selection 4 an existing entry can be deleted.

Selection R - Replace
With the selection R an existing entry can be replaced. The new entry replaces entries that are covered by the new entry.

Valid command keys of the current masks:

F5=Update
This command key is used for updating the selection lists. All options currently entered on the screen are deleted. The display list is rebuilt so that any list entries added, modified or deleted by other users are also displayed or removed.

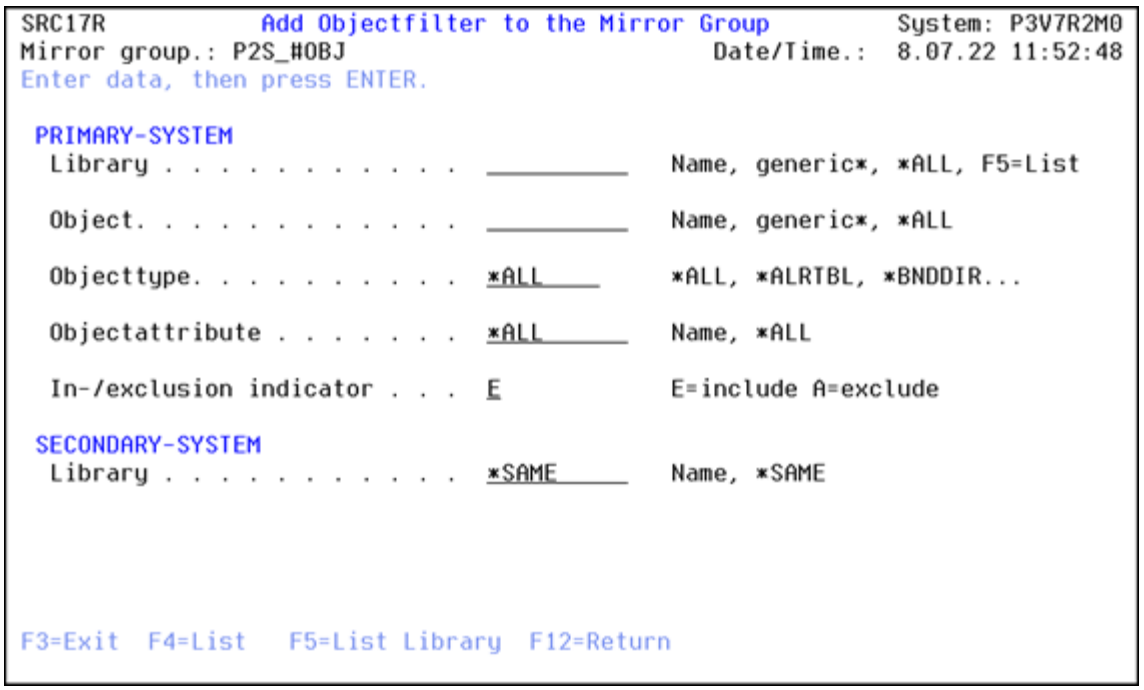
F6=Add
This function key can be used to add further objects to be mirrored to the mirror group.

F7=List from
The list of objects synchronized via a mirror group can be very large. To display only certain ones, a library and an object can be specified. The list then starts with this selection.

F9=Delays used.
Delays of objects can be managed analog to the command "WRKOBJDLY". If a delayed synchronization is defined for objects, the display is highlighted in light blue.

F24=Other
If more function keys are available in the function line than are displayed, you can call up the other function keys with F24.

2.4.11.1 Command key F6 - Add object filter to the mirror group



This input mask can be used to specify filters for objects that are to be mirrored. The parameters are described in more detail in the "Adding data filters to the mirror group" section

A maximum of 500 object filter entries with indicator E and a maximum of 200 object filter entries with indicator A can be entered.

The following input fields are available to the user:

PRIMARY SYSTEM

Library

Library on the primary system whose objects are recorded in the journal and can thus be mirrored.

Object

Object within the above library on the primary system that is recorded in the journal and can thus be mirrored.

Object type

The object type to be mirrored is specified. If *ALL is entered for object type, all specified objects will be mirrored. By specifying a certain object type (e.g. *ALRTBL) only objects of this type will be mirrored.

Inclusion/exclusion indicator

This flag can be used to control whether the objects defined by specified library/object/object type should be included or excluded in the mirroring process.

SECONDARY SYSTEM

Library

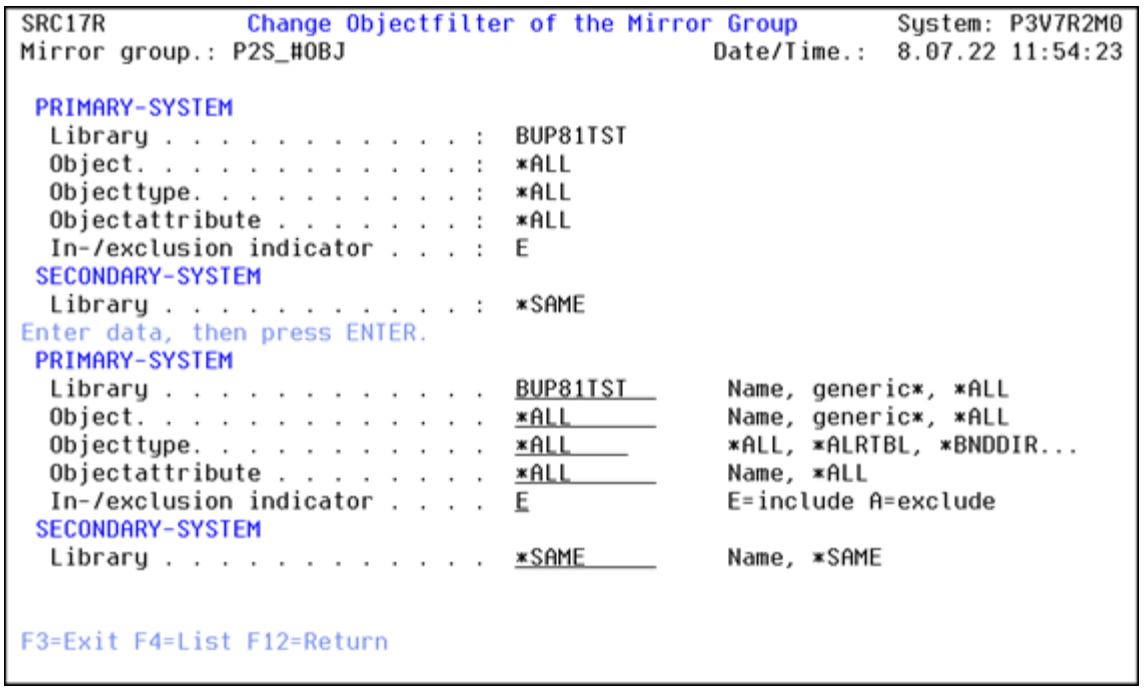
Library on the secondary system to which the data from the primary system is mirrored.

The following command keys are valid on the current mask:

F4=List
Depending on the object type, the valid object attributes can be displayed via the F4 command key.

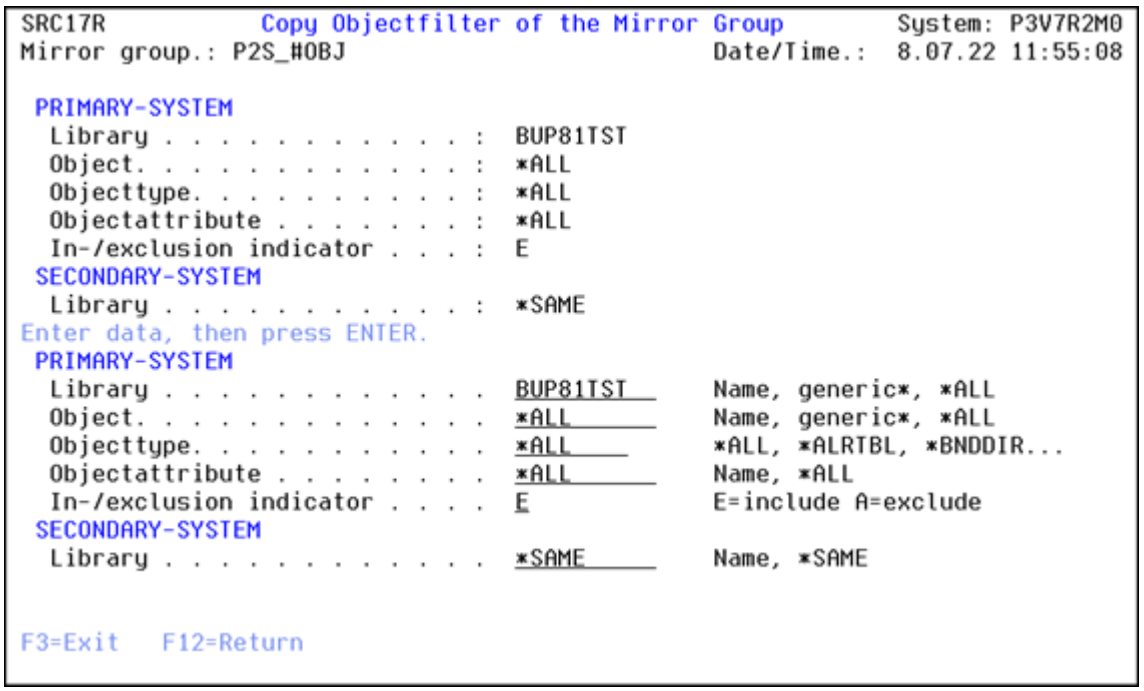
F5=Libraries list
A list of all libraries in the system is displayed.

2.4.11.2 Selection 2 - Change object filter of the mirror group



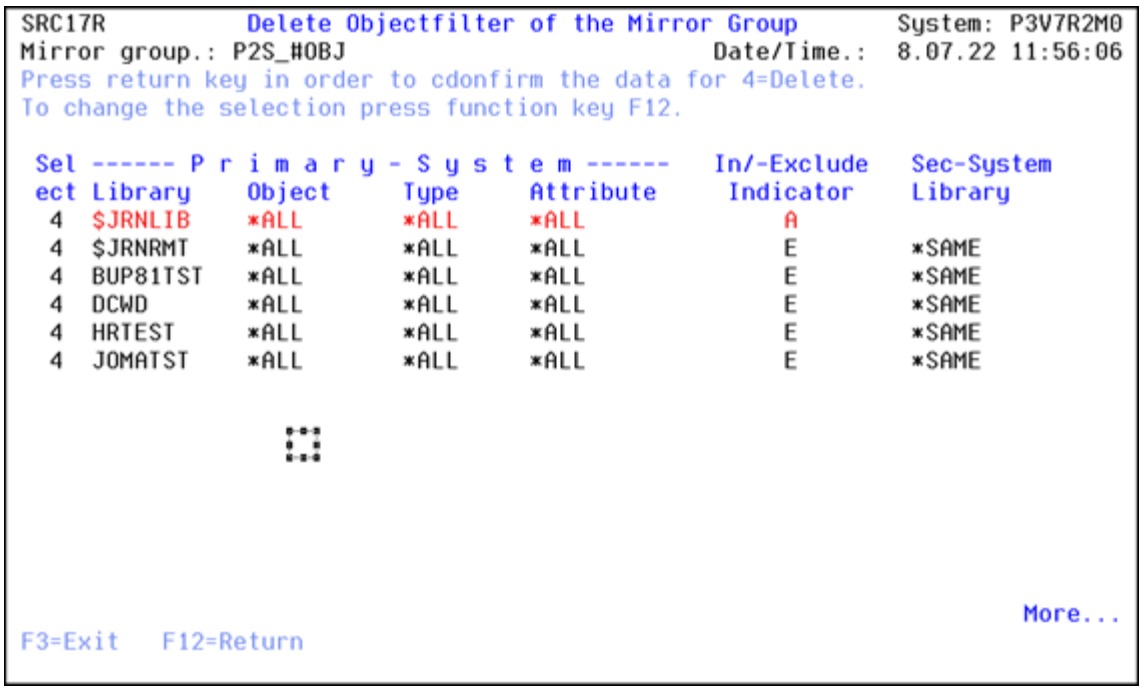
This input mask can be used to change the filters for objects that are to be mirrored. The parameters are described in more detail in the section "Adding data filters to the mirror group".

2.4.11.3 Selection 3 - Copy object filter of the mirror group



This input mask can be used to copy list entries for objects to be mirrored. The same rules for copying entries apply here as for the Add and Change functions.

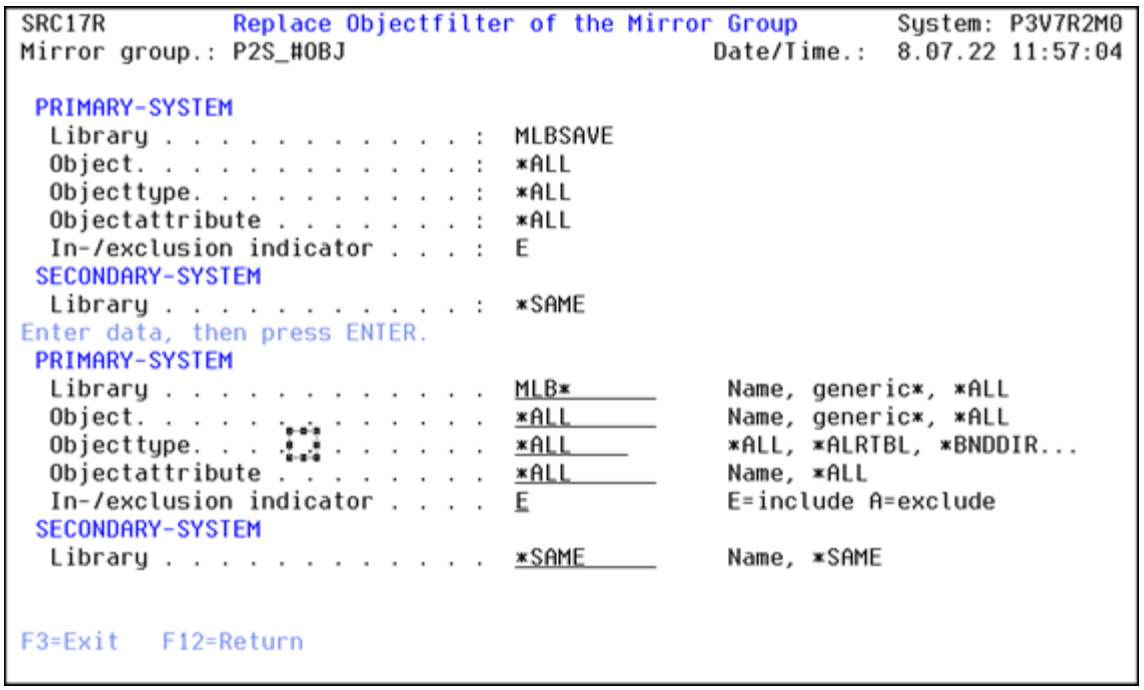
2.4.11.4 Selection 4 - Delete object filter of the mirror group



In the management list of the object filters of a mirror group, one or more list entries can be removed via selection option 4. This removes the objects that were specified in the list entry from the mirroring process of the mirror group.

After confirming with the Enter key, the object filter is deleted.

2.4.11.5 Selection R - Replace object filter of the mirror group



This input mask can be used to replace the filter entries for objects that are to be mirrored. The new entry replaces entries that are covered by the new entry. Only with changes to the library other entries will be replaced. For example, if there are several entries whose library names start with DLYT (DLYT1, DLYT2), these entries can be replaced with a generic library name (DLYT*). This reduces the number of filter entries. Combining them in one filter entry makes sense, since a maximum of 500 inclusions and a maximum of 200 exclusions can be defined.

This input mask can be used to replace the filters for objects that are to be mirrored. The parameters are described in more detail in the section "Adding data filters to the mirror group".

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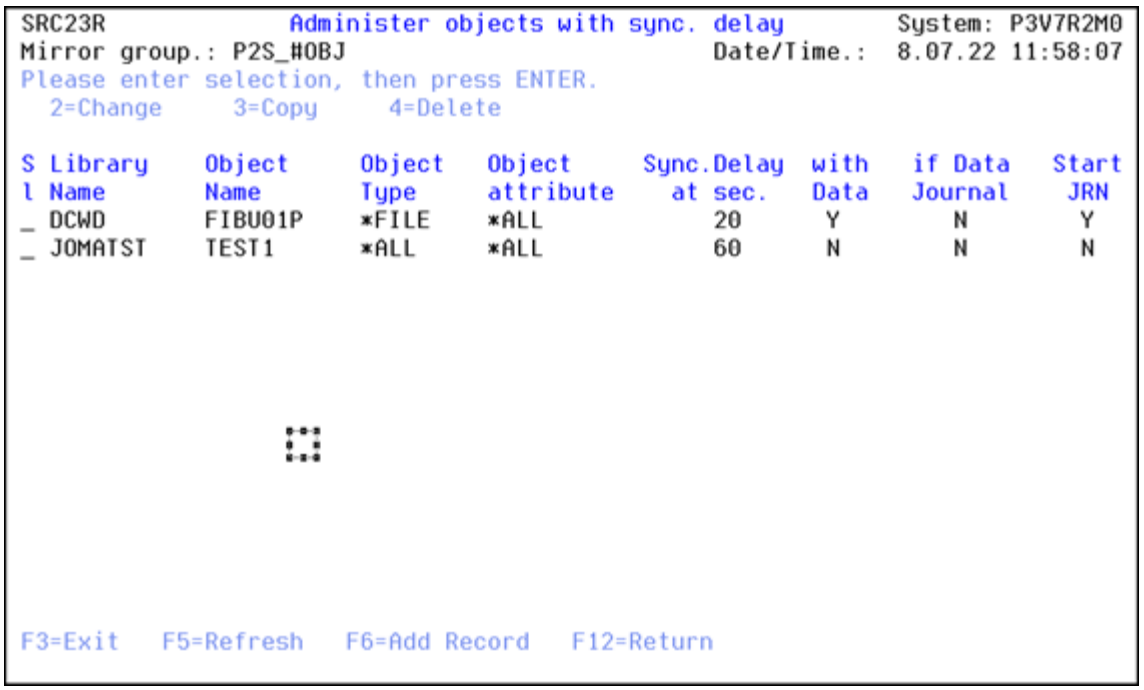
2.4.11.6 Command key F9 - Manage delays



Objects that are to be synchronized with a delay can be entered here. Delays of files can be managed analog to the command "WRKOBJDLY". If a delayed synchronization is defined for files, the display is highlighted in light blue. The individual selections are described in more detail in the "Use delay" section of "Manage mirror group data filters".

The following valid input fields are available to the user:

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

The following options are possible for managing the files to be delayed:

Selection 2 - Change
With the selection 2 the library name, the data object as well as the object type etc. can be changed.

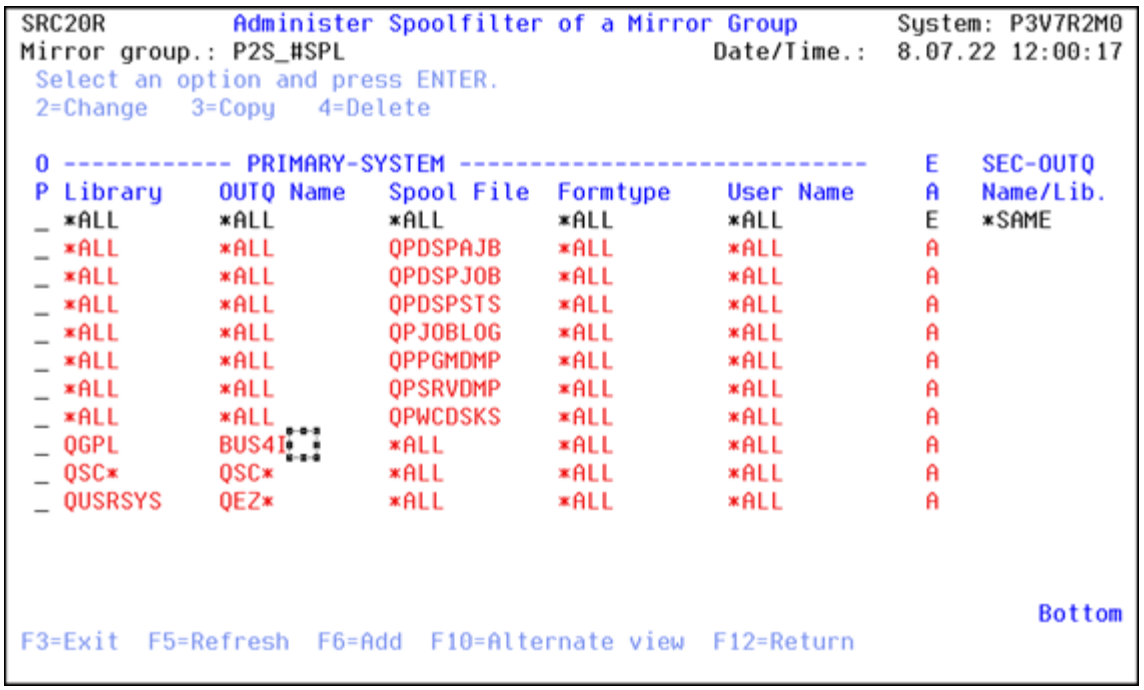
Selection 3 - Copy
With selection 3 list entries for files to be delayed can be copied.

Selection 4 - Delete
With selection 4 an existing entry can be deleted.

Valid command keys of the current masks:

F6=Add
This function key can be used to add further data objects to a mirror group that are to be delayed.

2.4.11.7 Selection S - Manage mirror group spool filter



The S option in the mirror group management list is used to manage the spool filters. Here filters can be created for spool files that are to be mirrored. The maximum number of inclusions is 200 and the maximum number of exclusions is 100.

The following valid input fields are available to the user:

PRIMARY SYSTEM

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

The following options are available for managing the objects to be mirrored:

Selection 2 - Change
Selection 2 can be used to change the library name, OUTQ name, spool file name and form type, as well as the inclusion/exclusion indicator.

Selection 3 - Copy
With selection 3 an existing entry can be copied.

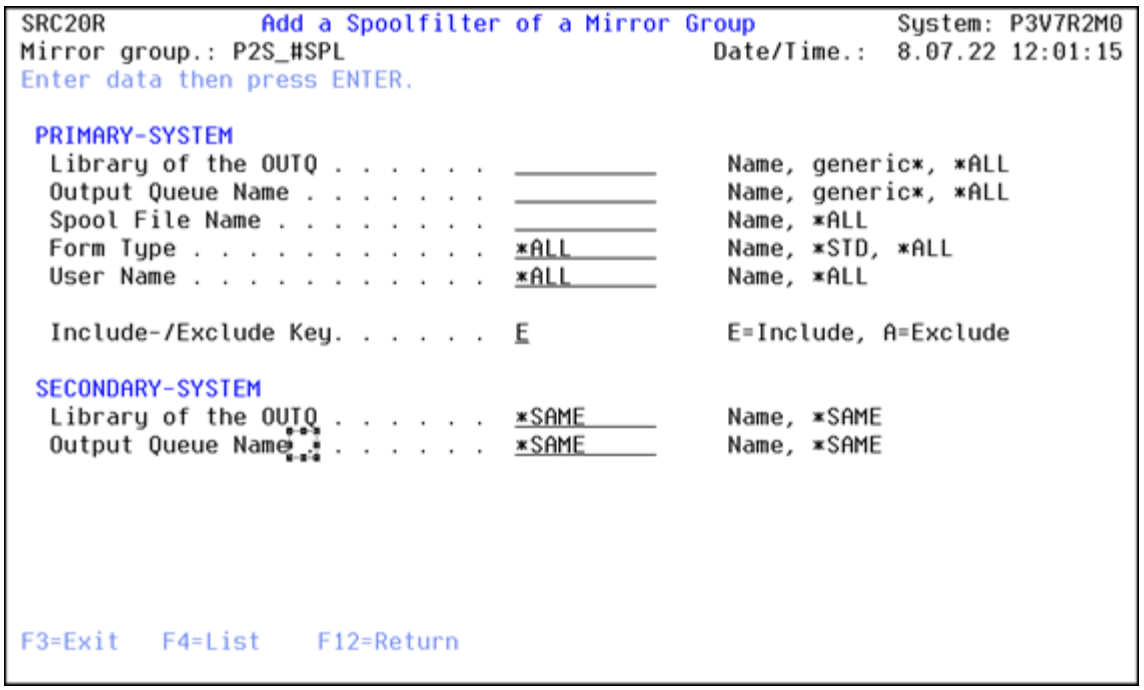
Selection 4 - Delete
With selection 4 an existing entry can be deleted.

Valid command keys of the current masks:

F5=Update
This command key is used for updating the selection lists. All options currently entered on the screen are deleted. The display list is rebuilt so that any list entries added, modified or deleted by other users are also displayed or removed.

F6=Add
This function key can be used to add further spool files to be mirrored to the mirror group.

2.4.11.8 Command key F6 - Add spool filter to mirror group



This input mask can be used to specify filters for spool files that are to be mirrored.

A maximum of 200 spool filter entries with indicator E and a maximum of 100 spool filter entries with indicator A can be entered.

The following input fields are available to the user:

PRIMARY SYSTEM

Library of the QUTQ
library on the primary system whose output queue can be recorded in the journal and thus mirrored.

Valid input values for the parameter Library **OUTQ** are:

Name
Name of the library containing the spool file to be mirrored.

generic*
Specify the generic name of the library which contains the output queues to be mirrored. A generic name consists of one or more characters followed by an asterisk (*). All libraries are taken whose name has the same prefix as the generic name.

***ALL**
If the value *ALL is specified instead of the library name, all spool file changes of a journal of a mirror group are mirrored. If the value *ALL is entered, no further entries for output queues to be mirrored must exist in the list.

Output queue
Enter output queue whose spool files are to be mirrored.

Valid input values for the **output queue** parameter are:

Name
Name for an output queue to be mirrored, which is contained in a specified library.

generic*
Specify the generic name of the output queue that contains the spool files to be mirrored. A generic name consists of one or more characters followed by an asterisk (*). All libraries are taken whose name has the same prefix as the generic name.

***ALL**
All output queues contained in the specified library are mirrored. If the value *ALL is specified for the output queue parameter, no other entry for the same output queue may exist in the object list.

Spool file name
File name of the spool files on the primary system to be mirrored.

Valid input values for the **spool file name** parameter are:

Name
Name for a spool file to be mirrored, which is contained in a specified library and output queue.

***ALL**
All spool files contained in the specified library and output queue are mirrored. If the value *ALL is specified for the Object parameter, then no other entry for the same library may exist in the object list. If *ALL was specified for the library and output queue parameter, then *ALL must also be specified for the spool file name.

The following combinations for *ALL/generic entries are possible:

Library	OUTQ	Spool file
*ALL	*ALL	*ALL
*ALL	Name	Name
*ALL	Name	*ALL
Name	*ALL	*ALL
Name	Name	*ALL

Form type
Form type on the primary system to be mirrored.

Valid values for the **Form type** parameter are:

Name
Names for a form type to be mirrored.

***STD**
Only spool file of the standard form type will be mirrored.

***ALL**
Spool files of all form types are mirrored.

Username
Spool file of a user on the primary system that is to be mirrored.

Valid values for the **Username** parameter are:

Name
Name for a user's spool file to be mirrored.

***ALL**
Spool files of all users are mirrored.

Inclusion/exclusion indicator
This flag can be used to control whether the specified library/output queue/spool file should be included or excluded from the mirroring process.

Valid values for the **Include/exclude flag** parameter are:

E - Inclusion
Include library/output queue/spool file in mirror process.

A - Exclusion
Exclude library/ output queue/spool file in mirror process.

SECONDARY SYSTEM

Library
Library on the secondary system into which the output queues from the primary system are mirrored.

Valid values for the **Library** parameter are:

***SAME**
library on the secondary system is identical to the primary system. If the value *ALL is specified as the library name on the primary system, only *SAME can be specified on the secondary system.

Name
Name of the library to which the file will be mirrored.

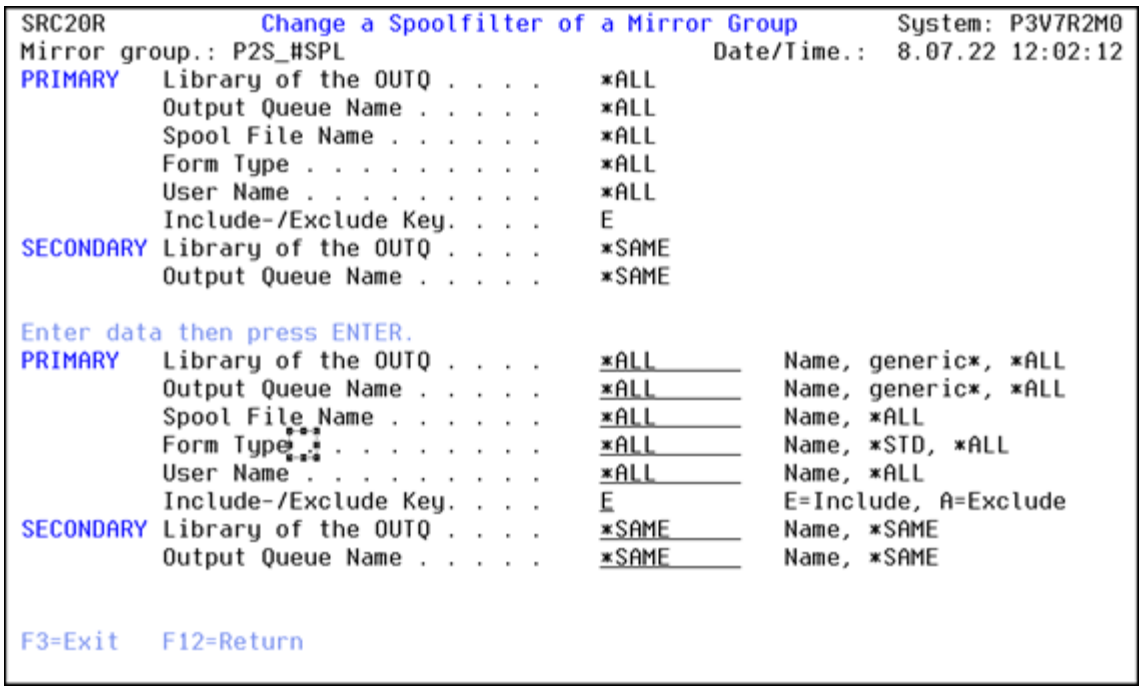
Output queue
Output queue on the secondary system to which the spool files from the primary system are mirrored.

Valid input values for the **output queue** parameter are:

Name
Name of the output queue to which the spool file will be mirrored.

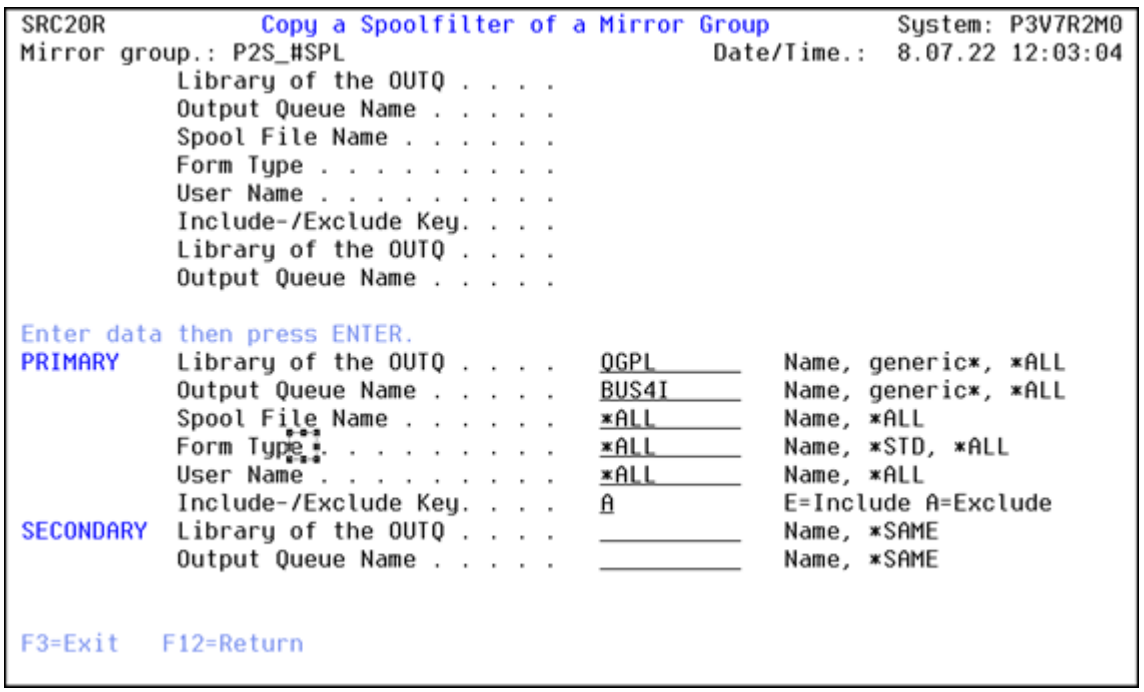
***SAME**
The output queue on the secondary system is identical to the primary system. If the value *ALL is specified as the output queue on the primary system, only *SAME can be specified on the secondary system.

2.4.11.9 Selection 2 - Change spool filter of mirror group



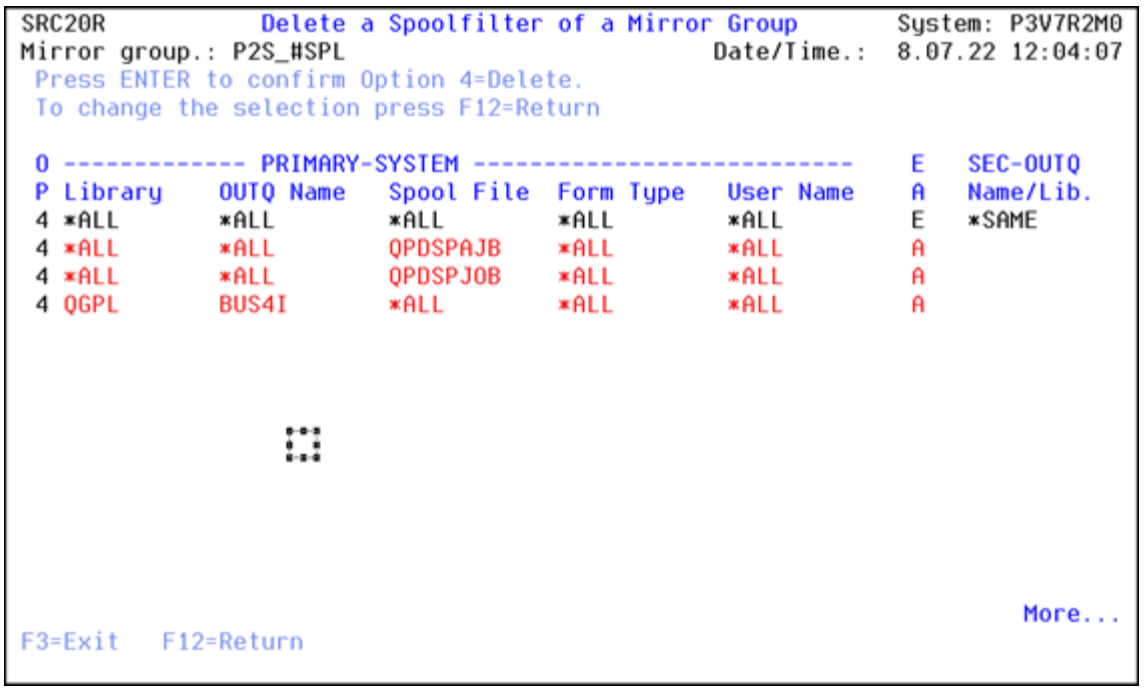
This input mask can be used to change one or all spool filters of a mirror group that are to be mirrored. The parameters are described in more detail in the section "Adding spool filters to the mirror group".

2.4.11.10 Selection 3 - Copy mirror group spool filter



This input mask can be used to copy list entries for spool files to be mirrored. The same rules for copying entries apply here as for the Add and Change functions.

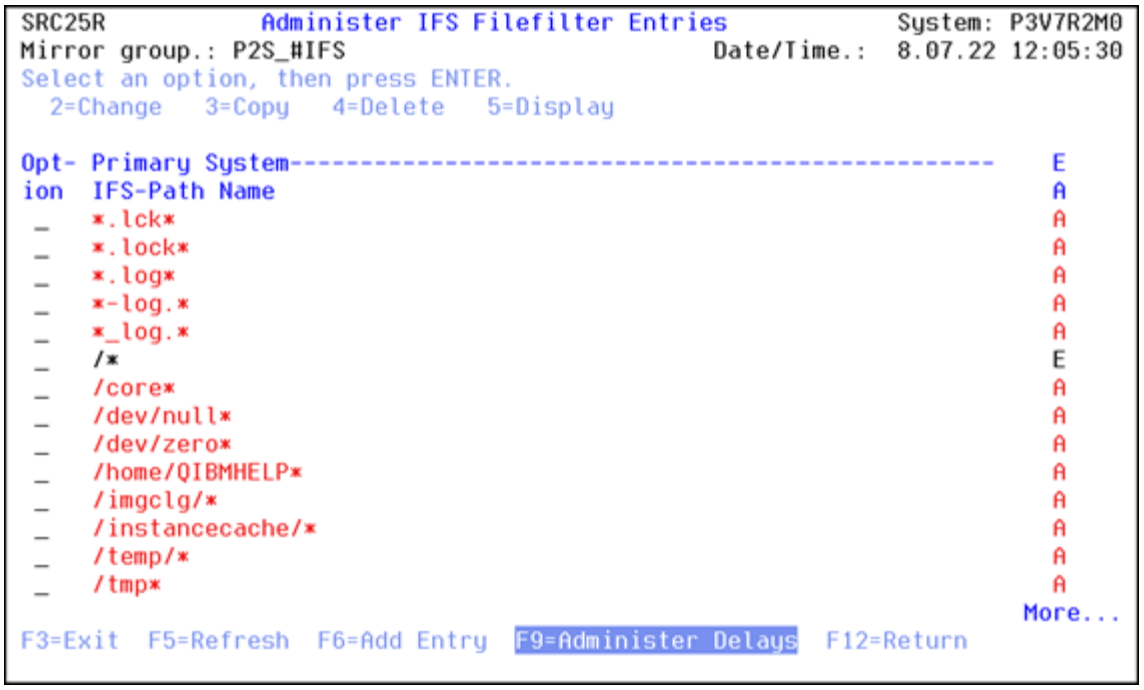
2.4.11.11 Selection 4 - Delete spool filter of mirror group



In the spool filter management list of a mirror group, one or more list entries can be removed via selection option 4. This removes the spool filters that were specified in the list entry from the mirroring process of the mirror group.

After confirming with the Enter key, the spool filter is deleted.

2.4.12 Selection I - Manage IFS file filters



The "I" option in the mirror group management list can be used to manage the filters for IFS files. A maximum of 200 inclusions and 200 exclusions are possible here.

If /* (mirror entire IFS) is to be entered as filter, the following IFS objects must be excluded:

/QSYS.LIB*
/QNTC*
/QOPT*
/QTCPTMM*
/QFileSvr.400*
/QSR*
/QOpenSys* or at least /QOpenSys/QIBM/ProdData*.
*.log
/logs/
/QIBM/UserData/OS/*
/QIBM/UserData/webquery/* (if available)
/QIBM/UserData/Eclipse/* (if available)
/dev/null*
/dev/zero*

The following valid input fields are available to the user:

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

The following options are possible for managing the IFS files to be mirrored:

Selection 2 - Change
With selection 2 the path name as well as the inclusion/exclusion flag can be changed.

Selection 3 - Copy
With selection 3 an existing entry can be copied.

Selection 4 - Delete
With selection 4 an existing entry can be deleted.

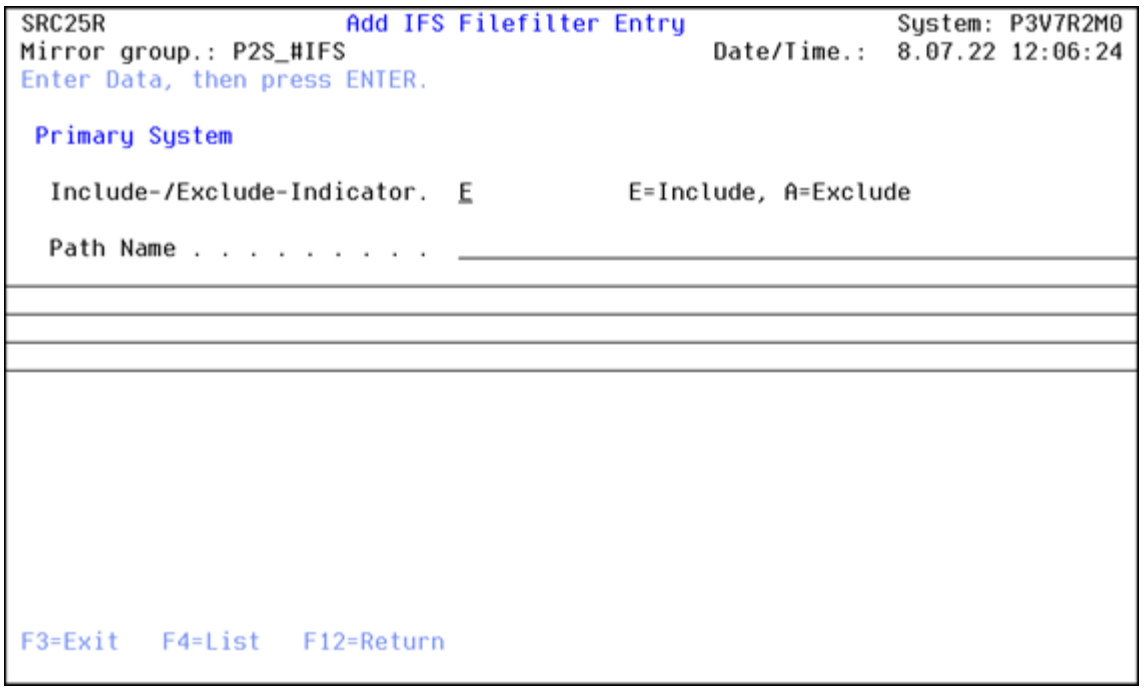
Selection 5 - Display
With selection 5 the current entry is displayed.

Valid command keys of the current masks:

F6=Add
This function key can be used to add further IFS files to be mirrored to the mirror group.

F9=Delays used.
Delays of objects can be managed analog to the command "WRKIFSDLY". If a delayed synchronization is defined for IFS objects, the display is highlighted in light blue.

2.4.12.1 Command key F6 - Add IFS file filter



IFS file filters can be added via this input mask.

The following input fields are available to the user:

Inclusion/exclusion indicator
This flag can be used to control whether the specified IFS path should be included or excluded from the mirroring process.

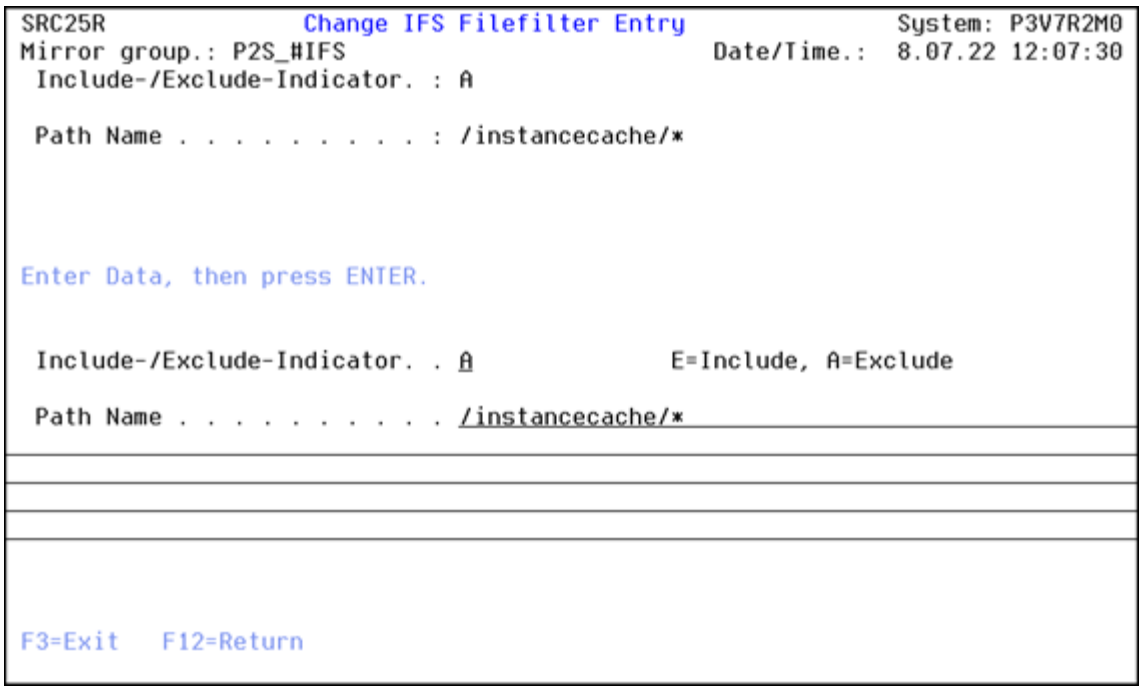
Valid values for the **Include/exclude flag** parameter are:

E - Inclusion
Include IFS path in mirroring process.

A - Exclusion
Exclude IFS path in mirror process.

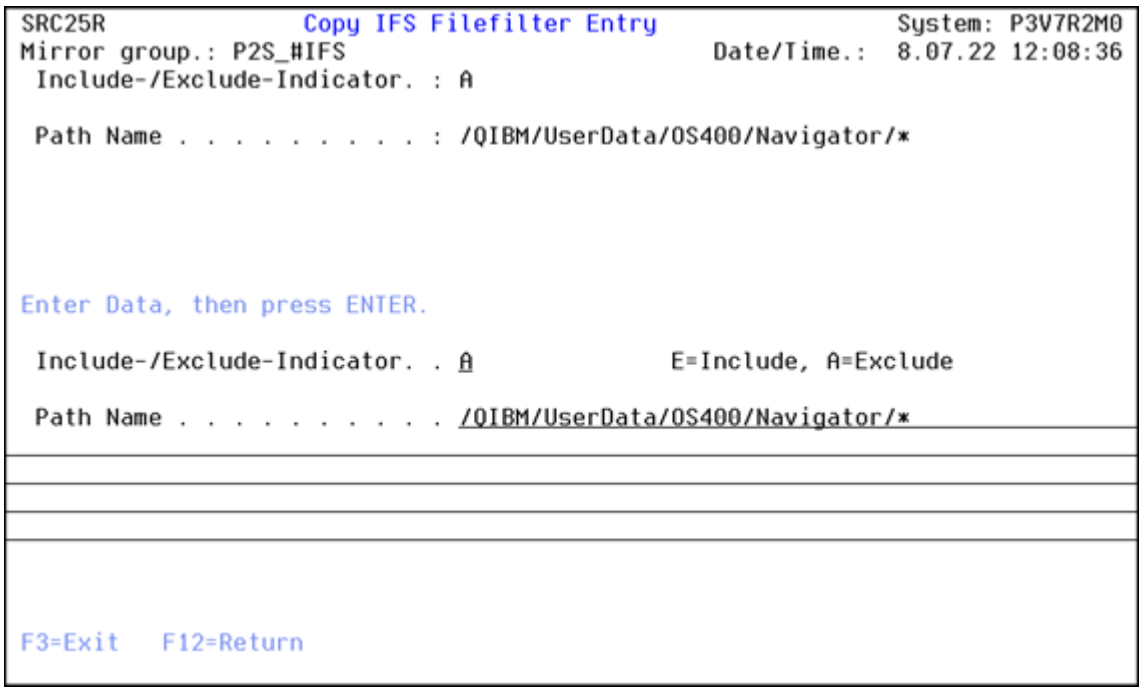
Path name
In the Path name input field, enter the valid path name for the IFS file or directory. End it with a *.

2.4.12.2 Selection 2 - Change IFS file filter



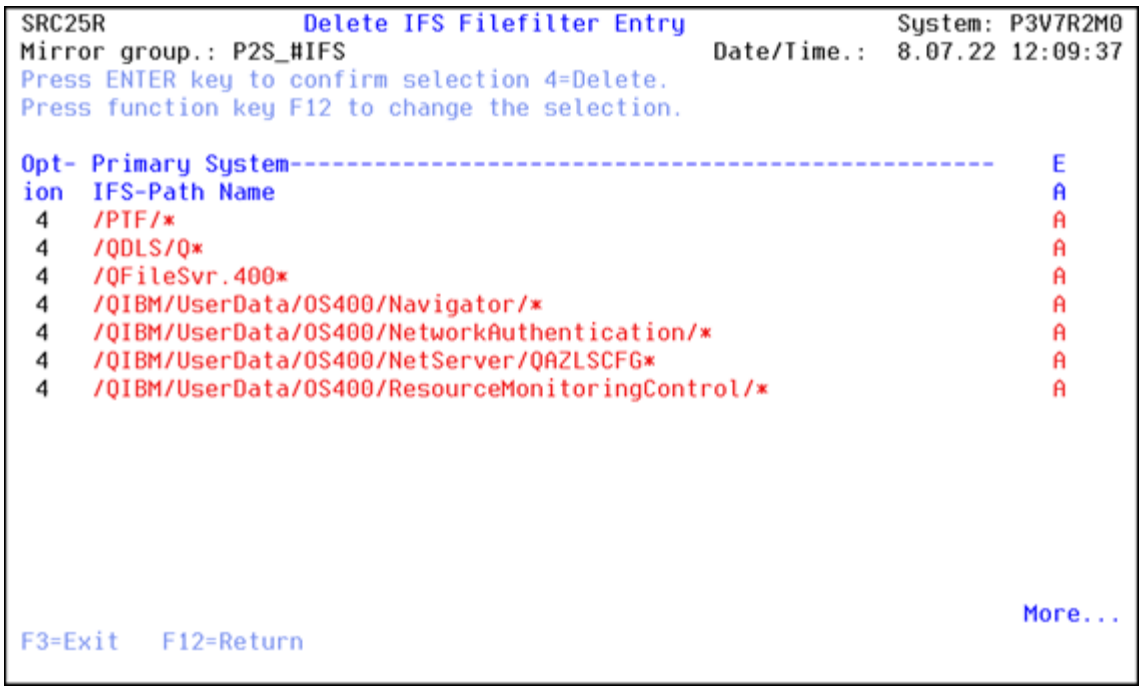
IFS file filters can be changed via this input mask. The parameters are described in more detail in the section "Add IFS file filter".

2.4.12.3 Selection 3 - Copy IFS file filter



IFS file filters can be copied via this input mask. The same rules for copying entries apply here as for the Add and Change functions.

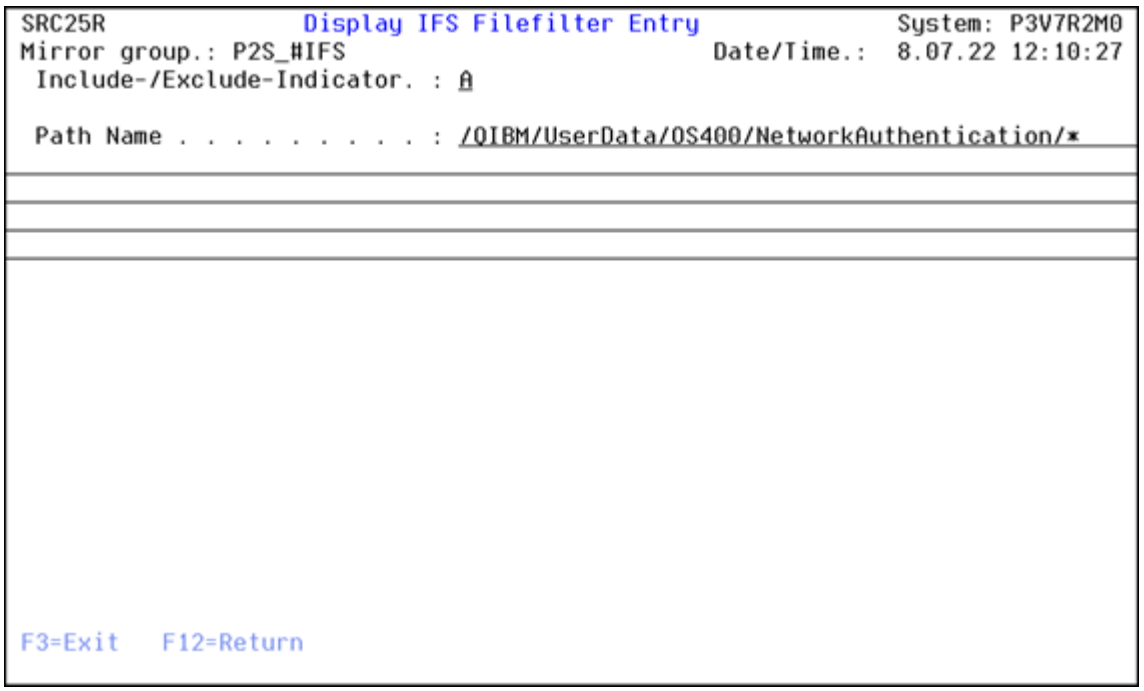
2.4.12.4 Selection 4 - Delete IFS file filter



In the IFS file filter management list, one or more list entries can be removed via selection option 4. This removes the IFS paths that were specified in the list entry from the mirroring process of the mirror group.

After confirming with the Enter key, the IFS file filter is deleted.

2.4.12.5 Selection 5 - Display IFS file filter



IFS file filter entries can be displayed via this mask. To see the complete path for longer IFS paths, for example.

2.4.12.6 Command key F9 - Administer delays

Here IFS files can be entered, which are to be synchronized with a delay. Delays of files can be managed analog to the command "WRKIFSDLY". If a delayed synchronization is defined for IFS files, the display is highlighted in light blue.

The following valid input fields are available to the user:

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

The following options are possible for managing the IFS files to be delayed:

Selection 2 - Change
With selection 2 the path name and the delay time can be changed.

Selection 3 - Copy
With selection 3 list entries for files to be delayed can be copied.

Selection 4 - Delete
With selection 4 an existing entry can be deleted.

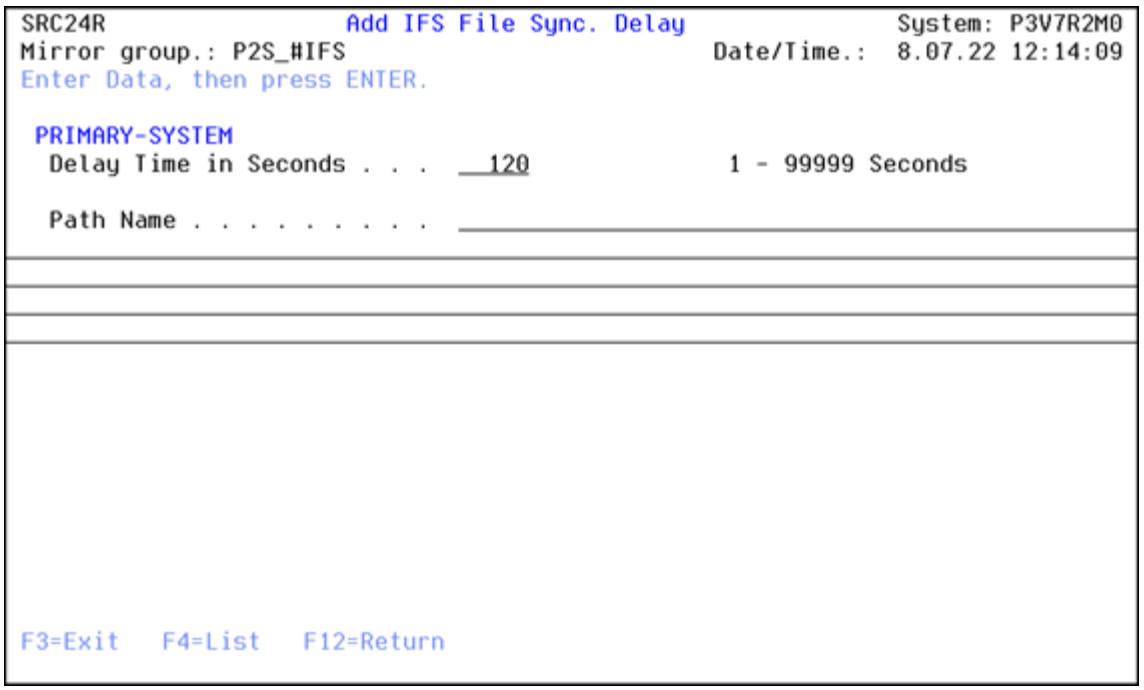
Selection 5 - Display
With selection 5 an existing entry can be displayed.

Valid command keys of the current masks:

F5=Update
Pressing this function key F5 displays the current values that may occur after manual changes or changes made by the program.

F6=Add
This function key can be used to add further data objects to a mirror group that are to be delayed.

2.4.12.6.1 Command key F6 - Add IFS files



This input mask can be used to create new IFS file delay entries. The entries added here will be synchronized with a defined delay.

The following valid input fields are available to the user:

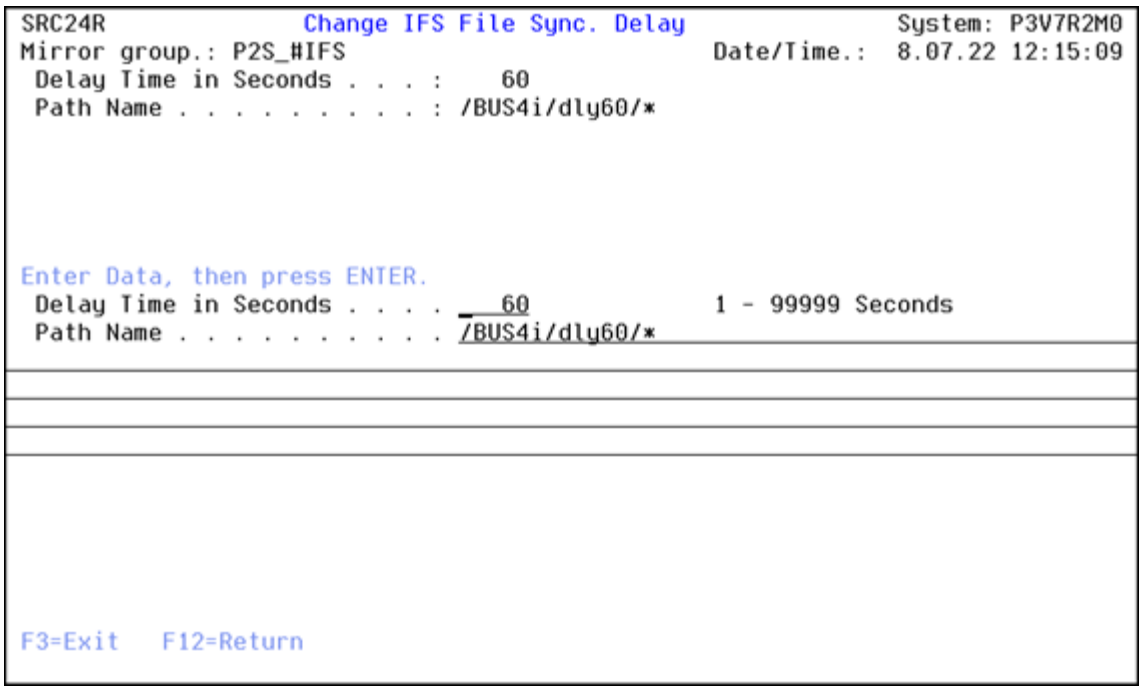
Delay time in seconds
Here you can set the delay time in seconds to wait until BUS4i synchronizes the path.

Valid input values for the **Delay time in seconds** parameter are:

1 - 99999 seconds
The delay time can be selected between 1 and 99999 seconds. The default value is 120.

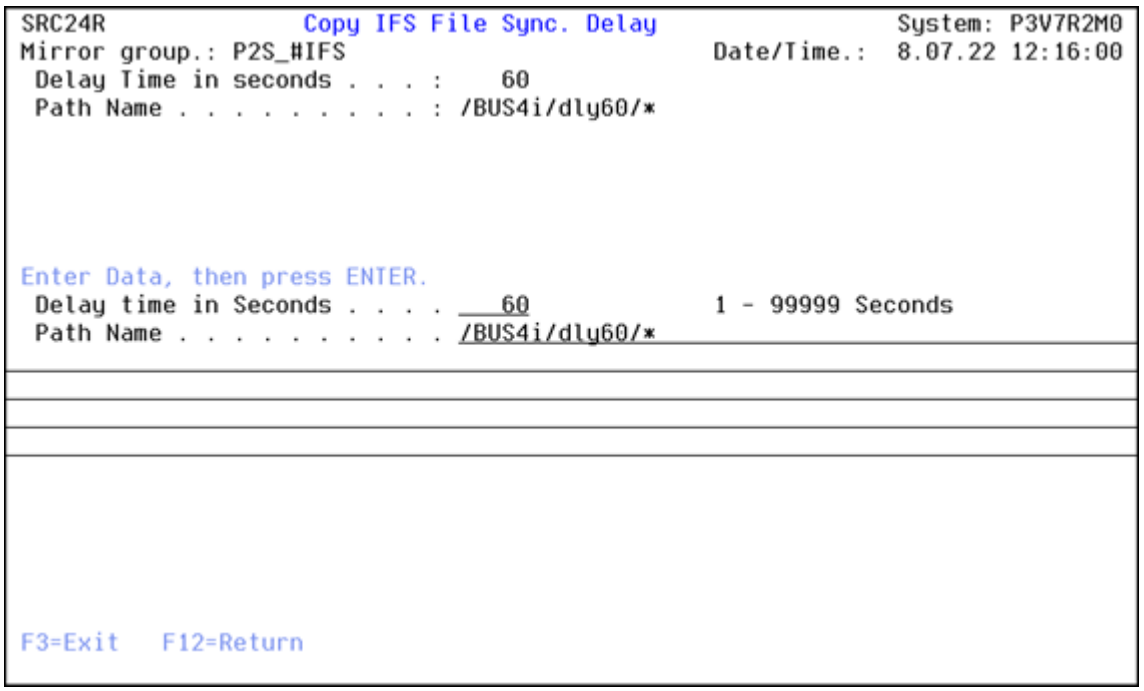
Path name
In the Path name input field, enter the valid path name for the IFS file or directory. End it with a *.

2.4.12.6.2 Selection 2 - Change IFS files



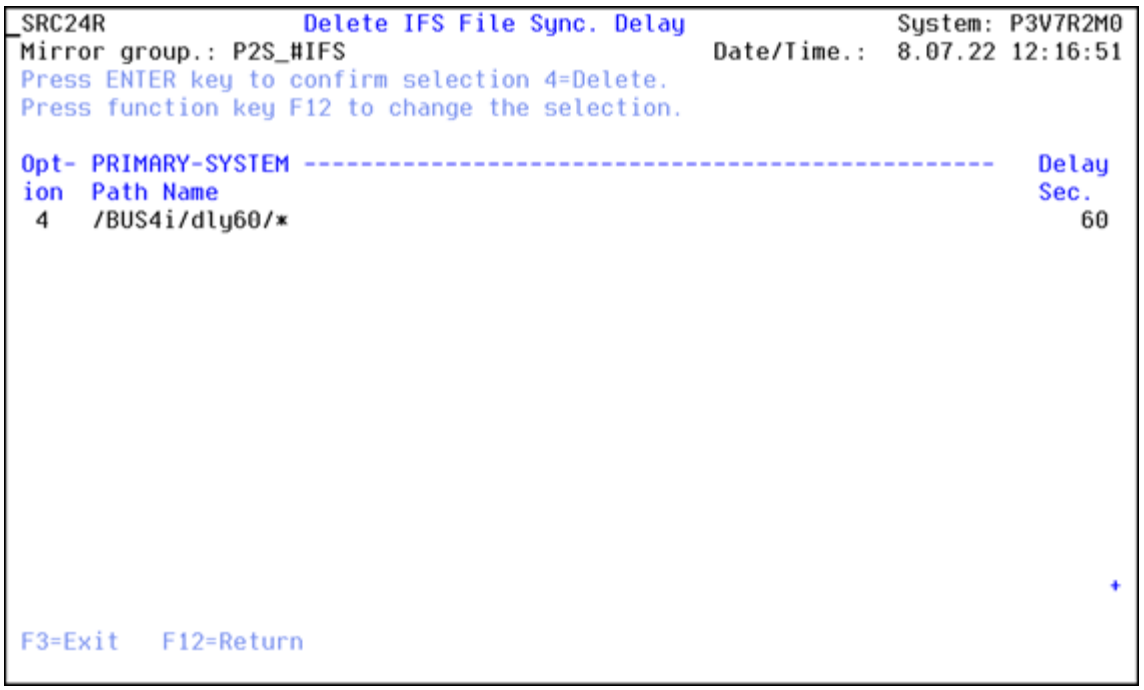
This input mask can be used to change the parameters of the synchronization delay entry. The parameters are described in more detail in the section "Add IFS files".

2.4.12.6.3 Selection 3 - Copy IFS files



This input mask can be used to copy list entries for synchronization delay. The same rules for copying entries apply here as for the Add and Change functions.

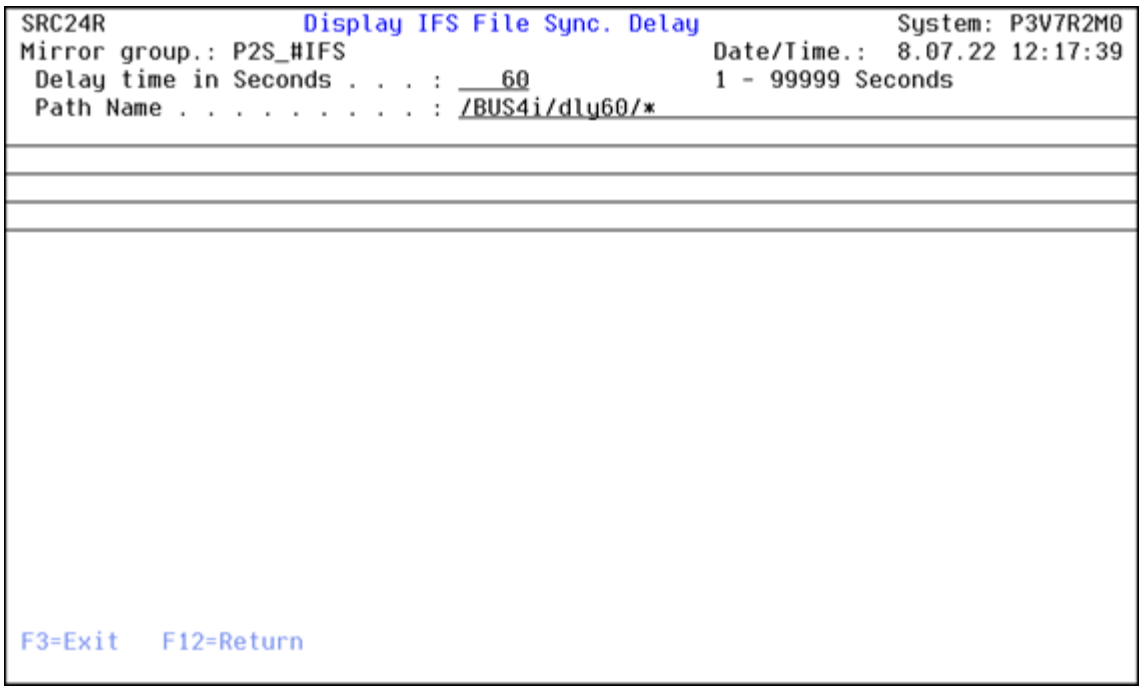
2.4.12.6.4 Selection 4 - Delete IFS files



In the synchronization delay management list, one or more list entries can be removed via selection option 4. This removes the synchronization delays that were specified in the list entry from the list that is no longer synchronized with delay.

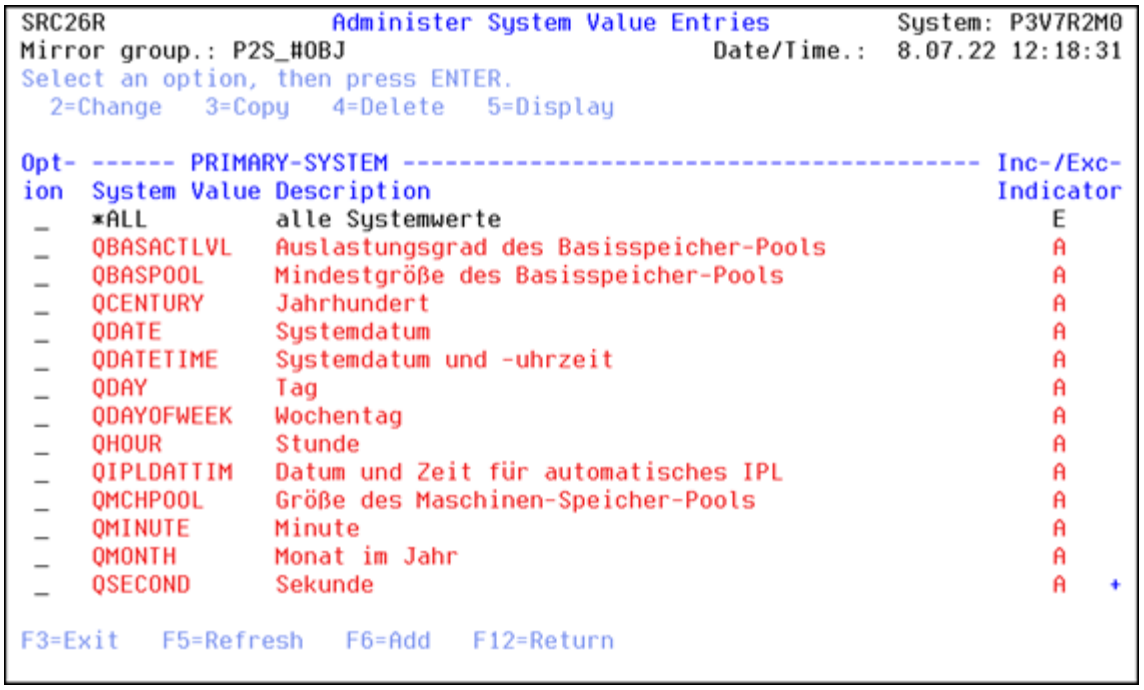
After confirming with the Enter key, the selected list entries are deleted from the mirror group.

2.4.12.6.5 Selection 5 - Display IFS files



IFS file filter entries can be displayed via this mask. For example, to see the complete path for longer IFS paths without the risk of accidentally changing something.

2.4.13 Selection W - Manage system value filter



The W option in the mirror group management list is used to manage the system value filters.

The following valid input fields are available to the user:

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

The following options are possible for managing the system value filters to be mirrored:

Selection 2 - Change
With selection 2, the library name, the system value and the inclusion/exclusion indicator can be changed.

Selection 3 - Copy
With selection 3 an existing entry can be copied.

Selection 4 - Delete
With selection 4 an existing entry can be deleted.

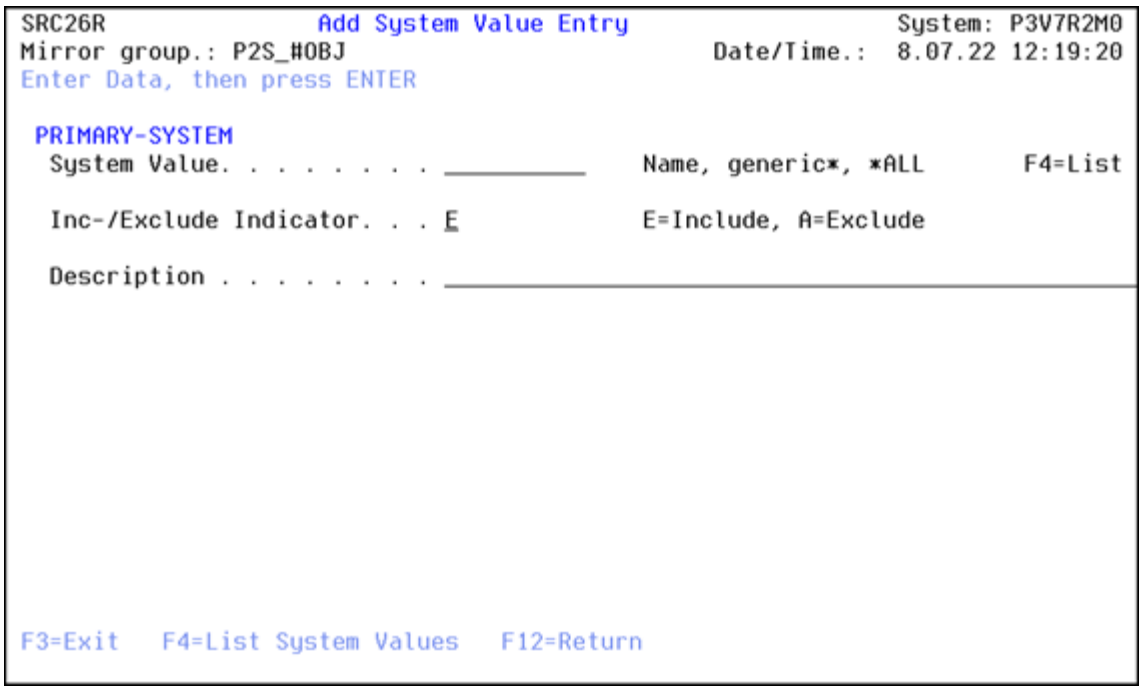
Selection 5 - Display
With selection 5 the current entries are displayed.

Valid command keys of the current masks:

F5=Update
This command key is used for updating the selection lists. All options currently entered on the screen are deleted. The display list is rebuilt so that any list entries added, modified or deleted by other users are also displayed or removed.

F6=Add
This function key can be used to add further system values to be mirrored to a mirror group.

2.4.13.1 Command key F6 - Add system value filter



A new system value filter can be added via this input mask.

The following input fields are available to the user:

System value
A system value to be mirrored can be entered here.

Valid values for the **System value** parameter are:

Name
Name, e.g. QHOUR (time), for the system value to be mirrored.

generic*
Specify the generic name of the system values to be mirrored. A generic name consists of one or more characters followed by an asterisk (*). All system values whose names have the same prefix as the generic name are taken.

***ALL**
All system values present on the primary system are selected.

Inclusion/exclusion indicator
This indicator can be used to control whether the specified system value should be included or excluded from the mirroring process.

Valid values for the **Include/exclude flag** parameter are:

E - Inclusion
Include system value in mirroring process.

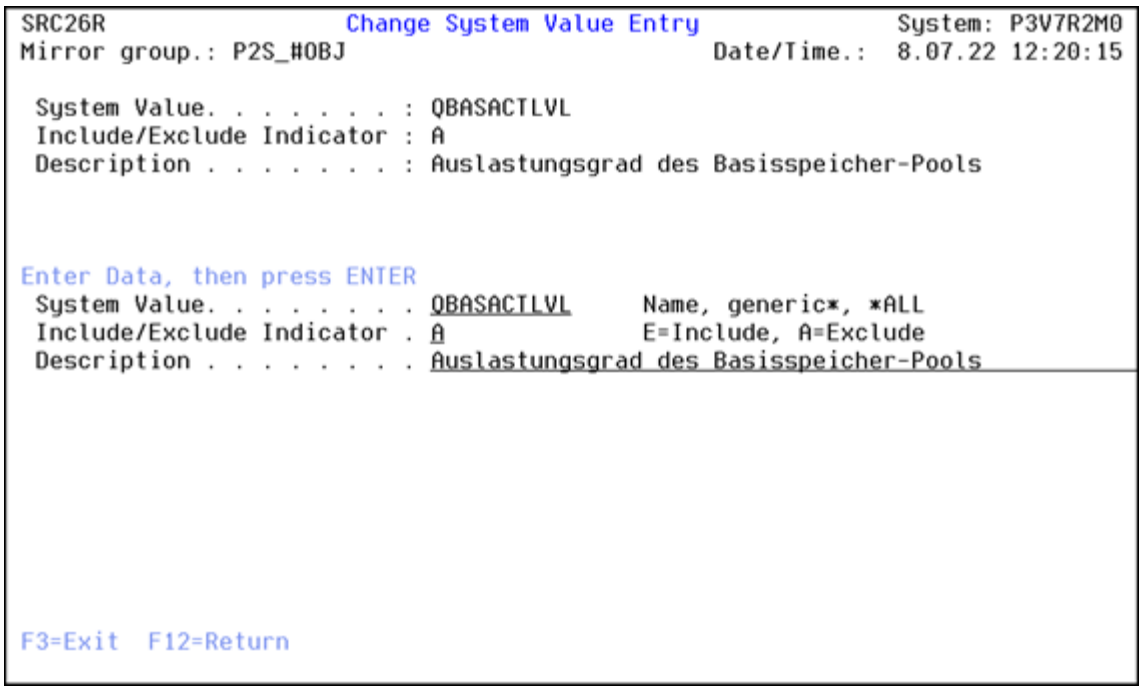
A - Exclusion
Exclude system value in mirror process.

Designation

A description for the system value can be entered in the Designation input field.
The following command keys are valid on the current mask:

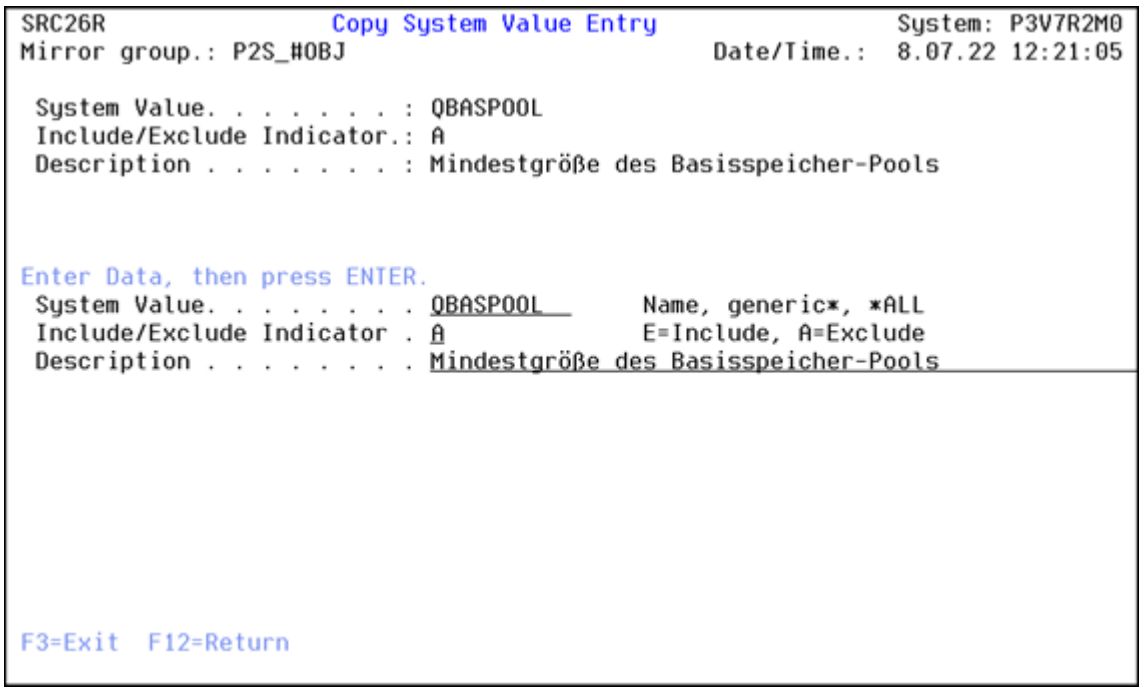
F4=List system values
The list of all system values is displayed. An entry can be selected from this list. The designation is taken from the system entry and placed in the 'Designation' input field.

2.4.13.2 Selection 2 - Change system value filter



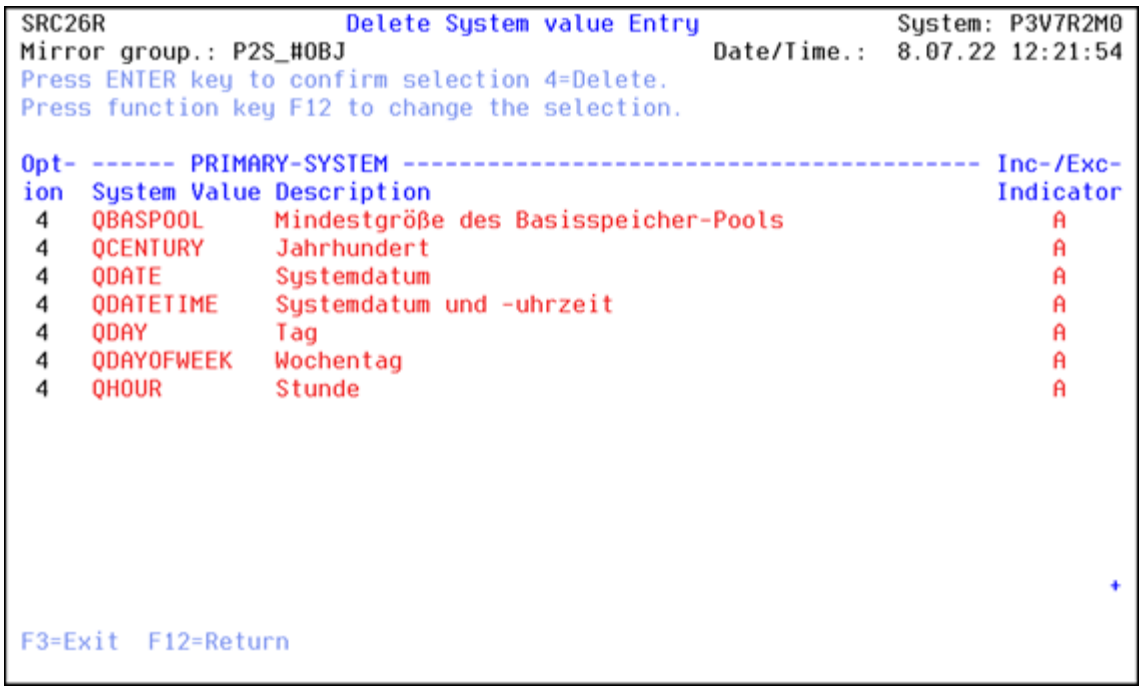
An existing system value filter can be changed via this input mask. The parameters are described in more detail in the section "Add system filter".

2.4.13.3 Selection 3 - Copy system value filter



This input mask can be used to copy an existing system value filter. The same rules for copying entries apply here as for the Add and Change functions.

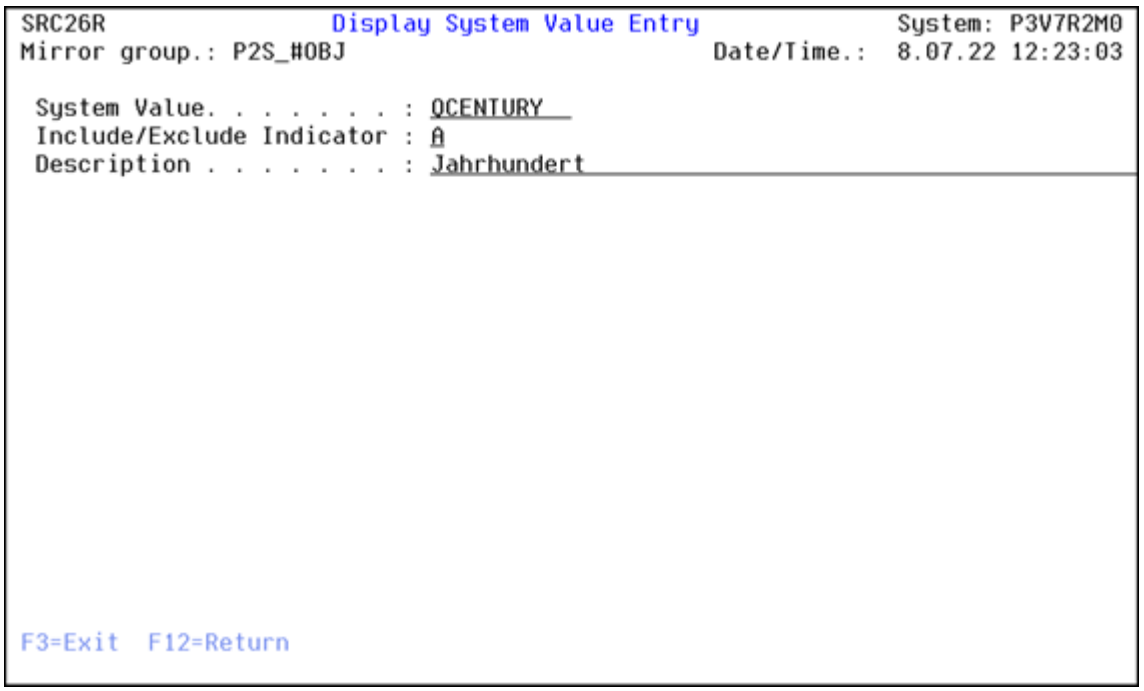
2.4.13.4 Selection 4 - Delete system value filter



In the management list of the system value filters, one or more list entries can be removed via selection option 4. This removes the system value filters that were specified in the list entry from the mirroring process of the mirror group.

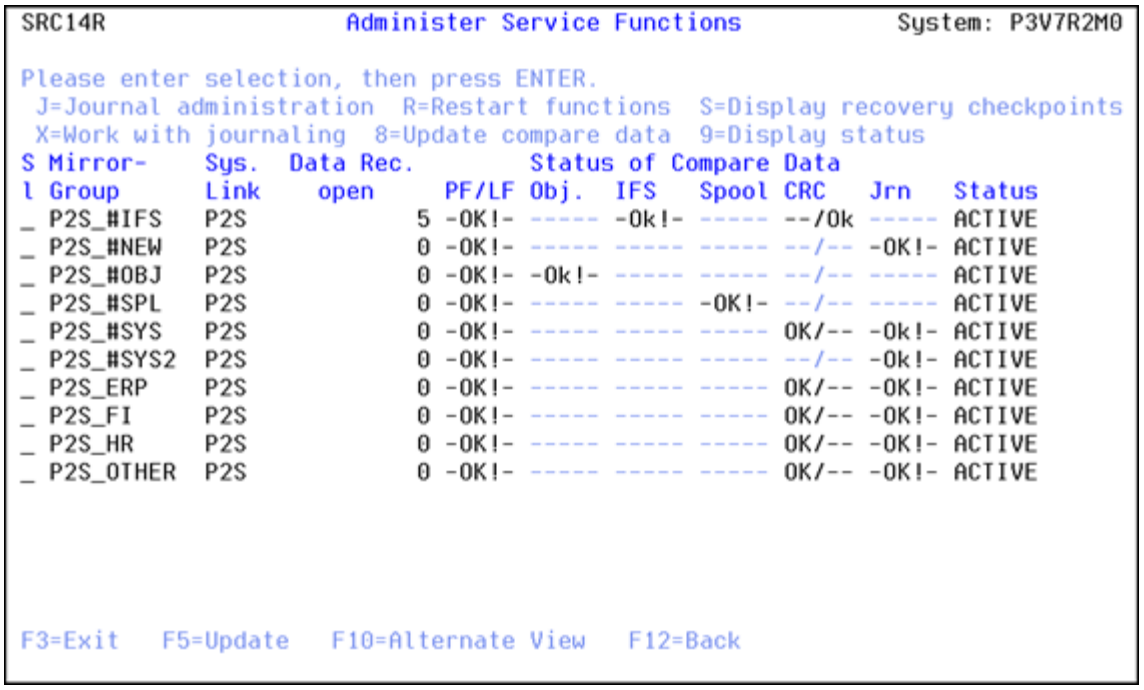
After confirming with the Enter key, the system value filter is deleted.

2.4.13.5 Selection 5 - Display system value filter



A system value filter can be displayed via this mask. Changes cannot be made.

2.5 Main menu selection 5 - Service functions



Via this selection list, the user can call up administration menus for the journal and restart functions for each mirror group.

Displayed:
- Mirror group
- System Link Name
- Records open (records still to be processed)
- PF/LF= Status of comparison data for physical and logical part files.
- Obj. = Status of comparison data for objects
- IFS = Status of the comparison data for IFS objects
- Spool= status of comparison data for spool files
- CRC= Status of CRC check data Objects/IFS
- JRN= Journal log data status
- following status is possible:
  - -OK!- = everything ok
  - -Ok!- = everything in order, but deviations were ignored
  - ERROR = Error
  - WARNG = Warning
  - -???- = Comparative data to old
  - --?-- = Too large difference in the number of comparison data
  - --!!!-- = Comparison data not available, although they should be there
  - --!-- = Comparison data are being created
  - ----- = no comparative data available
- Status of the mirror group sending process

The following valid input fields are available to the user:

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items are in the list. When entering an option that is not allowed, an error message appears on the screen.

The following options are possible for performing service functions:

Selection J - Journal management
Selecting J opens an administration menu that allows the user to manage the journal and its recipients specified in the control parameters.

Selection R - Restart functions
Selecting R calls up an administration menu which allows the user to call up the RESET procedure or to list or print error logs.

Selection S - Display fuse checkpoints
With the selection S you can display the fuse control points of the mirror group.

Selection X - Edit journaling
With this selection, the "Journal Deviations" of the mirror group are displayed directly.

Selection 8 - Update adjustment data
This selection can be called to get a new display for the deviations after a manual synchronization from the secondary system. Subsequently, a comparison is started whether there are still deviations in this group. If there are no deviations, an "OK!" is entered for the corresponding group. Otherwise, depending on the deviation type, an error message (ERROR) or the warning notice (WARNG) is issued.

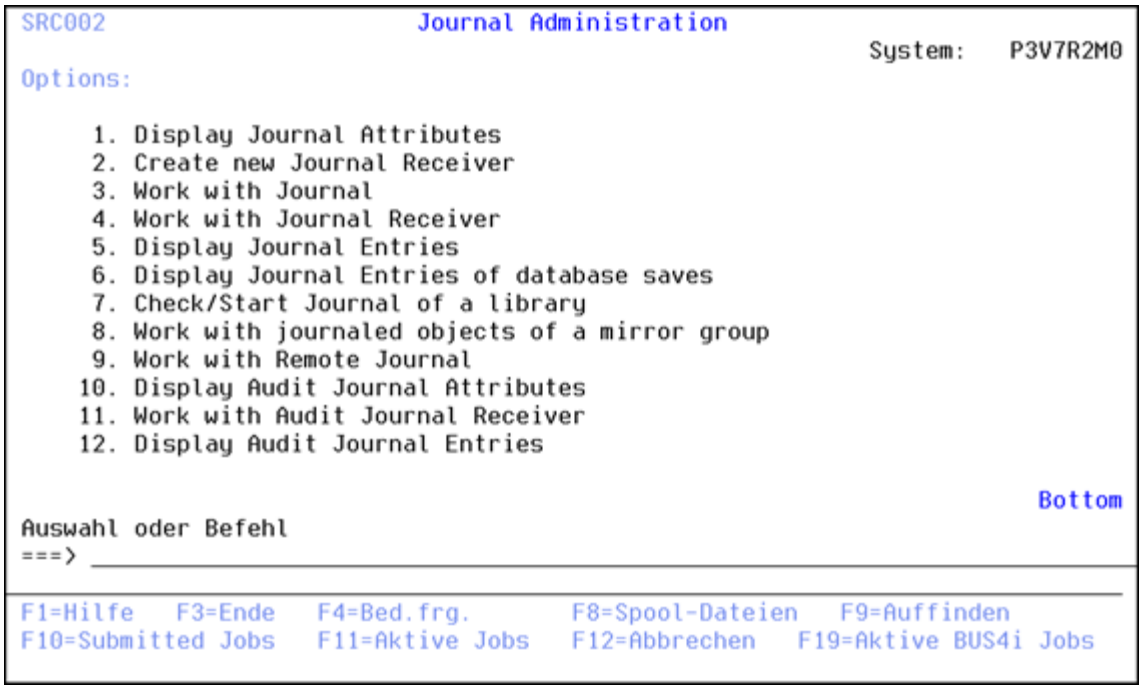
Selection 9 - Display status
This function gives the possibility to view the overall status of the backup application (primary and secondary system) from one system. (is activated in the basic control parameters).

The following command keys are valid on the current mask:

F5=Update
This command key is used for updating the selection lists. All options currently entered on the screen are deleted. The display list is rebuilt so that any list entries added, modified or deleted by other users are also displayed or removed.

F10=Alternative view
The alternative view additionally shows the designation of the mirror groups.

2.5.1 Selection J - Journal management



This drop-down menu allows the user to select commands for managing journal recipients and journal contents.

The following menu items can be selected on the current screen:

Menu item 1: Work with journal attributes
Existing journal attributes can be edited via this menu selection. The system command WRKJRNA is called.

Menu item 2: Create new journal receiver
This menu selection is used to place an entry (E2) in the journal receiver. No mask is displayed. The command CHGJRNRCV is called. When processing this journal entry, a new journal receiver is created.

Menu item 3: Work with journals
This menu item can be used to display all (blank or *ALL entries in both selection fields) or individual journals defined on the system. Via options, changes can be made to the journals as well as the journal recipients. The journals and attributes are displayed.

Menu item 4: Work with journal receivers
Existing journal receivers can be edited via this menu selection. Editing includes the functions Delete, Display attributes and Change description.

Menu item 5: Display journal entries
Via this menu selection, all journal entries that have not yet been transferred are displayed to the user. The system command DSPJRN is called.

Menu item 6: Display journal entries of backups
Journal entries of backups can be displayed via this menu selection. The journal entries 'MS' 'SS' and 'E4' can be displayed from a start date.

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Menu item 7: Check/start journaling of a library (STRBUPJRN)
This menu selection is used to check whether the data libraries are journalized.

Menu item 8: Edit mirror group journaling
This menu option can be used to edit the journalization of a mirror group.

Menu item 9: Work with remote journals
This menu item can be used to display all (blank or *ALL entries in both selection fields) or individual remote journals defined on the system. Parameters for remote journals are displayed. Options can be used to add, activate or deactivate remote journals, for example.

Menu item 10: Work with audit journal attributes
Existing audit journal attributes can be edited via this menu selection. The WRKJRNA system command for the audit journal is called.

Menu item 11: Working with audit journal receivers
This menu selection can be used to edit existing audit journal recipients. Editing includes the functions Delete, Display attributes and Change description. The WRKJRNRCV system command for the audit journal is called.

Menu item 12: Display audit journal entries
This menu selection shows the user all audit journal entries that have not yet been transferred. The system command DSPJRN for the audit journal is called.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

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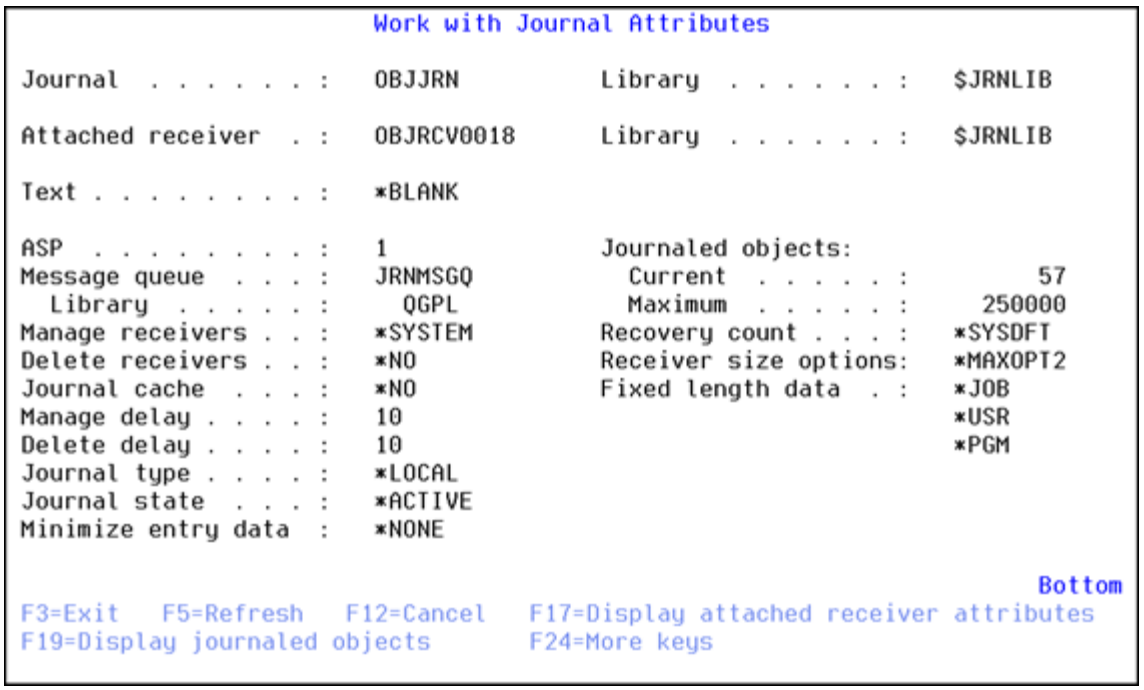
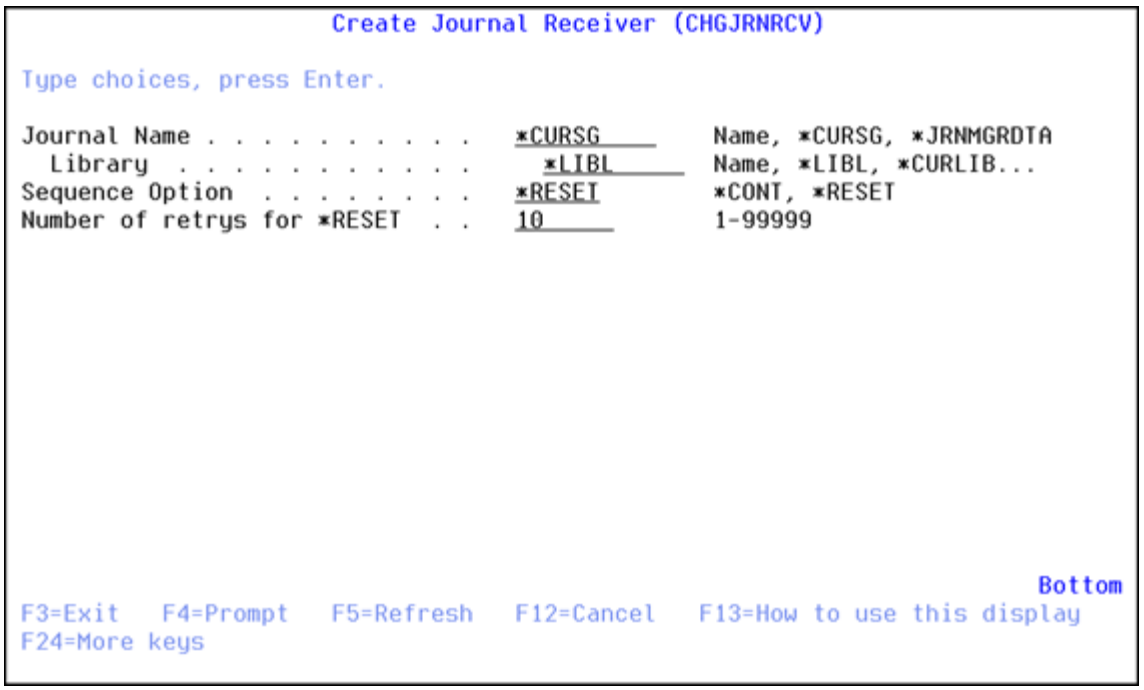
2.5.1.1 Menu item 1 - Work with journal attributes



In this mask the journal attributes are displayed for the journal defined in the mirror group. With the "F1" key in this display you get detailed information.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

2.5.1.2 Menu item 2 - Create new journal receiver



Creates a new journal receiver for the selected journal. The sequence number that is created is determined by the Sequence selection parameter. The CHGJRN system command is called with the corresponding parameters.

Journal Name
Name of the journal for which the called command is to be executed.

Valid values for the **Journal Name** parameter are:

Name
Name of the journal for which the command is to be executed.

***CURSG**
The application activated as "current" mirror group is used for command execution. *CURSG is the default value.

***JRNMGRDTA**
For *JRNMGRDTA, a new journal receiver is created for each journal entered with Journal manager.

Library
Specifies the library of the journal for which the receiver is to be recreated.

Valid values for the **Library** parameter are:

Name
Name of the library for which this command is to be executed.

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

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

Follow-up selection

Specifies how to set the journal sequence number of the new journal receiver.

Valid values for the **Sequence selection** parameter are:

***CONT**
The journal sequence number of the next journal entry created is 1 greater than the sequence number of the last journal entry in the new journal receiver.

***RESET**
The journal sequence number of the first journal entry in the newly created journal receiver is reset to 1. *RESET is the default value.

Number of attempts at *RESET

Specifies how many attempts are used to reset the journal sequence number to 1.

Valid values for the parameter **Number of attempts for *RESET** are:

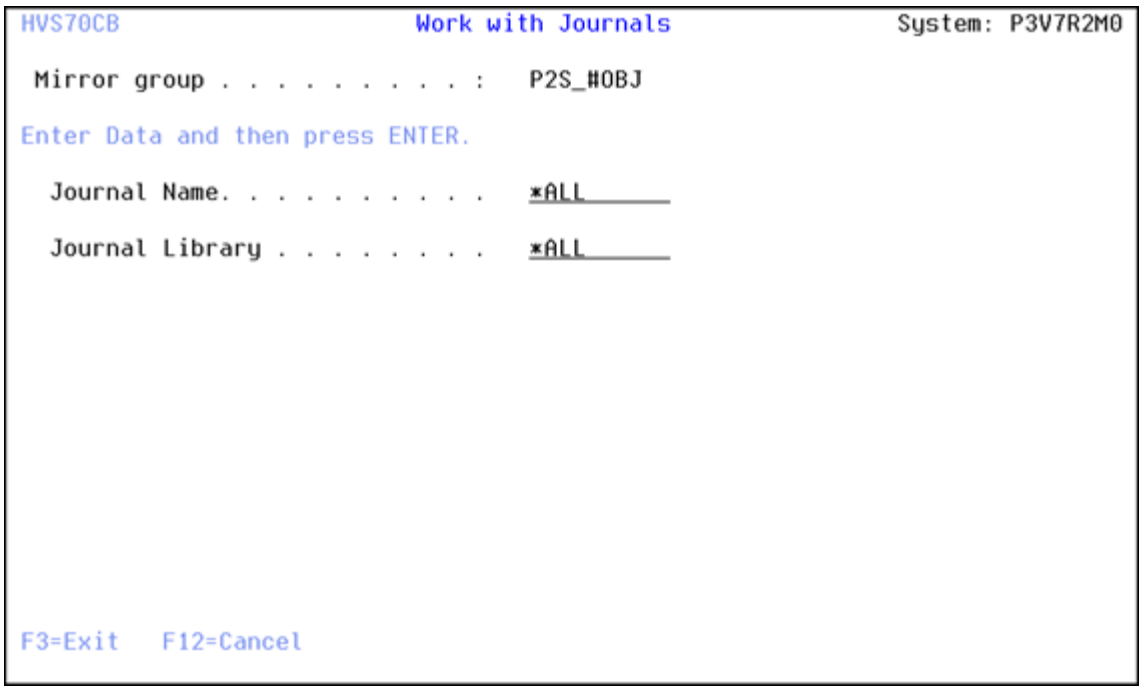
1-99999
The attempts which are used can be selected between 1 and 99999. The default value is 10.

The following command keys are valid on the current mask:

F5=Update
This command key is used for updating the selection lists. All options currently entered on the screen are deleted. The display list is rebuilt so that any list entries added, modified or deleted by other users are also displayed or removed.

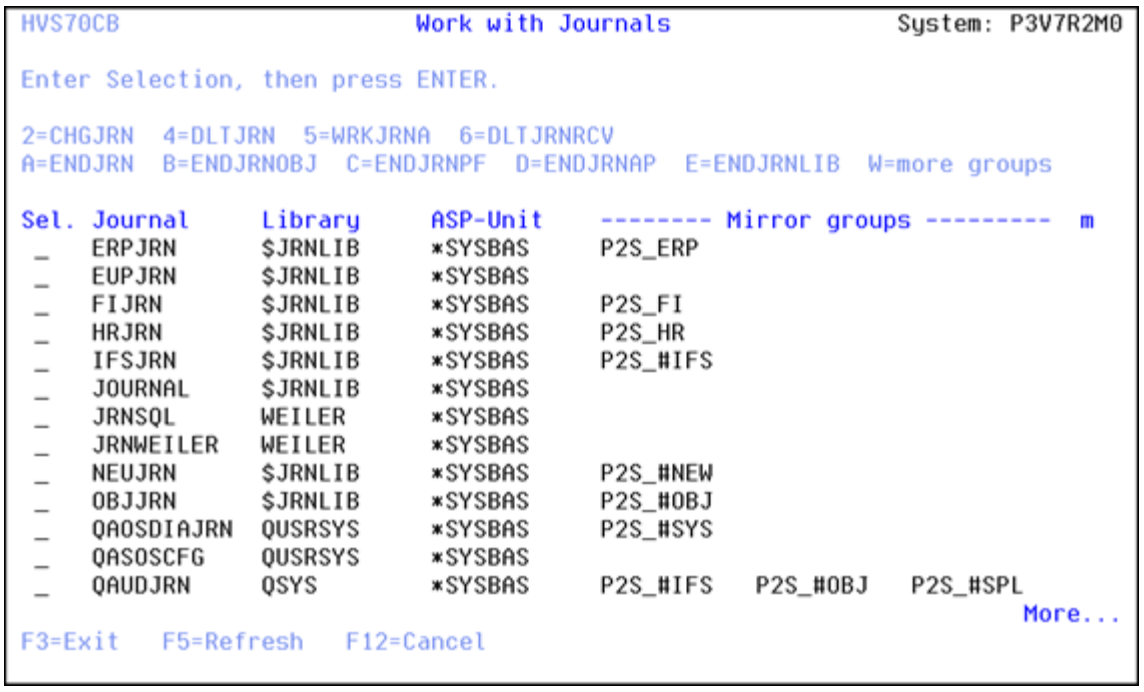
F9=All parameters
Displays all parameters of the mask, even those that were hidden at the beginning.

2.5.1.3 Menu item 3 - Work with journals



In this mask the journal parameters of the current application are displayed. To display all journals available in the system, set journal name as well as journal library to blank or enter *ALL.

The following mask appears:



The following input keys are available to the user on this screen:

Selection 2 - CHGJRN
The system command CHGJRN 'Change journal' is called with the corresponding parameters.

Selection 4 - DLTJRN
The system command DLTJRN 'Delete journal' is called with the corresponding parameters.

Selection 5 - WRKJRNA
The system command WRKJRNA 'Work with journal attributes' is called.

Selection 6 - DLTJRNRCV
The system command DLTJRNRCV 'Delete journal receivers' is called with the corresponding parameters. With the default parameters all journal receivers - except the active one - are deleted.

Selection A - ENDJRN
The system command ENDJRN 'End recording' is called.

Selection B - ENDJRNOBJ
The system command ENDJRNOBJ 'End recording of the object' is called.

Selection C - ENDJRNPF
The system command ENDJRNPF 'End recording PF changes' is called.

Selection D - ENDJRNAP
The ENDJRNAP (Stop Access Path Recording) command stops recording the access paths of a file for which journal entries are recorded.

Selection E - ENDJRNLIB
The ENDJRNLIB (End Library Recording) command ends the recording of changes for one or more libraries.

Selection W - Show more mirror groups
If more than three mirror groups are assigned to the journal, you can use this selection to display the remaining mirror groups.

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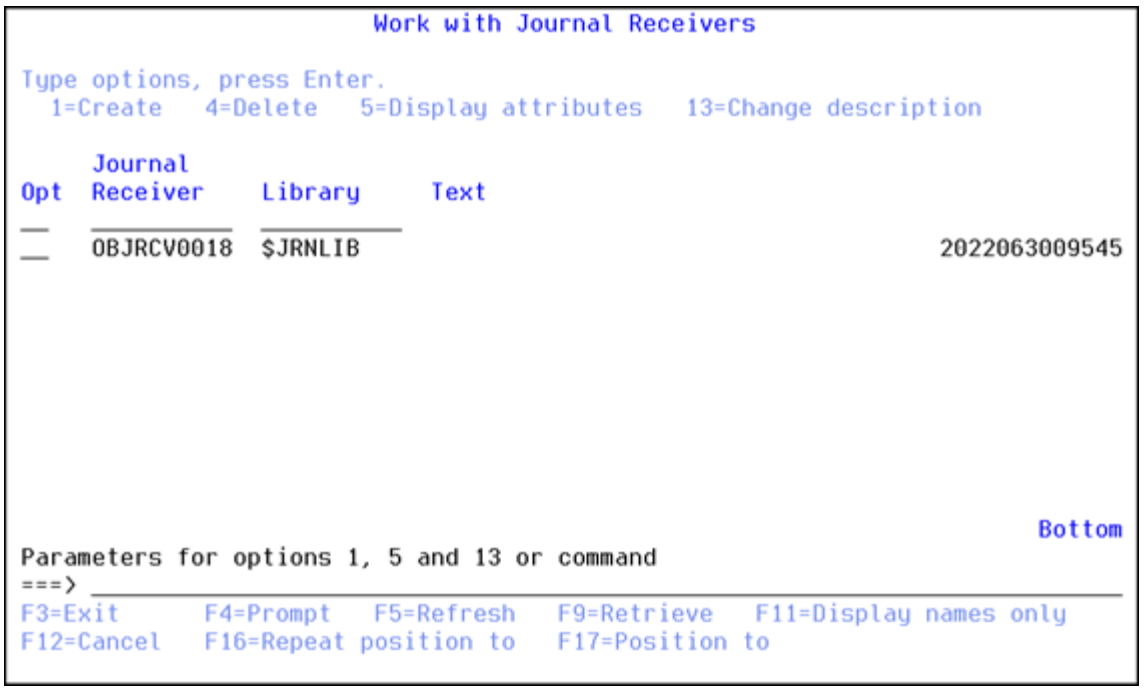
2.5.1.4 Menu item 4 - Work with journal receivers



A list of journal recipients from the journal library is displayed. The journal library entered in the selected mirror group is selected.

This display allows you to create and delete journal receivers, view journal receiver attributes, and modify journal receiver descriptions.

Selection 1 - Create
Create a journal receiver using the CRTJRNRCV command.

Selection 4 - Delete
When confirming with the Enter key, the selected journal receiver will be deleted.

Selection 5 - Display attributes
Details of the selected journal recipient are displayed.

Selection 13 - Change description
Changes the text describing the journal receiver with the CHGOBJD command.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

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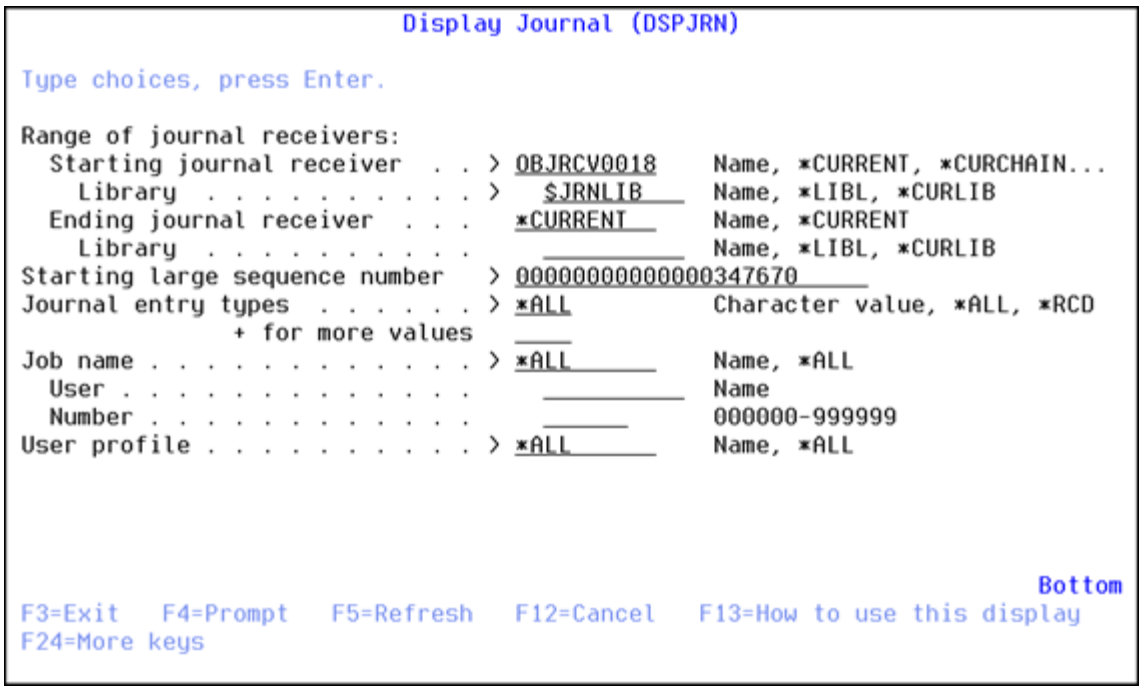
2.5.1.5 Menu item 5 - Display journal entries



The journal entries for one or more journal receivers are displayed. Pressing the F1 key displays further information on the entry fields.

The following input fields are available to the user:

Start journal receiver
Specifies the first journal recipient.

Valid values for the **Start journal receiver** parameter are:

Name
Name of the journal recipient whose entries are to be displayed.

***CURRENT**
The current recipient attached at the beginning of the journal entry display is used.

***CURCHAIN**
The journal receiver chain to which the journal receiver attached at the beginning of the journal entry display belongs is used.

Library
Specifies the library of the journal recipient.

Valid values for the **Library** parameter are:

Name
Specify the name of the library where the journal recipient is located.

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

***CURLIB**
The journal recipient is searched in the current job library.

End journal receiver
Specifies the last journal recipient.

Valid values for the **End journal receiver** parameter are:

Name
Specify the name of the last journal recipient whose entries are to be displayed.

***CURRENT**
The current recipient attached at the beginning of the journal entry display is used.

Library

Valid values for the **Library** parameter are:

Name
Specify the name of the library where the journal recipient is located.

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

***CURLIB**
The journal recipient is searched in the current job library.

First big sequel
Defines from which journal sequence number the journal entries are to be displayed.

Journal entry types
Specify one or more entry types here. Then only journal entries for these types will be specifically displayed.

Valid values for the **Journal entry types** parameter are:

Character values
Various character values of the journal can be specified here to filter the journal only by them.

***ALL**
All journal entry types are displayed. The default value is *ALL.

***RCD**
Only entries that have an entry type for sentence-level operations are displayed. Such as the following: BR, DL, DR, IL, PT, PX, UB, UP and UR.

Job title
A job name can be specified here so that only journal entries of this job are visible.

Valid values for the **Job name** parameter are:

***ALL**
The journal entries of all jobs of the system are displayed. The default value is *ALL.

Name
Name of the job for which the journal entries are to be displayed.

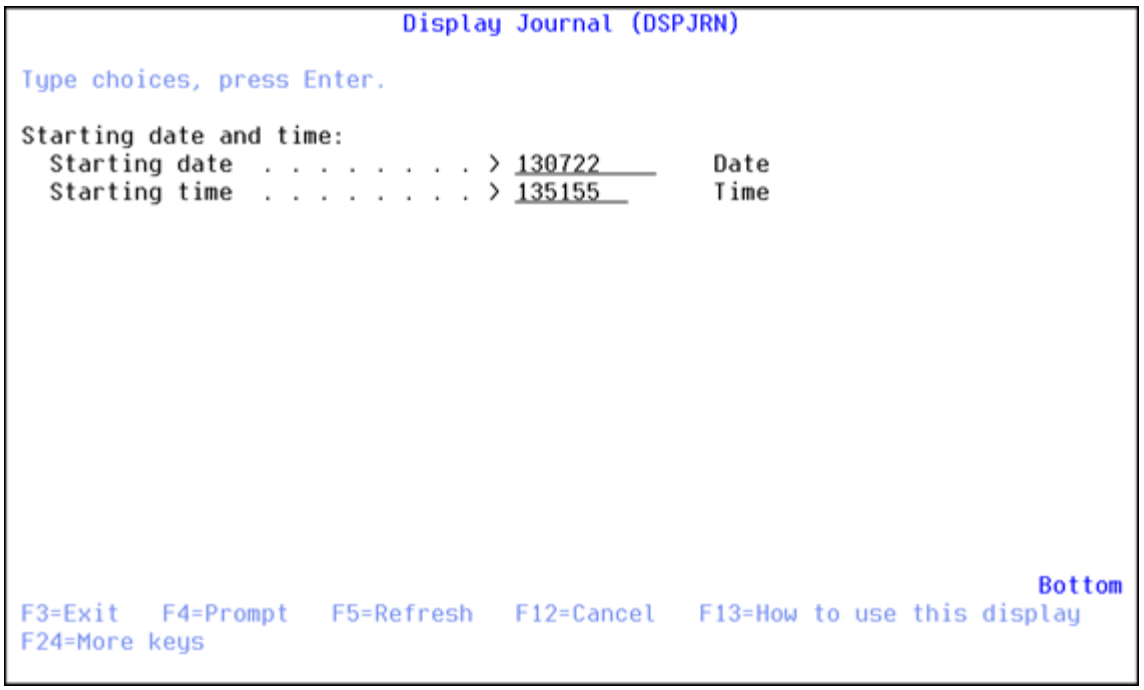
User
The name of the user of the job for which the journal entries are to be listed.

Number
The job number of the job whose entries are displayed in the journal listing.

User profile
Only the journal entries created for this user profile are displayed.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

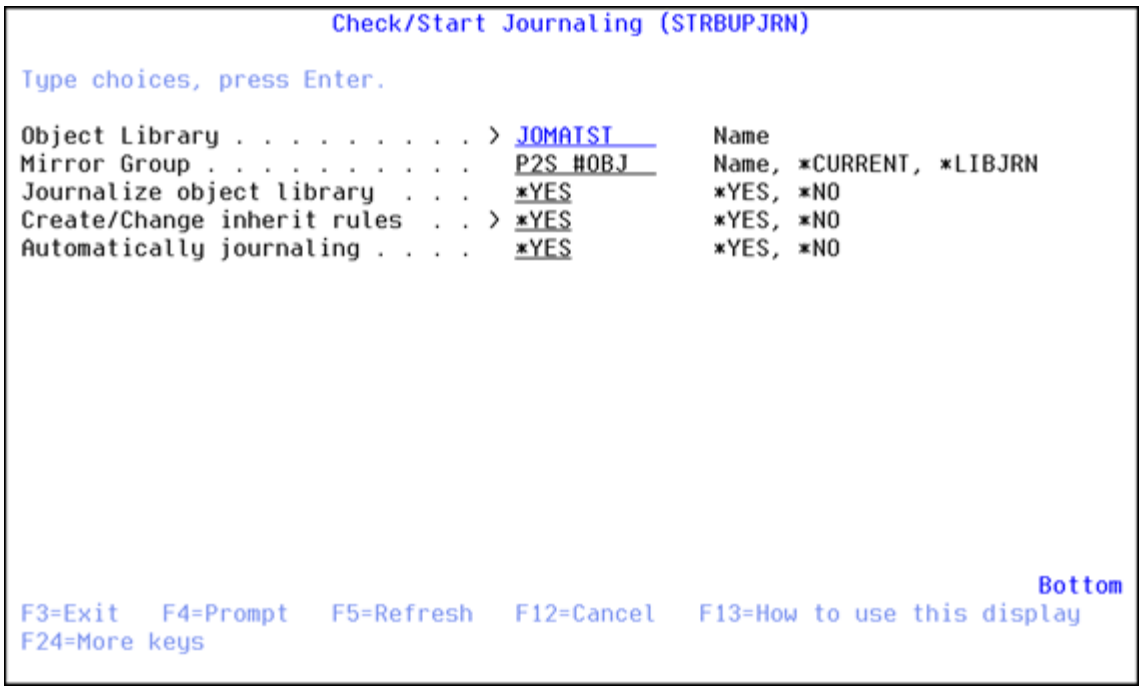
2.5.1.6 Menu item 6 - Display journal entries of backups



The journal entries of the backups used to set up the second system (backup system) are displayed. (entries E4, SS, MS, FS)
The date and time of the first entry can be specified as the starting point for the display.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

2.5.1.7 Menu item 7 Check/start journaling of a library



This menu item can be used to edit the journaling of a library. A list is displayed in which all objects that are located in the library. For these objects it is shown whether they are journalized and in which journal.

The following input fields are available to the user:

Object library
The name of the object library for which journaling is to be checked/started is specified here.

Valid values for the **Object library** parameter are:

Name
Here you must enter the explicit name of the library for which journaling is to be checked or started.

Mirror group
Name of the mirror group to be used for journaling the library.

Valid values for the **Mirror group** parameter are:

Name
The explicit name of the mirror group whose journal should be used.

***CURRENT**
For *CURRENT the mirror group for which the display was called is used.

***LIBJRN**
The journal with which the library is journalized is used.

Library journaling
Specify whether the library should be journalized.

Valid values for the **Start journaling** parameter are:

***YES**
*YES Library is journalized. *YES is the default value.

***NO**
*NO The library is not journalized. This means that objects that are newly created in this library are no longer automatically journalized. The objects are synchronized as a whole via object mirroring.

Change transfer rules

It is possible to define whether the transfer rules are changed for each library that is mirrored via the defined mirror group. The default transfer rules are used. If the library is journalized and these transfer rules exist, then every new data object created in this library will be recorded in this journal.

Valid values for the parameter **Create change transfer rules** are:

***YES**
The transfer rules are changed. *YES is the default value.

***NO**
The takeover rules are not changed.

Automatic journaling

Specify whether objects newly created in selected library should be journalized automatically.

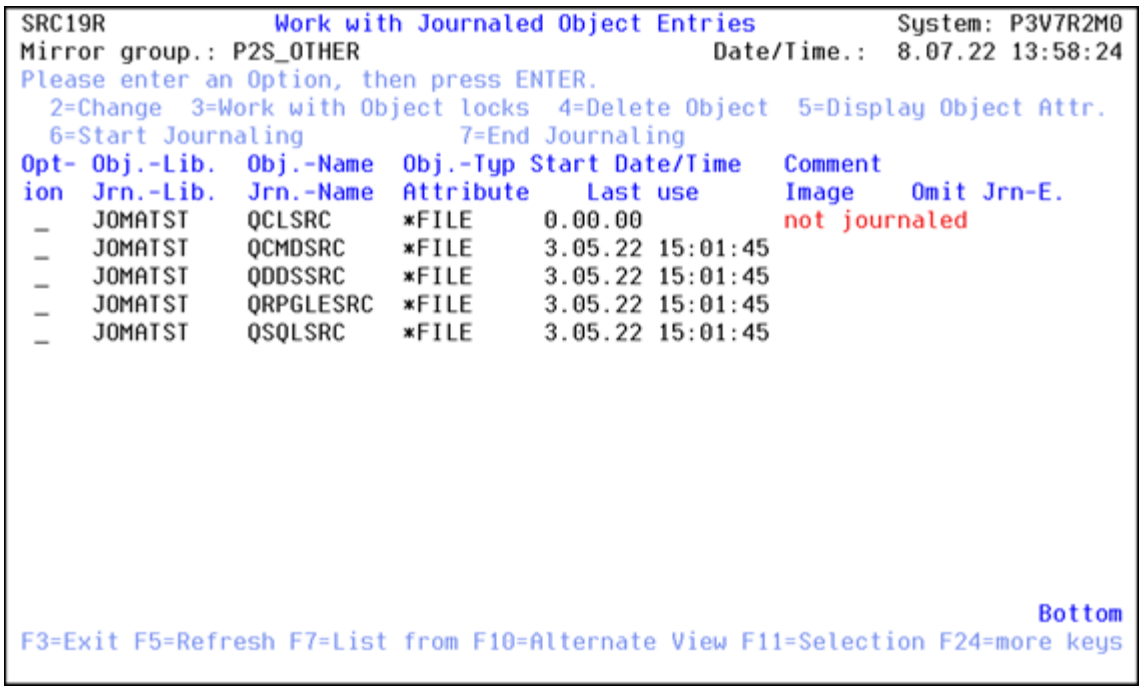
Valid values for the **Automatic journaling** parameter are:

***YES**
*YES Objects are journalized automatically. *YES is the default value.

***NO**
*NO The transfer rules are all changed to *OMIT. This means that objects that are newly created in this library will no longer be journalized automatically. The objects are synchronized as a whole via object mirroring.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

2.5.1.7.1 Work with object journaling



Here you can change, start and stop the journaling of the objects in the previously selected library.

The following options are available in **Edit object journaling:**

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

Selection 2 - Change
This selection option can be used to change the journal of the selected object.

Selection 3 - Display object locks
This selection option displays the object locks of the respective object.

Selection 4 - Delete object
This selection option deletes the object from the library.

Selection 5 - Display object attributes
With this selection option you can display the attributes of the object.

Selection 6 - Start journaling
This option allows you to start journalizing the object with the journal of the selected mirror group.

Selection 7 - Exit journaling
This option allows you to stop journalizing the object.

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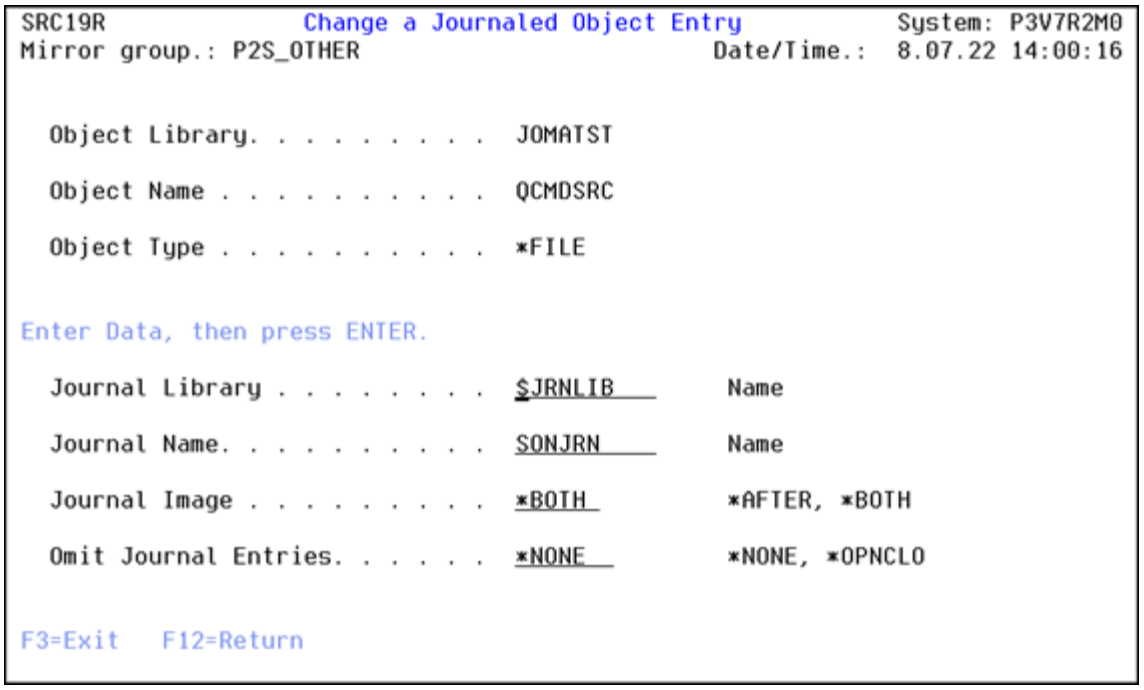
2.5.1.7.1.1 Selection 2 - Change



This selection allows to change the journalization of the selected object to the journal of the mirror group.

The following input fields are available to the user:

Journal Library
The name of the journal's library is specified here.

Journal name
Name of the journal through which the object is to be journalized.

Journal image
The journal image can be defined with this parameter. Here it can be selected whether the journaling is recorded before and/or after.

***AFTER**
Only one entry is written to the journal after the file change with the new status. The default value is *AFTER.

***BOTH**
When a file is changed, the state before and after the change is recorded in the journal.

Journal entries to be omitted
Journal entries that are not to be recorded can be selected here.

***NONE**
All actions are recorded by the journal. The default value is *NONE.

***OPNCLO**
Open and close file is not recorded in the journal.

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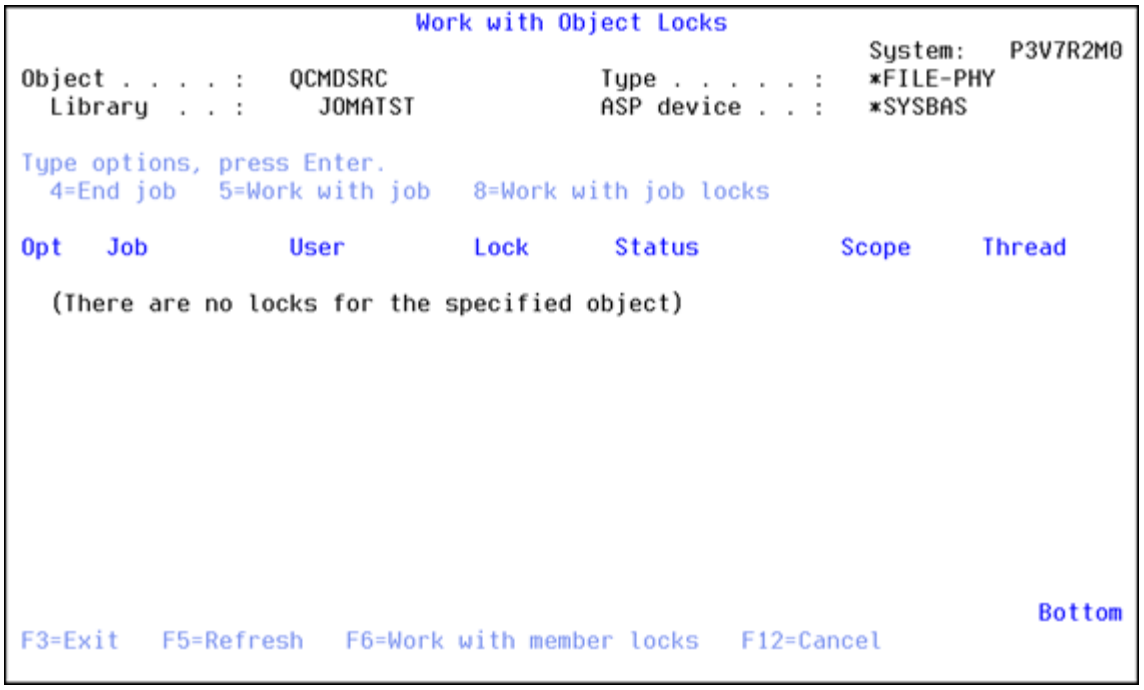
2.5.1.7.1.2 Selection 3 - Display object locks



Calls a display that shows all jobs that lock the selected object. These jobs can then be displayed, terminated, or additional job locks can be displayed.

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

Selection 4 - Finish job
This selection option allows the job that maintains the selected lock to be terminated in order to remove the lock.

Selection 5 - Work with Job
This selection option calls the system command "WRKJOB" and displays the corresponding menu.

Selection 8 - Working with job locks
This selection option lists the additional locks of the selected job.

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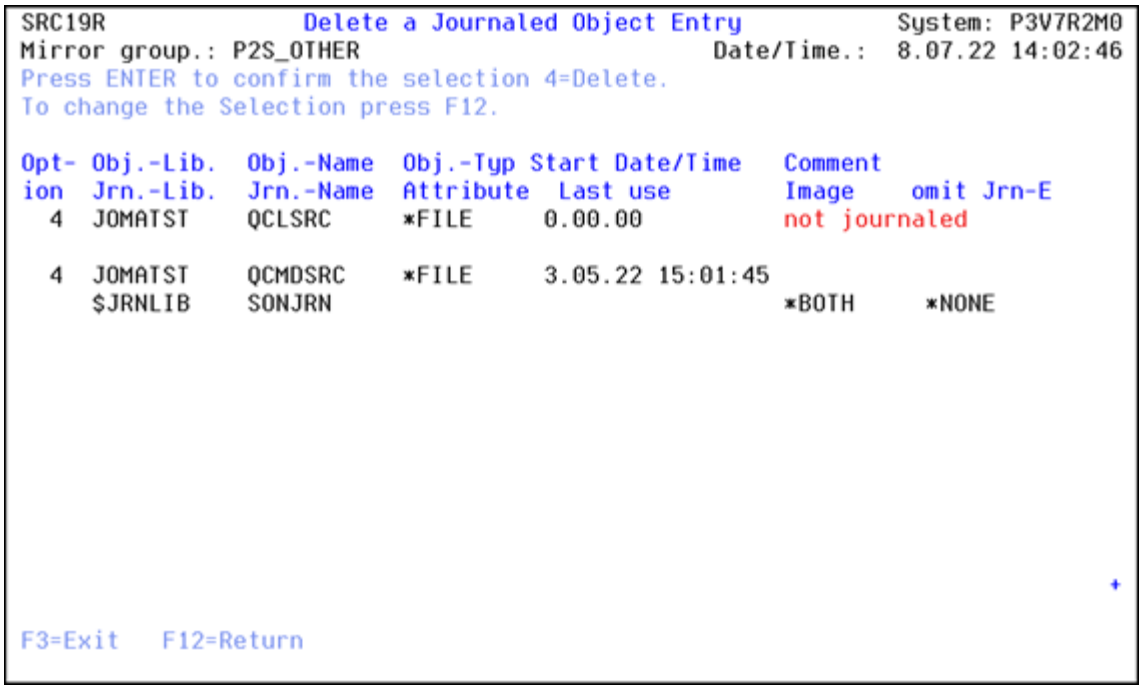
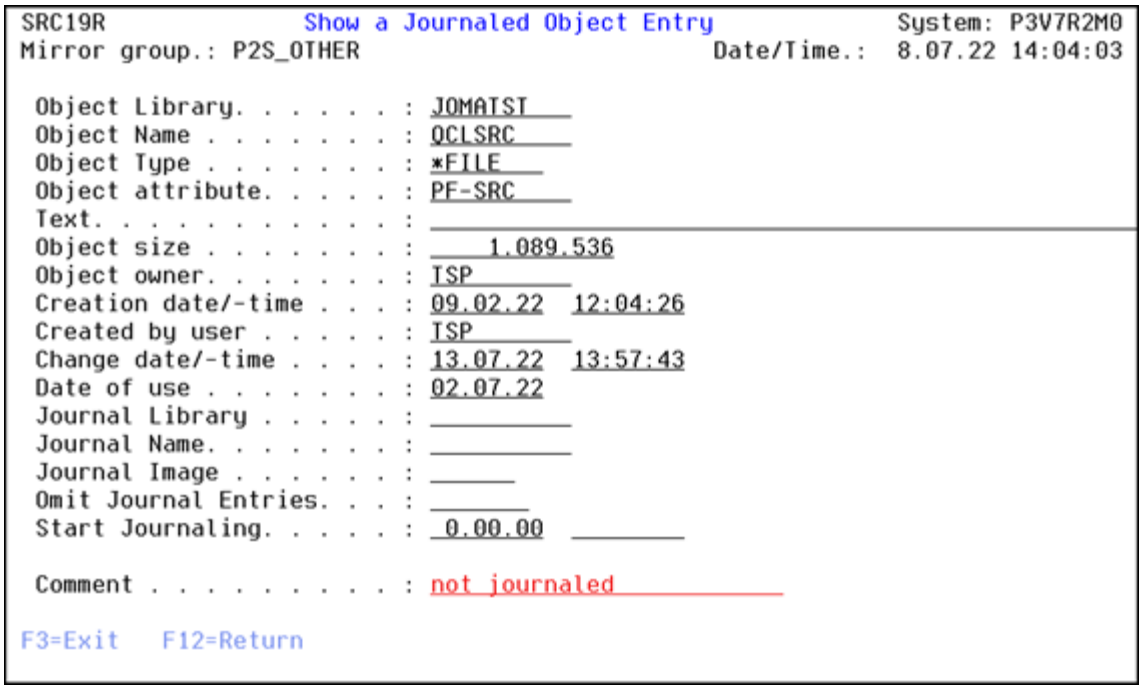
2.5.1.7.1.3 Selection 4 - Delete object



The selected object is irrevocably deleted from the machine; this must be confirmed beforehand by pressing the Enter key. The delete operation can be aborted with the F12 function key.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

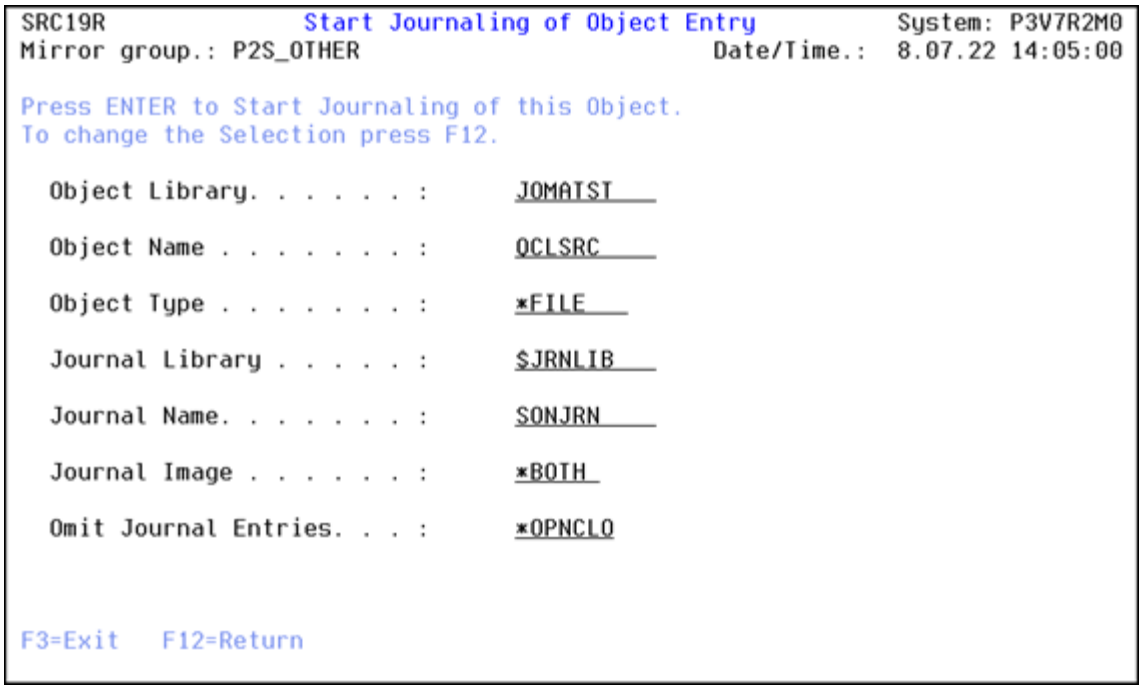
2.5.1.7.1.4 Selection 5 - Display object attributes



With the selection "Display object attributes" additional details about the selected object can be displayed. Among others, the creation date, the text, the owner and journaling information.

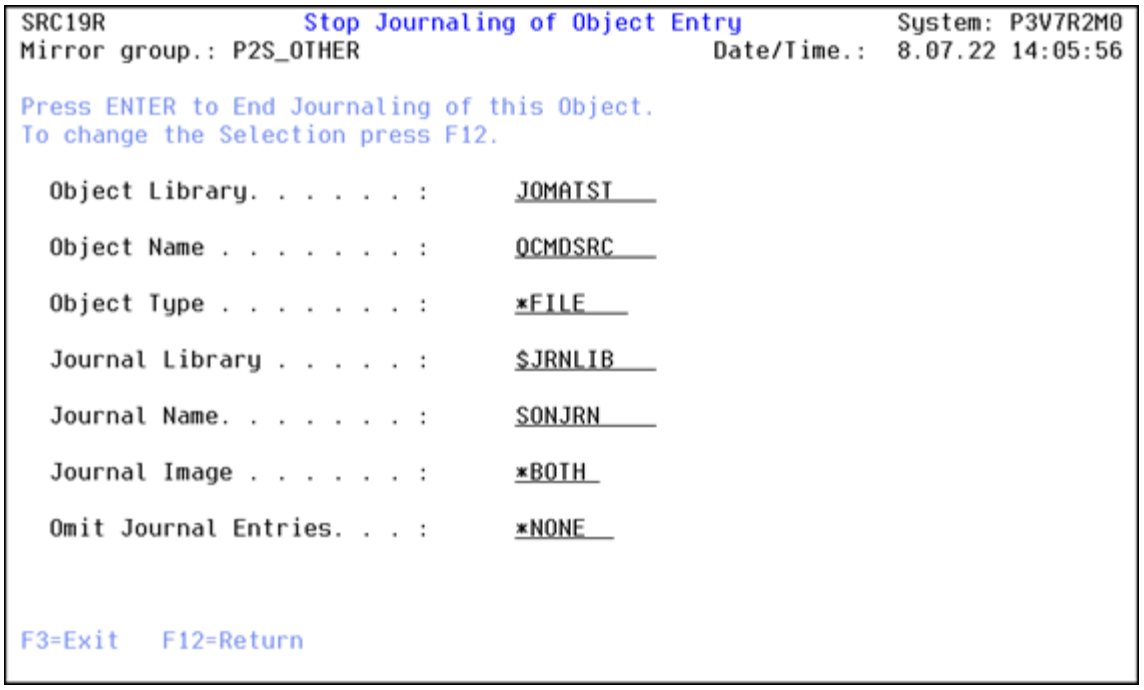
The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

2.5.1.7.1.5 Selection 6 - Start journaling



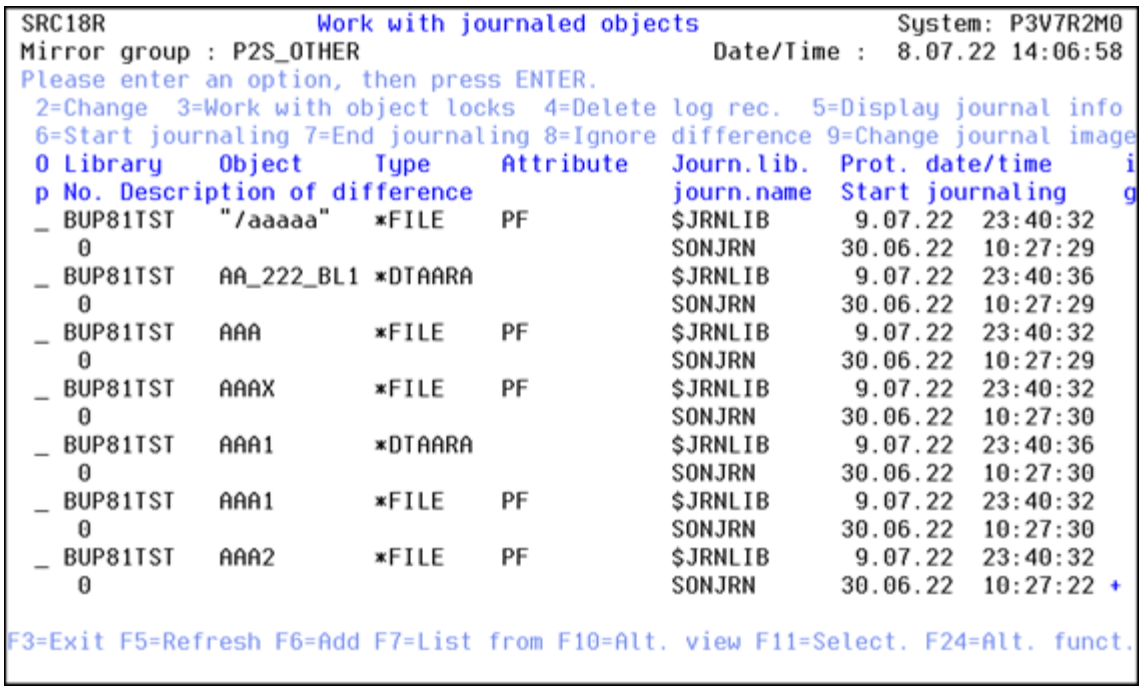
This selection starts the journalization of the selected object with the journal of the previously selected mirror group. This is only possible if the object is marked as "not journalized" and the object is not locked.

2.5.1.7.1.6 Selection 7 - End journaling



This selection ends the journaling of the selected object, so that it is displayed "not journaled". After that you can assign the object to another journal.

2.5.1.8 Menu item 8 - Manage mirror group journaling



This menu option can be used to manage the journaling of a mirror group.

All objects journalized in the current mirror group are displayed.
The following input field is available to the user:

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

The following options are available for journaling management:

Selection 2 - Change
With the selection 2 the journaling parameters can be changed.

Selection 3 - Display object locks
Selection 3 can be used to check whether the object is locked by jobs and shows a list of jobs.

Selection 4 - Delete set
With selection 4 an existing entry can be deleted.

Selection 5 - Display journal information
With selection 5 the current entry is displayed.

Selection 6 - Start journaling
This selection starts the journaling of a data object.

Selection 7 - Exit journaling
This selection ends the journaling of a data object.

Selection 8 - Ignore deviations

With this option, deviations on the backup system can be ignored. This is possible with the input of "Y" and a corresponding note why this deviation is correct. The selection can be used if, for example, additional objects are needed on the backup that are not present on the primary system (e.g. for tests).

Selection 9 - Change Journal Image

Selection 9 changes the journal image of the object.

The following command keys are valid on the current mask:

F6=Add

Add a new data object for journaling.

F7=List from

The list of objects synchronized via a mirror group can be very large. To display only certain ones, a library and an object can be specified. The list then starts with this selection.

F10=More data

Additional data such as journal library/journal name are also displayed on the screen.

F13=Select deviations

Only data objects with errors are displayed.

F15=Test

The journal attributes are checked for the data objects (locked, not journalized, not present...). The check results are displayed under the Comment/Error field.

F17=New logging

Journal information is read from the journal belonging to the mirror group and the data objects that are journalized are redetermined.

F18=Mark all the following

If an entry in the list has been selected with e.g. "6", this function key can be used to mark all following entries with the same option.
F19 can then be used to process all of them.

F19=Process all

All marked entries are processed with the selected option. If, for example, "6" has been selected, then journaling will be started for the selected entries.

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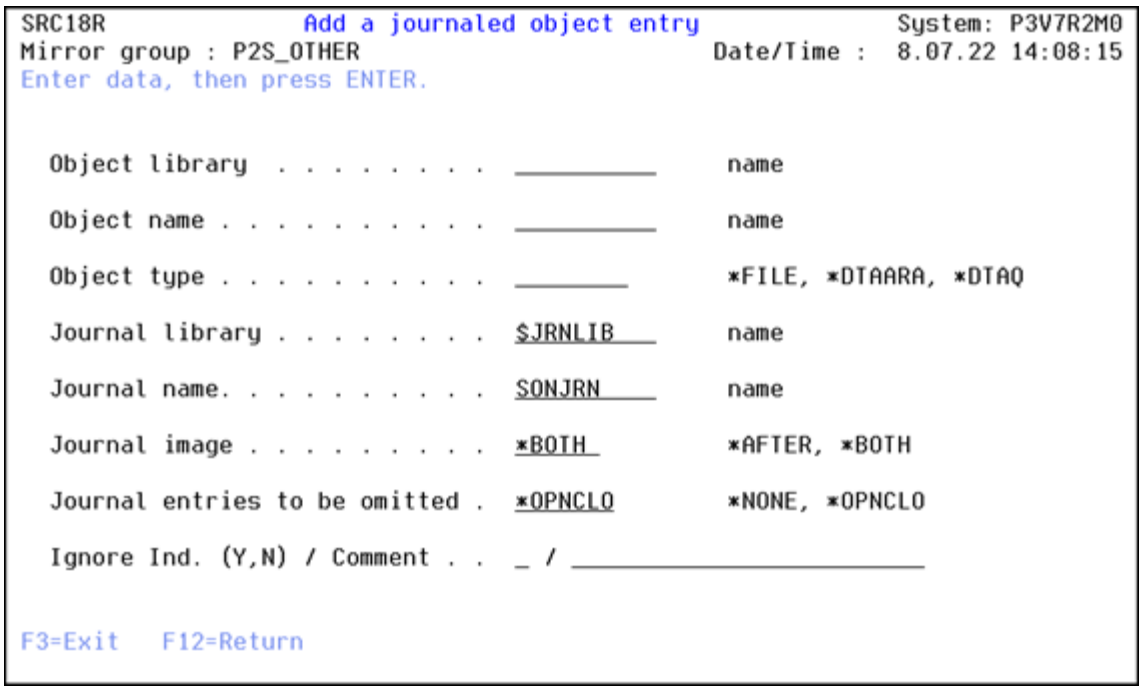
2.5.1.8.1 Command key F6 - Add journalization of data objects



Via this mask the journaling of data objects can be added to the current mirror group. The current mirror group is the application in which the journal management was called with 'J'.

Object library
Library on the primary system whose objects are recorded in the journal and can thus be mirrored.

Object name
Name for an object contained in a specified library.

Object type
Specify type for the selected object.

Valid values for the **Object type** parameter are:

***FILE**
Only objects of type *FILE are added to the journaling of the current mirror group.

***DTAARA**
Only objects of object type *DTAARA are selected from the library and added to the journaling.

***DTAQ**
The objects from the selected library, which have the type *DTAQ, are taken into account during the journalization of the current mirror group.

Journal Library
Library on the primary system that contains the journal entered under Journal Name.

Journal name
Name for a journal contained in the specified journal library.

Journal image
The image of a journal can be defined here. The choices here are *After and *Both.

Valid values for the **Journal image** parameter are:

***AFTER**
Only one entry is written to the journal after the file change with the new status. The default value is *AFTER.

***BOTH**
When a file is changed, the state before and after the change is recorded in the journal.

Journal entries to be omitted
Here it is possible to define which journal entries are excluded. The following input options are available to the user: *NONE, *OPNCLO.

Valid values for the **Web Allowed Journal Entries** parameter are:

***NONE**
All actions are recorded by the journal. The default value is *NONE.

***OPNCLO**
The journal entries for open and close file are not recorded in the journal.

Ignore Kz (Y/N)
If a "Y" is entered here, these entries are no longer displayed in the list. Via the note a reason can be entered why this entry should not be considered.

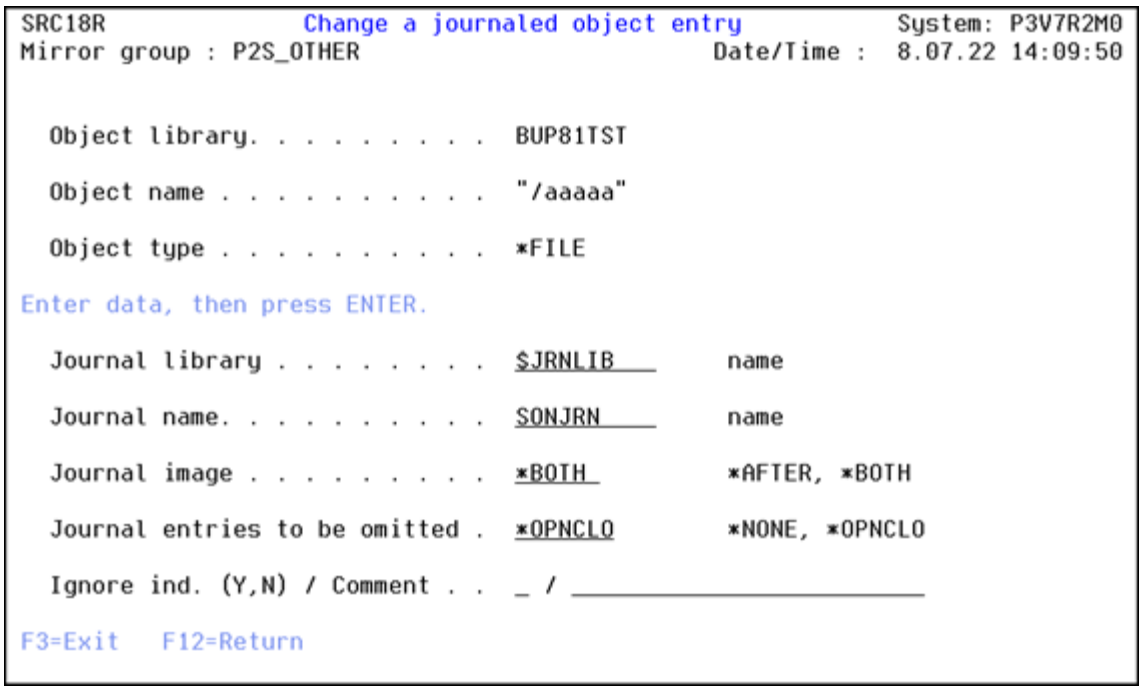
Valid values for the **Ignore Kz** parameter are:

N - No
The entries are not ignored and thus displayed in the list. The default value is "N".

Y - Yes
The entries are no longer displayed in the list.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

2.5.1.8.2 Selection 2 - Change journaling of data objects



This input mask can be used to change the journaling of a data object that belongs to a mirror group,

Journal Library
Library on the primary system that contains the journal entered under Journal Name.

Journal name
Name for a journal contained in the specified journal library.

Journal image
The image of a journal can be defined here. The choices here are *After and *Both.

Valid values for the **Journal image** parameter are:

***AFTER**
Only one entry is written to the journal after the file change with the new status. The default value is *AFTER.

***BOTH**
When a file is changed, the state before and after the change is recorded in the journal.

Journal entries to be omitted
Here it is possible to define which journal entries are excluded. The following input options are available to the user: *NONE, *OPNCLO.

Valid values for the **Web Allowed Journal Entries** parameter are:

***NONE**
All actions are recorded by the journal. The default value is *NONE.

***OPNCLO**
The journal entries for open and close file are not recorded in the journal.

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Ignore Kz (Y/N)
If a "Y" is entered here, these entries are no longer displayed in the list. Via the note a reason can be entered why this entry should not be considered.

Valid values for the **Ignore Kz** parameter are:

N - No
The entries are not ignored and thus displayed in the list. The default value is "N".

Y - Yes
The entries are no longer displayed in the list.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

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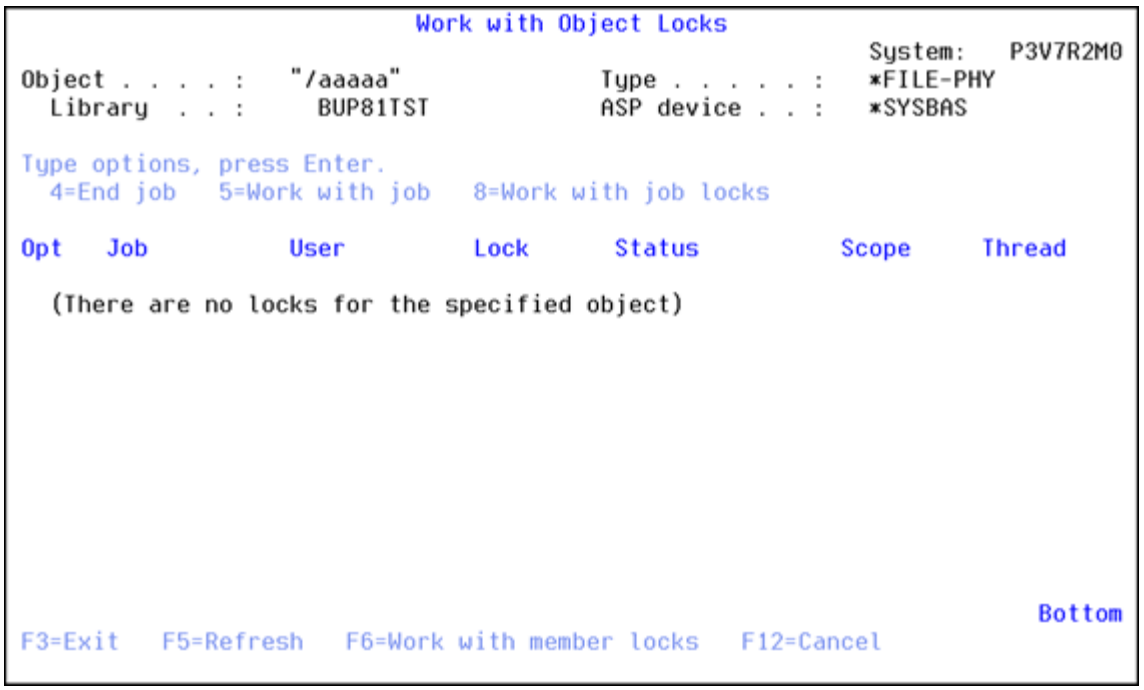
2.5.1.8.3 Selection 3 - Display object locks



Calls a display that shows all jobs that lock the selected object. These jobs can then be displayed, terminated, or additional job locks can be displayed.

Selection

In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

Selection 4 - Finish job

This selection option allows the job that maintains the selected lock to be terminated in order to remove the lock.

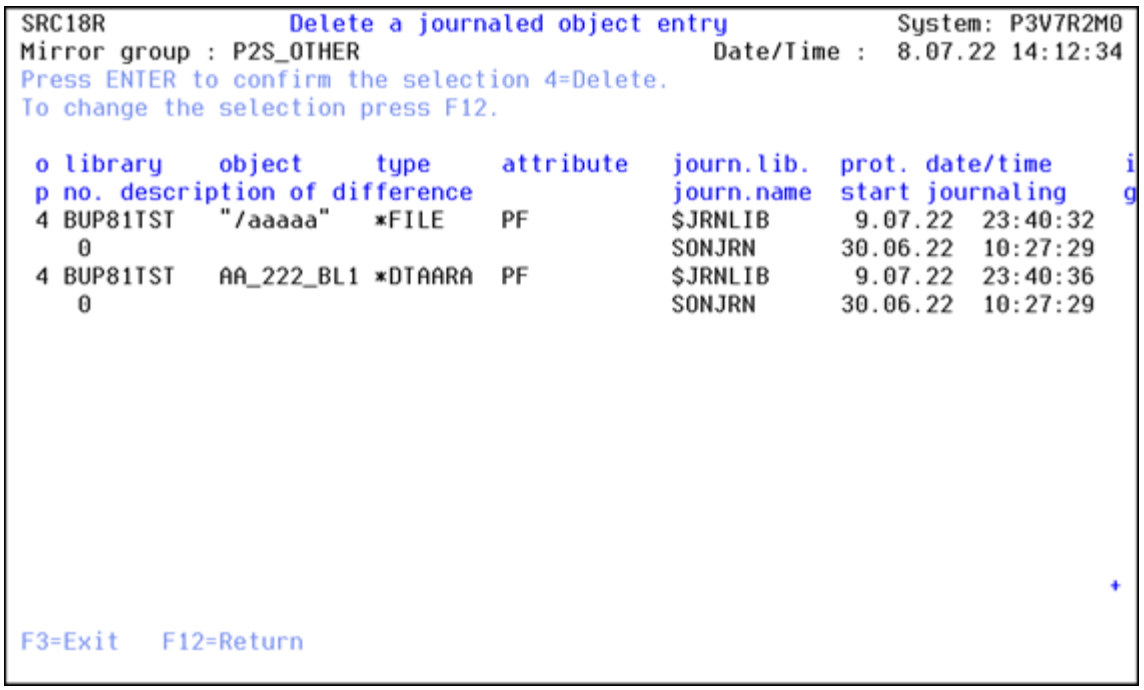
Selection 5 - Work with Job

This selection option calls the system command "WRKJOB" and displays the corresponding menu.

Selection 8 - Working with job locks

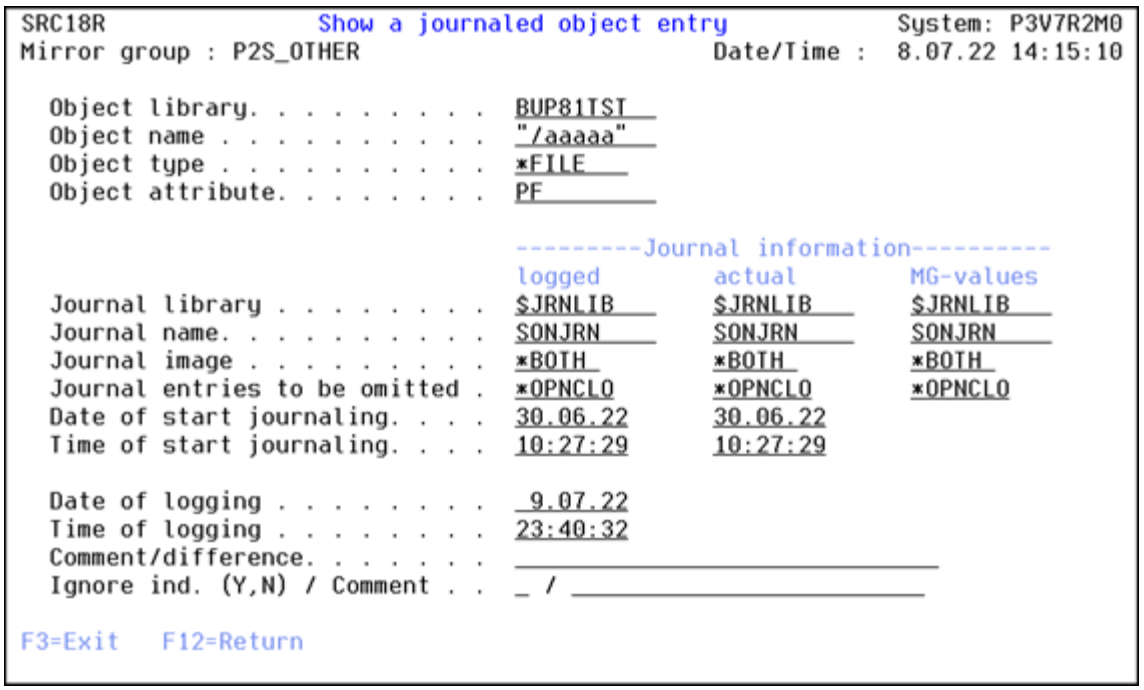
This selection option lists the additional locks of the selected job.

2.5.1.8.4 Selection 4 - Delete a journaled object entry



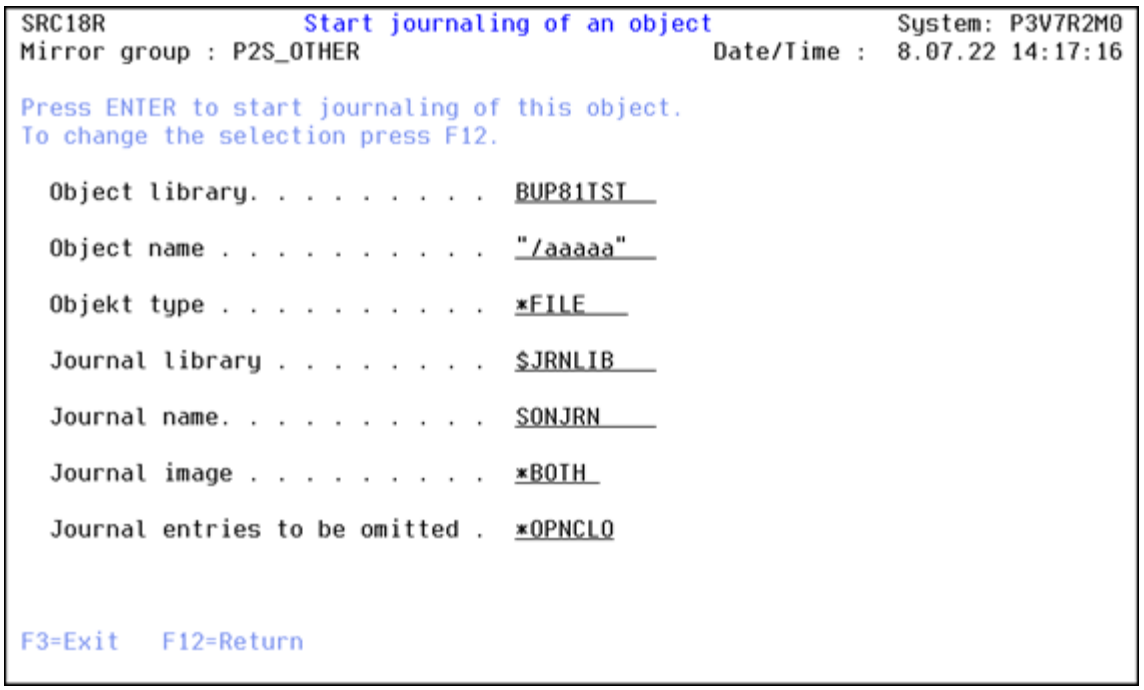
With the selection "4 = Delete" the journaling of a data object of the mirror group can be deleted. After confirming with the Enter key, the journaling entry for a data object is deleted. This object is no longer recorded in the journal.

2.5.1.8.5 Selection 5 - Show a journaled object entry



This menu is used to display the logged and current journaling of a data object belonging to a current mirror group. The display is divided into 3 columns logged, current and mirror group journal information. To compare these individual values, the current and mirror group values should be the same.

2.5.1.8.6 Selection 6 - Start journaling



This mask can be used to start the journaling of a data object that belongs to a mirror group. The selected data object is displayed. The journaling is started with the Enter key.

The following input fields are available to the user:

Object library
Library on the primary system whose objects are recorded in the journal and can thus be mirrored.

Object name
Name for an object contained in a specified library.

Object type
Specifies the type of object that will be journalized.

Journal Library
Library on the primary system where the journal was created. The objects are journalized in this journal.

Journal name
Name for a journal contained in the specified journal library.

Journal image
The image of a journal can be defined here. The choices here are *After and *Both.

Journal entries to be omitted
Here it is possible to define which journal entries are excluded. The following input options are available to the user: *NONE, *OPNCLO.

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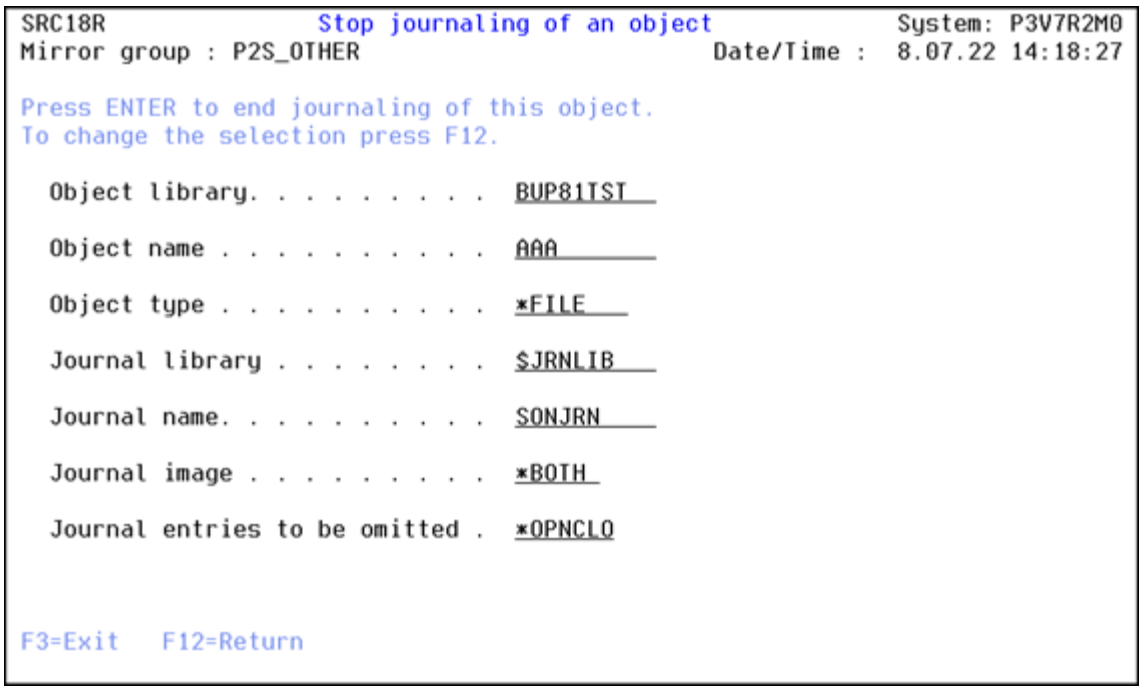
2.5.1.8.7 Selection 7 - End journaling



This mask can be used to end the journaling of a data object that belongs to a mirror group. The journaling is terminated with the Enter key.

The following fields are displayed for control:

Object library
Library on the primary system whose objects are recorded in the journal and can thus be mirrored.

Object name
Name for an object contained in a specified library.

Object type
Specifies the type of object that will be journalized.

Journal Library
Library on the primary system where the journal was created. The objects are journalized in this journal.

Journal name
Name for a journal contained in the specified journal library.

Journal image
The image of a journal can be defined here.

Journal entries to be omitted
Here you can define which journal entries are excluded.

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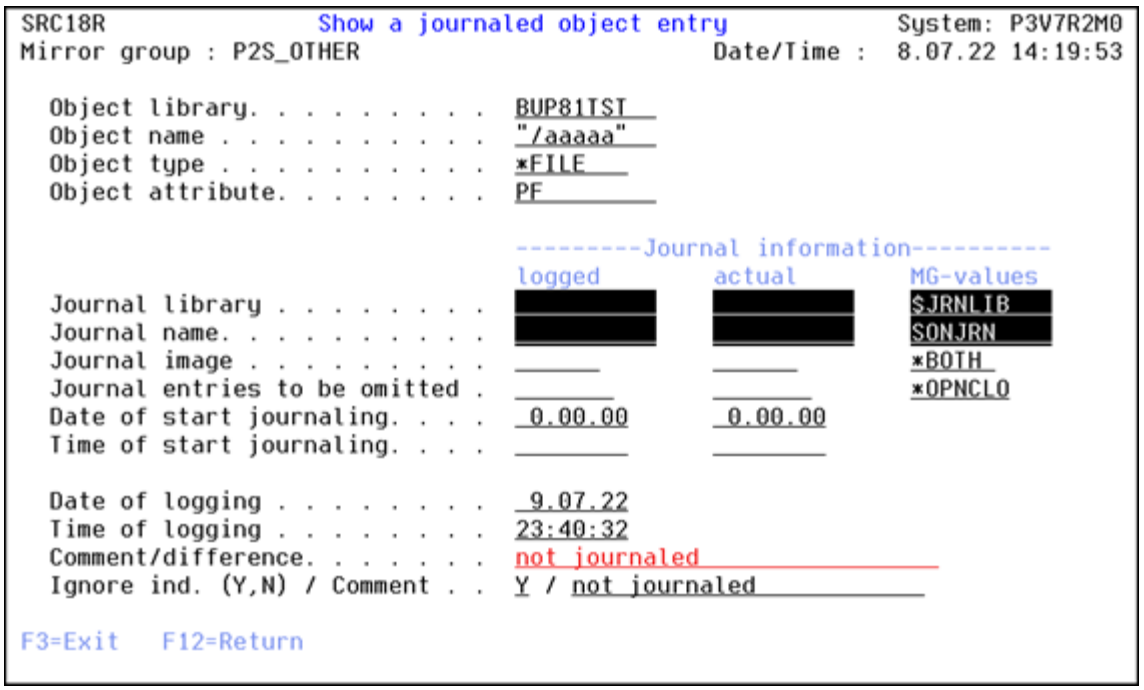
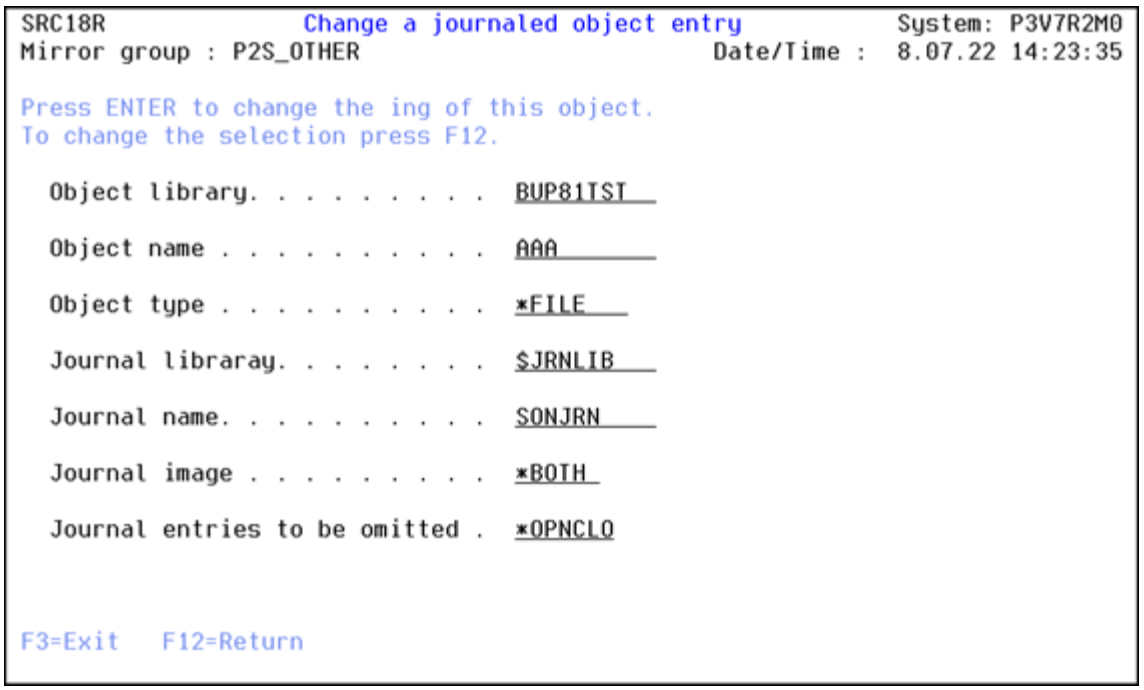
2.5.1.8.8 Selection 8 - Ignore deviation



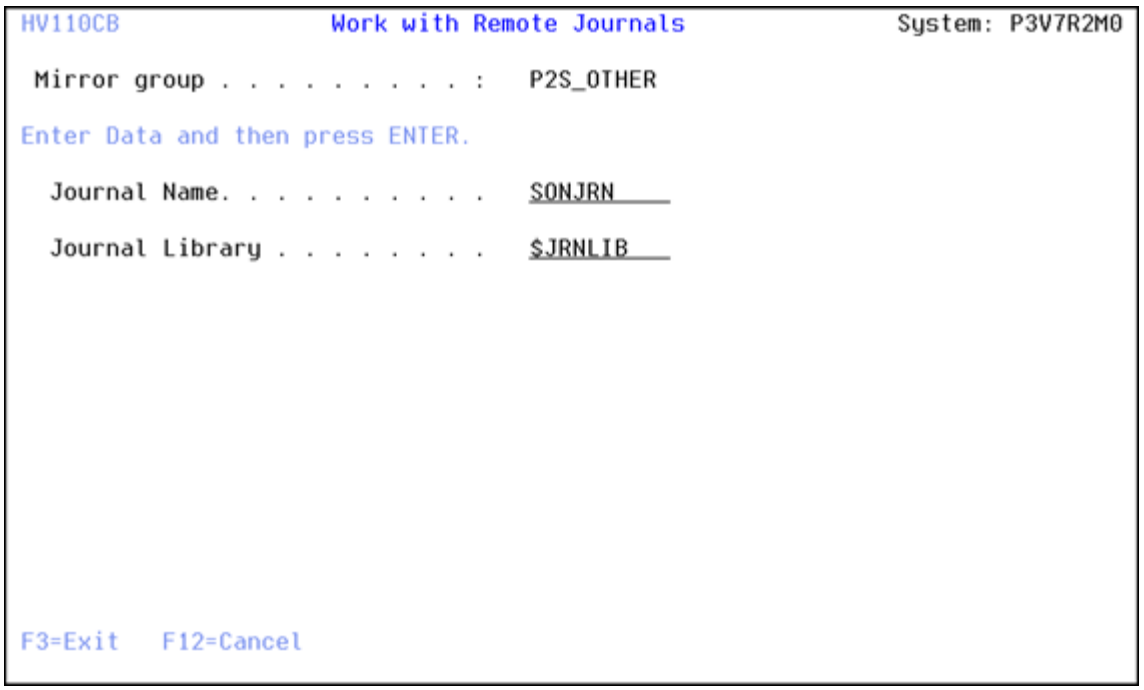
With this selection you can ignore deviations so that they are no longer displayed as errors. These deviations are then also no longer automatically corrected by BUS4i. An ignore flag is set, which can also be removed at any time so that the error reappears.

2.5.1.8.9 Selection 9 - Change Journal Image

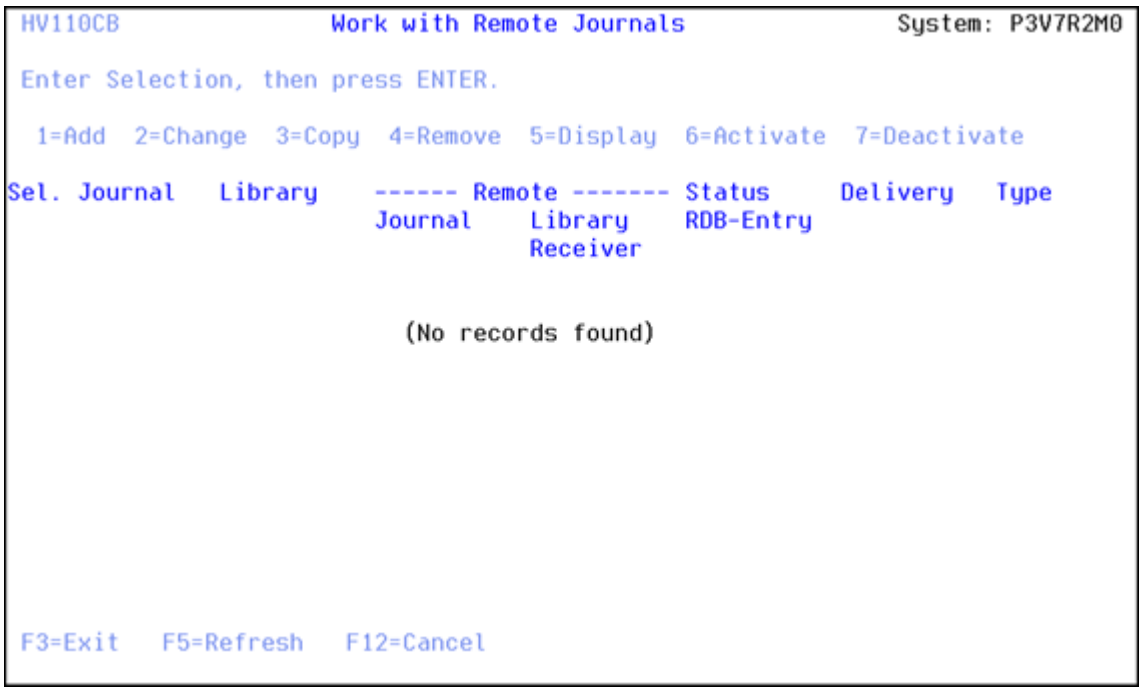


This selection can be chosen only in case of a deviation 5 "other journal image". The journal image which can be *After or *Both will be set to the image of the selected mirror group."

2.5.1.9 Menu item 9 Work with remote journals



Here one can select directly a certain journal or with blank or *ALL all existing journals can be listed. The journal of the mirror group is automatically entered into the selection fields at the beginning.



The following input keys are available to the user on this screen:

Selection 1 - Add
The system command "ADDRMTJRN" is called to add a remote journal.

Selection 2 - Change
The system command "CHGRMTJRN" is called to change a remote journal.

Selection 3 - Copy
The system command "ADDRMTJRN" is called to copy a remote journal.

Selection 4 - Remove
The system command "RMVRMTJRN" is called to remove a remote journal.

Selection 5 - Display
The system command "WRKJRNA" is called to display the journal attributes.

Selection 6 - Active.
The remote journal is activated.

Selection 7 - Deactive.
The remote journal is disabled.

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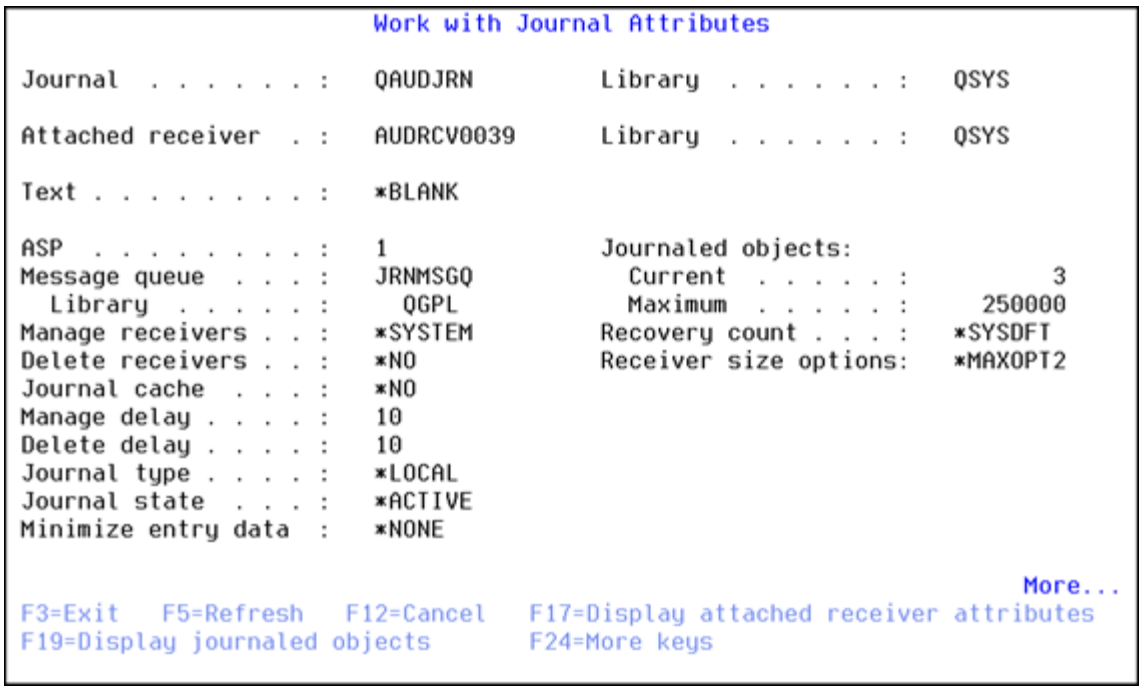
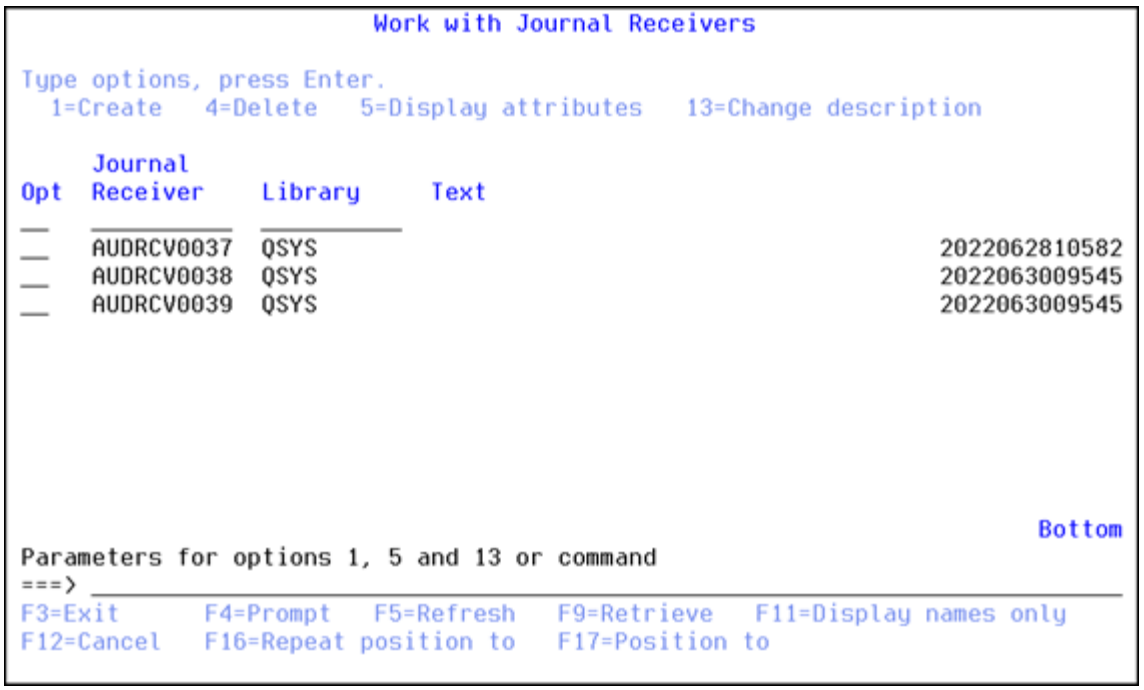
2.5.1.10 Menu item 10 Work with audit journal attributes



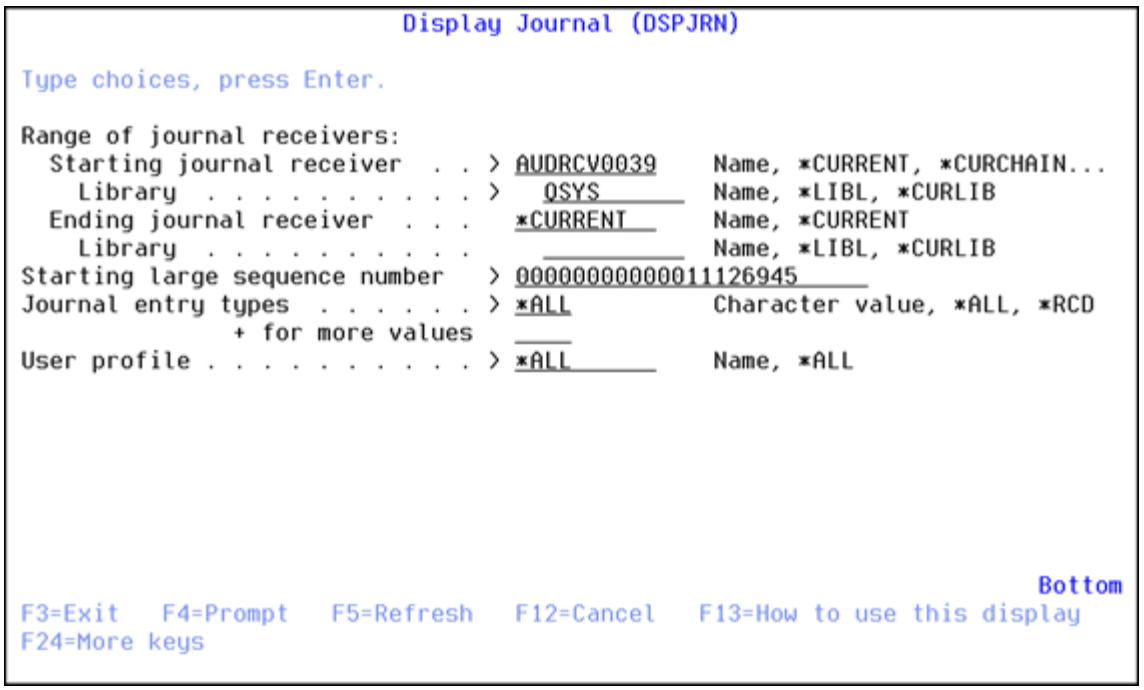
This view shows the journal attributes of the audit journal of the selected mirror group. This selection executes the system command "WRKJRNA" for the selected journal, in this case the audit journal.

2.5.1.11 Menu item 11 Working with audit journal receivers



This selection executes the system command "WRKJRNRCV" for the audit journal and displays all journal receivers of the audit journal that are still present on the system.

2.5.1.12 Menu item 12 Display audit journal entries



The journal entries for one or more journal receivers are displayed. Pressing the F1 key displays further information on the entry fields.

The following input fields are available to the user:

Start journal receiver
Specifies the first journal recipient.

Valid values for the **Start journal receiver** parameter are:

Name
Name of the journal recipient whose entries are to be displayed.

***CURRENT**
The current recipient attached at the beginning of the journal entry display is used.

***CURCHAIN**
The journal receiver chain to which the journal receiver attached at the beginning of the journal entry display belongs is used.

Library
Specifies the library of the journal recipient.

Valid values for the **Library** parameter are:

Name
Specify the name of the library where the journal recipient is located.

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

***CURLIB**
The journal recipient is searched in the current job library.

End journal receiver
Specifies the last journal recipient.

Valid values for the **End journal receiver** parameter are:

Name
Specify the name of the last journal recipient whose entries are to be displayed.

***CURRENT**
The current recipient attached at the beginning of the journal entry display is used.

Library

Valid values for the **Library** parameter are:

Name
Specify the name of the library where the journal recipient is located.

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

***CURLIB**
The journal recipient is searched in the current job library.

First big sequel
Defines from which journal sequence number the journal entries are to be displayed.

Journal entry types
Specify one or more entry types here. Then only journal entries for these types will be specifically displayed.

Valid values for the **Journal entry types** parameter are:

Character values
Here you can specify different character values of the journal to filter the journal only by them.

***ALL**
All journal entry types are displayed. The default value is *ALL.

***RCD**
Only entries that have an entry type for sentence-level operations are displayed. Such as the following: BR, DL, DR, IL, PT, PX, UB, UP and UR.

Job title
A job name can be specified here so that only journal entries of this job are visible.

Valid values for the **Job name** parameter are:

***ALL**
The journal entries of all jobs of the system are displayed. The default value is *ALL.

Name
Name of the job for which the journal entries are to be displayed.

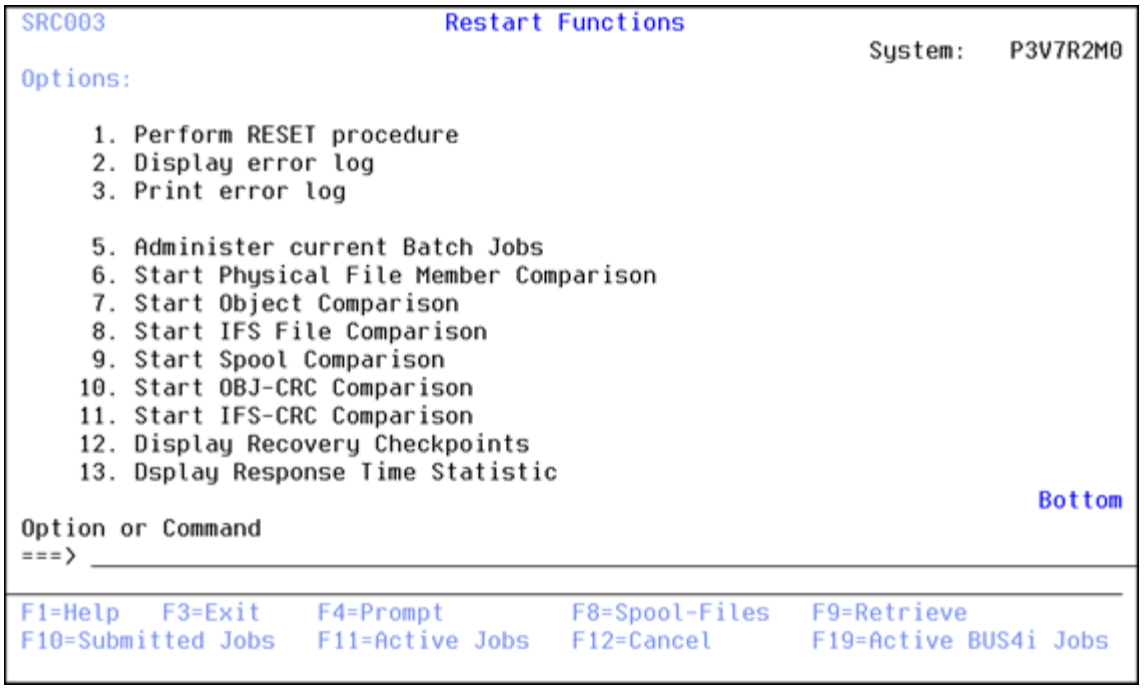
User
The name of the user of the job for which the journal entries are to be listed.

Number
The job number of the job whose entries are displayed in the journal listing.

User profile
Only the journal entries created for this user profile are displayed.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

2.5.2 Selection R - Restart functions



This selection menu allows the user to select commands for the restart functions.

The following menu items can be selected on the current screen:

Menu item 1: Perform RESET procedure
The RESET procedure on the primary system sets the mirror group to the start state. This menu item can be called to synchronize the database after installation or in case of an error.

Menu item 2: Display error log
The entries of the LOG file are displayed via this menu selection. All messages that occur during the processing procedure are logged in the LOG file with time and date.

Menu item 3: Print error log
This menu selection is used to print the entries of the LOG file.

Menu item 5: Manage current batch jobs
This menu selection is used to manage batch jobs. Batch jobs can be displayed and deleted here.

Menu item 6: Start comparison of physical part files
This menu selection starts the comparison of the physical part files.

Menu item 7: Start comparison of objects
This menu selection starts the comparison of the objects.

Menu item 8: Start comparison of IFS files
This menu selection starts the comparison of the IFS files.

Menu item 9: Start comparison of spool files
This menu selection starts the comparison of the spool files.

Menu item 10: Start comparison of OBJ CRC data
This menu selection starts the comparison of the OBJ CRC data.

Menu item 11: Start comparison of IFS CRC data
This menu selection starts the comparison of the IFS CRC data.

Menu item 12: Display fuse checkpoints
A list of backup files is displayed. Data and objects can be restored from these backup files in the case of an xSB version.

Menu item 13: Display reaction time statistics
The STRBUSPFR command can be used to perform a performance measurement over a certain period of time. These determined values can be displayed via the reaction time statistics. The times between receiving and sending a journal entry are listed.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

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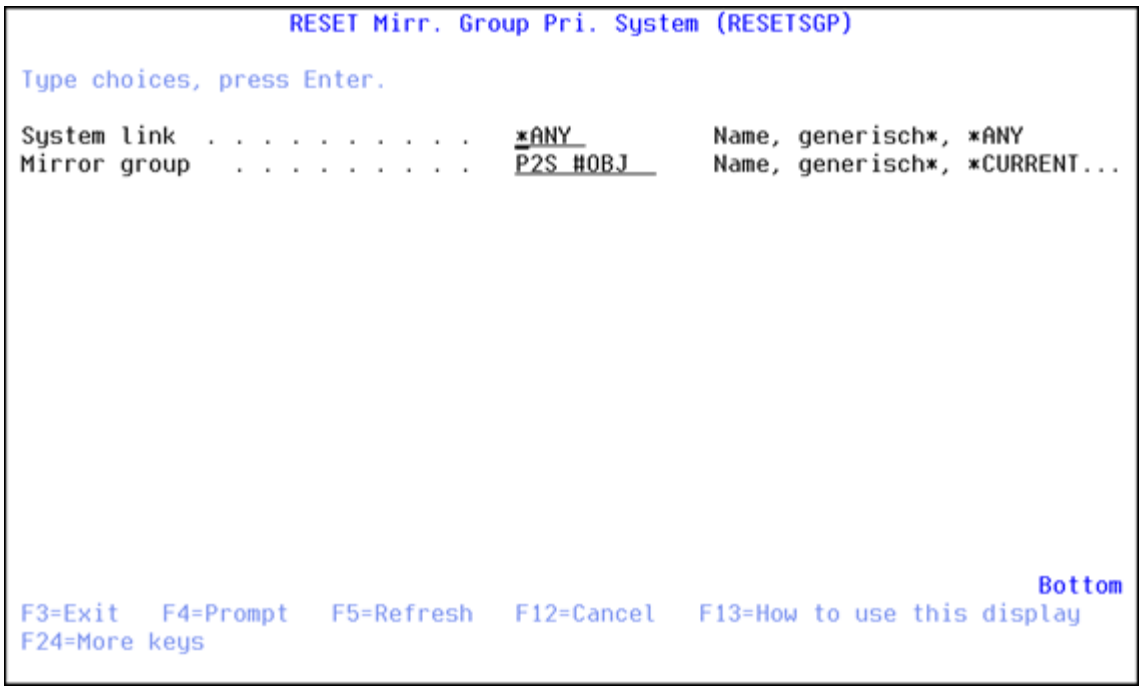
2.5.2.1 Menu item 1- Perform RESET procedure



This command can be executed if the mirroring is to be restarted on the primary system via a mirror group.
The send process for the mirror group must not be active, terminate the processes if necessary.
On the primary system, the internal workspaces are cleaned up.
The displayed or changed parameters for the corresponding mirror group are reset. This means that all existing journal receivers are deleted and a journal receiver is created with the entry number specified in the parameter. The contents of the log file are also deleted.

The following input fields are available to the user:

System link
Name of the system link for which the command is executed.

Valid values for the **System link** parameter are:

Name
Name of the system link

generic*
Specify the generic name of the system link. A generic name consists of one or more characters followed by an asterisk (*). All system links whose name has the same prefix as the generic name are taken.

***ANY**
Any system link is valid that matches the mirror group.

Mirror group
Name of the mirror group for which the called command is to be executed.

Valid values for the **Mirror group** parameter are:

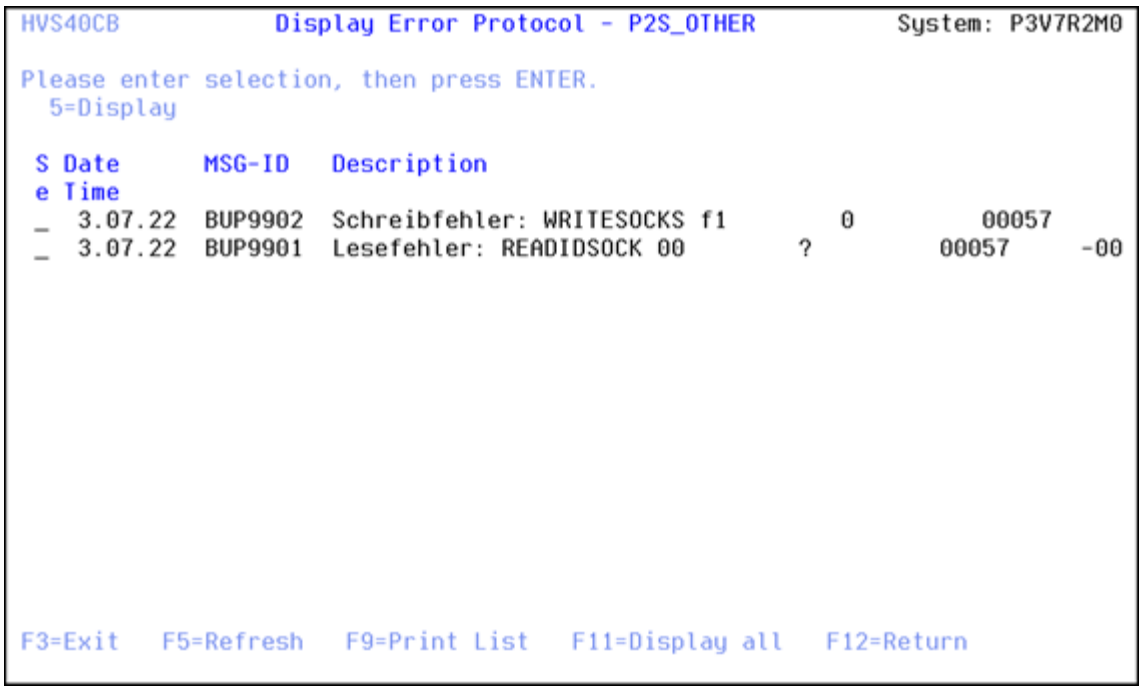
Name
Name of the mirror group for which the command is to be executed.

generic*
Specify the generic name of the mirror group for which the mapping is to be printed. A generic name consists of one or more characters followed by an asterisk (*). All mirror groups are taken whose name has the same prefix as the generic name.

***CURRENT**
The application activated as "current" mirror group is used for command execution. *CURRENT is the default value.

The description of the valid command keys can be found in the overview.

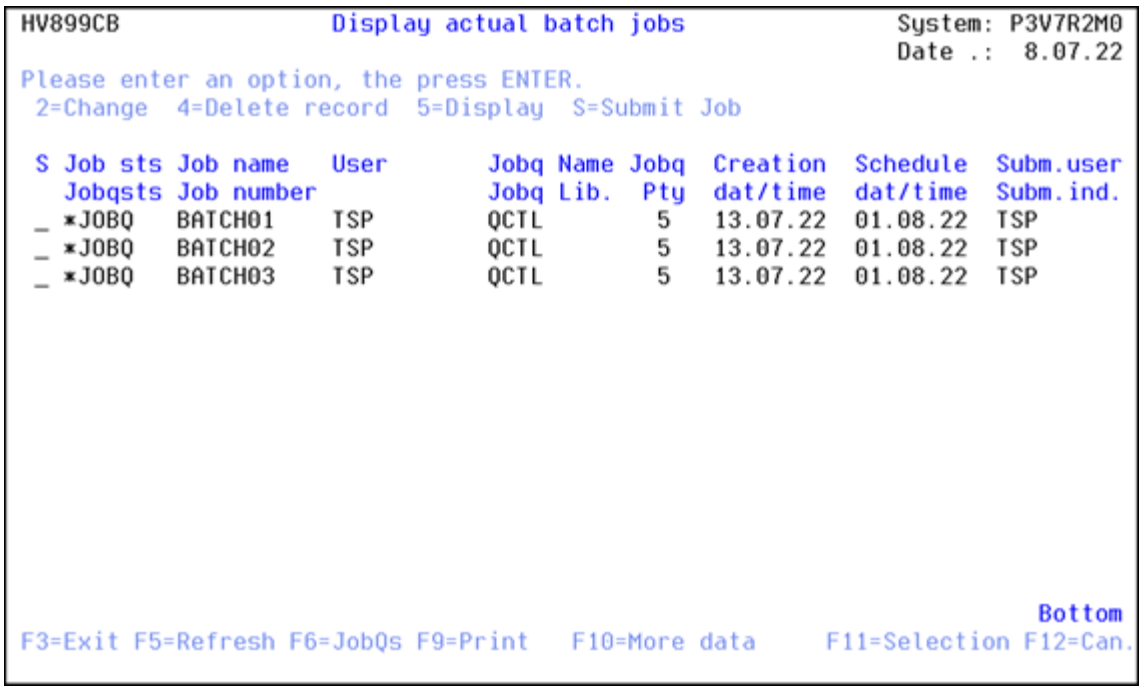
2.5.2.2 Menu item 2+3 - Display/print error log



The errors that occurred on the primary system within the send process are logged in a file. These errors can be displayed or printed.

The description of the valid command keys can be found in the overview.

2.5.2.3 Menu item 5 - Manage current batch jobs



This screen shows the current batch jobs on the system. The current batch jobs are listed here with additional information such as user, JobQ, OutQ etc.. Via the selection it is possible to change, delete, display or cancel the batch jobs.

The following valid input fields are available to the user:

Selection
The Selection data field is used to enter the options displayed on the current screen.

The following options are available for editing the running batch jobs:

Selection 2 - Change
With this selection, various parameters of the batch job can be changed.

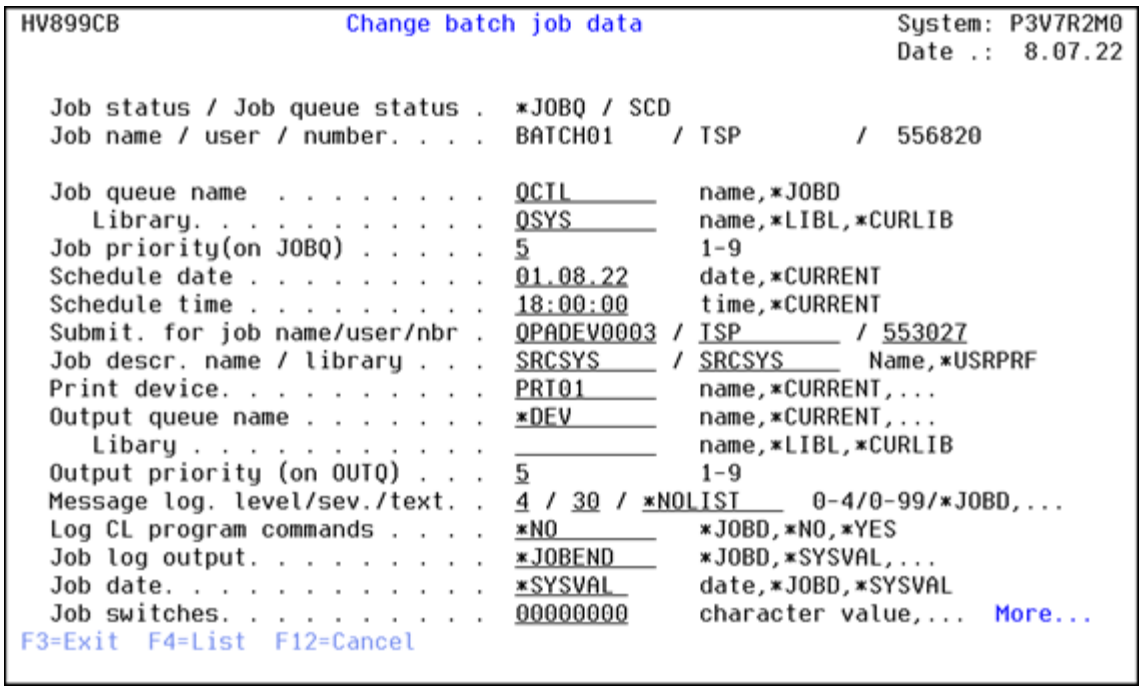
Selection 4 - Delete set
Batch jobs can be deleted with this selection.

Selection 5 - Display
This selection can be used to display application-specific batch jobs.

Selection S - Submit Job
With this selection, the batch jobs are submitted and thus started immediately.

The description of the valid command keys can be found in the overview.

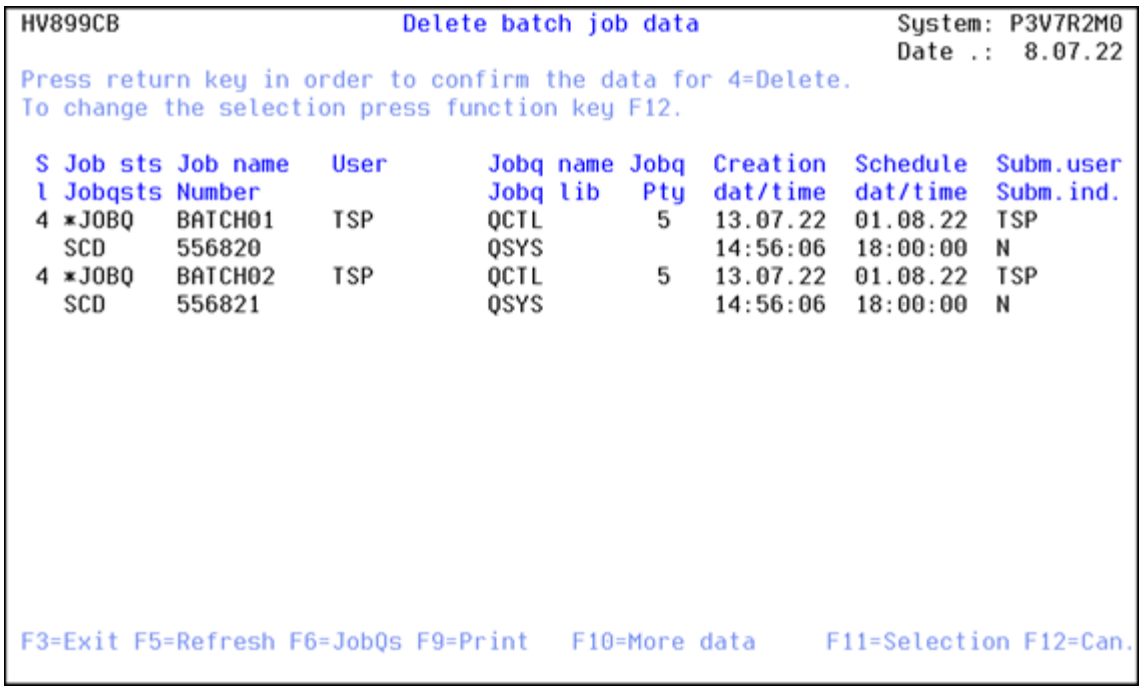
2.5.2.3.1 Selection 2 – Change batch job data



Here all parameters of the selected batch job are displayed and can be changed. This selection contains all parameters which are available in the job and can be changed with the system command "CHGJOB". For more detailed descriptions of the individual parameters, see the IBM documentation of the "CHGJOB" command.

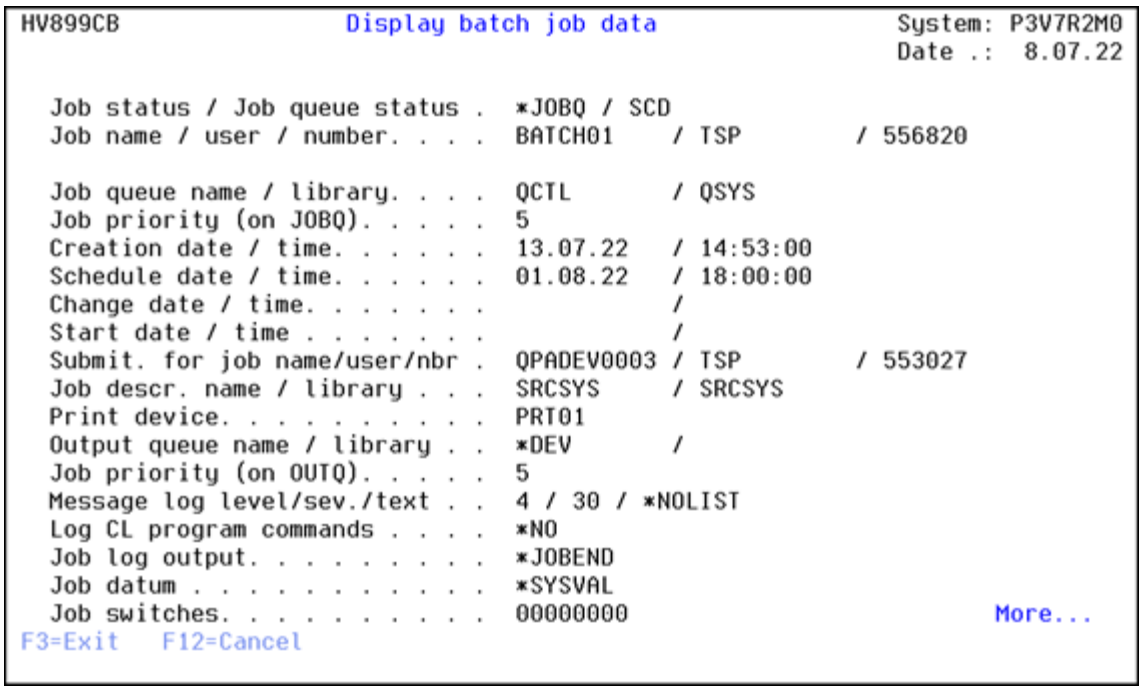
The description of the valid command keys can be found in the overview.

2.5.2.3.2 Selection 4 - Delete batch job data



In the management list of running batch jobs, one or more list entries can be removed via selection option 4. When confirming with the Enter key, the selected batch jobs are deleted.

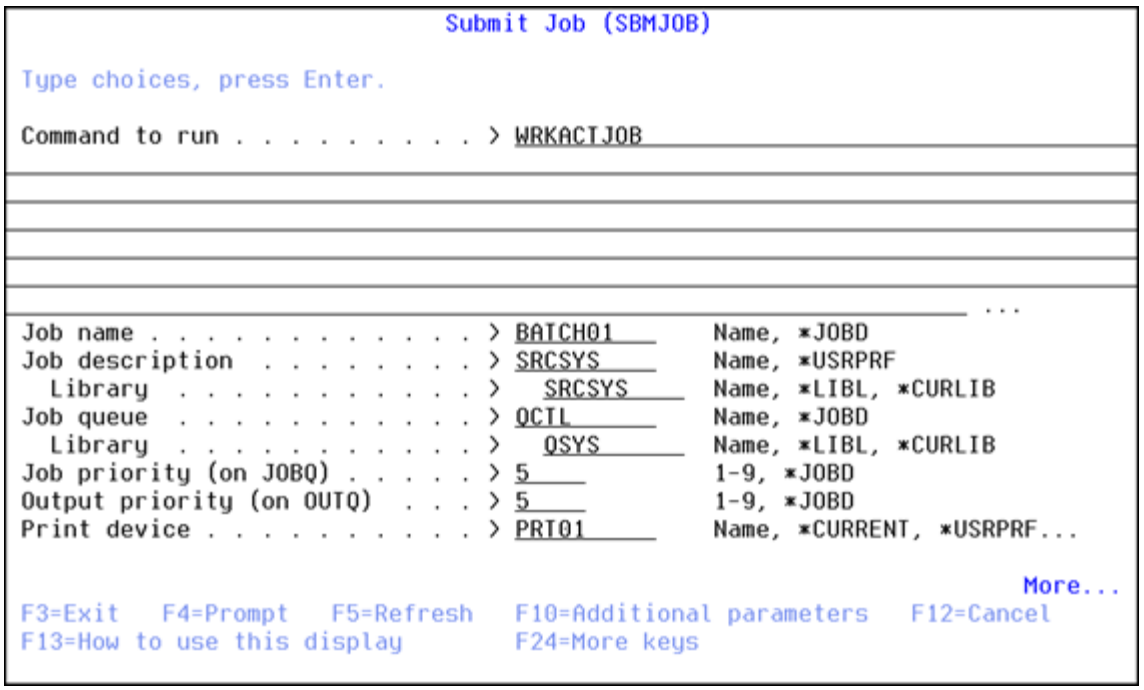
2.5.2.3.3 Selection 5 – Display batch job data



Batch job data can be displayed in the management list of running batch jobs. All parameters are then displayed here

The description of the valid command keys can be found in the overview.

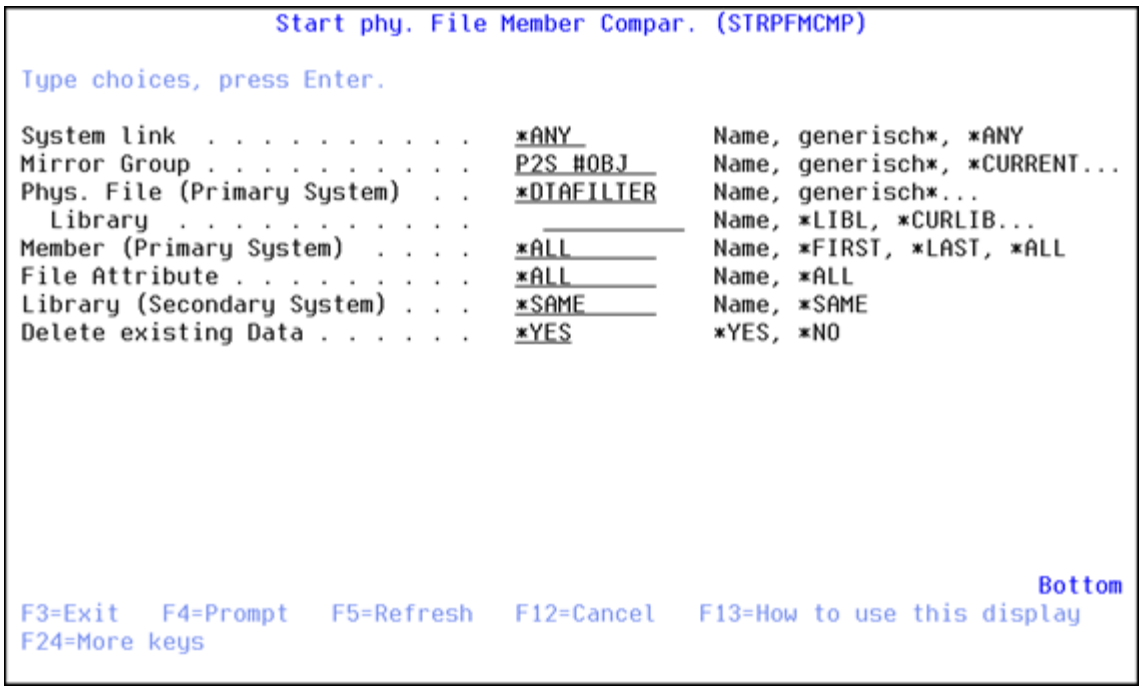
2.5.2.3.4 Selection S - Submit Job



With "Submit Job" you can immediately release the batch job so that it is started, regardless of when it was scheduled to start.

The description of the valid command keys can be found in the overview.

2.5.2.4 Menu item 6 - Start comparison of physical file members



With this command the data synchronization of the physical files can be checked. With F9 all existing parameters are displayed. The user can start the synchronization of the physical files via this input mask.

The STRPFMCMP command is called and the PFMINFPP file is created, in which the deviations of the physical part files such as: File does not exist, difference in number of records, triggers etc., are logged for the primary system. At the same time, on the secondary system, according to the data filter on the primary side, the PFMINFSP file is created for the secondary system.

The following differences of the physical files are checked by this function:

- Object exists on both sides
- Object size
- Creation date and time
- Modification date and time
- Number of deleted records
- Maximum record length
- Maximum key length
- Number of integrity conditions
- Number of triggers
- Number of current records
- Format Level ID
- Number record format
- Number of part files
- Journal name and journal library
- Number of LF part files via PF part file
- Alternate file name
- Journal image

The following valid input fields are available to the user:

System link
Name of the system link for which the command is executed.

Valid values for the **System link** parameter are:

Name
Name of the system link

generic*
Specify the generic name of the system link. A generic name consists of one or more characters followed by an asterisk (*). All system links whose name has the same prefix as the generic name are taken.

***ANY**
Any system link is valid that matches the mirror group.

Mirror group
Name of the mirror group for which the called Match physical part files command is to be executed.

Valid values for the **Mirror group** parameter are:

Name
Name of the mirror group for which the command is to be executed.

***CURRENT**
The application activated as the "current" **mirror group** is used for the command execution.

Physical file (primary system)
The physical files selected here are checked to see if they have the same status on the primary system as well as the secondary system.

Valid values for the **Physical files** parameter are:

***DTAFILTER**
This parameter searches the data filter of the mirror group and checks all physical files included there. The default value is *DTAFILTER.

Name
Name of the physical file for which the command is to be executed.

generic*
Specify the generic name of the system values to be matched. A generic name consists of one or more characters followed by an asterisk (*). All physical files whose name has the same prefix as the generic name are taken. Only files specified in the data mirror are matched.

Library
The library of physical files to be checked.

Valid values for the **Library** parameter are:

Name
Name of the library for which this command is to be executed.

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

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

Part file (primary system)
Name of the part file on the primary system to be compared.

Valid input value for the parameter **Part file** is:

Name
Name of the part file for which this command is to be executed.

Physical file (secondary system)
If the name of the physical file on the secondary system is different from that on the primary system, the different name on the secondary system must be entered here.

Valid values for the **Physical files** parameter are:

Name
Name of the physical file that will be selected for matching.

***SAME**
The physical file on the secondary system has the same name as on the primary system.

Library

Valid values for the **Library** parameter are:

Name
Name of the library on the secondary system whose physical files are to be compared.

***SAME**
The library of the physical file on the secondary system has the same name as on the primary system.

Part file (secondary system)
Name of the part file on the secondary system to be compared.

Valid input value for the parameter **Part file** is:

Name
Name of the part file whose deviations are to be detected.

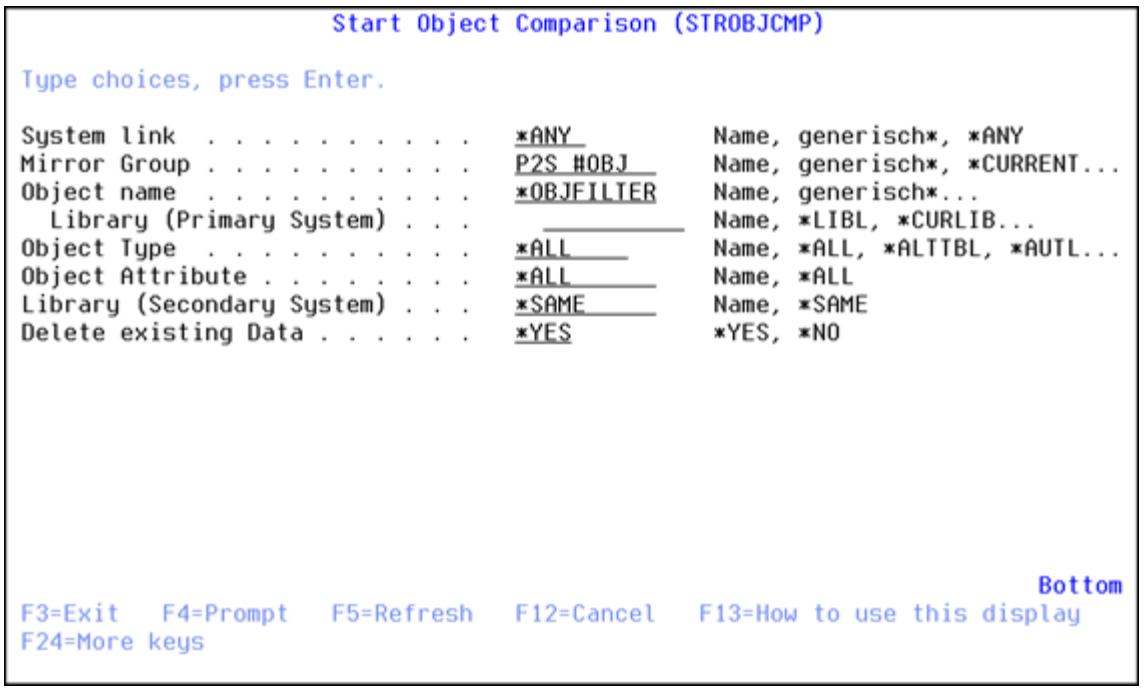
Delete existing data
Specifies whether to delete the existing data in the match file (PFMINFPP).

***YES**
The existing data in the PFMINFPP match file will be deleted.

***NO**
New match files are added to the existing data.

The description of the valid command key menus is given in detail in the system operator help of the current mask.

2.5.2.5 Menu item 7 - Start comparison of objects



With this command the object synchronization can be checked. With F9 all possible parameters are displayed.

The user can start the matching of the objects via this input mask. The command STROBJCMP is called and the file OBJINFPP is created, in which the deviations of the object attributes like size, creation date and modification date for the primary system are logged. At the same time, the OBJINFSP file is created for the secondary system according to the object filter on the primary side.

The following differences of the objects are checked by this function:

- Object exists on primary and secondary system
- Object description
- Object size
- Creation date and time
- Modification date and time
- Journal name and library
- Number of part files
- Number of integrity conditions
- Number of triggers
- Object owner
- Authorization list
- Object permissions
- Primary group
- Object logging value

The following valid input fields are available to the user:

System link

Name of the system link for which the command is executed.

Valid values for the **System link** parameter are:

Name
Name of the system link.

generic*
Specify the generic name of the system link. A generic name consists of one or more characters followed by an asterisk (*). All system links whose name has the same prefix as the generic name are taken.

***ANY**
Any system link is valid that matches the mirror group.

Mirror group
Name of the mirror group for which the called command - Match objects - is to be executed.

Valid values for the **Mirror group** parameter are:

***CURRENT**
The currently selected mirror group is used for the command execution.

Name
Name of the mirror group for which the command is to be executed.

Object name
Name for an object whose deviations between primary and secondary system are to be determined.

Valid values for the **Object name** parameter are:

Name
Name of the object for which the command is to be executed.

generic*
Specify the generic name of the objects for which match data is to be created. A generic name consists of one or more characters followed by an asterisk (*). All objects whose name has the same prefix as the generic name are taken.

***OBJFILTER**
Matching is performed for all objects defined in the object filter of the mirror group (see Manage object filters). The default value is *OBJFILTER.

Library (primary system)
Here the library is specified in which the objects are located that are to be compared.

Valid values for the **Library** parameter are:

Name
Name of the library in which the object exists.

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

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

Object type
The object type for which the adjustment data is to be created is specified. Valid input values are all system object types and *ALL. By specifying a certain object type, e.g. *ALRRBL, adjustment data is only created for objects of this type.

Object attribute
One or more values can be specified for the displayed object attributes. Of all objects in the specified libraries as well as the libraries themselves whose object attribute(s) are specified.

Valid values for the **Object attribute** parameter are:

***ALL**
All types of object attributes are synchronized with a delay.

Name
Name of the object attribute to be compared exclusively.

Library (secondary system)
A library can be specified here if it is to be different on the secondary machine from the library on the primary machine.

Name
Name of the library on the secondary system whose objects are to be compared.

***SAME**
The library on the secondary system has the same name as on the primary system.

Delete existing data
With this parameter it is possible to select whether the comparison data already present in the file should be deleted or remain.

***YES**
The existing data in the OBJINFP match file will be deleted.

***NO**
New match data is added to those existing in the match file.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

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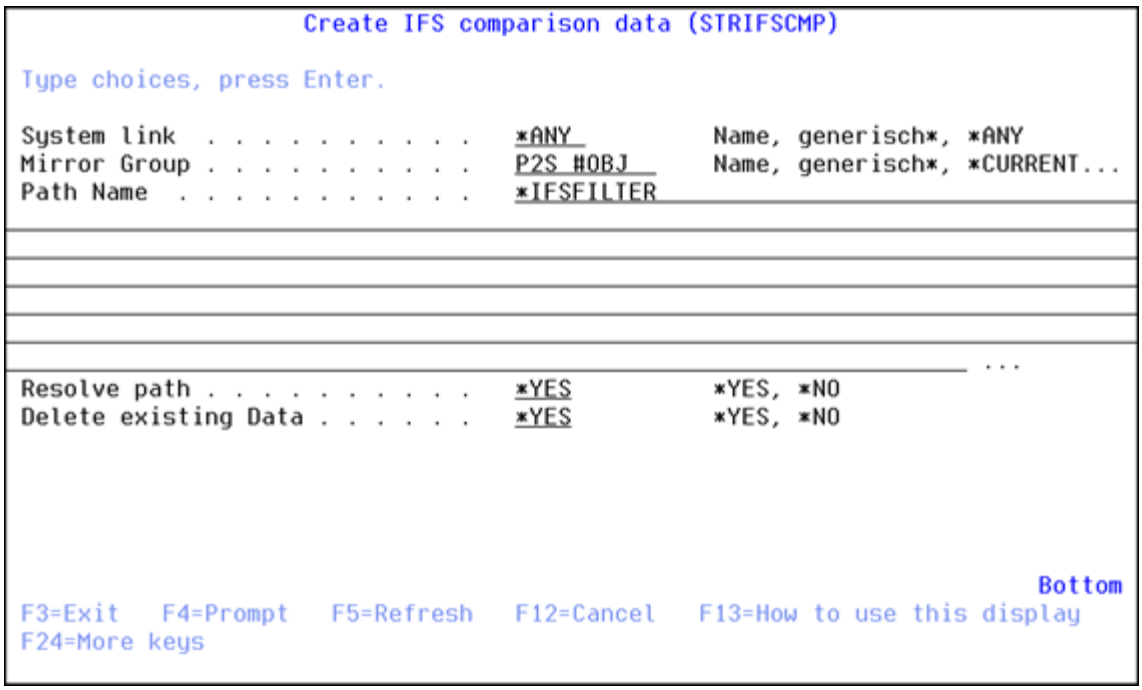
2.5.2.6 Menu item 8 - Start comparison of IFS files



With this command the IFS files can be compared.

The user can start the alignment of the IFS files via this input mask. The command STRIFSCMP is called and the file IFSINFPP is created, in which the deviations of the IFS objects such as change date for the primary system are logged. At the same time on the secondary system according to the IFS filter on the primary side the file IFSINFSP is created for the secondary system.

The following differences of the IFS files are checked by this function:

- IFS file exists on primary and secondary system
- IFS file size
- Data changes
- Creation date and time
- Last access to IFS file
- Journal name and library
- Number of hardlinks
- IFS file owner
- Primary group
- Authorization list
- Permissions
- Logging value

The following valid input fields are available to the user:

System link

Name of the system link for which the command is executed.

Valid values for the **System link** parameter are:

Name

Name of the system link

generic*
Specify the generic name of the system link. A generic name consists of one or more characters followed by an asterisk (*). All system links whose name has the same prefix as the generic name are taken.

***ANY**
Any system link is valid that matches the mirror group.

Mirror group
Name of the mirror group for which the IFS file deviations are to be determined.

Valid values for the **Mirror group** parameter are:

***CURRENT**
The currently selected mirror group is used for the command execution.

Name
Name of the mirror group for which the command is to be executed.

Pathname
Either an absolute path can be specified here or *IFSFILTER to compare the files in the IFS filter.

Resolve path
Specifies whether the specified path should be resolved and compared individually or the entire path.

Valid values for the **Resolve path** parameter are:

***YES**
The path is resolved, and each subdirectory is saved individually. *YES is the default value.

***NO**
The path is saved completely with all subdirectories.

Delete existing data
It is possible to select whether existing comparison data should be deleted or remain.

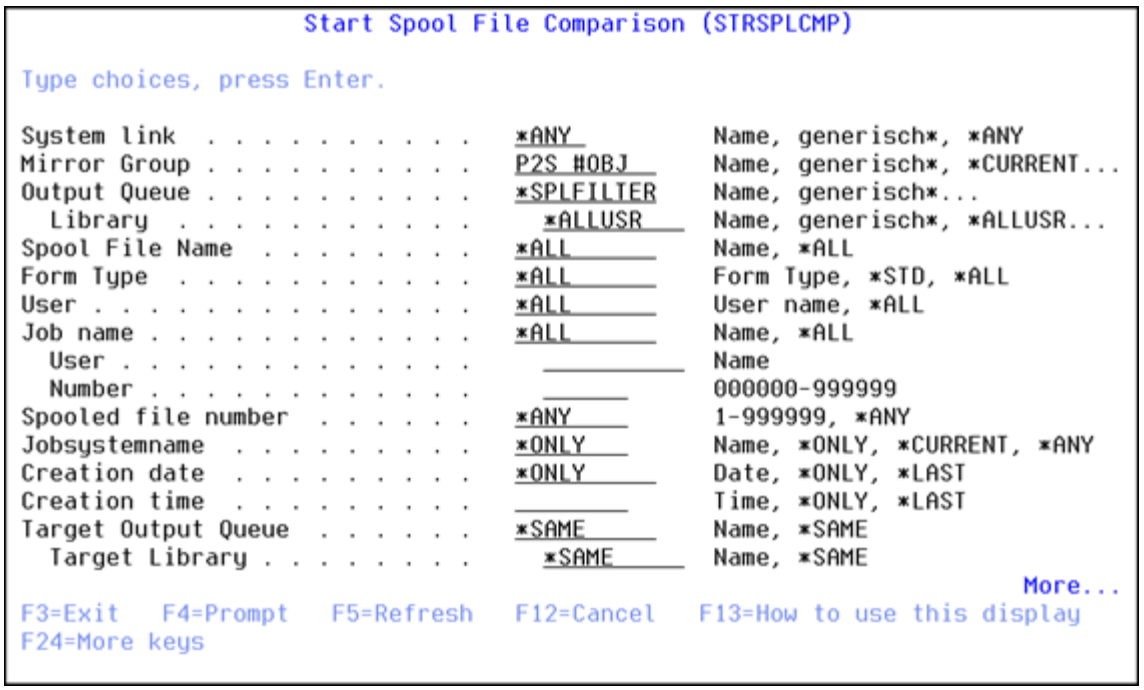
Valid values for the **Delete existing data** parameter are:

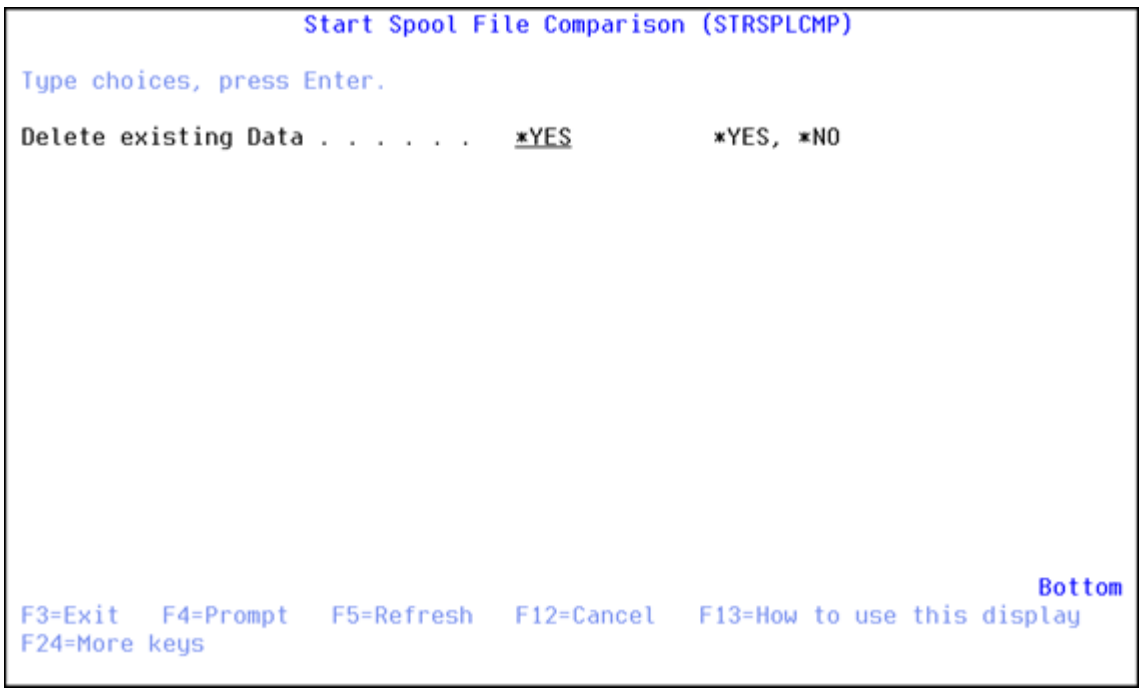
***YES**
If *YES is entered, then the existing data of the last IFS adjustment will be deleted *YES is the default value.

***NO**
If ***NO** is entered, then the existing data from the last IFS adjustment will not be deleted.

The description of the valid command key menus is given in detail in the system operator help of the current mask.

2.5.2.7 Menu item 9 - Start comparison of spool files





With this command the spool files can be compared.

The user can start the adjustment of the spool files via this input mask. The STRSPLCMP command is called and the SPLINFPP file is created, in which the deviations of the spool files, such as modification date, are logged for the primary system. At the same time, the SPLINFSP file for the secondary system is created on the secondary system according to the spool filter on the primary side.

The following valid input fields are available to the user:

System link

Name of the system link for which the command is executed.

Valid values for the **System link** parameter are:

Name
Name of the system link

generic*
Specify the generic name of the system link. A generic name consists of one or more characters followed by an asterisk (*). All system links whose name has the same prefix as the generic name are taken.

***ANY**
Any system link is valid that matches the mirror group.

Mirror group
Name of the mirror group for which the IFS file deviations are to be determined.

Valid values for the **Mirror group** parameter are:

***CURRENT**
The currently selected mirror group is used for the command execution.

Name
Name of the mirror group for which the command is to be executed.

Output queue
Here the output queue is specified in which the spool files to be checked are present.

Valid values for the **output queue** parameter are:

Name
Name of the output queue containing the spool files to be checked.

generic*
Specify the generic name of the output queue for which match data is to be created. A generic name consists of one or more characters followed by an asterisk (*). All spool files whose name has the same prefix as the generic name are taken.

***SPLFILTER**
Matching is performed for all spool files defined in the spool filter of the mirror group (see Manage spool filters). The default value is *SPLFILTER.

Library
Specifies the library in which the output queue can be found.

Valid values for the **Library** parameter are:

Name
Name of the library which contains the specified output queue.

generic*
Specify the generic name of the library that contains the files to be backed up. A generic name consists of one or more characters followed by an asterisk (*). All libraries are taken whose name has the same prefix as the generic name.

***ALLUSR**
The output queue is searched in all user libraries.

***ALL**
All libraries are searched for the specified output queue.

Spool file name
Here the file name of the spool file is specified for which the comparison is to be started.

Valid values for the **spool filename** parameter are:

Name
The name of the spool file to be compared.

***ALL**
All spool files in the selected output queue are included in the comparison.

Form type
This parameter specifies the type of form to be inserted into the printer for printing this file.

Valid values for the **Form type** parameter are:

***ALL**
All form types are checked and compared on both machines.

***STD**
All spool files with the form type *STD are included in the check.

Job title
Specifies the name of the job or jobs that created the spool files to be selected.

Valid values for the **Job name** parameter are:

Name
The spool files should be included that were created by jobs with the specified name.

generic*
The spool files are to be included that were created by jobs with the specified generic name. A generic name is a string consisting of one or more characters followed by an asterisk (*), e.g. 'ABC*'. The asterisk replaces all valid characters. A generic job name specifies all jobs whose job name starts with the generic prefix.

***ALL**
All spool files created by jobs matching the specified job name are included. *ALL is the default value.

Valid values for the **User** parameter are:

Name
The spool files should be included that were created by jobs with the specified user name.

generic*
The spool files should be included that were created by jobs with the specified generic user name.

***ALL**
All spool files created by jobs matching the specified job name are included. *ALL is the default value.

Valid values for the parameter **number** are:

000001-999999
All spool files created by jobs matching the specified job name and user name should be included.

***ALL**
All spool files created by jobs matching the specified job name are included. *ALL is the default value.

SPLNBR - Spool file number
Specifies the number of the job's spool file to be displayed.

Valid values for the **spool file number** parameter are:

1-999999
Specify the number of the spool file with the relevant name whose records are displayed.

***ANY**
The spool file number is not used to determine which spool file is used. Use this value if the job system name parameter or the spool file creation date and time parameter should take precedence over the spool file number when selecting a spool file. *ANY is the default value.

SYSNAME - job system name
Specifies the name of the system on which the job that created the spool file (JOB parameter) was run. This parameter is taken into account after the requirements for the job name, user name, job number, spool file name and spool file number parameters have been met.

Valid values for the **Job system name** parameter are:

Name
Specify the name of the system on which the job that created the spool file was run.

***ONLY**
There is a spool file with the specification for job name, user name, job number, spool file name, spool file number and creation date/time of the spool file.

***CURRENT**
The spool file created on the current system with the information for job name, user name, job number, spool file name, spool file number, and creation date/time of the spool file is used.

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

CRTDATE - creation date
Specifies the time (date/time) when the spool file was created. This parameter is taken into account after the requirements for the job name, user name, job number, spool file name, spool file number and job system name parameters have been met.

Valid values for the **Creation date** parameter are:

Date
Specify the date when the spool file was created.

***ONLY**
There is a spool file with the information for job name, user name, job number, spool file name, spool file number as well as job system name.

***LAST**
The spool file with the current creation time (date/time) of the specifications for job name, user name, job number, spool file name, spool file number and job system name is used.

CRTTIME - Creation time

Specifies the time (date/time) when the spool file was created. This parameter is taken into account after the requirements for the job name, user name, job number, spool file name, spool file number and job system name parameters have been met.

Valid values for the **Creation time** parameter are:

Time
Specify the time at which the spool file was created.

***ONLY**
There is only one spool file with the information for job name, user name, job number, spool file name, spool file number, job system name and creation date of the spool file.

***LAST**
The spool file with the current creation time (date/time) of the job name, user name, job number, spool file name, spool file number, job system name and creation date of the spool file is used.

Destination output queue

This parameter is required if a different output queue is used on the backup system than on the production system.

Valid values for the **destination output queue** parameter are:

***SAME**
*SAME is selected if the output queue is the same on both systems. The default value is *SAME.

Name
Name of the output queue on the backup system, if it is different from the one on the production system.

Target library

The output queue library, if different from the one on the production system.

Valid values for the **Target library** parameter are:

***SAME**
*SAME is selected if the library is the same on both systems. The default value is *SAME.

Name
Name of the library on the backup system, if different from that of the production system.

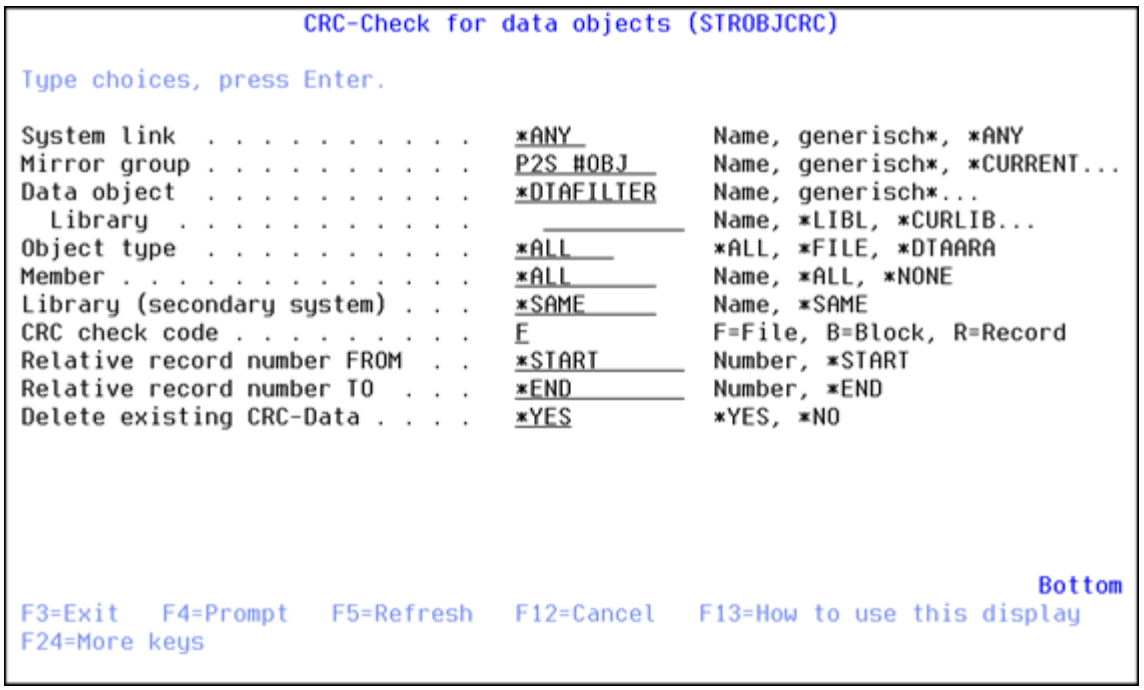
Delete existing data
Here you can select whether the file for the spool adjustment (SPLINFPP) should be deleted and rebuilt or whether the new data should be added to the existing file.

Valid values for the **Delete existing data** parameter are:

***YES**
The file is deleted and rebuilt with the new data. The default value is *YES.

***NO**
The existing data in the file will remain and the new ones will be added to them.

2.5.2.8 Menu item 10 - Start comparison of OBJ CRC data



Via this input mask the user can start the comparison of the OBJ-CRC data. The command STROBJCRC is called, this forms checksums of the files and compares afterwards the individual checksums of the two systems with one another. At the same time, the same reconciliation is started on the secondary system and the data of the primary and secondary systems are then compared with each other.

The following parameters are checked during the comparison:

- Contents of the files and data areas
- Change during CRC check
- Record differences
- Missing sets
- Library, file and part files exist on primary and secondary system
- No permission for file
- File locked
- Read error
- Open COMMIT cycle present

The following valid input fields are available to the user:

System link

Name of the system link for which the command is executed.

Valid values for the **System link** parameter are:

Name
Name of the system link

generic*
Specify the generic name of the system link. A generic name consists of one or more characters followed by an asterisk (*). All system links whose name has the same prefix as the generic name are taken.

***ANY**
Any system link is valid that matches the mirror group.

Mirror group
Name of the mirror group for which the CRC data deviations are to be determined.

Valid values for the **Mirror group** parameter are:

Name
Name of the mirror group for which the CRC check is to be started.

***CURRENT**
The CRC check is started for the current mirror group. *CURRENT is the default value.

generic*
Specify the generic name of the mirror group for which the CRC check is to be started. A generic name consists of one or more characters followed by an asterisk (*). All mirror groups whose name has the same prefix as the generic name are taken.

***ALL**
The CRC check is started for all mirror groups.

***CONFIG**
The CRC check is started for all mirror groups with defined data filter, except when mirroring to a NAS.

Data object
Specifies which data object is to be checked. A single or multiple objects can be specified here in various ways.

Valid values for the **Data object** parameter are:

Name
Name of the data object for which the command is to be executed.

generic*
Specify the generic name of the data objects for which match data is to be created. A generic name consists of one or more characters followed by an asterisk (*). All objects whose name has the same prefix as the generic name are taken.

***DTAFILTER**
This parameter searches the data filter of the mirror group and checks all physical files included there. The default value is *DTAFILTER.

***OBJFILTER**
Matching is performed for all objects defined in the object filter of the mirror group (see Manage object filters).

Library
The library of data objects to be checked.

Valid values for the **Library** parameter are:

Name
Name of the library for which this command is to be executed.

***LIBL**

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

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

***USRLIBL**
The libraries in the user library list are used for the check and searched for the selected data object.

***ALLUSR**
All user libraries are searched for the selected data object and used if the data object exists there

***ALL**
All libraries on the system are searched for the selected data object and used if the data object exists there.

Object type
The object type can be specified for this parameter. Then only objects of the selected type will be checked.

Valid values for the **Object type** parameter are:

***ALL**
All objects are taken into account during the check. The default value is *ALL.

***FILE**
The check considers only data objects of type *File.

***DTAARA**
Only objects of type *DTAARA are used in the matching process.

Part file (primary system)
This parameter specifies whether and which part files are used for the check.

Valid values for the parameter **Part file (primary system)** are:

***ALL**
All part files of the selected data objects are included in the check.

Name
The name of the part file to be checked.

***NONE**
No part file is included in the check.

Library (secondary system)
If the library on the secondary system is different from the one on the primary system, the name of the library on the secondary system must be entered here.

Valid values for the parameter **Library (secondary system)** are:

***SAME**
With *SAME, the library on the secondary system is the same as on the primary system. The default value is *SAME.

Name
The different name of the library on the secondary system must be specified here.

Exam code
Specifies at which level the selected file should be checked.

Valid values for the **Check code** parameter are:

F=File
A file level check is performed, this is the top level and does a rough test on the file to see if there are any discrepancies there. The default value is F.

B=Block
With the block check, the file is divided into individual blocks to narrow down the error more.

R=Record
Here, each individual record is checked to precisely identify the deviation.

Relative record number FROM
This option can be used to limit the check by entering a record number. This number then serves as the starting point for the check.

Valid values for the **Relative record number VON** parameter are:

***START**
This value selects the first record in the file and thus starts the check from the beginning of the file. The default value is *START.

Number
The record number with which the check is to be started. All record numbers smaller than this are skipped and therefore not checked.

Relative record number BIS
This option can be used to limit the check by entering a record number. This number then serves as the end point for the check.

Valid values for the **Relative record number BIS** parameter are:

***END**
This value selects the last record in the file and checks it to the end of the file. The default value is *END.

Number
The record number at which the check is to be terminated. All record numbers greater than this will not be checked.

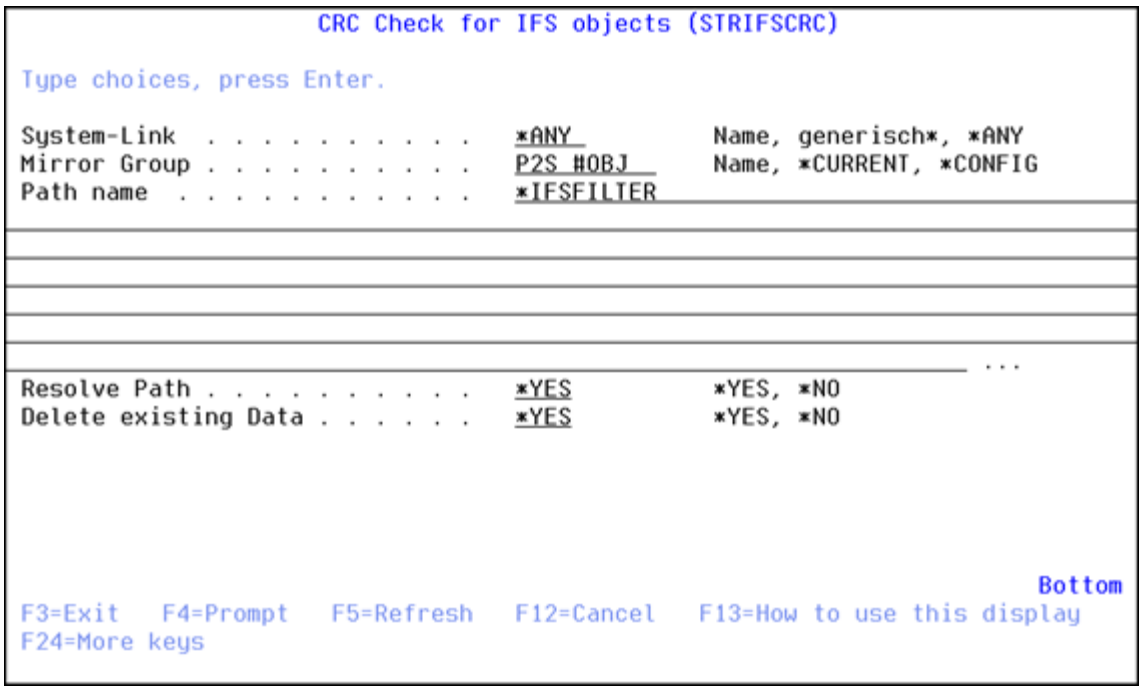
Delete existing CRC data
Specifies whether to delete the already existing data in the check file or to add the new data.

Valid values for the **Delete existing CRC data** parameter are:

***YES**
The data in the check file is deleted and the file is filled again with the new check data. The default value is *YES.

***NO**
The data in the check file will remain and the new data will be added to them.

2.5.2.9 Menu item 11 - Start comparison of IFS CRC data



The user can start the comparison of the IFS CRC data via this input mask. The STRIFSCRC command is called, this forms checksums of the files and then compares the individual checksums of the two systems with each other. At the same time, the same reconciliation is started on the secondary system and the data of the primary and secondary systems are then compared with each other.

The following parameters are checked during the comparison:

- IFS files content
- Record differences
- Missing sets
- User directories and IFS files exist on primary and secondary system
- No permission for file
- File locked
- Read error

The following valid input fields are available to the user:

System link
Name of the system link for which the command is executed.

Valid values for the **System link** parameter are:

Name
Name of the system link

generic*
Specify the generic name of the system link. A generic name consists of one or more characters followed by an asterisk (*). All system links whose name has the same prefix as the generic name are taken.

***ANY**

Any system link is valid that matches the mirror group.

Mirror group
Name of the mirror group for which the CRC data deviations are to be determined.

Valid values for the **Mirror group** parameter are:

Name
Name of the mirror group for which the CRC check is to be started.

***CURRENT**
The CRC check is started for the current mirror group. *CURRENT is the default value.

generic*
Specify the generic name of the mirror group for which the CRC check is to be started. A generic name consists of one or more characters followed by an asterisk (*). All mirror groups whose name has the same prefix as the generic name are taken.

***ALL**
The CRC check is started for all mirror groups.

***CONFIG**
The CRC check is started for all mirror groups with defined data filter, except when mirroring to a NAS.

Pathname
Here the path name is entered via which the comparison is to be started.

Valid values for the **pathname** parameter are:

Name
Name of the path for which the command is to be executed. Pathname must be terminated with a *.

***IFSFILTER**
The comparison is performed for all paths from the IFS filter. *IFSFILTER is the default value.

Resolve path
Specifies whether the specified path should be resolved and saved individually or the entire path.

Valid values for the **Resolve path** parameter are:

***YES**
The path is resolved, and each subdirectory is saved individually. *YES is the default value.

***NO**
The path is saved completely with all subdirectories.

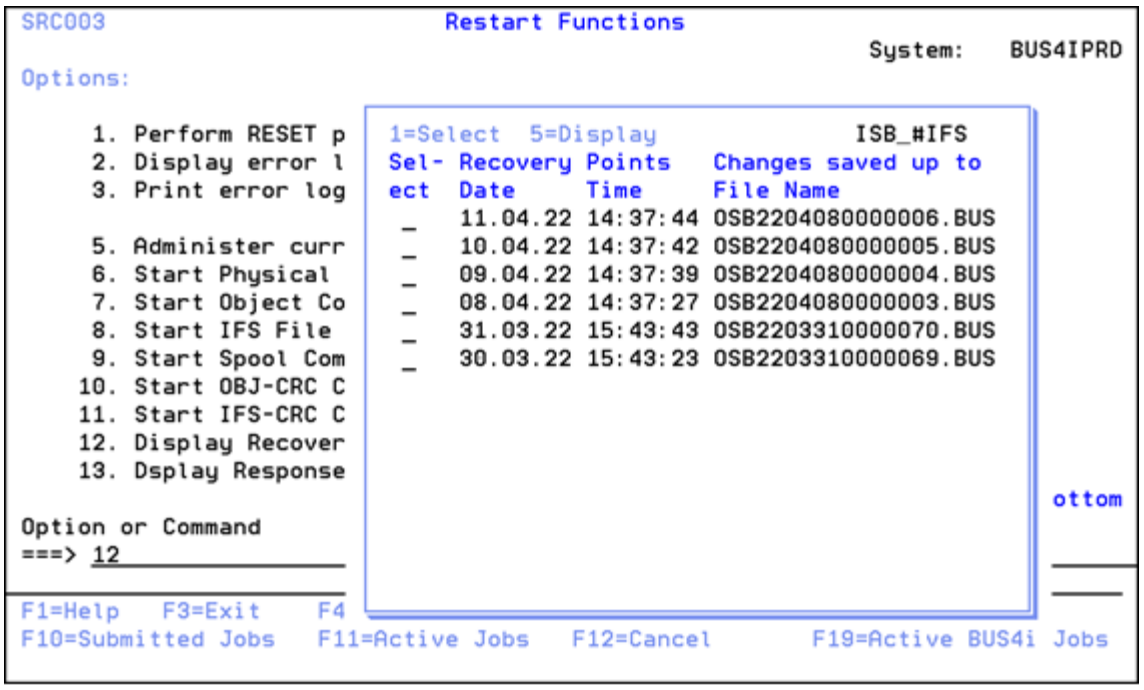
Delete existing CRC data
Specifies whether to delete the already existing data in the check file or to add the new data.

Valid values for the **Delete existing CRC data** parameter are:

***YES**
The data in the check file is deleted and the file is filled again with the new check data. The default value is *YES.

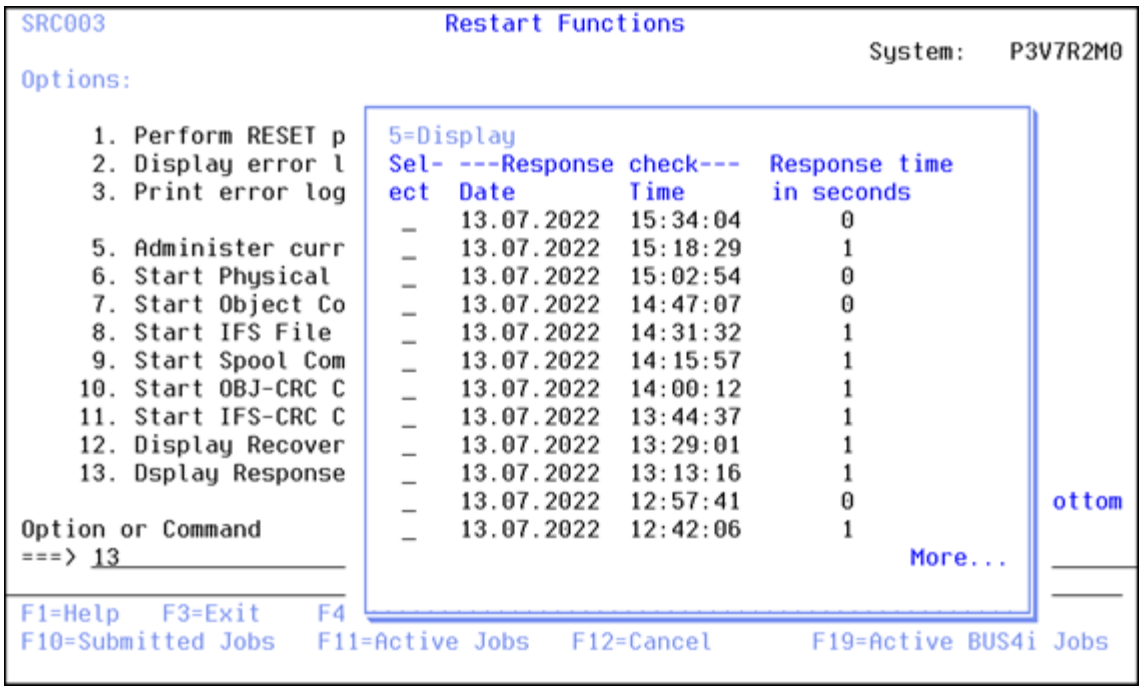
***NO**
The data in the check file will remain and the new data will be added to them.

2.5.2.10 Menu item 12 - Display recovery checkpoints



This menu item can be used to display a list of the control points of a backup.
With an xSB version, the file names are also displayed. Data and objects can be restored from these files if required.

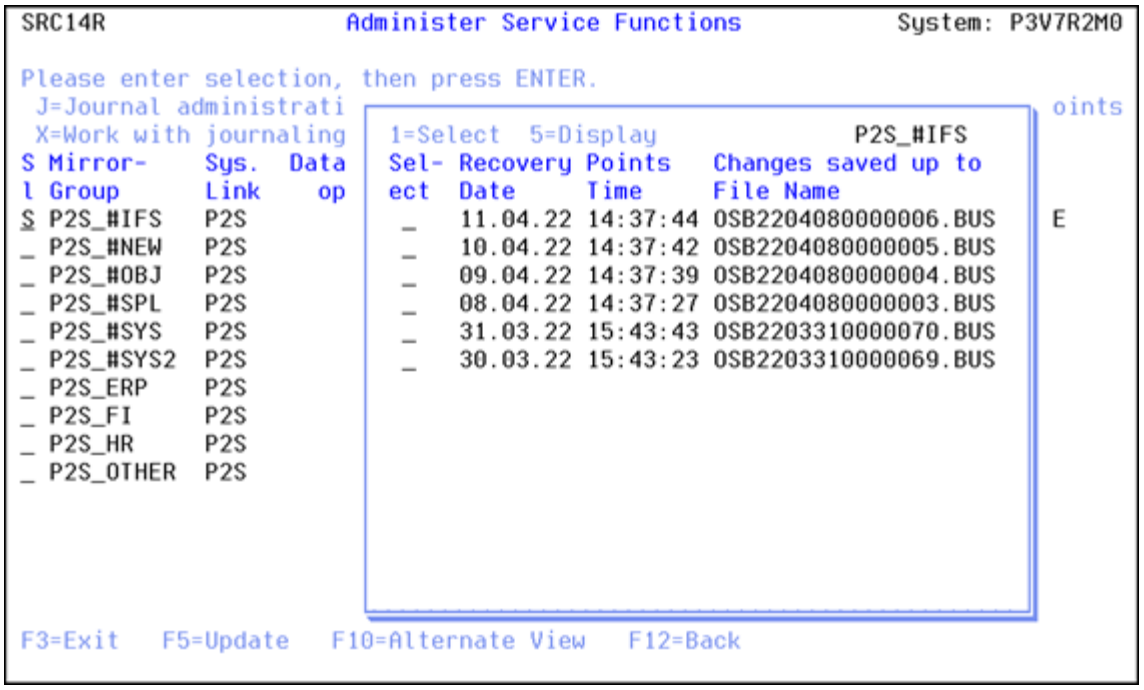
2.5.2.11 Menu item 13 - Display reaction statistics



The time is measured between the sending of a journal entry and the confirmation of the receiving process that this journal entry has been received. Logging is done in e.g. 30 minutes interval, depending on the monitoring interval of the process control.

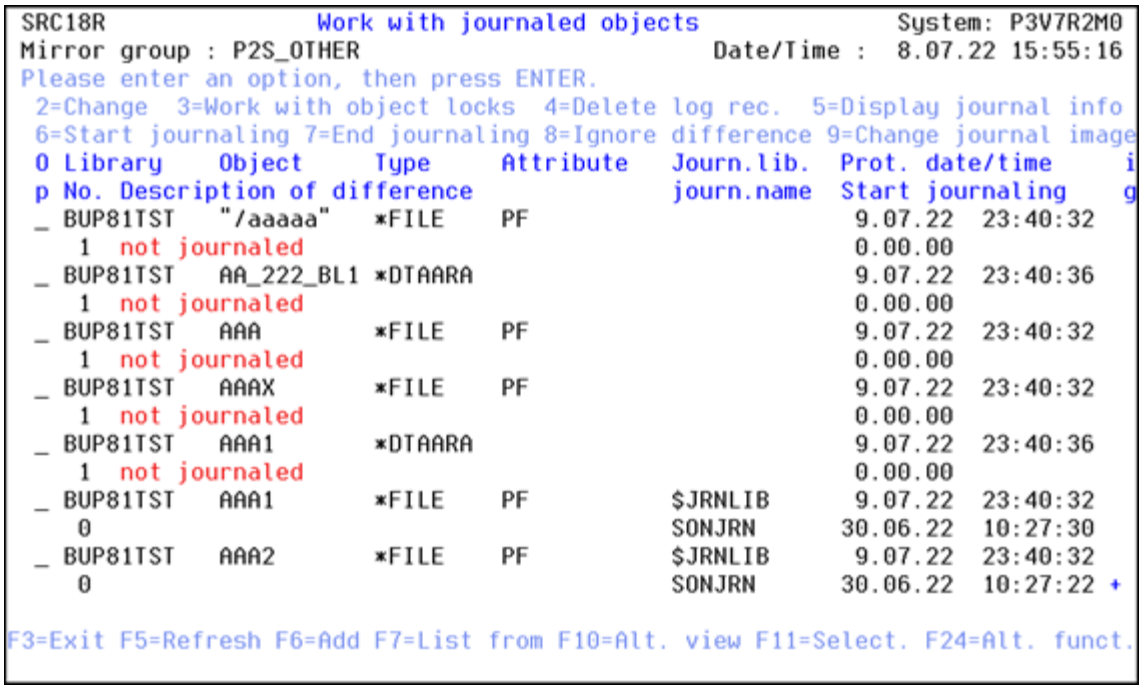
With 5=Display you can display the reaction statistics in more detail. The current and the last journal receiver name and the journal sequence number are also displayed there.

2.5.3 Selection S - Display recovery checkpoints



This selection can be used to display a list of the control points of a backup.
With an xSB version, the file names are also displayed. Data and objects can be restored from these files if required.

2.5.4 Selection X – Work with journaling



In this view, the errors in the journaling are displayed. The deviations can then also be corrected directly here.

The following valid input fields are available to the user:

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items are in the list. When entering an option that is not allowed, an error message appears on the screen.

The following options are available for journaling corrections:

Selection 2 - Change
This selection option allows you to change the journaling parameters of the selected object.

Selection 3 - Display object locks
This selection option shows all object locks on the selected object and lists them in a table.

Selection 4 - Delete set
The selection "Delete record" deletes the error from the view, this no longer appears in the view until the next journal check.

Selection 5 - Display journal information
This selection option allows you to view the journal information of the selected object.

Selection 6 - Start Journal
This selection option can be used to start journaling of a non-journaled object.

Selection 7 - End Journal

This selection option can be used to end the journaling of a journaled object.

Selection 8 - Ignore deviation

With this selection option, the selected deviation can be ignored, so it no longer appears in the view.

Selection 9 - Change Journal Image

With this selection option, in case of deviations of the journal image, this can be set to the value of the mirror group.

The following command keys are available on this screen:

F6=Add journaling of data objects

Allows to add data objects to the journalization of the current mirror group.

F13=Select deviation

With "Select deviation" you can select whether objects without deviations, confirmed deviations or with deviations should be displayed.

F15=Test

Checks the journaled objects again to see if there have been changes and the displayed deviations have been corrected, or new ones have been added.

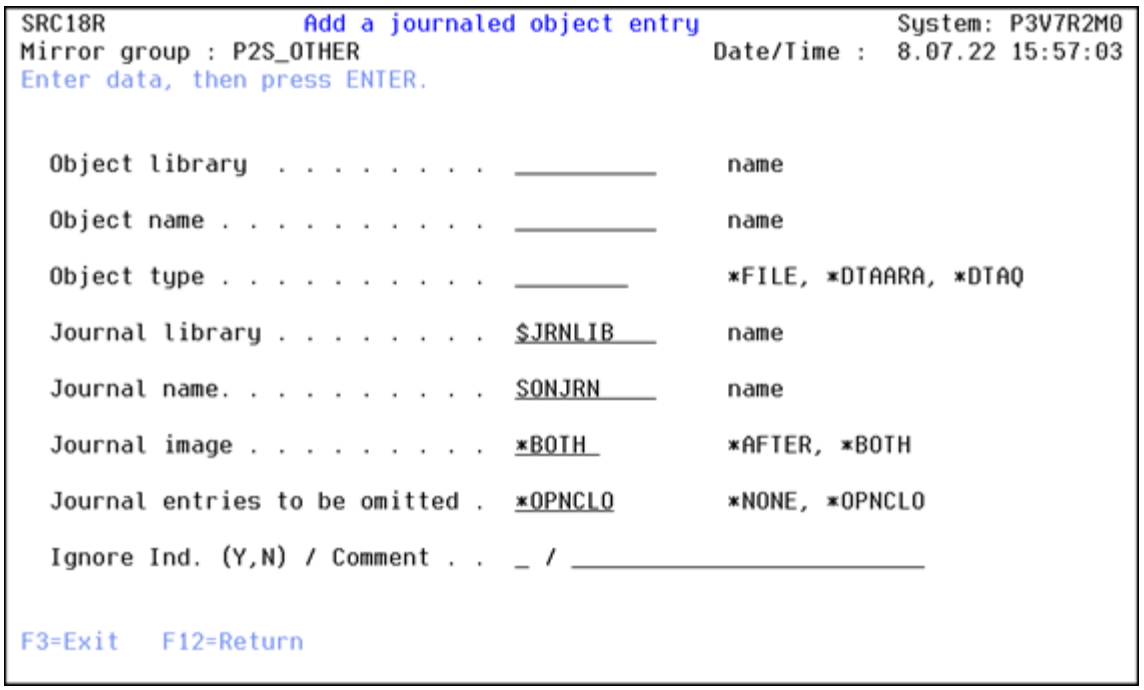
F17=New logging

Re-logs the journaling data and rebuilds the discrepancy file.

F20=Current Journal

This command key can be used to set the current journal, which will be used when Start Journal is selected.

2.5.4.1 Command key F6 - Add journalization of data objects



Via this mask the journaling of data objects can be added to the current mirror group. The current mirror group is the application in which journal management was called with 'J'.

The following fields are available to the user:

Object library
Library on the primary system whose objects are recorded in the journal and can thus be mirrored.

Object name
Name for an object contained in a specified library.

Object type
Specify type for the selected object.

Valid values for the **Object type** parameter are:

***FILE**
Only objects of type *FILE are added to the journaling of the current mirror group.

***DTAARA**
Only objects of object type *DTAARA are selected from the library and added to the journaling.

***DTAQ**
The objects from the selected library, which have the type *DTAQ, are taken into account during the journalization of the current mirror group.

Journal Library
Library on the primary system that contains the journal entered under Journal Name.

Journal name
Name for a journal contained in the specified journal library.

Journal image
The image of a journal can be defined here. The choices here are *After and *Both.

Valid values for the **Journal image** parameter are:

***AFTER**
Only one entry is written to the journal after the file change with the new status. The default value is *AFTER.

***BOTH**
When a file is changed, the state before and after the change is recorded in the journal.

Journal entries to be omitted
Here it is possible to define which journal entries are excluded. The following input options are available to the user: *NONE, *OPNCLO.

Valid values for the **Web Allowed Journal Entries** parameter are:

***NONE**
All actions are recorded by the journal. The default value is *NONE.

***OPNCLO**
The journal entries for open and close file are not recorded in the journal.

Ignore Kz (Y/N)
If a "Y" is entered here, these entries are no longer displayed in the list. Via the note a reason can be entered why this entry should not be considered.

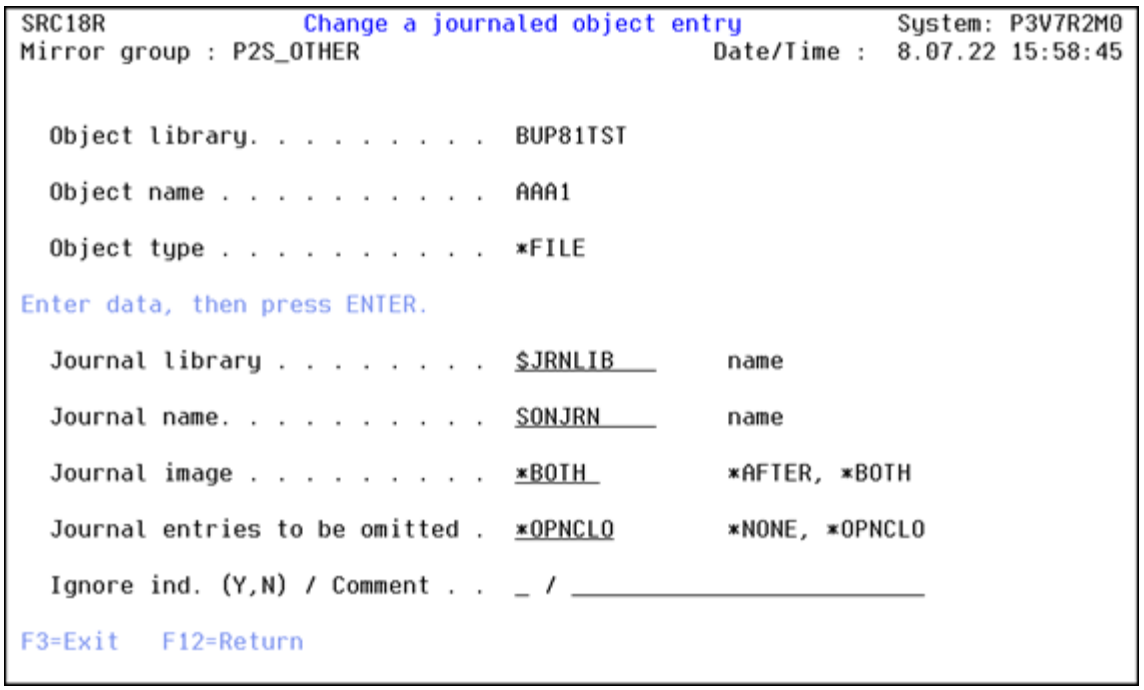
Valid values for the **Ignore Kz** parameter are:

N - No
The entries are not ignored and thus displayed in the list. The default value is "N".

Y - Yes
The entries are no longer displayed in the list.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

2.5.4.2 Selection 2 - Change journaling of data objects



This input mask can be used to change the journaling of a data object that belongs to a mirror group,

Journal Library
Library on the primary system that contains the journal entered under Journal Name.

Journal name
Name for a journal contained in the specified journal library.

Journal image
The image of a journal can be defined here. The choices here are *After and *Both.

Valid values for the **Journal image** parameter are:

***AFTER**
Only one entry is written to the journal after the file change with the new status. The default value is *AFTER.

***BOTH**
When a file is changed, the state before and after the change is recorded in the journal.

Journal entries to be omitted
Here it is possible to define which journal entries are excluded. The following input options are available to the user: *NONE, *OPNCLO.

Valid values for the **Web Allowed Journal Entries** parameter are:

***NONE**
All actions are recorded by the journal. The default value is *NONE.

***OPNCLO**
The journal entries for open and close file are not recorded in the journal.

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Ignore Kz (Y/N)
If a "Y" is entered here, these entries are no longer displayed in the list. Via the note a reason can be entered why this entry should not be considered.

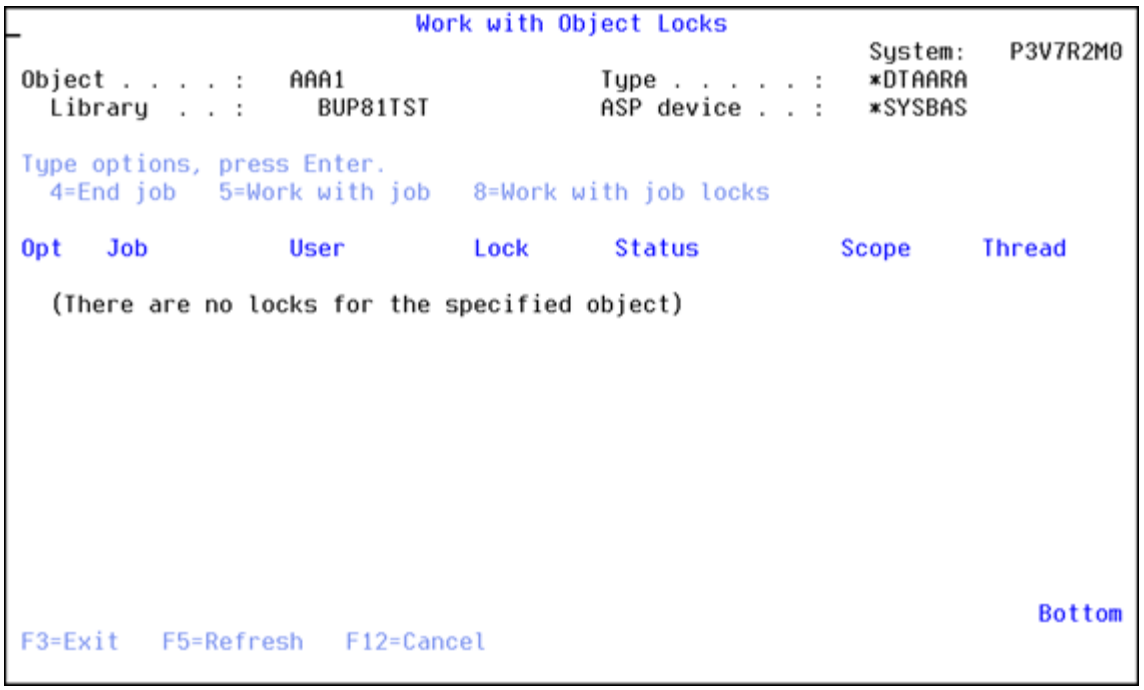
Valid values for the **Ignore Kz** parameter are:

N - No
The entries are not ignored and thus displayed in the list. The default value is "N".

Y - Yes
The entries are no longer displayed in the list.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

2.5.4.3 Selection 3 - Display object locks



Calls a display that shows all jobs that lock the selected object. These jobs can then be displayed, terminated, or additional job locks can be displayed.

Selection

In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

Selection 4 - Finish job

This selection option allows the job that maintains the selected lock to be terminated in order to remove the lock.

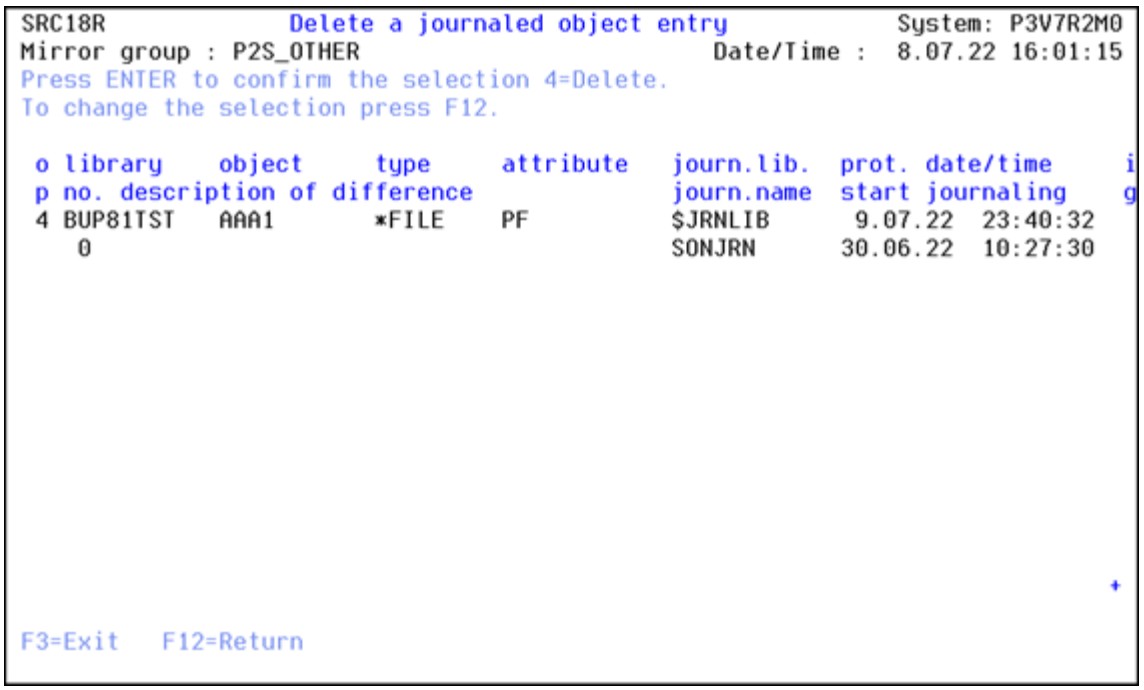
Selection 5 - Work with Job

This selection option calls the system command "WRKJOB" and displays the corresponding menu.

Selection 8 - Working with job locks

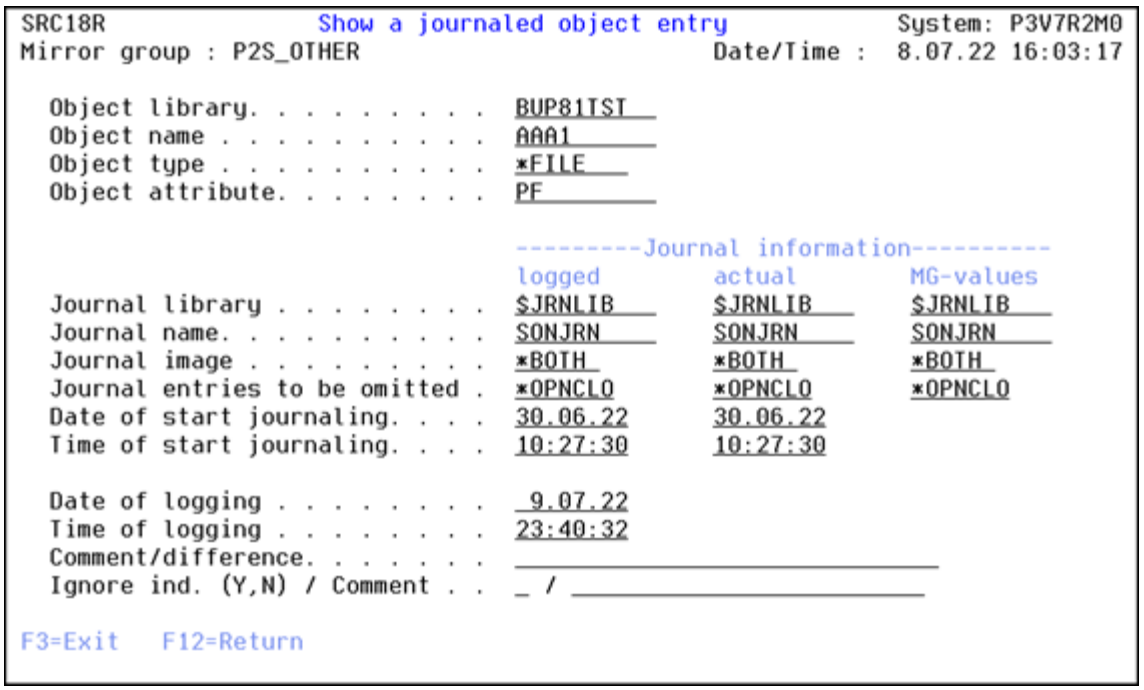
This selection option lists the additional locks of the selected job.

2.5.4.4 Selection 4 - Delete a journaled object entry



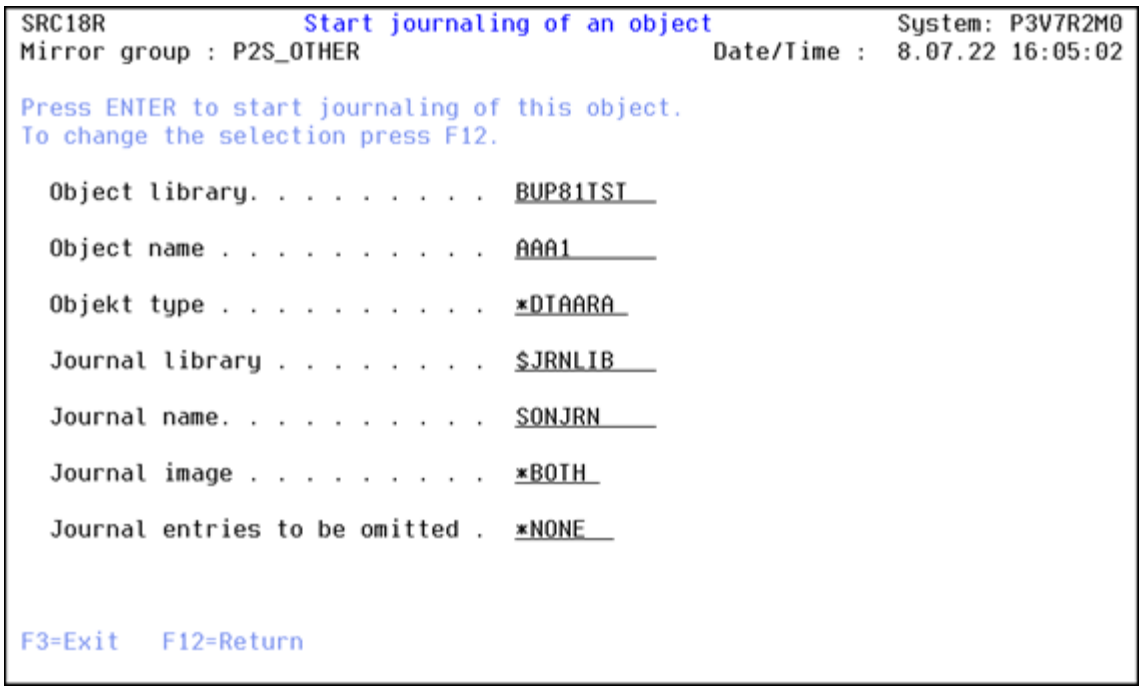
With the selection "4 = Delete" the journaling of a data object of the mirror group can be deleted. After confirming with the Enter key, the journaling entry for a data object is deleted. This object is no longer recorded in the journal.

2.5.4.5 Selection 5 - Show a journaled object entry



This menu is used to display the logged and current journaling of a data object belonging to a current mirror group. The display is divided into 3 columns logged, current and mirror group journal information. To compare these individual values, the current and mirror group values should be the same.

2.5.4.6 Selection 6 - Start journaling of an object



This mask can be used to start the journaling of a data object that belongs to a mirror group. The selected data object is displayed. The journaling is started with the Enter key.

The following input fields are available to the user:

Object library
Library on the primary system whose objects are recorded in the journal and can thus be mirrored.

Object name
Name for an object contained in a specified library.

Object type
Specifies the type of object that will be journalized.

Journal Library
Library on the primary system where the journal was created. The objects are journalized in this journal.

Journal name
Name for a journal contained in the specified journal library.

Journal image
The image of a journal can be defined here. The choices here are *After and *Both.

Journal entries to be omitted
Here it is possible to define which journal entries are excluded. The following input options are available to the user: *NONE, *OPNCLO.

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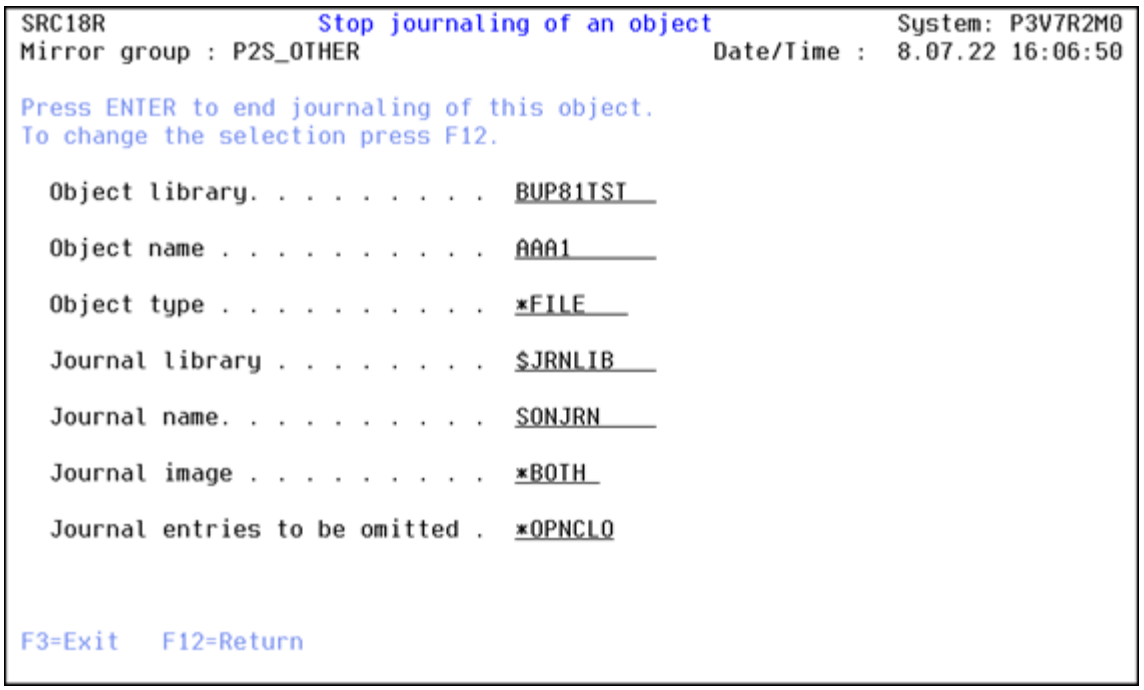
2.5.4.7 Selection 7 - End journaling of an object



This mask can be used to end the journaling of a data object that belongs to a mirror group. The journaling is terminated with the Enter key.

The following fields are displayed for control:

Object library
Library on the primary system whose objects are recorded in the journal and can thus be mirrored.

Object name
Name for an object contained in a specified library.

Object type
Specifies the type of object that will be journalized.

Journal Library
Library on the primary system where the journal was created. The objects are journalized in this journal.

Journal name
Name for a journal contained in the specified journal library.

Journal image
The image of a journal can be defined here.

Journal entries to be omitted
Here you can define which journal entries are excluded.

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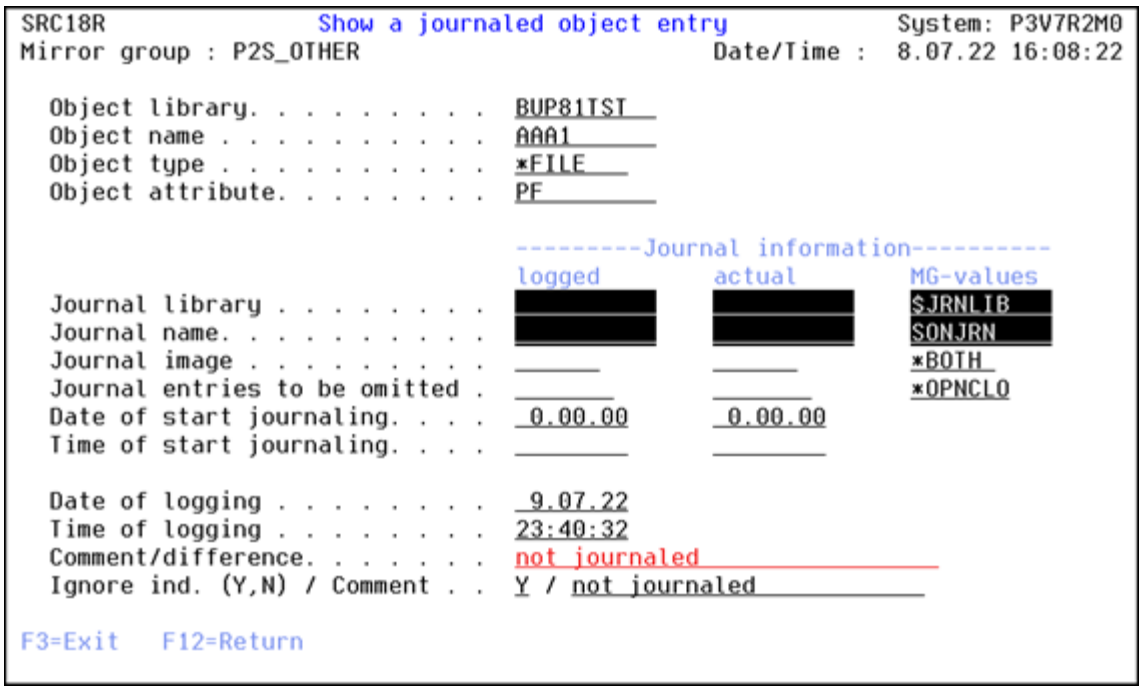
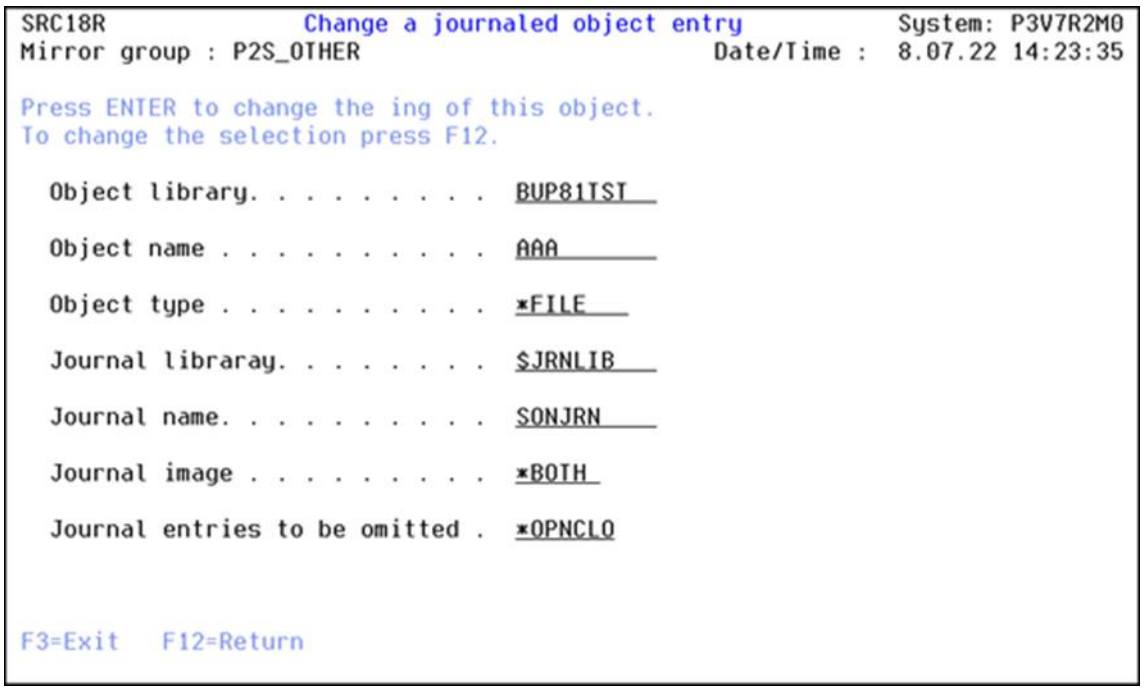
2.5.4.8 Selection 8 - Ignore deviation



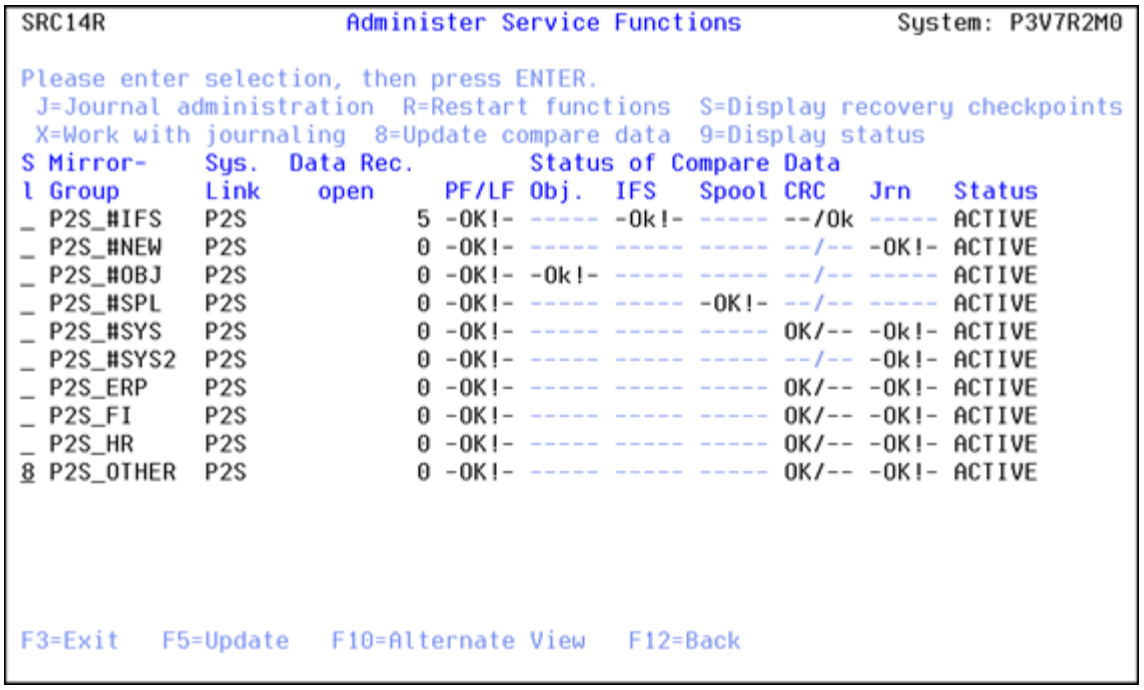
With this selection you can ignore deviations so that they are no longer displayed as errors. These deviations are then also no longer automatically corrected by BUS4i. An ignore flag is set, which can also be removed at any time so that the error reappears.

2.5.4.9 Selection 9 - Change Journal Image



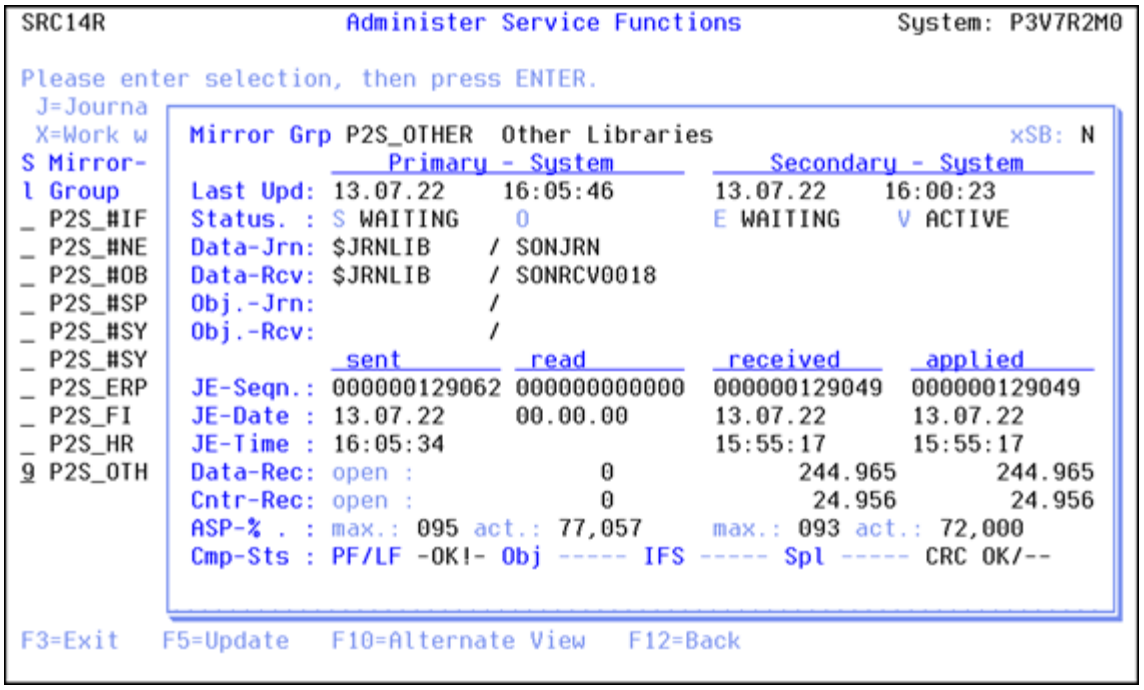
This selection can be chosen only in case of a deviation 5 "other journal image". The journal image which can be *After or *Both will be set to the image of the selected mirror group."

2.5.5 Selection 8 - Update comparison data



With this selection, the display of the comparison data is updated and entered according to the current status. In addition, the comparison data of the secondary system are also fetched and the status updated.

2.5.6 Selection 9 - Display status



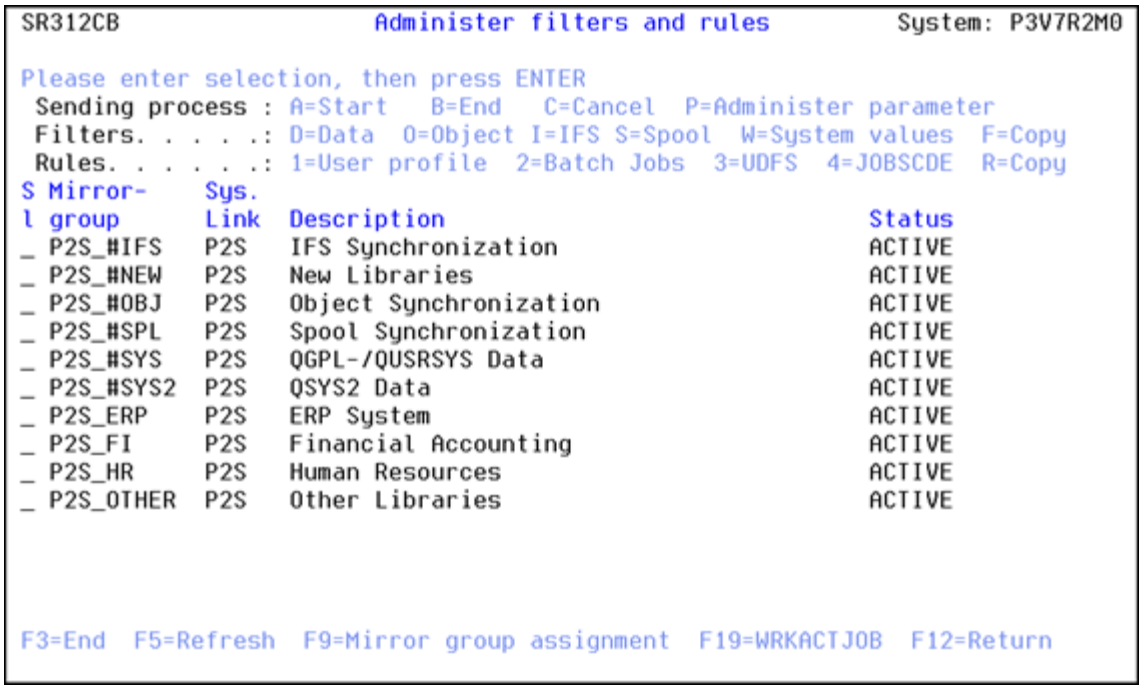
In "Manage send processes" as well as in "Manage mirror groups" or "Service functions", the overall status of a mirror group can be displayed on both the primary and the secondary system via selection 9. Among other things, the journal and the journal receiver for the mirror group are displayed, taking into account the number of records processed. In addition, the ASP occupancy can be checked.

The bottom line displays the status of deviations between production and backup system. This display informs about errors, warnings, OK's for part files (PF/LF), objects (Obj), IFS objects(IFS) and spool files (Spool).

Detailed information can be displayed on the secondary system by selecting 5=Service functions.

The display "-----" means that no information is available in this mirror group for the respective object type.

2.6 Main menu selection 6 - Administer filters and rules



With this selection list, the user can make mirror group changes to the filters and rules of the mirror group. Furthermore, the mirror groups can be started, stopped, canceled or the corresponding control parameters can be changed.

A separate library is created for each mirror group, which contains all objects that cannot be used across applications.

The following options are available for **mirror group management:**

Selection

In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

Sending processes:

Selection A - Start

This selection option starts both the sending process on the primary system and the receiving process on the secondary system (as described for selection 1) and the processing process on the secondary system.

Selection B - Exit

With this selection option, an "END control record" is added at the end in the journal receiver. The send process transmits the database changes, object changes up to this "END control record". After that, both the send process on the primary system and the receive process and the processing process on the secondary system are terminated.

Selection C - Cancel

With this selection option, the send process on the primary system is aborted abnormally via the ENDJOB *IMMED command.

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Selection P - Manage parameters
This selection option can be used to change application-specific control parameters.

Filters:

Selection D - Manage mirror group data filters
This selection option can be used to manage the data objects of a mirror group whose changes are to be tracked on the secondary system.

Selection O - Manage objects
This selection option can be used to manage the objects that are to be synchronized on the secondary system.

Selection I - Manage IFS file filters
This selection option can be used to manage the IFS files that are to be synchronized on the secondary system. It is possible to enter selected folders.

Selection S - Manage spool filters
This selection option can be used to manage the spool files to be synchronized on the secondary system.

Selection W - Manage system value filter
This selection option can be used to manage the system values to be synchronized on the secondary system.

Selection F - Copy filter
This selection copies all filters to another mirror group, thus deleting the filters of the other mirror group and replacing them with the filters of the previously selected mirror group.

Rules:

Selection 1 - User profiles
If user profiles are to be deactivated on the secondary system, this selection can be used to define which state they are to assume on the secondary system.

Selection 2 - Stack jobs
This selection is used to set up the filter with the inclusions and exclusions for the batch jobs (JOBQ), thus selecting which JOBQs are mirrored to the secondary system and which are not.

Selection 3 - UDFS
With this selection, user-defined file systems can be entered and via which directory they are attached.

Selection 4 - JOBSCDE
If the JOB scheduler is mirrored, this selection can be used to define which status the job schedule entry should have on the secondary system.

Selection R - Copy rules
This selection copies all rules to another mirror group, thus deleting the rules of the other mirror group and replacing them with the rules of the previously selected mirror group.

The following command keys are valid on the current mask:

F9=Manage default mirror group assignment
In this view, generic library names can be assigned to mirror groups so that newly created libraries matching the generic name are automatically recorded in the correct mirror group.

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F19=WRKACTJOB
This command key calls the WRKACTJOB (Work Active Job) command with the Subsystem (BUS4i) parameter.

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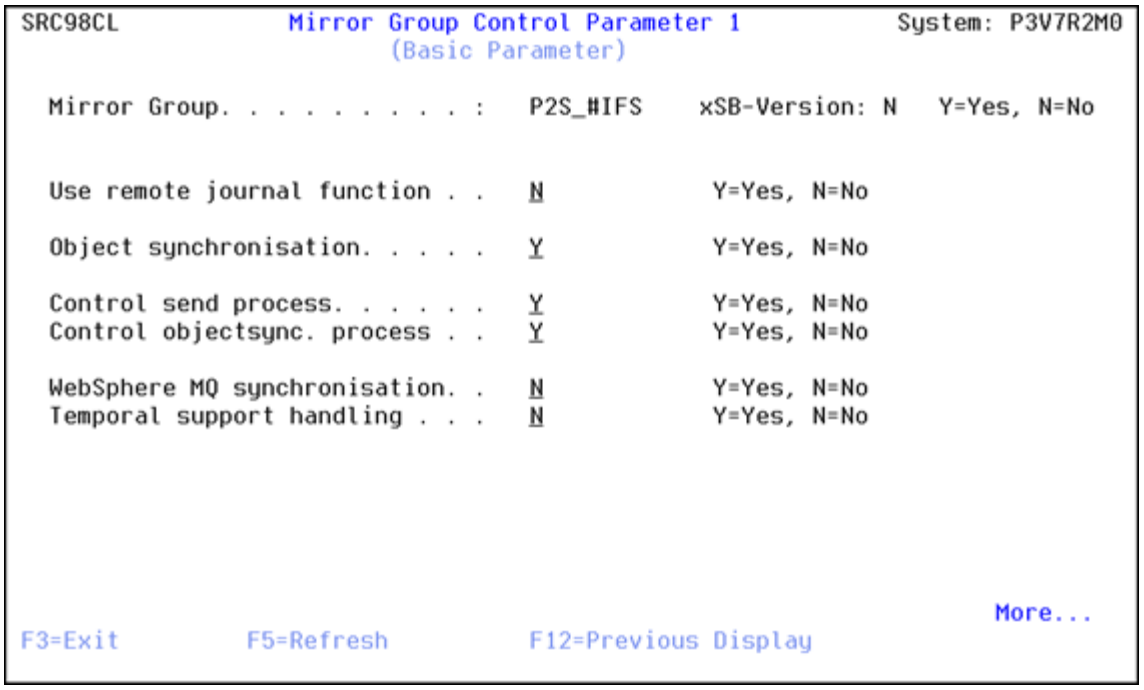
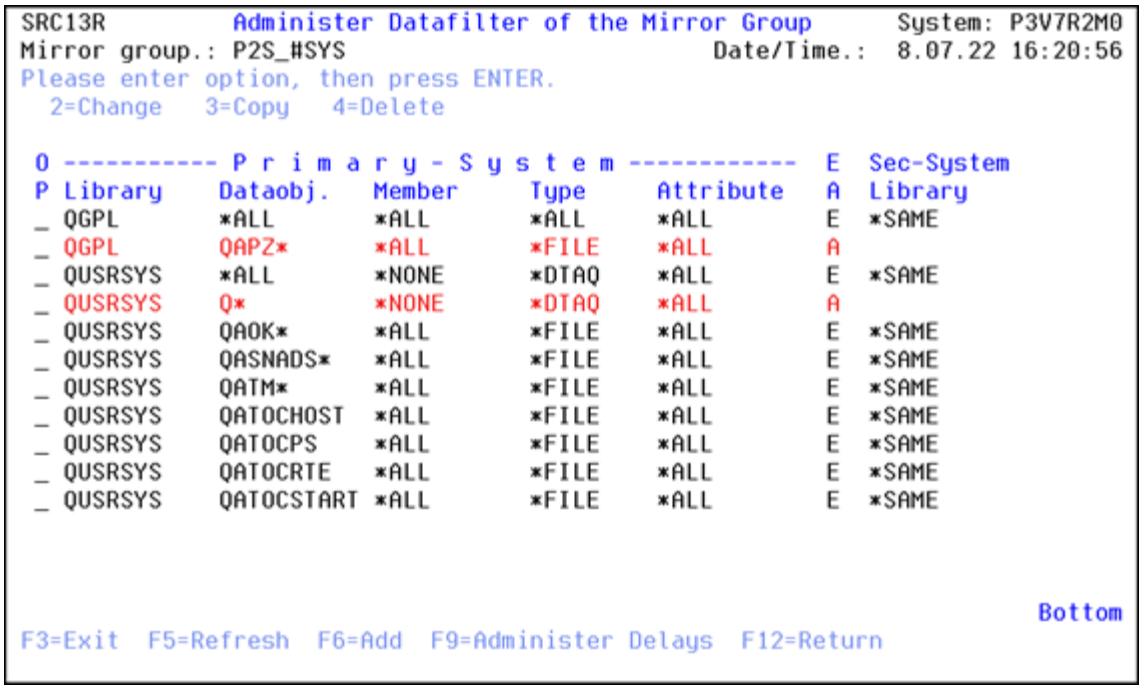
2.6.1 Selection P - Manage parameters



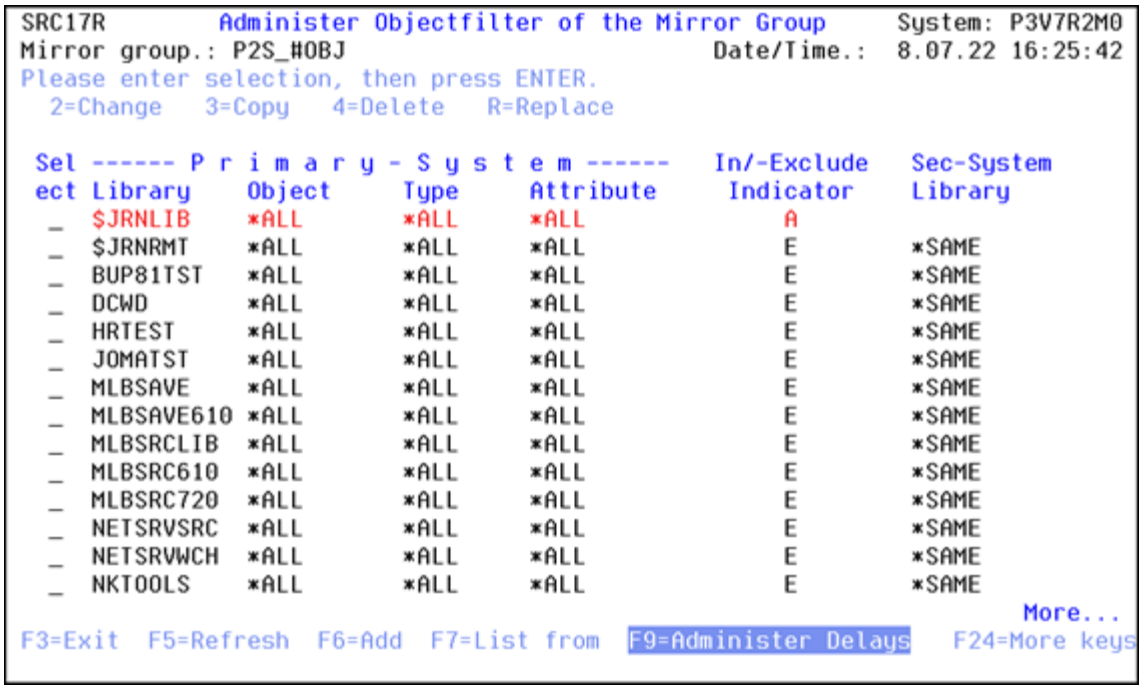
This selection opens a new screen where the mirror group parameters can be changed. This function is the same as in 1.1.4.2 Selection 2 - Change mirror groups, a detailed description can be found there.

2.6.2 Selection D - Data



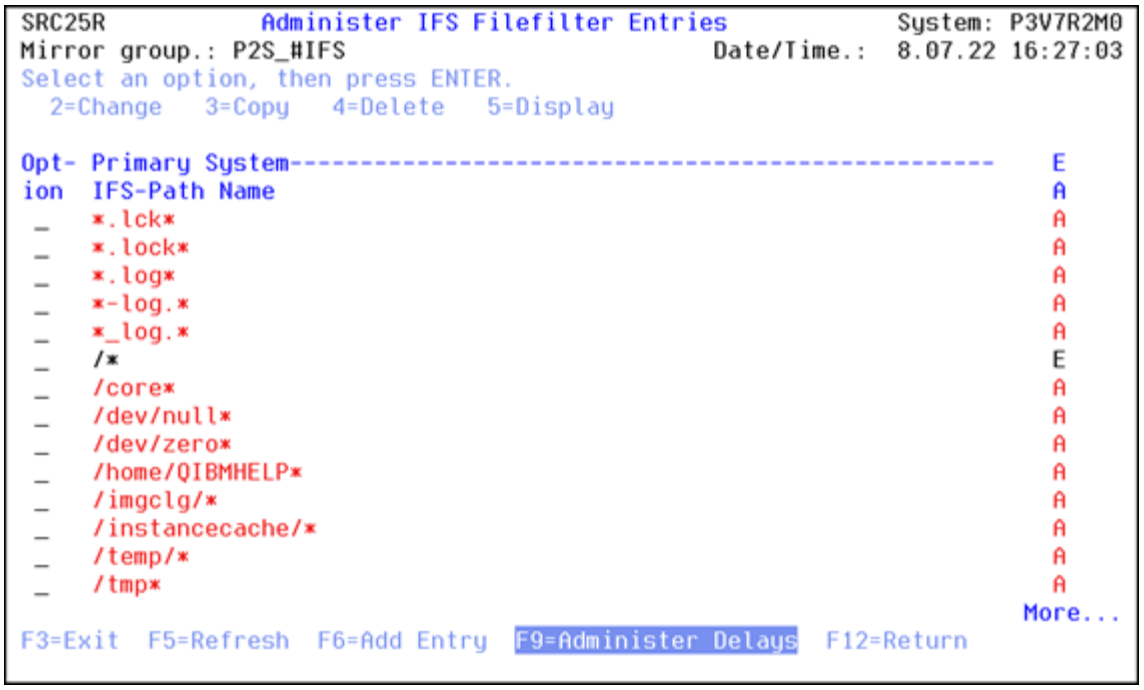
Here the data filter of the mirror group can be viewed and changed. For a detailed description see 1.1.4.10 Selection D - Manage mirror group data filter.

2.6.3 Selection O - Object



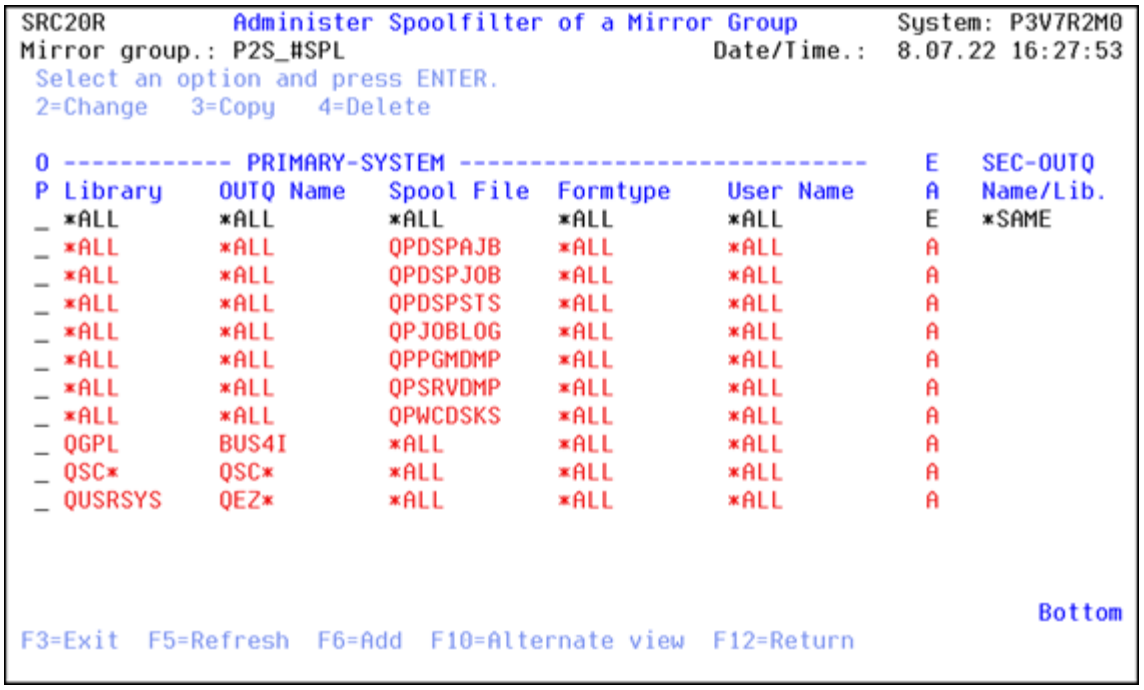
Under this point the object filter of the mirror group can be managed. The object filter is displayed and can be changed here, a detailed description of this can be found under point 1.1.4.11 Selection O - Manage object filter of the mirror group.

2.6.4 Selection I - IFS



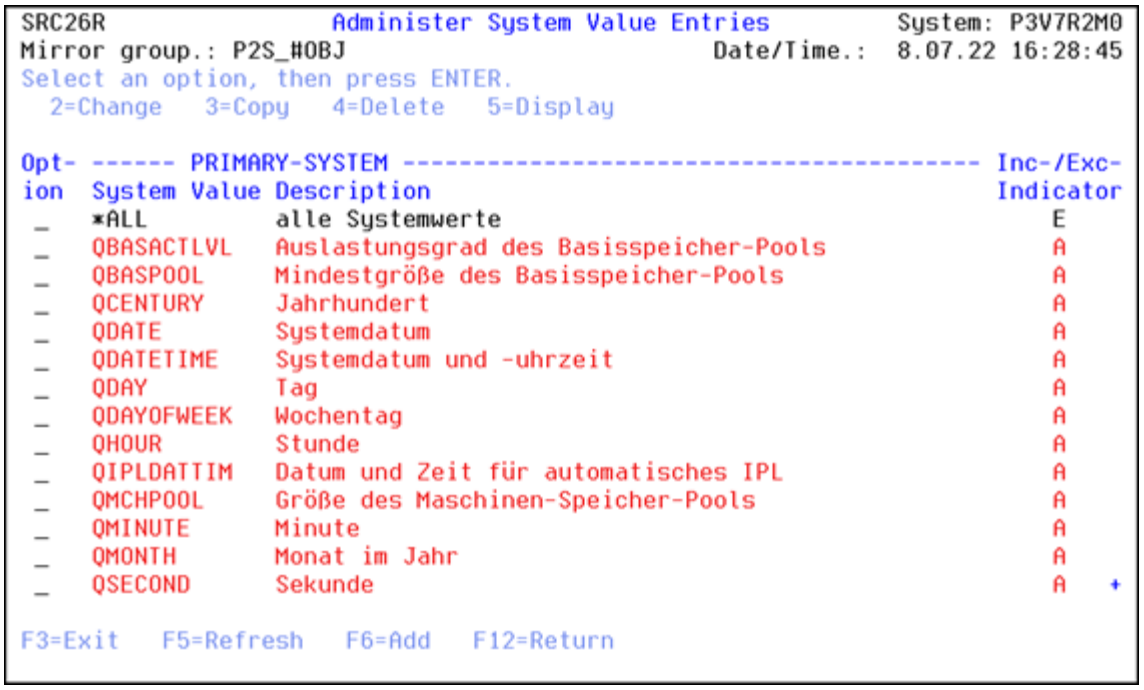
The IFS file filter can be changed and displayed with this selection. This is described in more detail at the following location, 1.1.4.13 Selection I - Manage IFS File Filter.

2.6.5 Selection S - Spool



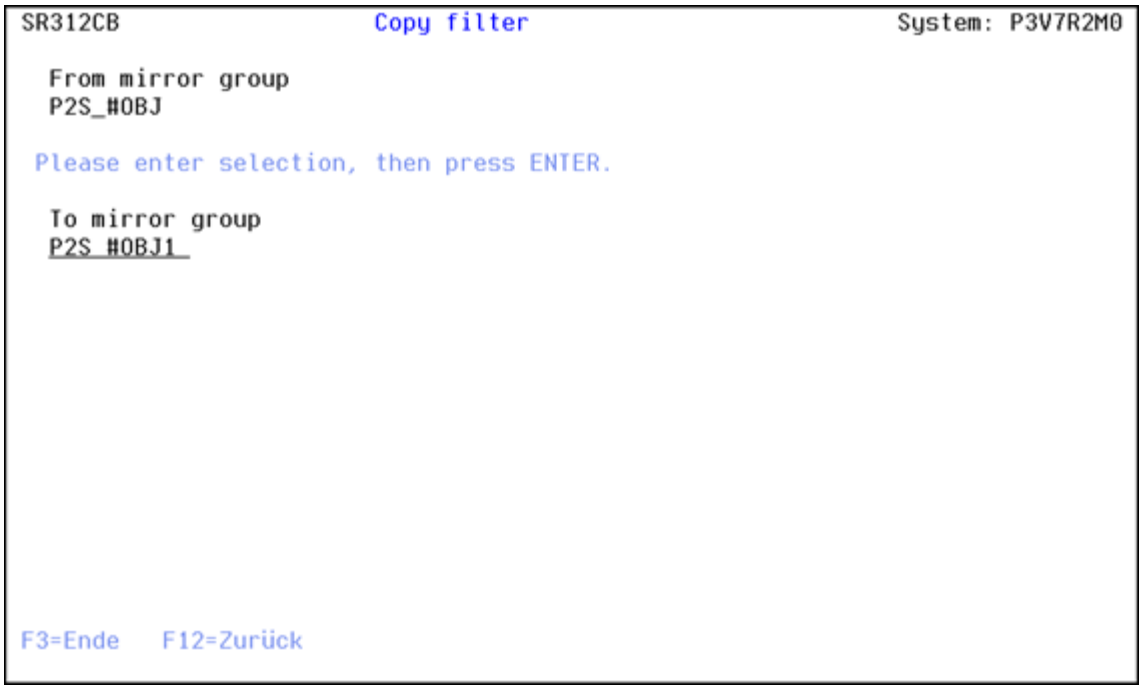
The selection opens the spool filter, which is then displayed and can be changed. For an additional description, see 1.1.4.12 Selection S - Manage spool filter of mirror group.

2.6.6 Selection W - System values



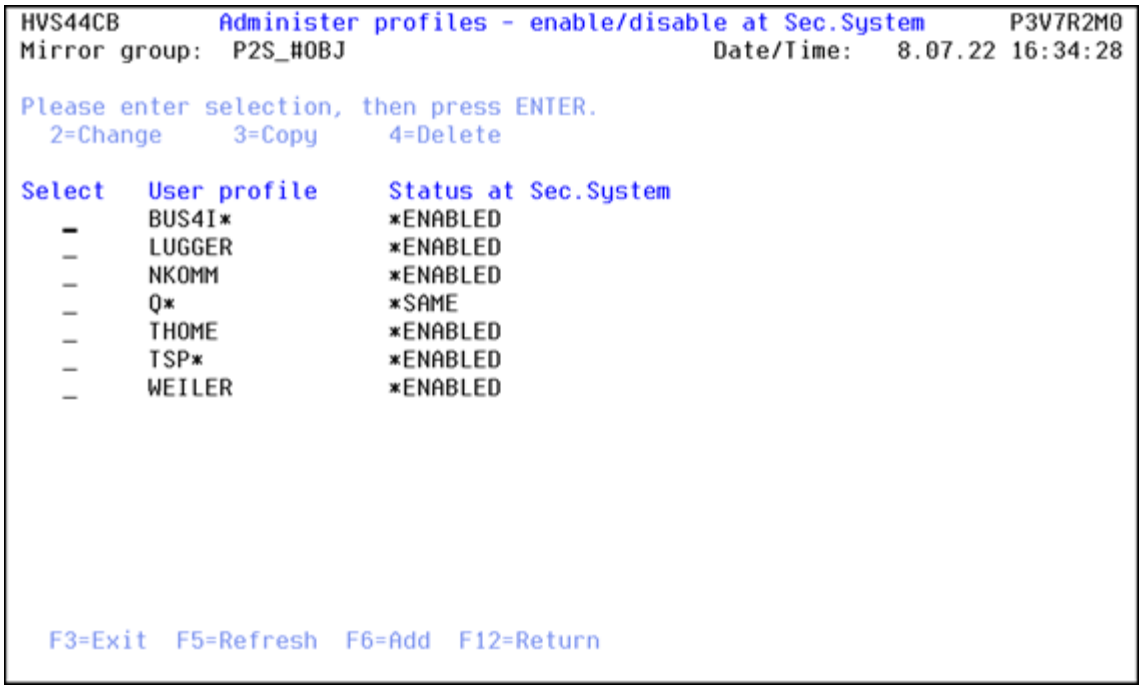
This opens a view that displays the system value filter. The system value filter entries can be changed and new ones can be added. See section 1.1.4.14 Selection W - Manage system value filter for a more detailed description of the view.

2.6.7 Selection F - Copy filter



Press "F" to select the mirror group from which the filters are to be copied to another mirror group. A view opens in which the selected mirror group is displayed. In an additional field you can then enter the mirror group to which the filters are to be copied.

2.6.8 Selection 1 - User profiles



The status of the user profiles on the secondary system can be managed here. Only if the "Deactivate user profiles remotely" option is set to "Y" in the mirror group parameters can this view be called up. Entries can be added, changed or removed. Users entered here with "*ENABLED" are activated on the secondary system, users entered with *DISABLED are deactivated, the remaining users that do not appear here are also deactivated.

The following valid input fields are available to the user:

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items are in the list. When entering an option that is not allowed, an error message appears on the screen.

The following options are possible for the implementation:

Selection 2 - Change
With the selection 2 one can edit already existing entries. When editing, only the status of the user profile can be changed.

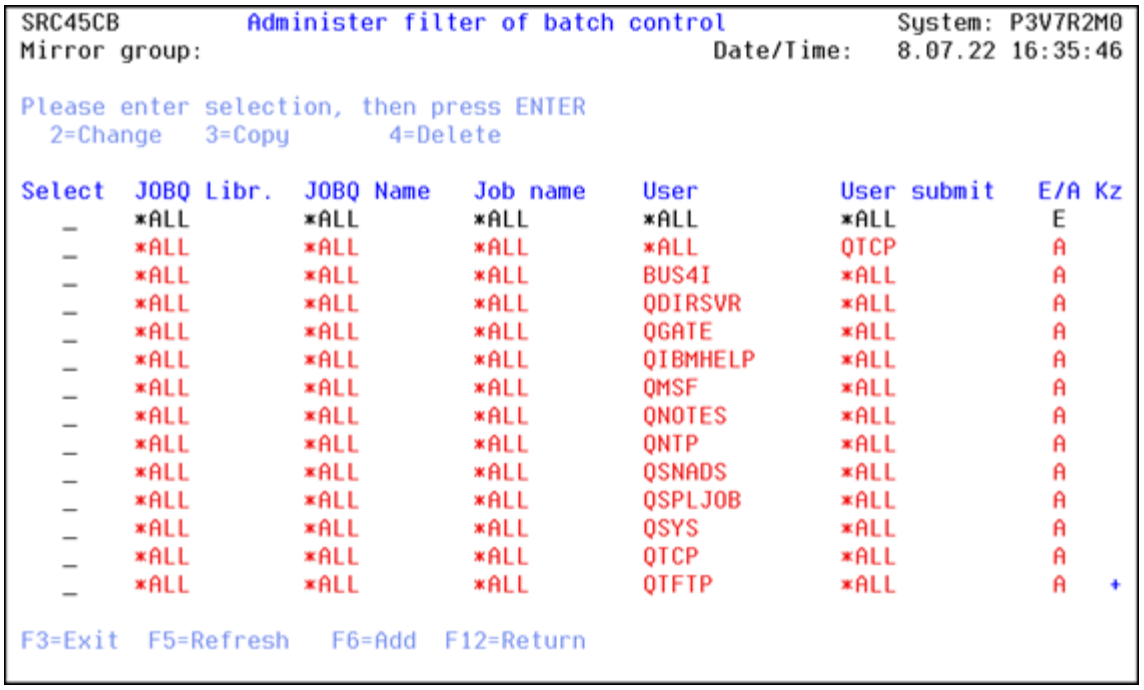
Selection 3 - Copy
With selection 3 the entry is copied and the parameters like user name and status are preset with the copied values.

Selection 4 - Delete
Selecting 4 deletes the selected entry from the list, thus deactivating the user on the secondary system.

The following command keys are valid on the current mask:

F6=Add
This command button opens a new view with which a user can be added to the list and assigned a status.

2.6.9 Selection 2 - Batch jobs



```
SRC45CB          Administer filter of batch control              System: P3V7R2M0
Mirror group:                                          Date/Time:   8.07.22 16:35:46

Please enter selection, then press ENTER
  2=Change   3=Copy       4=Delete

Select  JOBQ Libr.  JOBQ Name   Job name    User         User submit   E/A Kz
   _    *ALL        *ALL        *ALL        *ALL         *ALL           E
   _    *ALL        *ALL        *ALL        *ALL         QTCP           A
   _    *ALL        *ALL        *ALL        BUS4I        *ALL           A
   _    *ALL        *ALL        *ALL        QDIRSVR      *ALL           A
   _    *ALL        *ALL        *ALL        QGATE        *ALL           A
   _    *ALL        *ALL        *ALL        QIBMHELP     *ALL           A
   _    *ALL        *ALL        *ALL        QMSF         *ALL           A
   _    *ALL        *ALL        *ALL        QNOTES       *ALL           A
   _    *ALL        *ALL        *ALL        QNTP         *ALL           A
   _    *ALL        *ALL        *ALL        QSNADS       *ALL           A
   _    *ALL        *ALL        *ALL        QSPLJOB      *ALL           A
   _    *ALL        *ALL        *ALL        QSYS         *ALL           A
   _    *ALL        *ALL        *ALL        QTCP         *ALL           A
   _    *ALL        *ALL        *ALL        QTFTP        *ALL           A   +

F3=Exit  F5=Refresh   F6=Add  F12=Return
```

In this view, the filters for the batch jobs (JOBQ), the inclusions and exclusions can be set up, thus selecting which JOBQs are mirrored to the secondary system and which are not.

The following valid input fields are available to the user:

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items are in the list. When entering an option that is not allowed, an error message appears on the screen.

The following options are possible for the implementation:

Selection 2 - Change
With selection 2 you can edit already existing entries. When editing, only the inclusion and exclusion Kz of the batch job can be changed.

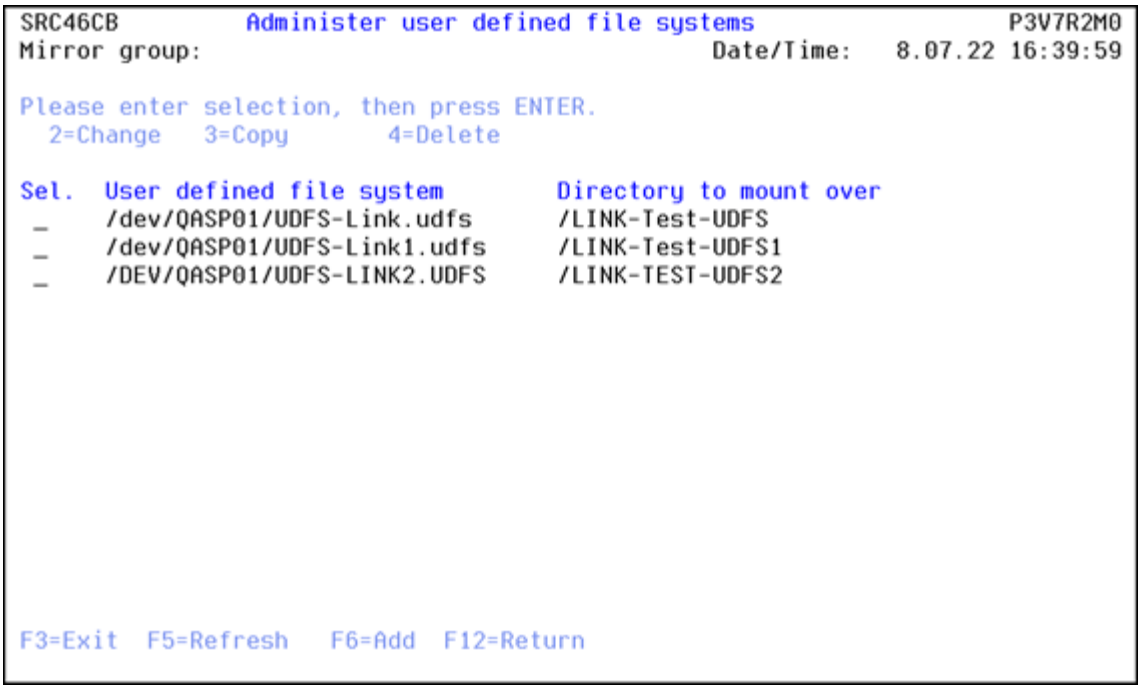
Selection 3 - Copy
With selection 3 the entry is copied and the parameters are preset with the copied values. These can then be changed and saved under a new entry.

Selection 4 - Delete
Selection 4 deletes the selected entry from the list and thus changes what is done with these batch jobs.

The following command keys are valid on the current mask:

F6=Add
This command key opens a new view with which the filters for batch jobs can be created.

2.6.10 Selection 3 - UDFS



User-defined file systems must be entered in this view. The assignment of the file system to a directory in the IFS is recorded here so that BUS4i registers this directory as a UDFS.

The following valid input fields are available to the user:

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items are in the list. When entering an option that is not allowed, an error message appears on the screen.

The following options are possible for the implementation:

Selection 2 - Change
With the selection 2 one can edit already existing entries. When editing, the directory to be attached can be changed, but not the file system.

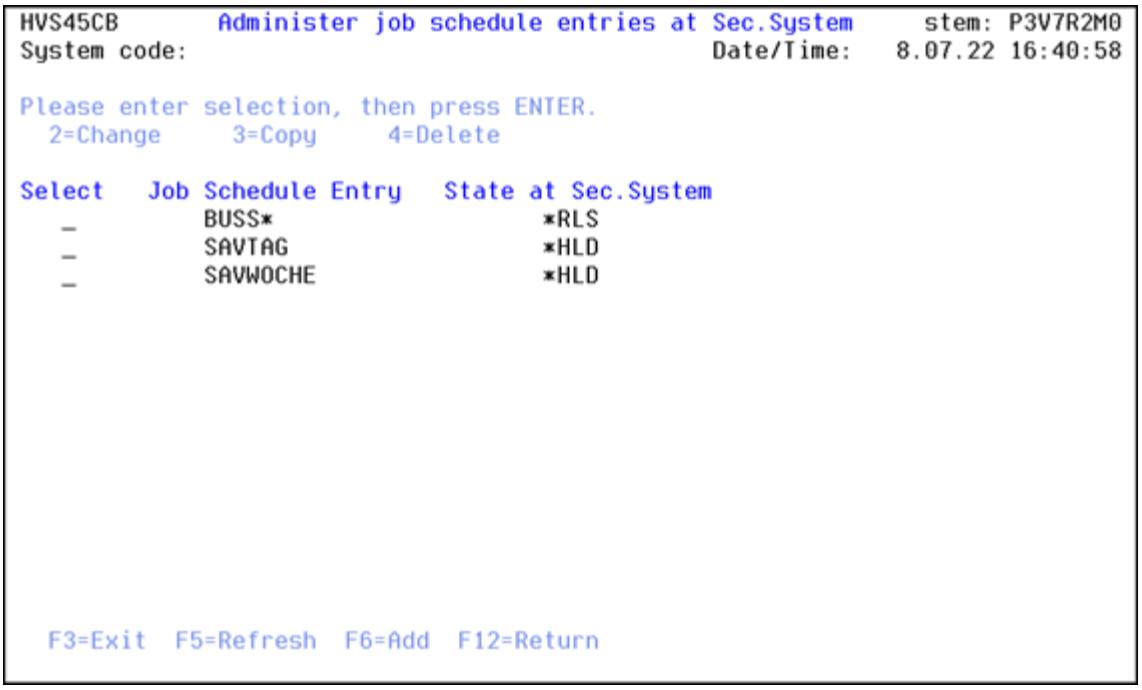
Selection 3 - Copy
With selection 3 the entry is copied and the parameters are preset with the copied values. These can then be changed and saved under a new entry.

Selection 4 - Delete
Selection 4 deletes the selected entry from the list.

The following command keys are valid on the current mask:

F6=Add
This command key opens a new view with which the assignment of a new user-defined file system to a directory can be made.

2.6.11 Selection 4 - JOBSCDE



This view must be used to enter JOB schedule entries that are to have a status other than *HLD on the secondary system.
The following valid input fields are available to the user:

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items are in the list. When entering an option that is not allowed, an error message appears on the screen.

The following options are possible for the implementation:

Selection 2 - Change
With the selection 2 one can edit already existing entries. When editing, the directory to be attached can be changed, but not the file system.

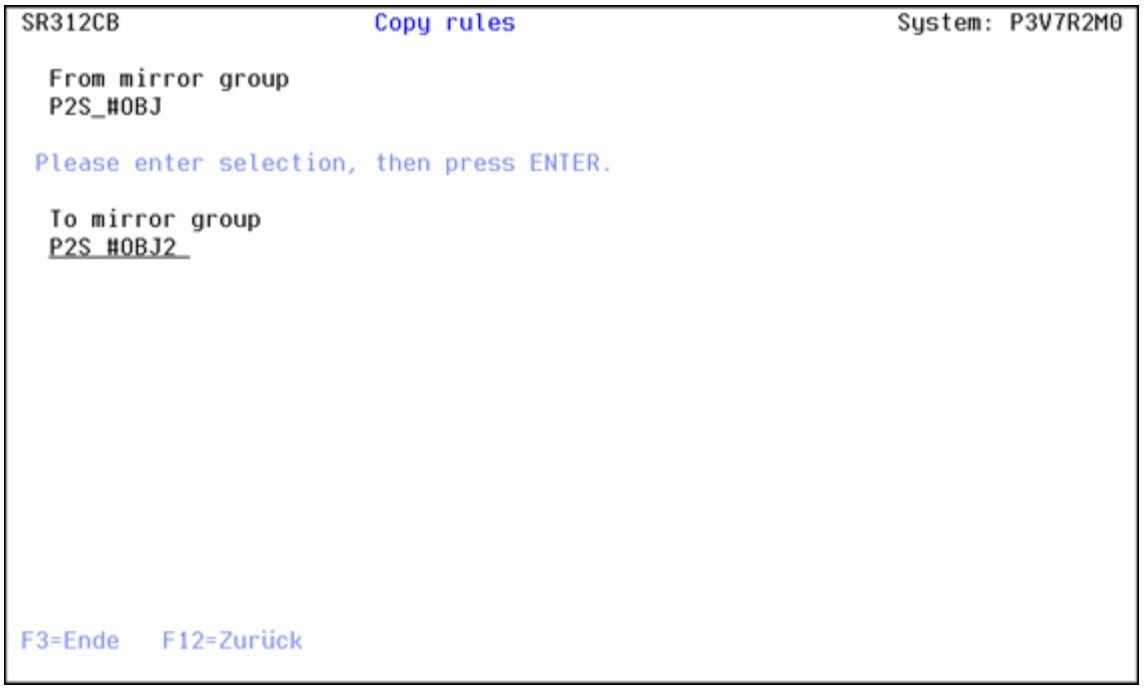
Selection 3 - Copy
With selection 3 the entry is copied and the parameters are preset with the copied values. These can then be changed and saved under a new entry.

Selection 4 - Delete
Selection 4 deletes the selected entry from the list.

The following command keys are valid on the current mask:

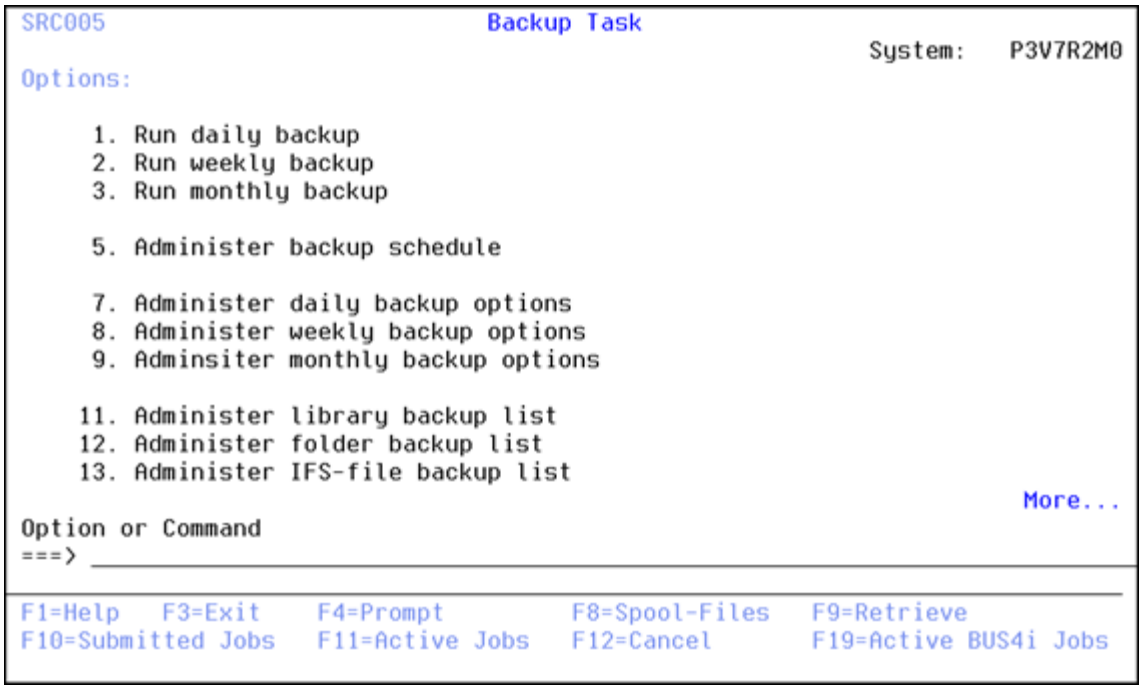
F6=Add
This command key opens a new view with which the assignment of a new user-defined file system to a directory can be made.

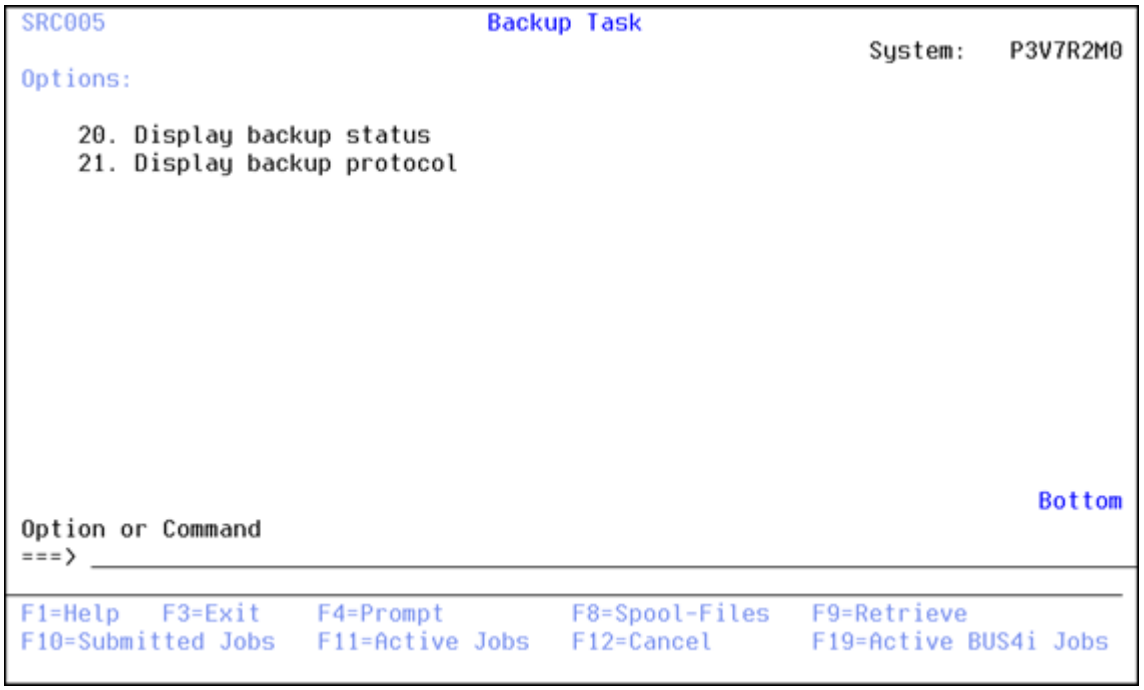
2.6.12 Selection R - Copy



Use "R" to select the mirror group from which the rules are to be copied to another mirror group. A view opens in which the selected mirror group is displayed. In an additional field you can then enter the mirror group to which the rules are to be copied.

2.7 Main menu selection 7 - Backup tasks





This menu item is used to manage the parameters for daily, weekly and monthly backup. Lists can be created for the backup of user libraries, folders and user directories. A backup schedule can be used to specify when and how backups are to be performed.

If it is specified in the backup schedule that the backup is to be executed according to this schedule, the SAVCTLP process is started in the BUS4i subsystem when the HA system is started. The backup is then performed automatically at the specified time.

If the backup schedule specifies that the backup is not to be executed according to this schedule, the backup can be started manually, either via menu items 1, 2, 3 or the BUSSAVE command (enter parameters via F4).
The process SAVDAY, SAVWEEK or SAVMONTH is then started in the BUS4i subsystem, depending on whether daily (SAVDAY) weekly (SAVWEEK) or monthly (SAVMONTH) backups are to be made.

The following menu items can be selected on the screen:

Menu item 1: Perform daily backup
With this menu item the daily backup can be started manually (not by schedule). The backup is executed based on the parameters for the daily backup.

Menu item 2: Perform weekly backup
With this menu item the weekly backup can be started manually (not by schedule). The backup is executed based on the parameters for the weekly backup.

Menu item 3: Perform monthly backup
This menu item can be used to start the monthly backup manually (not by schedule). The backup is executed based on the parameters for the monthly backup.

Menu item 5: Manage backup schedule
This menu item can be used to define whether the backup is to be performed according to schedule. The type of backup and the time can be defined.

Menu item 7: Manage daily backup parameters
With this menu item it is possible to define what-how-where to save.

Menu item 8: Manage weekly backup parameters
With this menu item it is possible to define what-how-where to save.

Menu item 9: Manage parameters of monthly backup
With this menu item it is possible to define what-how-where to save.

Menu item 11: Manage library backup list
A list of libraries can be created and maintained which are saved if 'Save by list' is selected in the parameters under 'Menu item 7/8/9'.

Menu item 12: Manage folder backup list
A list of folders can be created and maintained that will be saved if 'Save by list' is selected in the parameters under 'Menu item 7/8/9'.

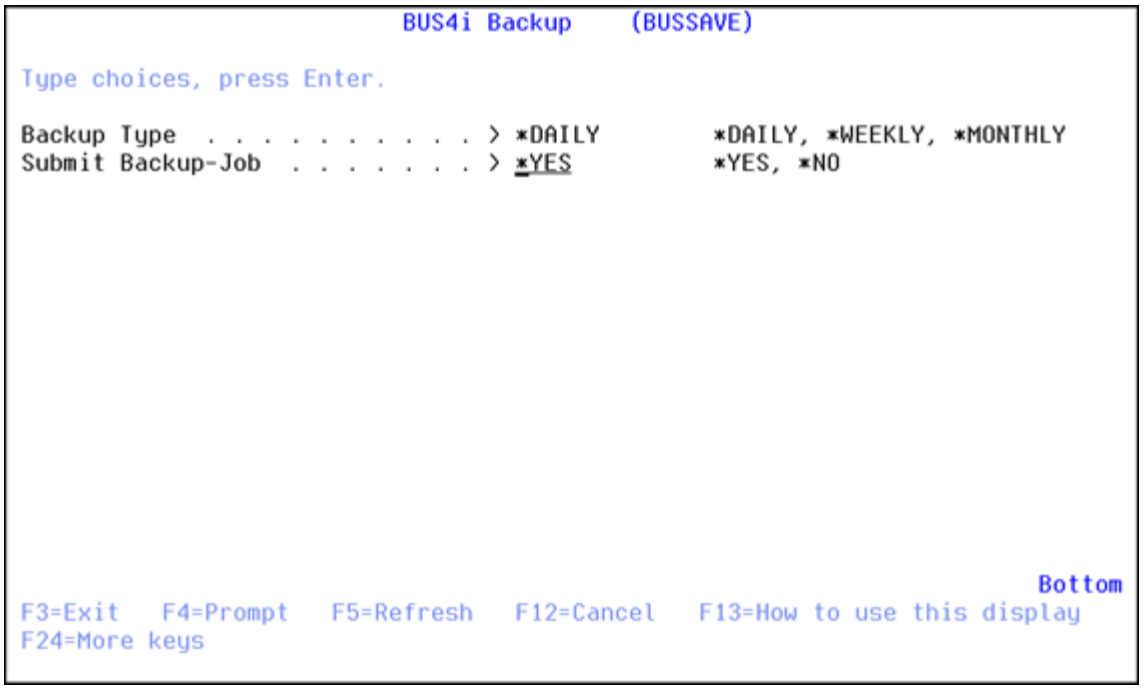
Menu item 13: Manage IFS file backup list
A list of user directories can be created and maintained, which are saved, if 'Save by list' is selected in the parameters under 'Menu item 7/8/9'.

Menu item 20: Display status of backup
This menu item can be used to display the status of executed backups. Backups that are not executed correctly are displayed 'red'.

Menu item 21: Display backup log
With this menu item, one entry is displayed per saved object. The backup type, the time and whether the backup was performed correctly are displayed.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

2.7.1 Menu item 1 - Perform daily backup



This menu item is used to execute the backup with the specifications for the daily backup. A backup file is created in the library defined in the parameters for the daily backup.

The name and number for the backup file are taken from subsequent DTAARA's:
SVDSFNM library for the backup files
SVDSFNMActual backup file name Dmmddnnnnn, D = daily, mm = month, dd = day, nnnnn = number
SVDSFNRLast backup file number nnnnn (5 digits)

The following input field is available to the user:

Start as batch job
Defines whether the backup should be started as a batch job or as an interactive job.

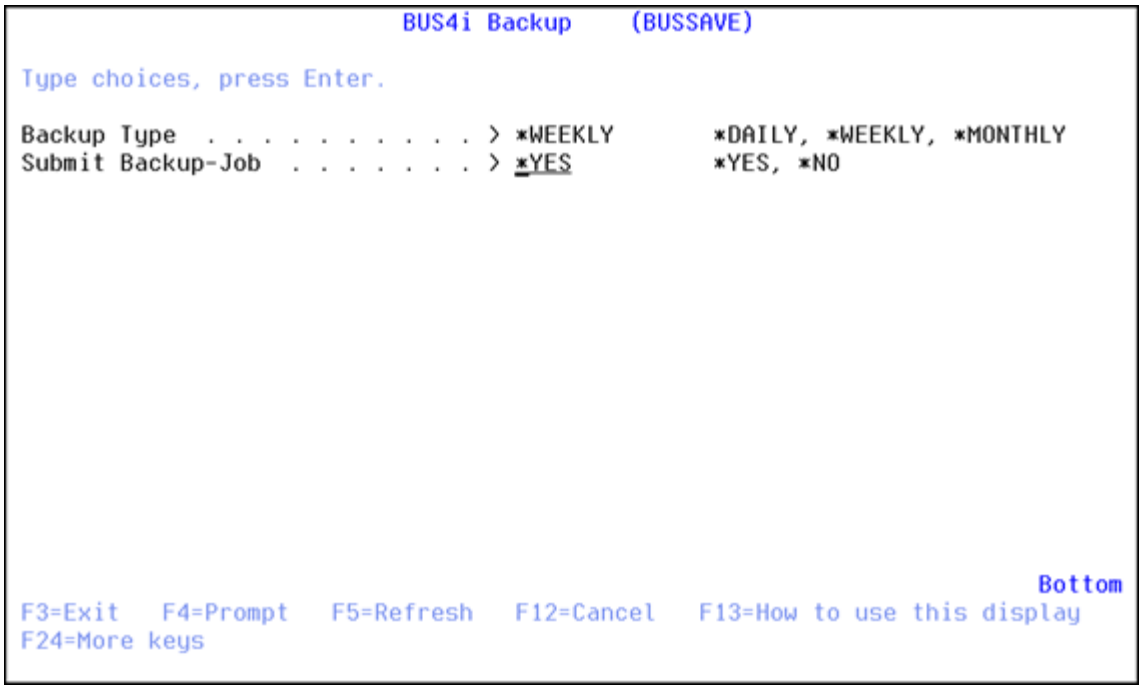
Valid input values for the **Start as batch job** parameter are:

***YES**
The backup is started as a batch job.

***NO**
The backup is started as an interactive job.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

2.7.2 Menu item 2 - Perform weekly backup



This menu item is used to execute the backup with the specifications for the weekly backup. A backup file is created in the library defined in the parameters for the weekly backup.

The name and number for the backup file are taken from subsequent DTAARA's:

SVWSFLB	Library for the backup files
SVWSFNM	Current backup file name Wmmddnnnnn, W = weekly, mm = month, dd = day, nnnnn = number
SVWSFNR	Last backup file number nnnnn (5 digits)

The following input field is available to the user:

Start as batch job
Defines whether the backup should be started as a batch job or as an interactive job.

Valid input values for the **Start as batch job** parameter are:

***YES**
The backup is started as a batch job.

***NO**
The backup is started as an interactive job.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

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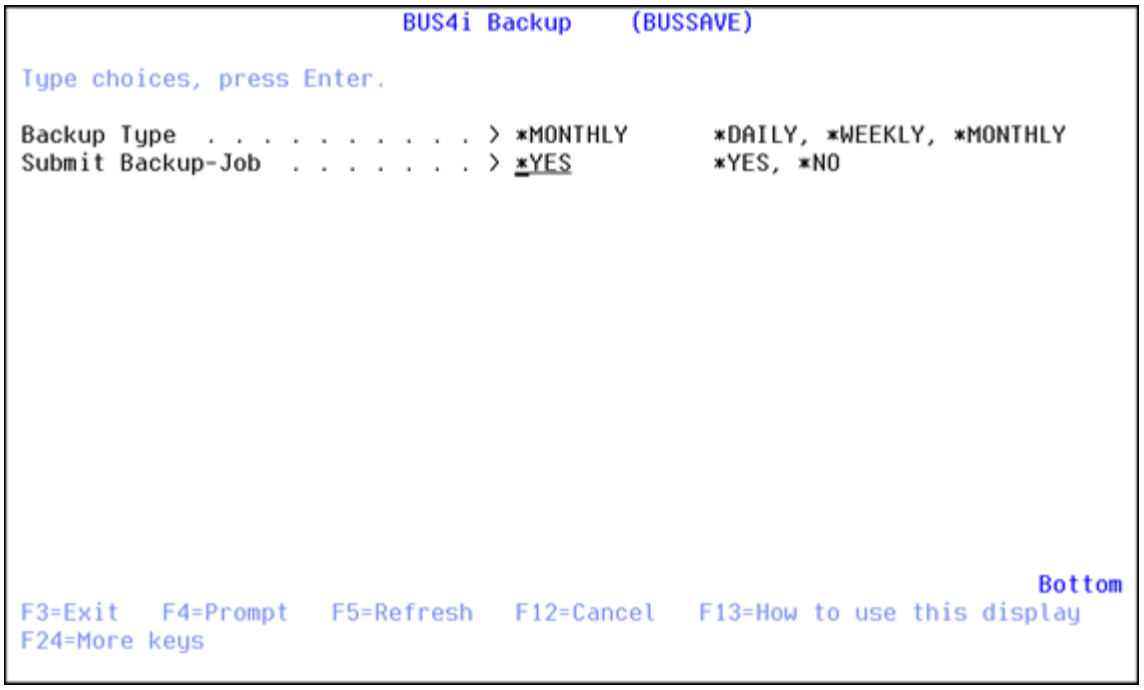
2.7.3 Menu item 3 - Perform monthly backup



This menu item is used to execute the backup with the specifications for the monthly backup. A backup file is created in the library defined in the parameters for the monthly backup.

The name and number for the backup file are taken from subsequent DTAARA's:

SVMSFLB library for the backup files
SVMSFNMActual backup file name Mmmddnnnnn M = monthly, mm = month, dd = day, nnnnn = number
SVMSFNRLast backup file number nnnnn (5 digits)

The following input field is available to the user:

Start as batch job
Defines whether the backup should be started as a batch job or as an interactive job.

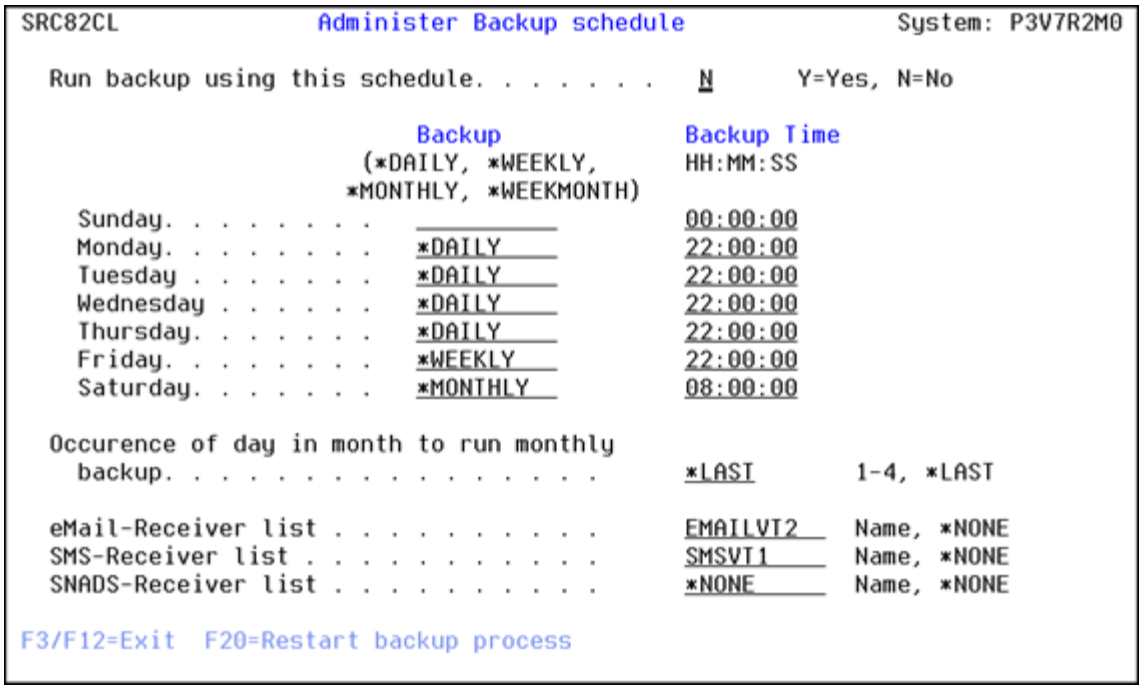
Valid input values for the **Start as batch job** parameter are:

***YES**
The backup is started as a batch job.

***NO**
The backup is started as an interactive job.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

2.7.4 Menu item 5 - Administer backup schedule



The menu contains selections to manage the backup schedule.

In this schedule it is defined whether the backup should be executed according to this schedule. The type of backup and the time can be defined for each day.

If the backup is to be executed according to this plan, the SAVCTLP backup process is automatically started under the BUS4i subsystem.

To be able to stop and start the backup process manually according to the schedule, the commands ENDSAVP (stop backup process) and STRSAVP (start backup process) are available.

If a backup is performed according to the backup schedule, a status record is written for each backup. This can be displayed via menu item 20 "Display backup status".

Perform backup according to this schedule

Defines whether the backup should be performed according to this schedule or not.

Valid values for the **Execute backup according to this schedule** parameter are:

Y = Yes
The backup is executed as specified by this schedule.

N = No
The backup is not executed according to this schedule.

Backup schedule

In this list, you can enter the interval at which the data is to be saved on the respective weekday.

Valid values for the **Fuse** parameter are:

***DAILY**
The backup is performed daily using the daily backup specifications.

***WEEKLY**
The backup is performed weekly using the specifications for the weekly backup.

***MONTHLY**
The backup is made every month using the information for the monthly backup. If this backup type is selected, a value for the week in the month must be specified. The information for monthly backup is used for a specific week in the month (e.g. backup on every first Monday of the month), and the information for weekly backup is used for all other weeks of the month.

Valid values for the parameter **Time of backup** are:

00:00:00 - 23:59:59
The time at which the backup is started must be specified here.

On which day in which week perform monthly backup
Defines in which week of the month the monthly backup should be executed. This value is only observed if *MONTHLY is selected in the backup schedule.

Valid values for the parameter **On which day in which week** to **perform monthly backup:**

1 - 4
With the 1 - 4 this can be selected 1st - 4th week of the month.

***LAST**
With *LAST the backup is always in the last week of the month no matter how many weeks a month has.

eMail distribution list ID
The e-mail distribution list to which the e-mails are sent in the event of an error can be entered here.

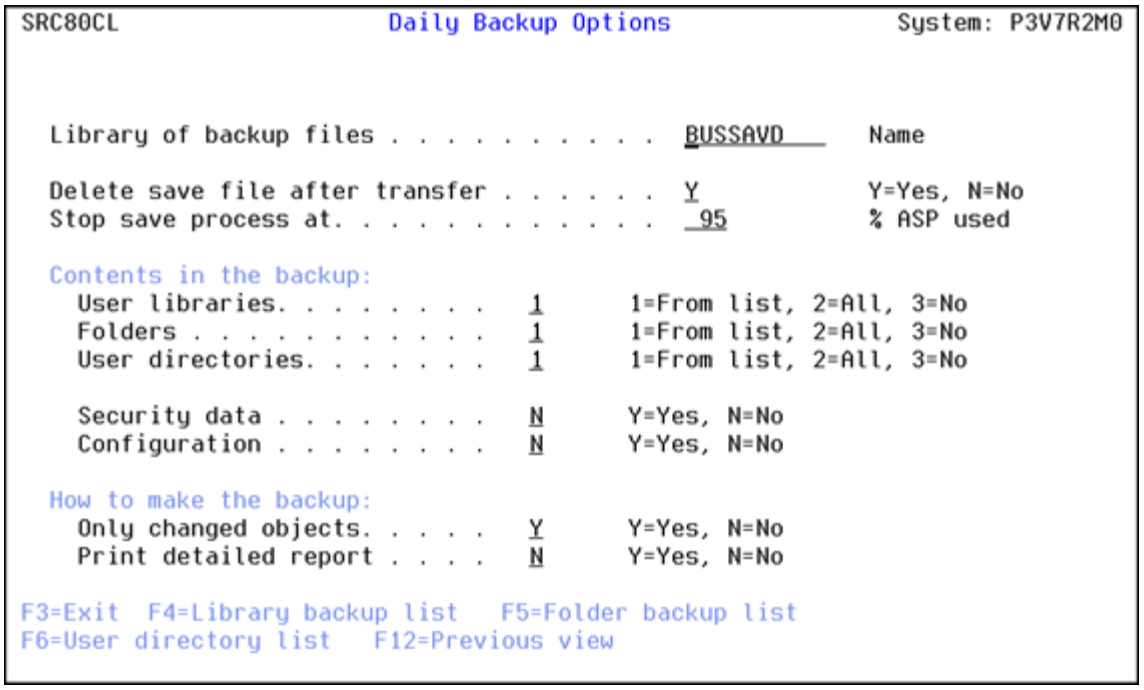
SMS distribution ID
Here you can enter the SMS distribution list to which the SMS will be sent in case of an error.

SNADS distributor ID
Here the SNADS distributor can be entered, to which the messages are sent in case of an error.

Valid command key of the current mask.

F20=Restart backup process
If changes have been made in the schedule, the backup process can be terminated and restarted with F20. The backup is then performed according to the new schedule.

2.7.5 Menu item 7 - Administer daily backup parameters



On this screen the parameters for the daily backup are set.

The following input fields are available to the user:

Backup files library
Specify the name of the library in which the backup files are stored. During object synchronization, this library is then entered in the filter so that the objects are mirrored to the secondary system.

Delete backup files after transfer
Specifies whether to delete the backup files from the library after they have been transferred to the secondary system.

Valid values for the parameter **Delete backup files after transfer** are:

Y = Yes
If the backup file was transferred to the secondary system, the backup file is deleted from the library.

N = No
The backup file is not deleted from the library after transfer to the secondary system.

Stop the backup process at xx% of the ASP allocation
Here you define the percentage of ASP occupancy at which the backup process is aborted to prevent the disk capacity from being reached and it is no longer possible to continue working with the system.

User library
The type of backup for user libraries is specified.

Valid values for the **User library** parameter are:

1 = According to list
The libraries defined in the library backup list are saved.
2 = All
All libraries that are on the system are backed up.

3 = None
No library is saved.

Folder
The type of backup for folders is specified.

Valid values for the **Folder** parameter are:

1 = According to list
The folders defined in the folder backup list will be backed up.

2 = All
All folders located on the system will be backed up.

3 = None
No folder will be saved.

User directories
The type of backup for directories is specified.

Valid values for the **User directories** parameter are:

1 = According to list
The directories defined in the directory backup list are backed up.

2 = All
All directories located on the system are backed up.

3 = None
No directory will be saved.

Safety data
Here it is decided whether the safety data of the system should be saved.

Valid values for the parameter **Safety data** are:

Y = Yes
The safety data such as system values are saved.

N = No
No safety data is backed up.

Configuration
Decides whether the configurations of the different servers should be backed up.

Valid values for the **Configuration** parameter are:

Y = Yes
The configurations are also backed up during the backup.

N = No
The configurations are not taken into account during the backup.

Only changed objects

It is defined whether only changed objects or always all objects should be saved.

Valid values for the "**Only changed objects"** parameter are:

Y = Yes
Only objects that have been changed since the last backup are saved. This saves space but you have to restore from all backups in case of a system failure.

N = No
All objects are always backed up, so the backup takes longer and requires more storage space. However, it is easier to restore data because all files are available on each backup.

Print detail report

A report with the list of saved objects can be printed.

Valid values for the **Print detail report** parameter are:

Y = Yes
The detailed report with a list of saved objects is printed.

N = No
No detailed report will be printed.

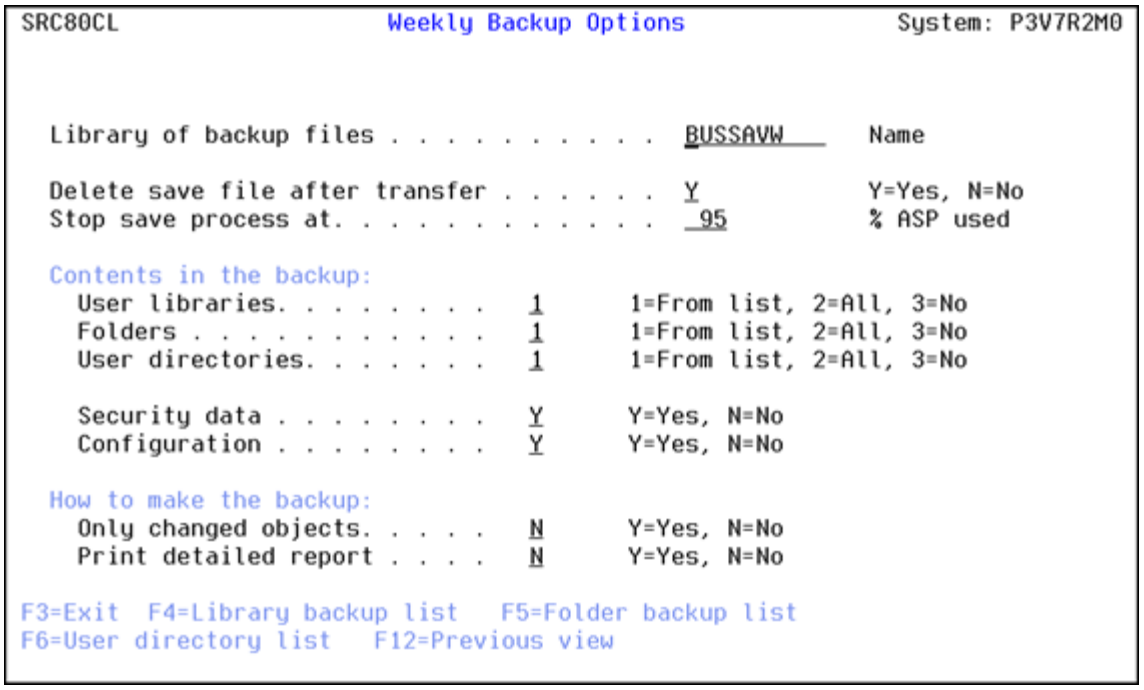
Valid command key of the current mask:

F4=Library backup list
The list of libraries to be saved is displayed. This list can also be managed via menu item 11.

F5=Ordersave list
The list of folders to be backed up is displayed. This list can also be managed via menu item 12.

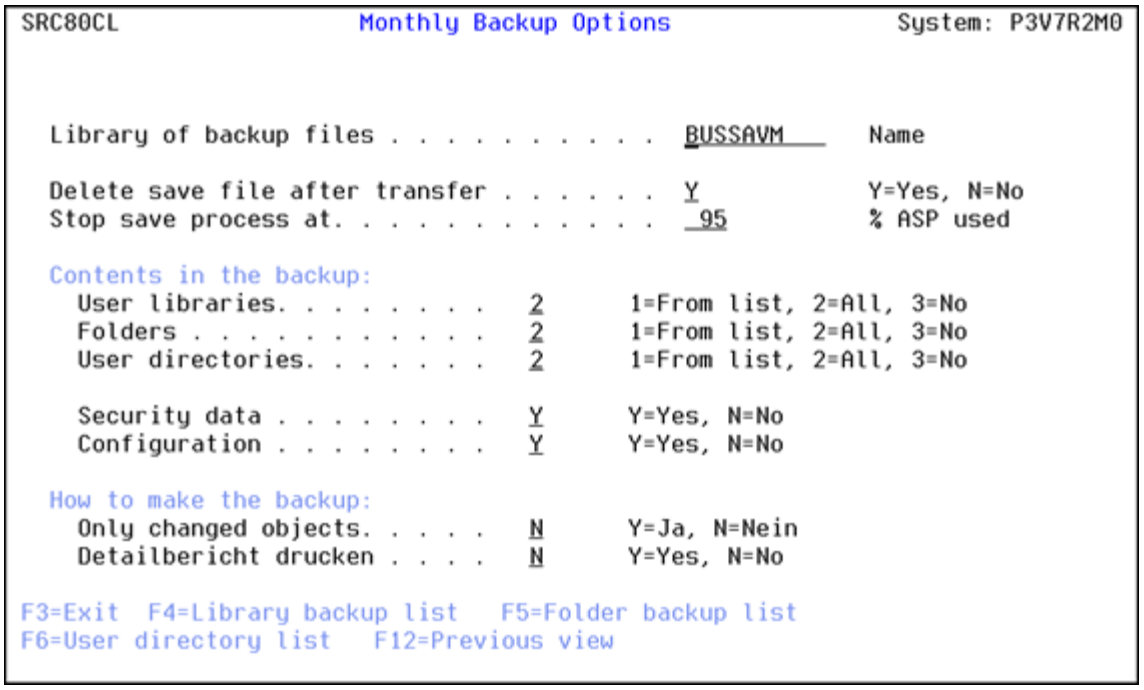
F6=Directory backup list
The list of directories to be backed up is displayed. This list can also be managed via menu item 13.

2.7.6 Menu item 8 - Administer weekly backup parameters



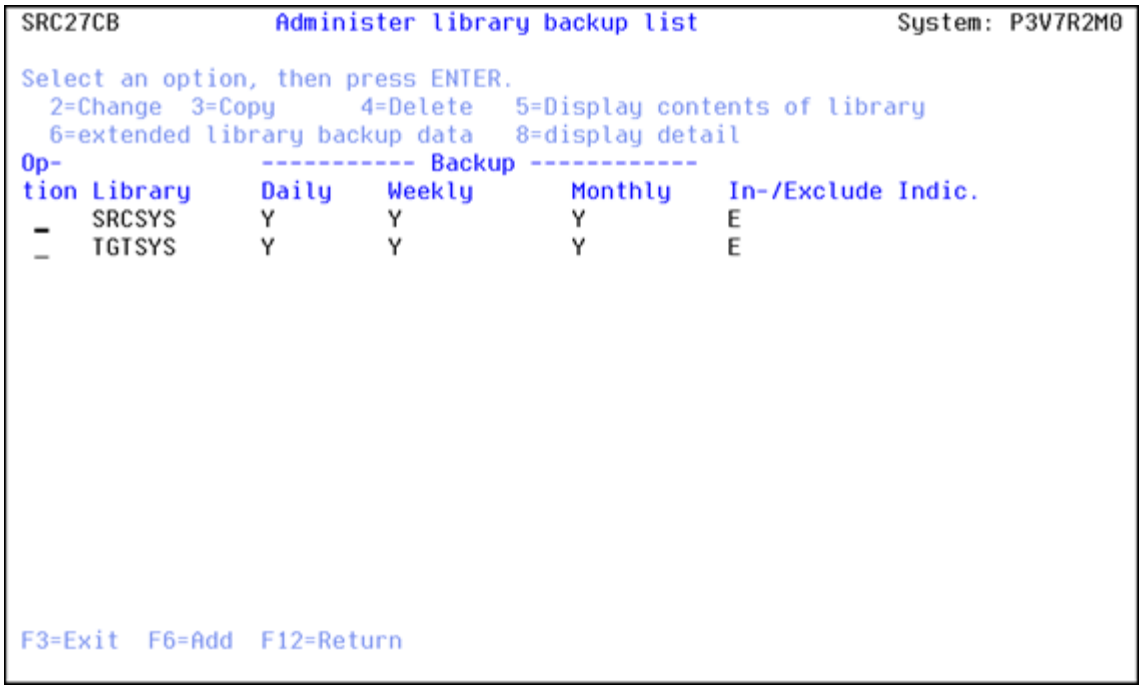
On this screen the parameters for the weekly backup are managed. For a detailed description of the parameters see: Menu item 7 - Manage daily backup parameters

2.7.7 Menu item 9 - Administer parameters of monthly backup



On this screen the parameters for the monthly backup are managed. For a detailed description of the parameters see: Menu item 7 - Manage daily backup parameters

2.7.8 Menu item 11 - Administer library backup list



This mask is used to manage the library backup list. Libraries that are to be saved can be added to this list. Entries from this list can be deleted, copied and changed. Additionally, extended information about the library can be retrieved.

The following input field is available to the user:

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

The following options are available for managing the library backup list:

Selection 2 - Change
This selection option can be used to change the backup parameters for the entry.

Selection 3 - Copy
With this selection option the backup parameters of an entry can be copied to a new entry.

Selection 4 - Delete
With this selection option a library can be deleted from the backup list.

Selection 5 - Display the contents of the library
This selection option can be used to display the contents of a library. This option is not valid for generic names.

Selection 6 - extended library backup data
This selection option displays the backups that have been made for this library. If the backup files have already been deleted, the display is empty.

Selection 8 - Details

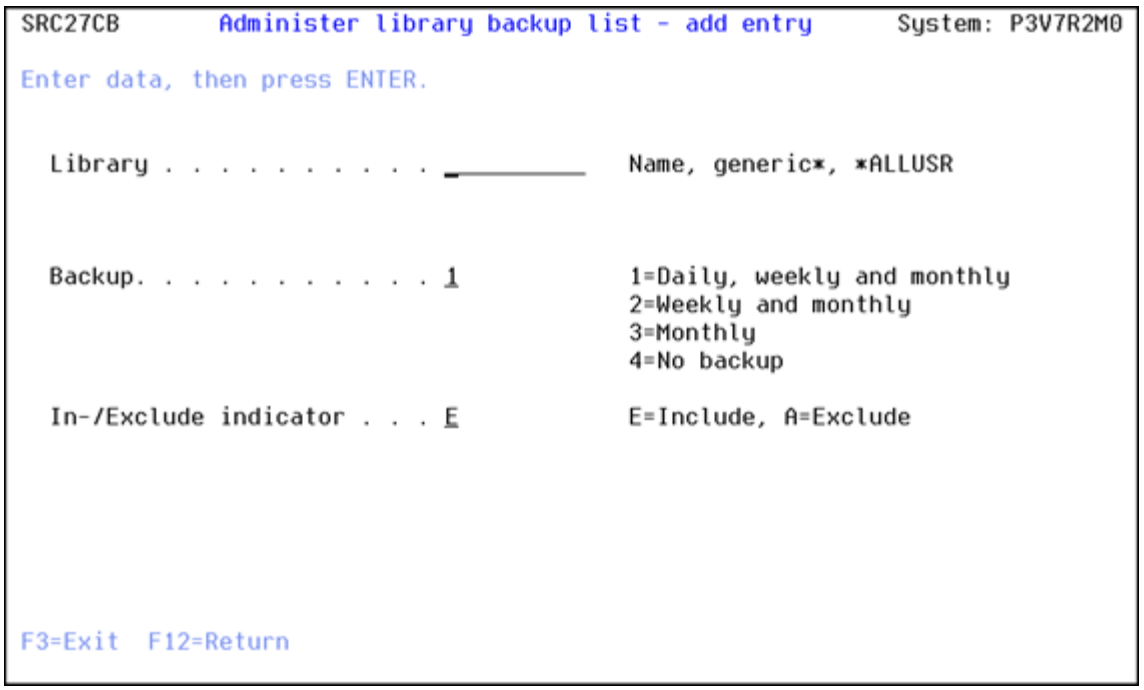
This selection displays the object description of the selected library.

Valid command keys of the current mask:

F6=Add

A new library is added to the list.

2.7.8.1 Command key F6 - Library backup list - Add entry



The F6 command key can be used to add a library to the backup list.

The following input field is available to the user:

Library
Here you can specify the name of a library to be added to the library backup list.

Valid values for the **Library** parameter are:

Name
Enter the name for the library you want to back up.

generic*
Specify the generic name of the library that contains the files to be backed up. A generic name consists of one or more characters followed by an asterisk (*). All libraries whose name has the same prefix as the generic name are used.

***ALLUSR**
Libraries of all users are included in the backup list.

Fuse
Here you specify when the backup should be performed.

Valid values for the **Fuse** parameter are:

1 = Daily, weekly and monthly
The backup is performed daily, weekly and monthly.

2 = Weekly and monthly
Backup is performed only weekly and monthly.

3 = Monthly
The backup is performed monthly.

4 = No fuse
No backup is performed.

Inclusion/exclusion indicator

This flag can be used to control whether the specified library should be included or excluded from the backup process.

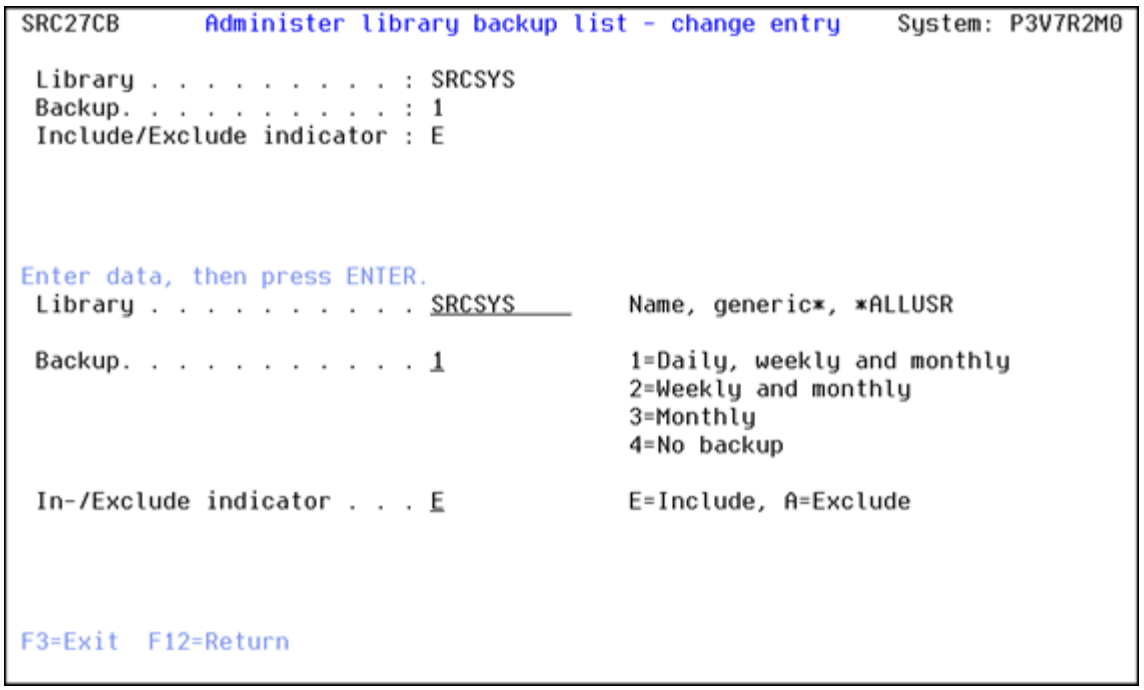
Valid values for the **Include/exclude flag** parameter are:

E = Inclusion
Include library in backup process

A = Exclusion
Exclude library in backup process

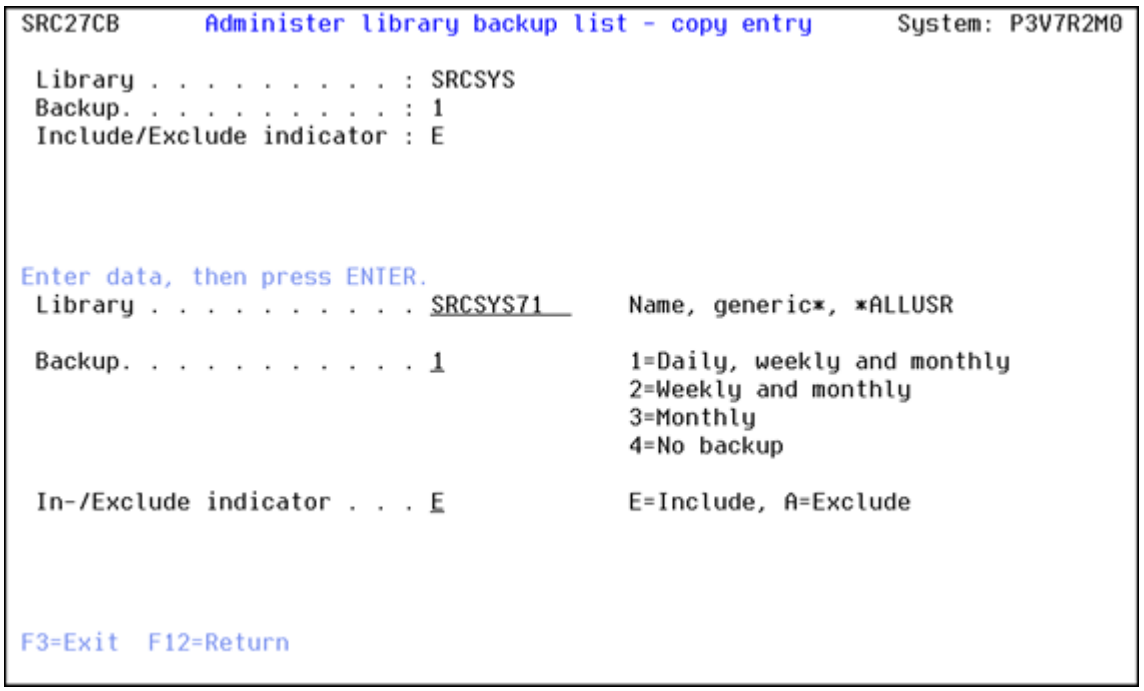
The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

2.7.8.2 Selection 2 - Library backup list - Change entry



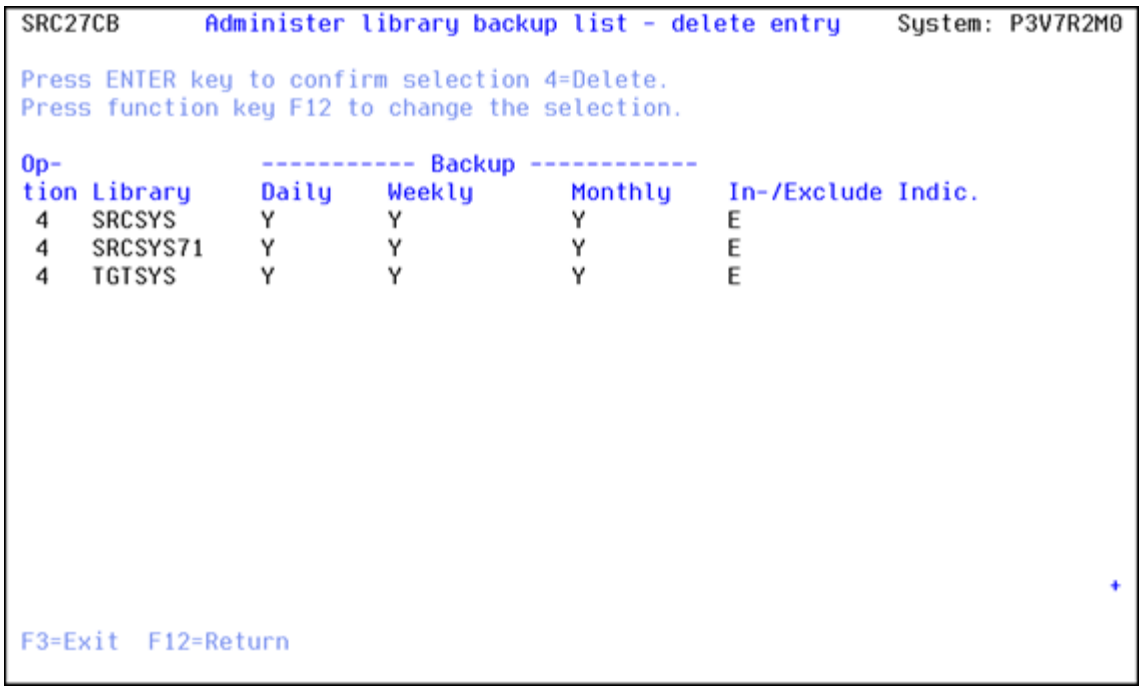
This mask is used to change an entry from the library backup list. For a detailed description of the parameters see: Command key F6 - Library backup list - Add entry.

2.7.8.3 Selection 3 - Library backup list - Copy entry



With this mask an entry can be copied from the library backup list. For a detailed description of the parameters see: Command key F6 - Library backup list - Add entry

2.7.8.4 Selection 4 - Library backup list - Delete entry

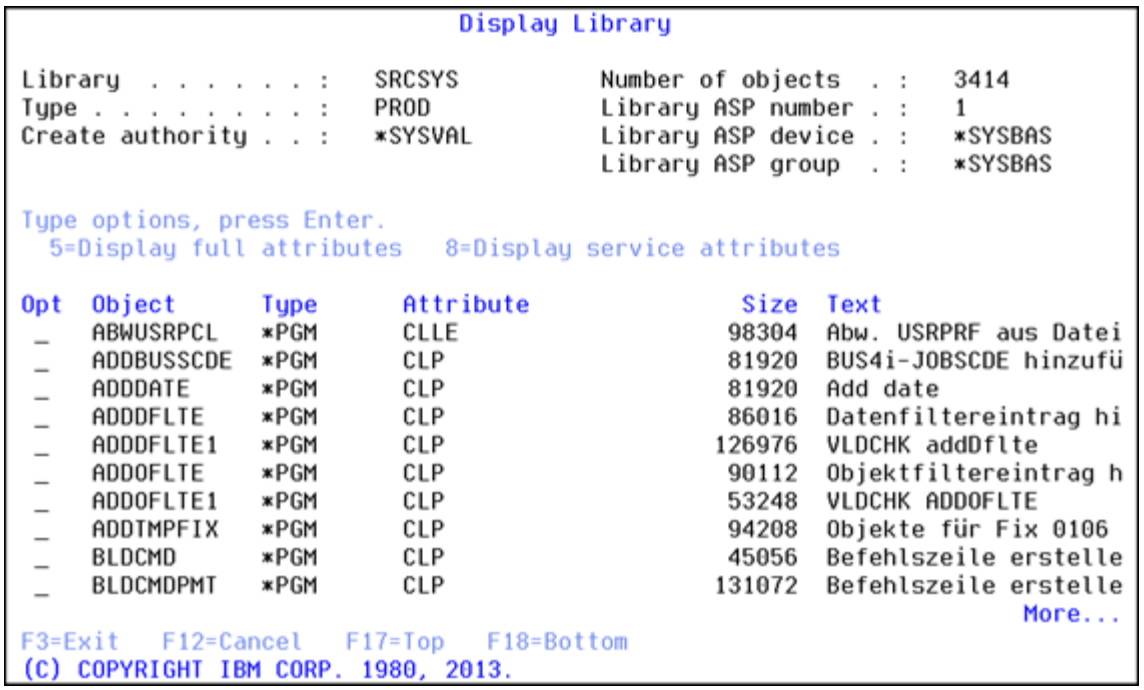


To confirm the deletion of the selected entries you should press the Enter key, this will also delete the entries from the library backup list.

The deletion process can be canceled with F12.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

2.7.8.5 Selection 5 - Display the contents of the library



The names and attributes of the objects in the selected library are displayed.

The following input field is available to the user:

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

The following options are available for managing the library list:

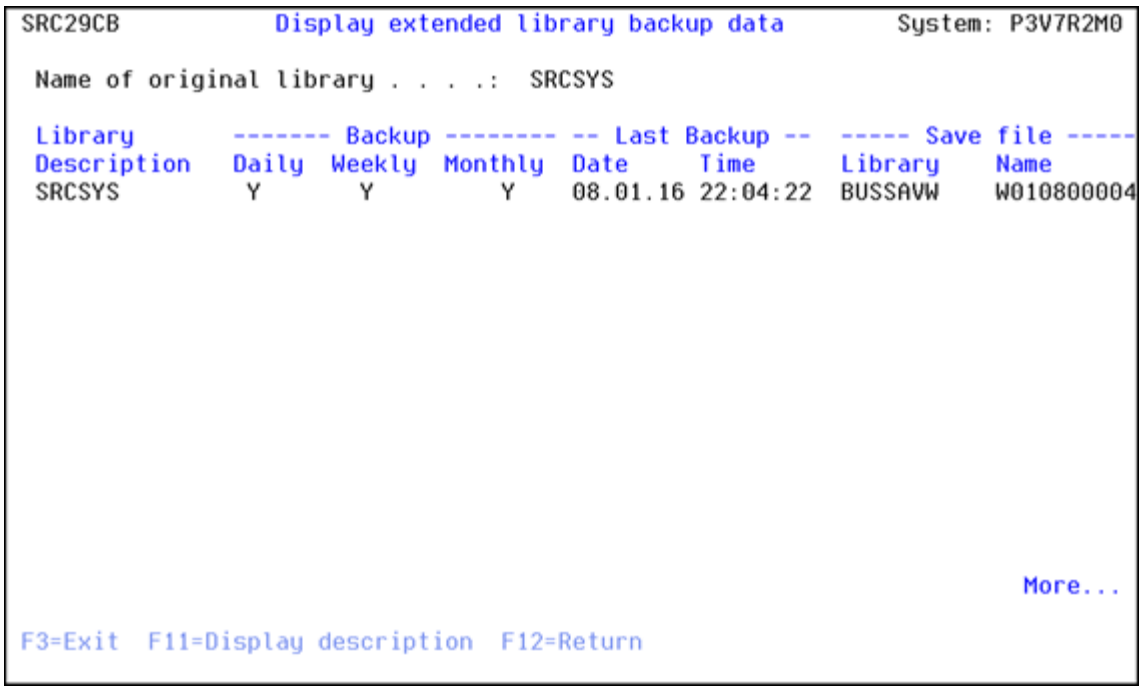
Selection 5 - Show attributes completely
The full description of the selected object is displayed.

Selection 8 - Display service attributes
The maintenance-related attributes of the selected object are displayed.

If "More..." appears at the bottom right of the display, further information is available. Press the Page up key to display the information.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

2.7.8.6 Selection 6 - Show extended library backup data



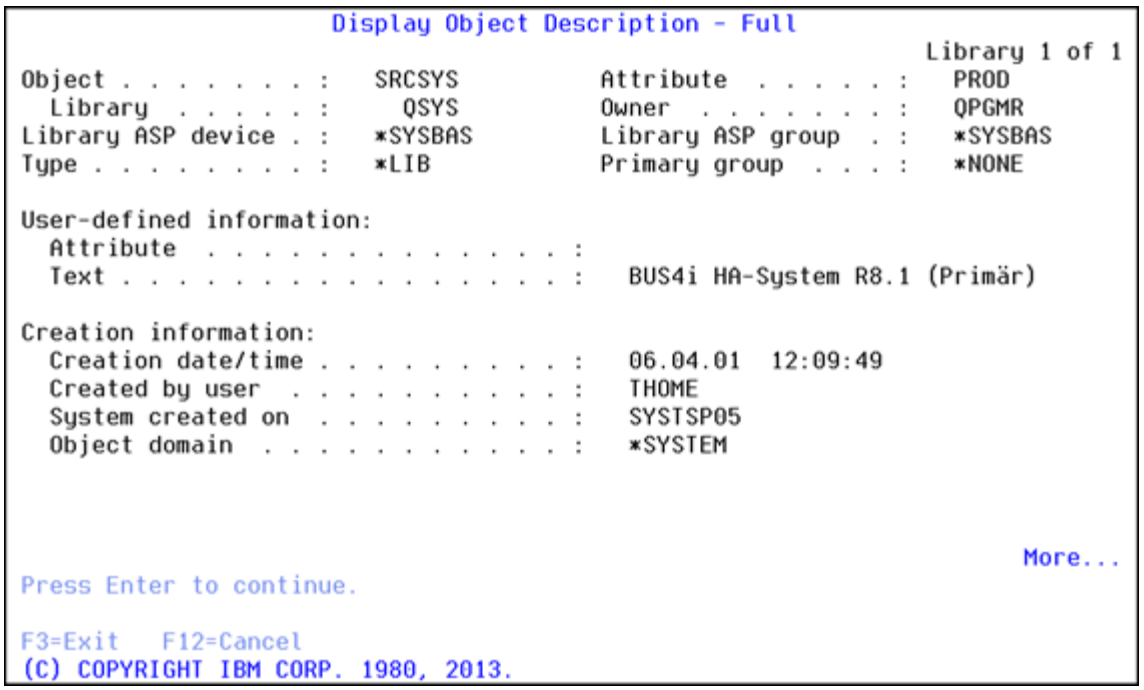
If the backup files have not been deleted yet, a list of the last backups is displayed.

If "More..." appears at the bottom right of the display, further information is available.
Press the Page up (Advance) key to display the information.

Valid command keys of the current mask:

F11=Display description
An extended description of the library is displayed.

2.7.8.7 Selection 8 - Display details

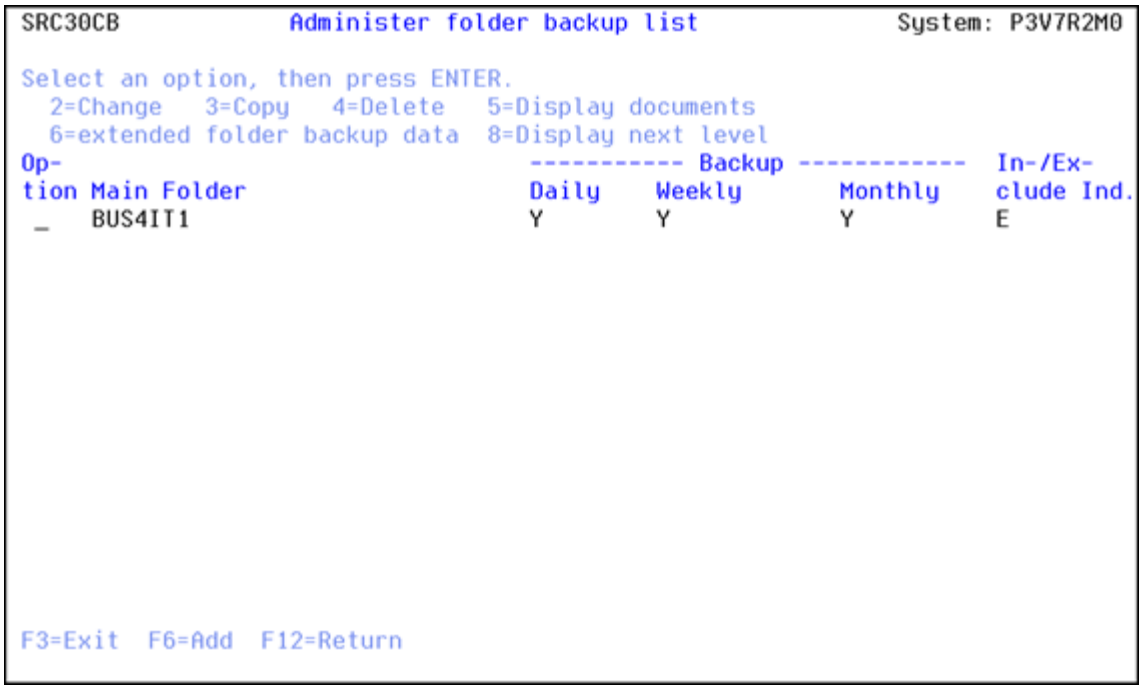


The object description for the selected library is displayed. For generic names, the object description can be displayed for all libraries beginning with this name by scrolling with the ENTER key.

If "More..." appears at the bottom right of the display, further information is available.
Press the Page up (Advance) key to display the information.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

2.7.9 Menu item 12 - Administer folder backup list



This mask is used to manage the folder backup list. Folders that are to be backed up can be added to this list. Entries from this list can be deleted, copied and changed. Additionally, extended information for the folder can be retrieved.

The following input field is available to the user:

Selection
The Selection data field is used to enter the options displayed on the current screen.
The choices can be combined depending on the type of work to be performed.
The options are performed in the order in which the selected items are in the list.
If you enter an option that is not allowed, an error message will appear on the screen.

The following options are available for managing the library list:

Selection 2 - Change
This selection option can be used to change the backup parameters for the entry.

Selection 3 - Copy
With this selection option the backup parameters of an entry can be copied to a new entry.

Selection 4 - Delete
This selection option can be used to delete a folder from the backup list.

Selection 5 - Show documents
This selection option can be used to display the contents of a folder. This option is not valid for generic names.

Selection 6 - extended folder backup data
This selection option displays the backups that have been made for this folder. If the backup files have already been deleted, the display is empty.

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Selection 8 - Show next level

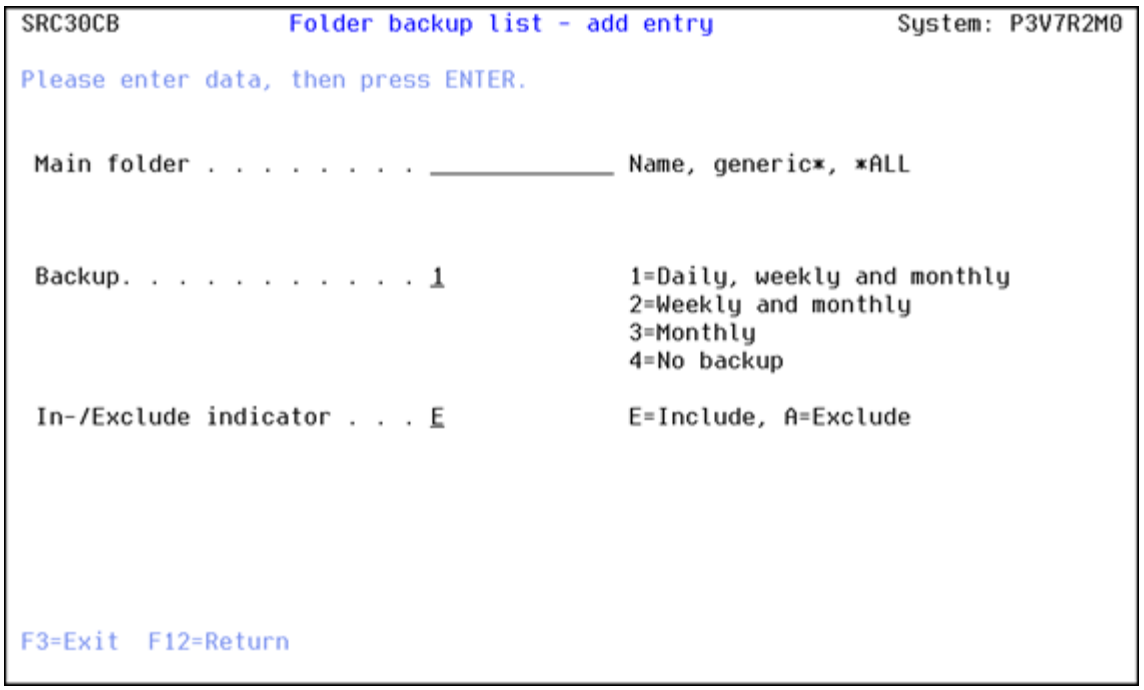
This selection displays the object description of the selected folder.

Valid command keys of the current mask:

F6=Add

A new folder will be added to the list.

2.7.9.1 Command key F6 - Folder backup list - Add entry



The F6 command key can be used to add a new folder to the backup list.

The following input field is available to the user:

Main folder
Enter the folder to be backed up here.

Valid values for the **Main folder** parameter are:

Name
Enter the name of the folder to be backed up.

generic*
Specify the generic name of the folders that contain the documents to be backed up. A generic name consists of one or more characters followed by an asterisk (*). All folders are taken whose name has the same prefix as the generic name.

***ALL**
All folders are backed up.

Fuse
Here you specify when the backup should be performed.

Valid values for the **Fuse** parameter are:

1 = Daily, weekly and monthly
The backup is performed daily, weekly and monthly.

2 = Weekly and monthly
The backup is performed only weekly and monthly.

3 = Monthly
The backup is performed monthly.

4 = No fuse
No backup is performed.

Inclusion/exclusion indicator

This flag can be used to control whether the specified library should be included or excluded from the backup process.

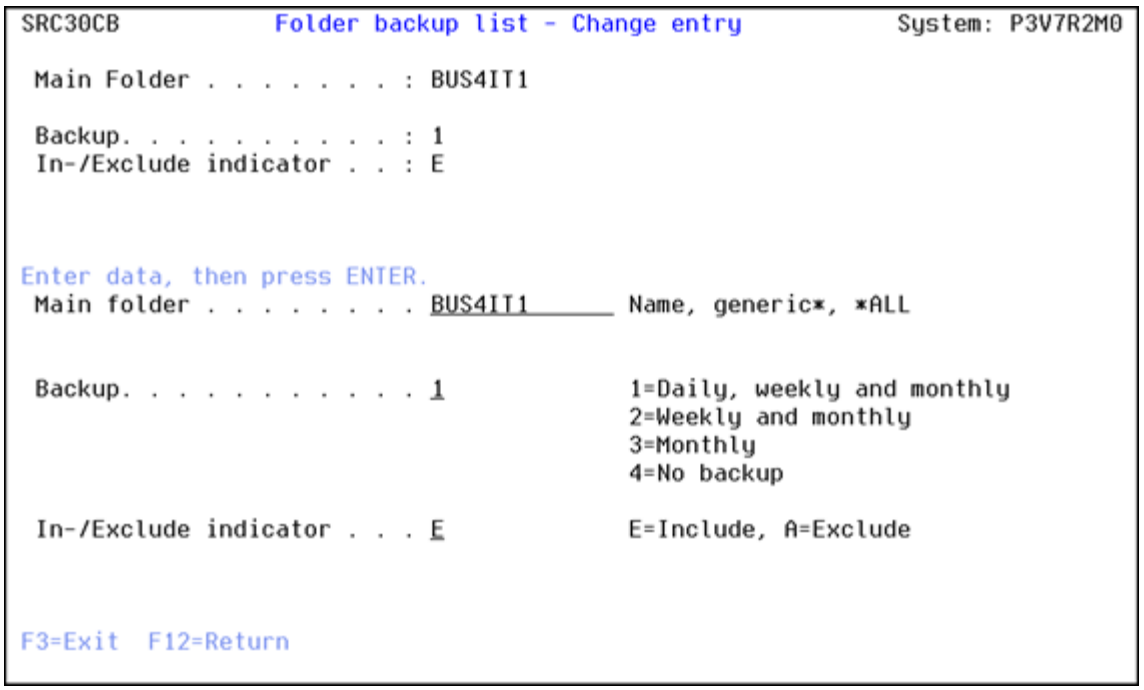
Valid values for the **Include/exclude flag** parameter are:

E = Inclusion
Include library in backup process

A = Exclusion
Exclude library in backup process

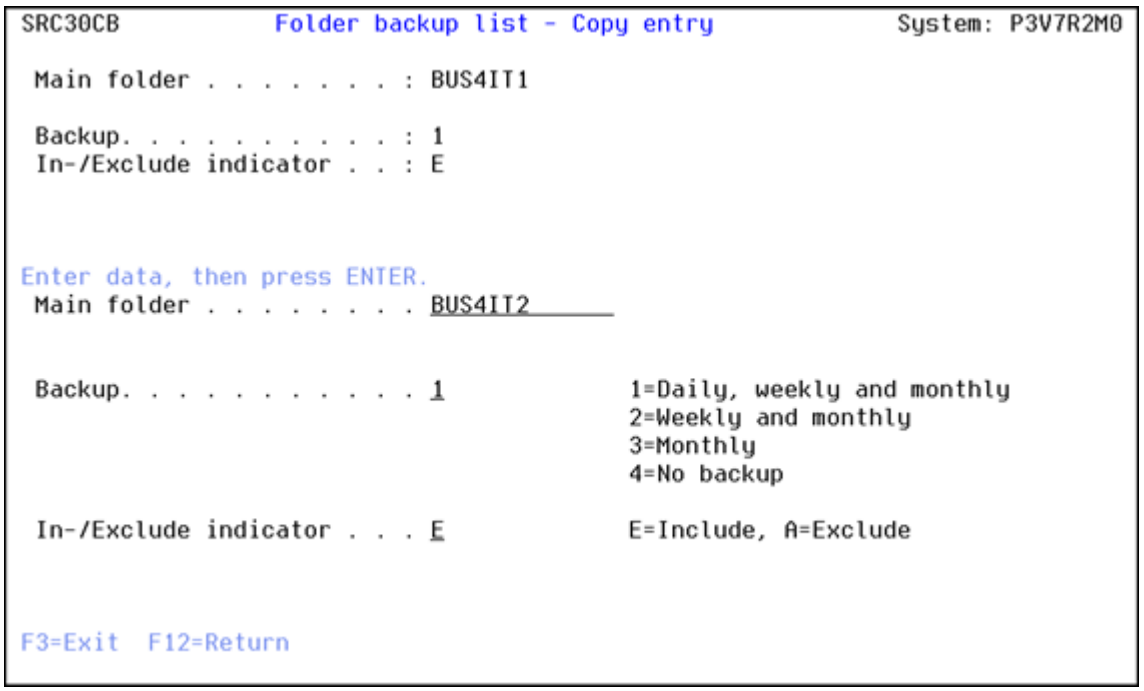
The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

2.7.9.2 Selection 2 - Folder backup list - Change entry



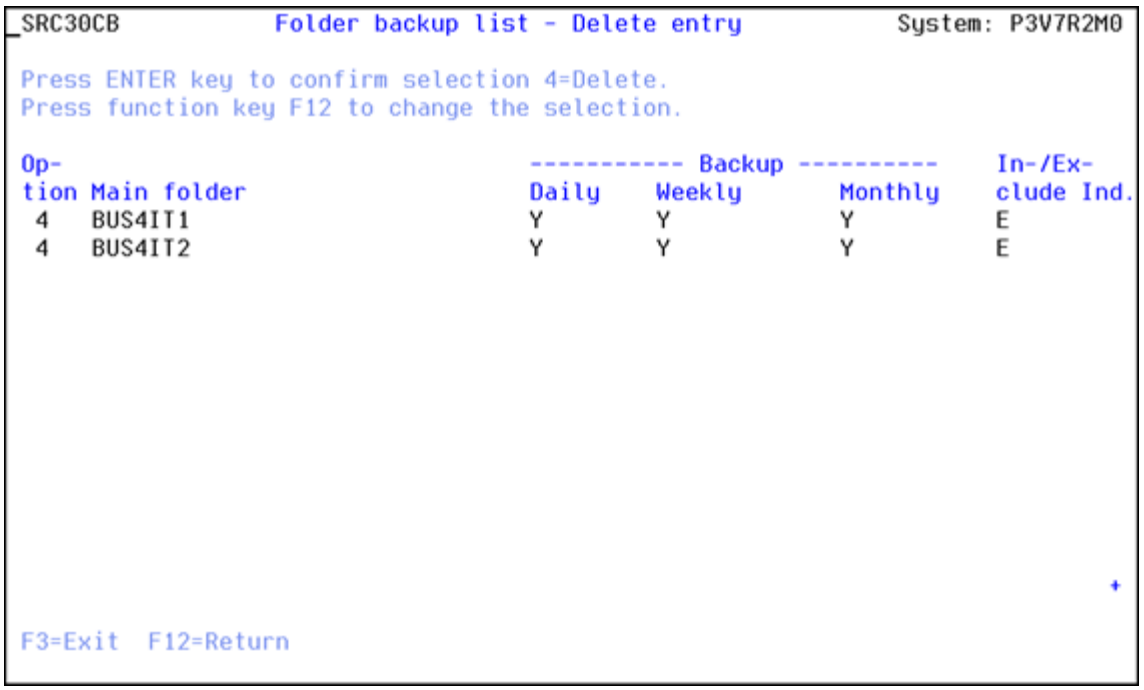
With this mask an entry from the folder backup list can be changed. For a detailed description of the parameters see: Command key F6 - Folder backup list - Add entry.

2.7.9.3 Selection 3 - Copy folder backup list entry



With this mask an entry can be copied from the folder backup list. For a detailed description of the parameters see: Command key F6 - Folder backup list - Add entry.

2.7.9.4 Selection 4 - Folder backup list - Delete entry

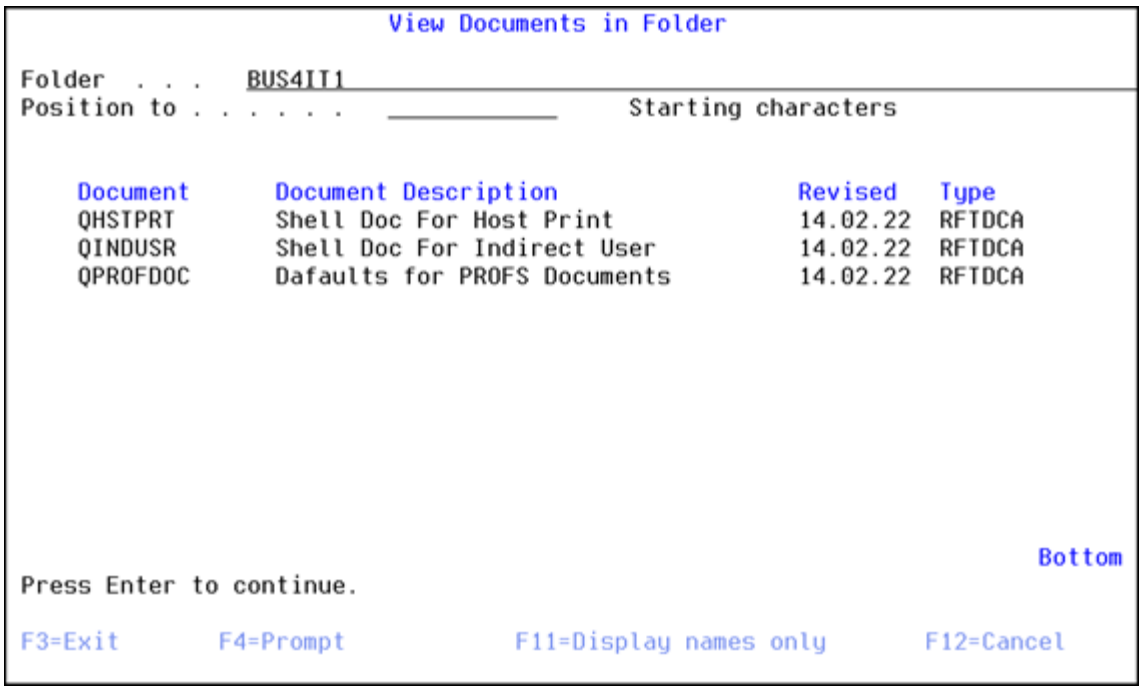


When you confirm with the Enter key, the selected entries are deleted from the folder backup list.

The deletion process can be canceled with the F12 key.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

2.7.9.5 Selection 5 - Display documents in folder



The "Show documents in folder" display lists all documents in a particular folder. It may not be possible to display all document names at the same time. The entire list of document names can be displayed using the image keys.

If "More..." appears at the bottom right of the display, further information is available. Press the Page up key to display the information.

The following input fields are available to the user:

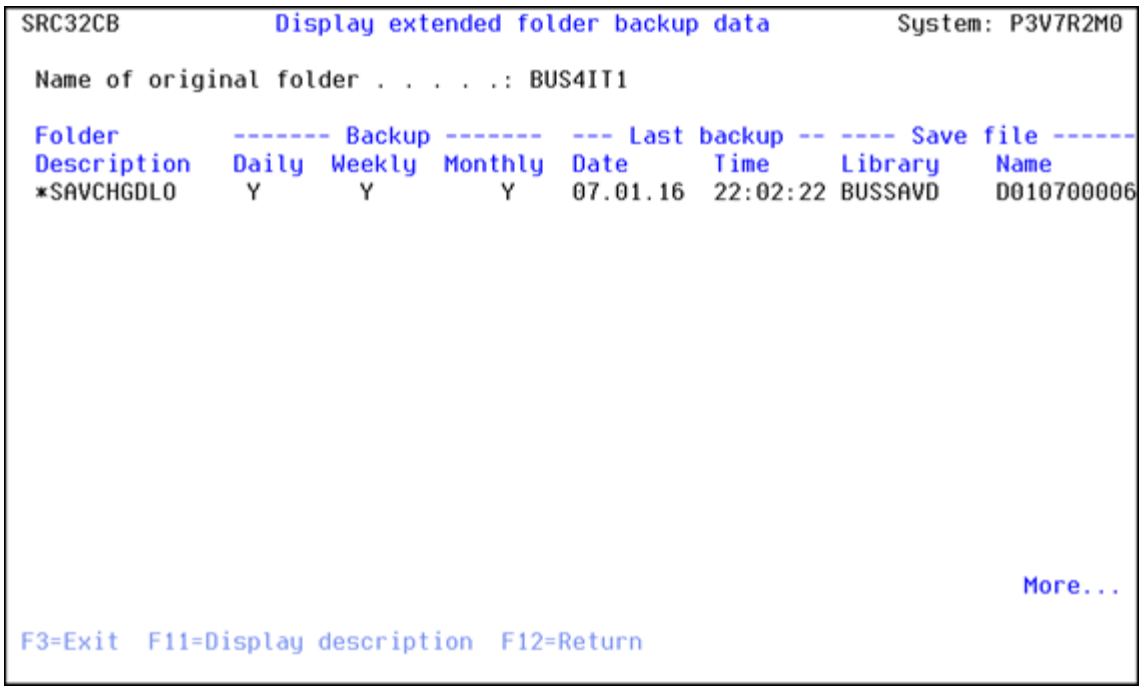
Folder
Enter the name of the folder containing the documents to be displayed.
If F4 (operator guidance) is pressed, the "Select folder" display is called up with a list of folders.

Start of list at
Enter a complete document name or part of a document name and press Enter to make the list start with that name. Enter *TOP to display the beginning of the list, *BOT to display the end of the list.

Valid command keys of the current mask are:

F11 = Show names only
Only the document name is displayed without a description.

2.7.9.6 Selection 6 - Display extended folder backup data



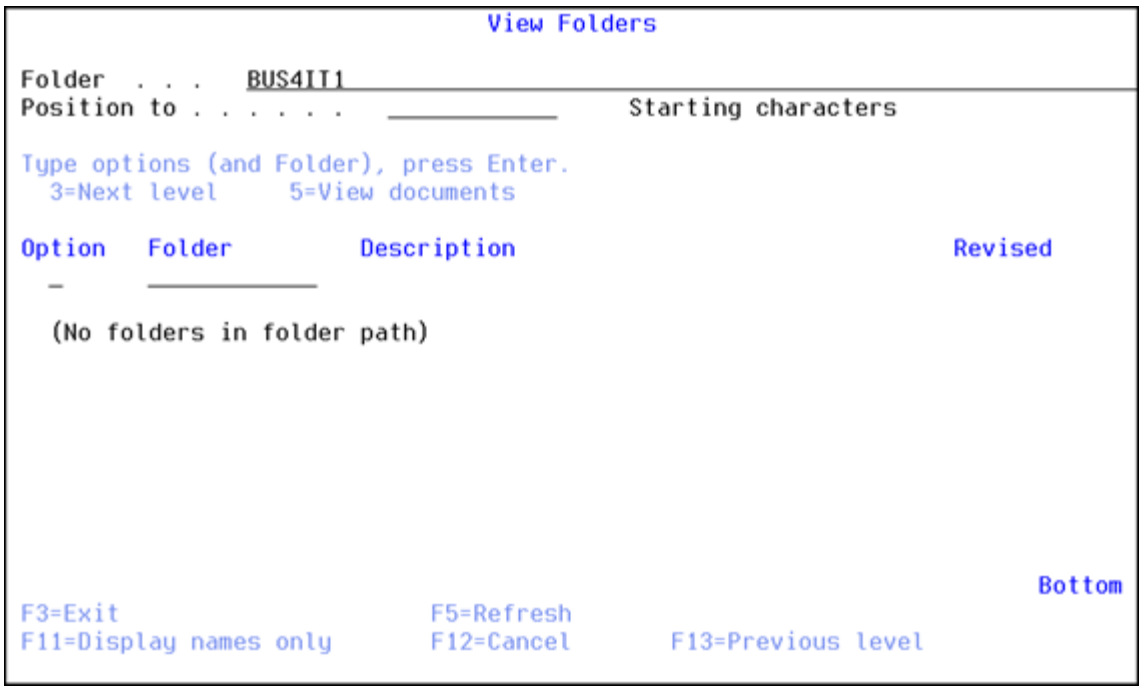
If the backup files have not been deleted yet, the list of the last backups is displayed.

If "More..." appears at the bottom right of the display, further information is available.
Press the Page up (Advance) key to display the information.

Valid command keys of the current mask are:

F11=Display description
An extended description is displayed.

2.7.9.7 Selection 8 - Display next level



For a folder, the existing subfolders are listed.

The following input field is available to the user:

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

The following input field is available to the user:

Selection 3 - Next level
The next folder level within a folder is displayed.

Selection 5 - Show documents
The "Show documents in folder" display is called up. It contains a list of all documents contained in the folder.

Folder
The first line in the "Folder" column is empty. There you can specify the name of the folder to be displayed from the folder specified at the top of the display. The entries after the first entry in the "Folder" column are the names of all folders in the specified folder.

Note: If a selection and a folder name are entered in the first row of the "Selection" and "Folder" columns, this folder will be displayed first.

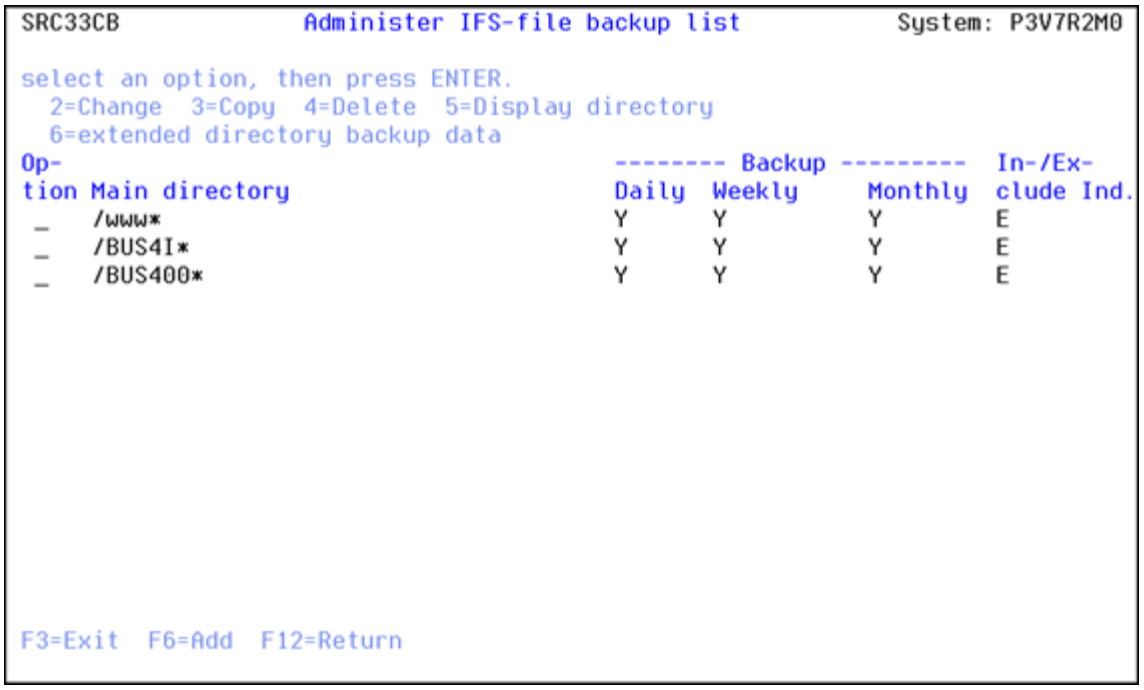
Revised
This column contains the date when the folder was created or last revised. It is displayed for information only.

If "More..." appears at the bottom right of the display, further information is available. The information can be displayed by pressing the "Page up (scroll forward)" key.
Valid command keys of the current mask are:

F11=Display name only
Only the folder names are displayed without description. The display is rebuilt.

F13=Previous level
The previous level is displayed for the folder.

2.7.10 Menu item 13 - Administer IFS file backup list



This mask is used to manage the IFS file backup list. IFS directories that are to be backed up can be added to this list. Entries from this list can be deleted, copied and changed. Additionally, extended information about the directories can be retrieved.

The following input field is available to the user:

Selection
The Selection data field is used to enter the options displayed on the current screen.
The choices can be combined depending on the type of work to be performed.
The options are performed in the order in which the selected items are in the list. When entering an option that is not allowed, an error message appears on the screen.

The following options are possible:

Selection 2 - Change
This selection option can be used to change the backup parameters for the entry.

Selection 3 - Copy
With this selection option the backup parameters of an entry can be copied to a new entry.

Selection 4 - Delete
With this selection option a directory / IFS file can be deleted from the backup list.

Selection 5 - Show directory
This selection option can be used to display the contents of a directory. This option is not valid for generic names.

Selection 6 - extended directory backup data
This selection option displays the backups that have been made for these directories. If the backup files have already been deleted, the display is empty.

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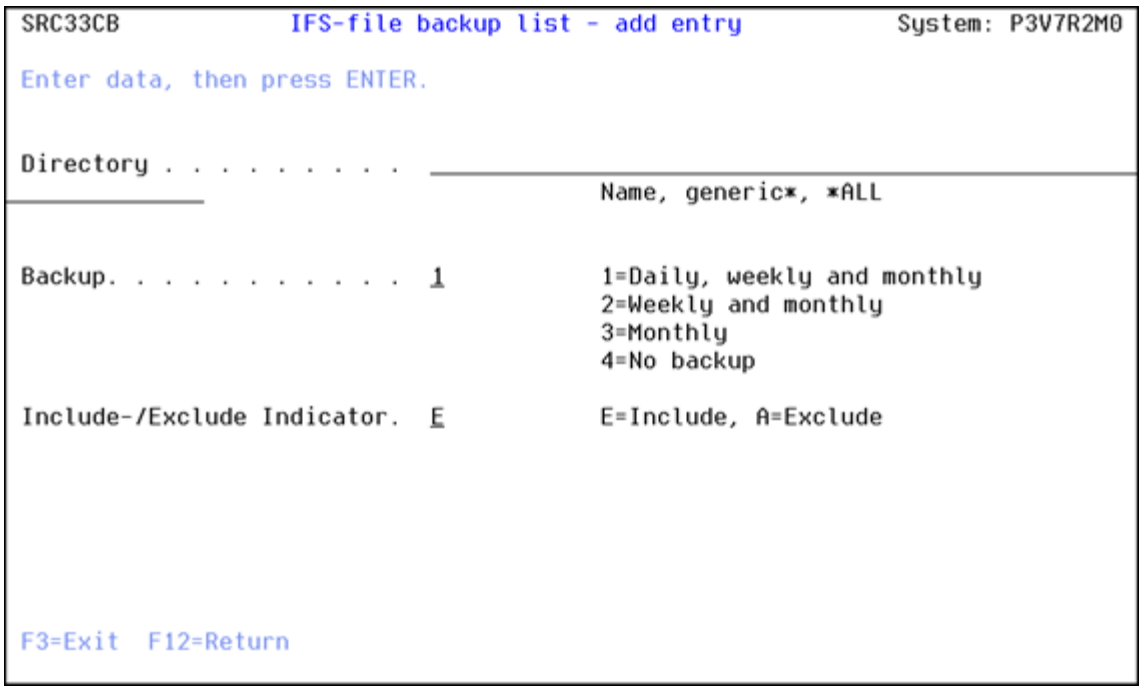
Valid command keys of the current mask:

F6=Add
A new directory will be added to the list.

2.7.10.1 Command key F6 - IFS file backup list - Add entry



Command key F6 inserts a new directory into the backup list.

The following input field is available to the user:

Directory
Enter the directory to be backed up here.

Valid values for the parameter **Directory** are:

Name
Enter the name of the directory to be backed up.

generic*
Specify the generic name of the directory that contains the files to be backed up. A generic name consists of one or more characters followed by an asterisk (*). All directories are taken whose name has the same prefix as the generic name.

***ALL**
All directories are backed up.

Fuse
Here you specify when the backup should be performed.

Valid values for the **Fuse** parameter are:

1 = Daily, weekly and monthly
The backup is performed daily, weekly and monthly.

2 = Weekly and monthly
Backup is performed only weekly and monthly.

3 = Monthly
The backup is performed monthly.

4 = No fuse
No backup is performed.

Inclusion/exclusion indicator

This flag can be used to control whether the specified library should be included or excluded from the backup process.

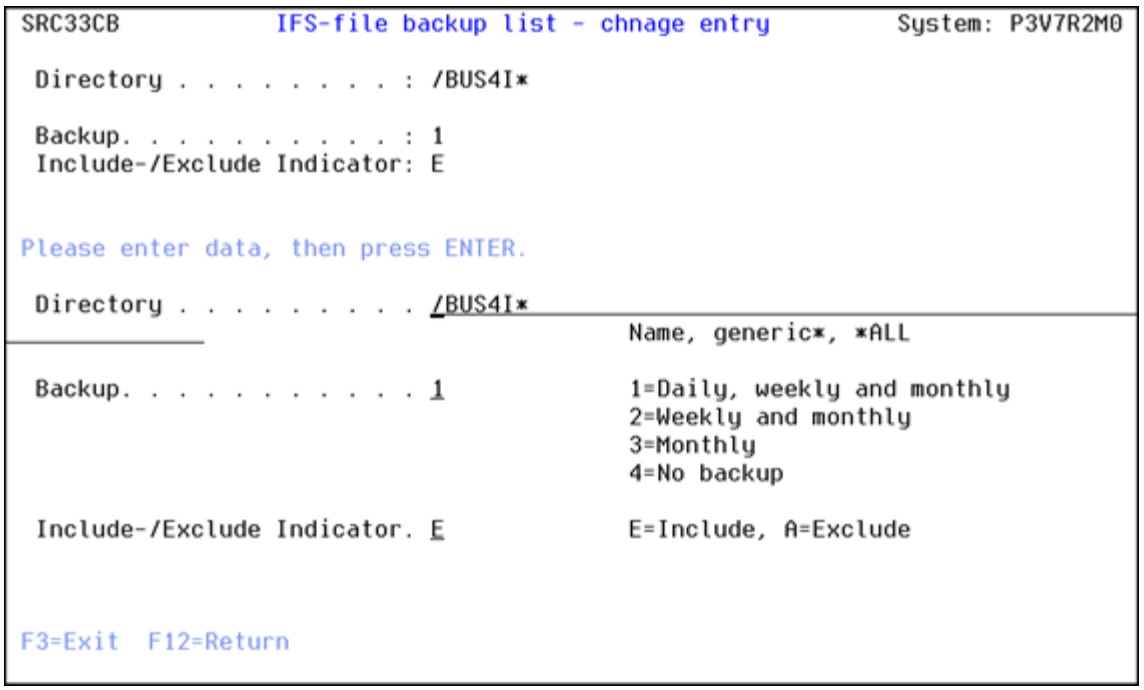
Valid values for the **Include/exclude flag** parameter are:

E = Inclusion
Include library in backup process

A = Exclusion
Exclude library in backup process

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

2.7.10.2 Selection 2 - IFS file backup list - change entry



This mask is used to change an entry from the directory backup list.

The following input field is available to the user:

Directory
The directory is specified whose backup list entry is to be changed.

Valid values for the parameter **Directory** are:

Name
Specify the name of the directory whose backup list entry is to be changed.

generic*
Specify the generic name of the directory that contains the files to be modified. A generic name consists of one or more characters followed by an asterisk (*). All directories are taken whose name has the same prefix as the generic name.

***ALL**
All directories will be changed.

Fuse
Here you specify when the backup should be performed.

Valid values for the **Fuse** parameter are:

1 = Daily, weekly and monthly
The backup is performed daily, weekly and monthly.

2 = Weekly and monthly
Backup is performed only weekly and monthly.

3 = Monthly
The backup is performed monthly.

4 = No fuse
No backup is performed.

Inclusion/exclusion indicator

This flag can be used to control whether the specified library should be included or excluded from the backup process.

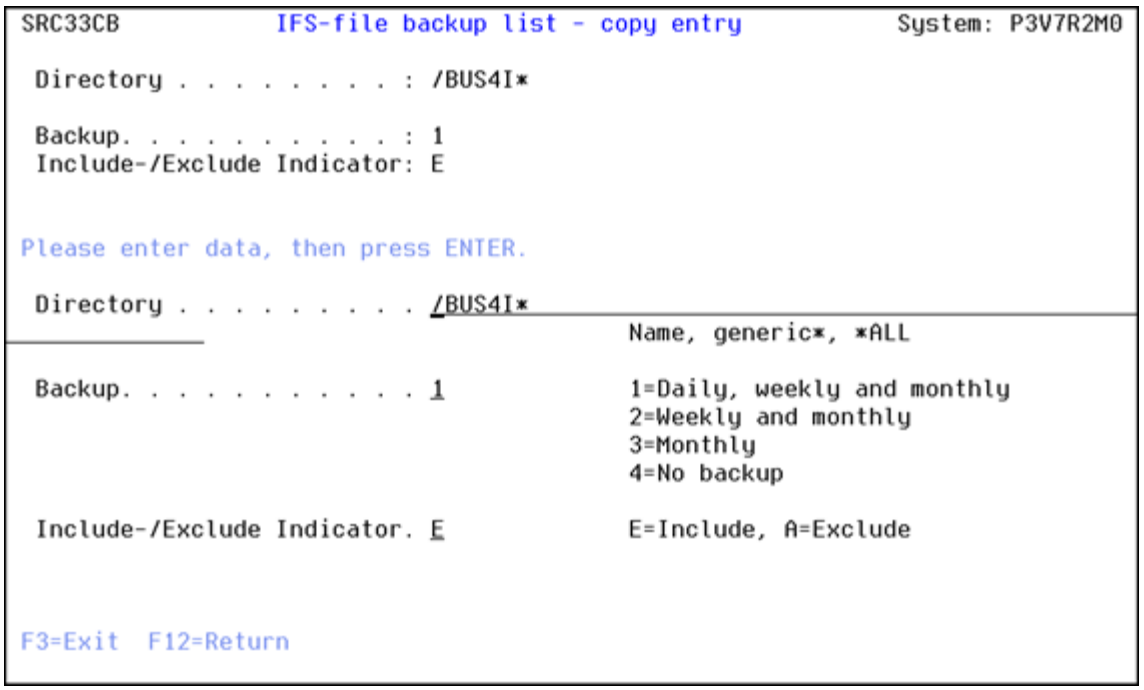
Valid values for the **Include/exclude flag** parameter are:

E = Inclusion
Include library in backup process

A = Exclusion
Exclude library in backup process

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

2.7.10.3 Selection 3 - IFS file backup list - copy entry



This mask can be used to copy an entry from the IFS file backup list.

The following input field is available to the user:

Directory
The directory is specified whose backup list entry is to be changed.

Valid values for the parameter **Directory** are:

Name
Specify the name of the directory whose backup list entry is to be changed.

generic*
Specify the generic name of the directory that contains the files to be modified. A generic name consists of one or more characters followed by an asterisk (*). All directories are taken whose name has the same prefix as the generic name.

***ALL**
All directories will be changed.

Fuse
Here you specify when the backup should be performed.

Valid values for the **Fuse** parameter are:

1 = Daily, weekly and monthly
The backup is performed daily, weekly and monthly.

2 = Weekly and monthly
The backup is performed only weekly and monthly.

3 = Monthly
The backup is performed monthly.

4 = No fuse
No backup is performed.

Inclusion/exclusion indicator

This flag can be used to control whether the specified library should be included or excluded from the backup process.

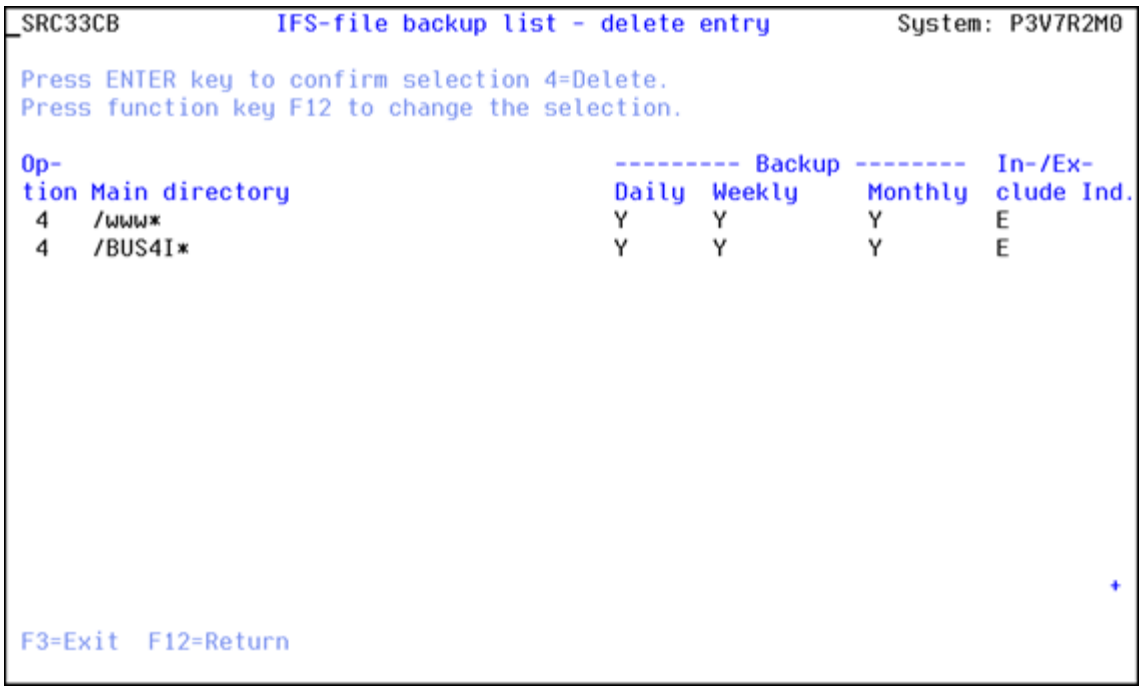
Valid values for the **Include/exclude flag** parameter are:

E = Inclusion
Include library in backup process

A = Exclusion
Exclude library in backup process

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

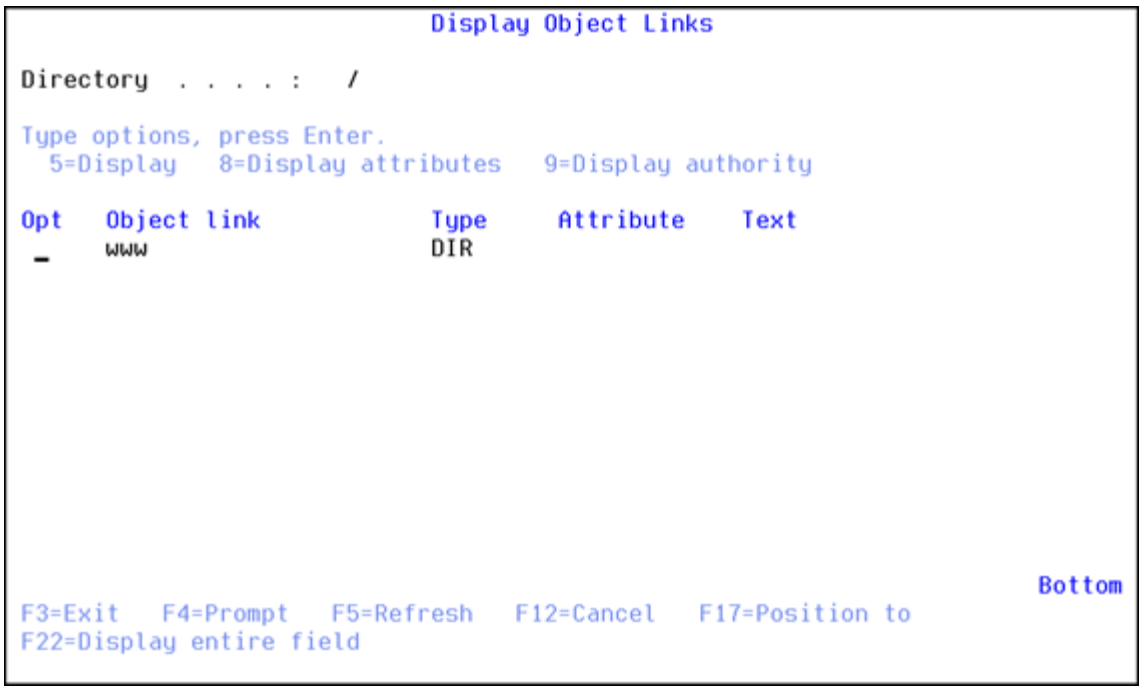
2.7.10.4 Selection 4 - IFS file backup list - delete entry



When confirming with the Enter key, the selected entries are deleted from the IFS file backup list.

The deletion process can be canceled with F12.

2.7.10.5 Selection 5 - Display directory



The object links to a directory are displayed.

The following input field is available to the user:

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

The following options are possible:

Selection 5 - Display
This selection can be used to work with object links in a directory or to display the contents of a data stream file. If the object is regarded as a directory, this selection displays the objects in the directory; e.g. an object of the object type DIR (directory), LIB (library) or FLR (folder). If the object belongs to the STMF (data stream file) or DOC (document) object type, the DSPF (show file) command is called to display the contents of the file.

Selection 8 - Display attributes
With this selection the attributes of an object can be displayed. Among other things, they contain information about the object type and when the object was last used or changed.

Selection 9 - Display authorization
With this selection it is possible to display a list of authorized users for an object and the authorizations of these users. With this selection the command DSPAUT (Display authorization) is executed.

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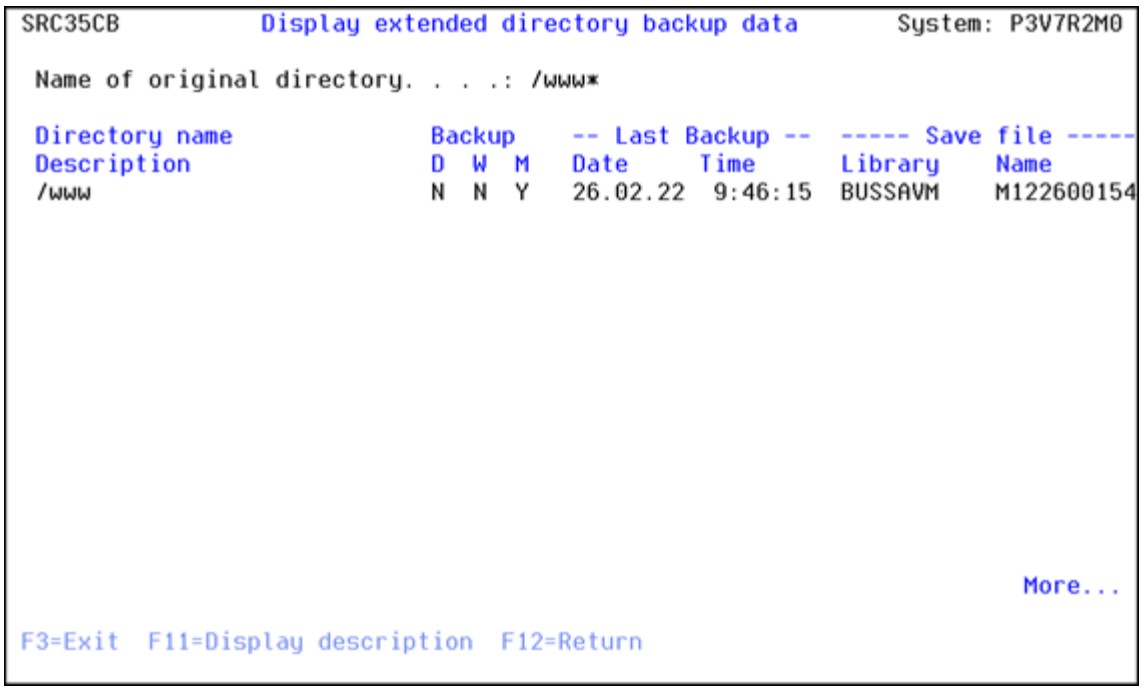
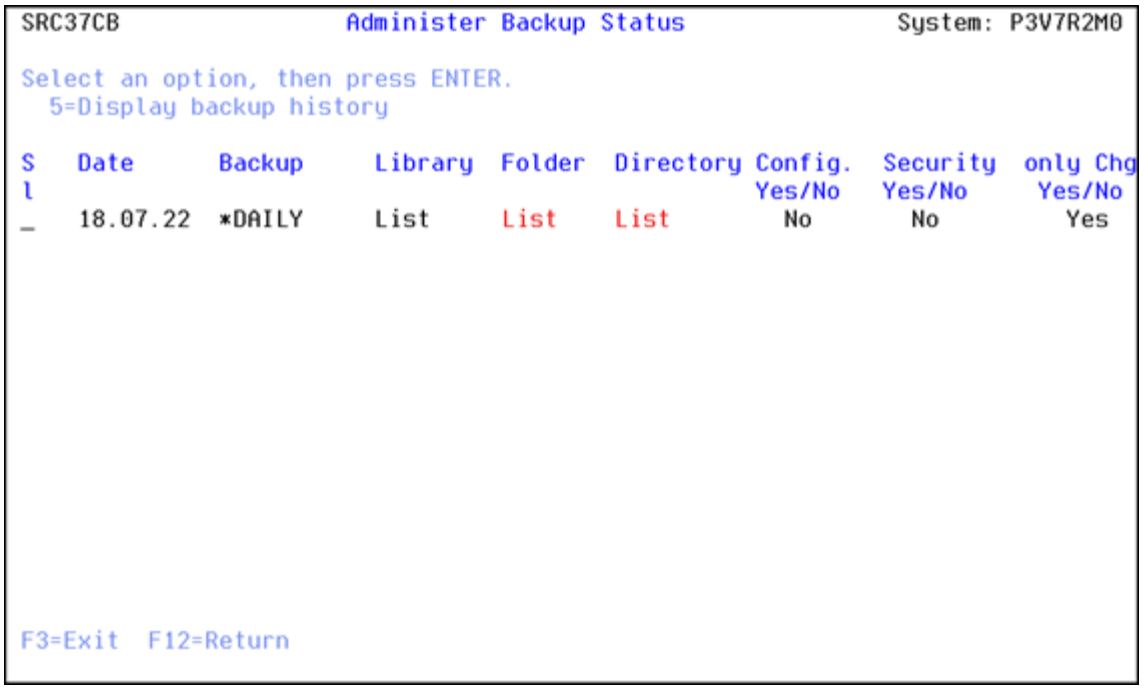
2.7.10.6 Selection 6 - Show extended directory backup data



If the backup files have not yet been deleted, a list of the last backups is displayed. The directory name is displayed here, the type of backup such as daily, weekly or monthly and the date and time of the backup.

2.7.11 Menu item 20 - Display status of backups



What was backed up during a backup that has already been performed is displayed. Here the date, the type of backup, which libraries, folders, directories were backed up. In addition, you can see whether the configuration, security files and whether only changes since the last backup are backed up.

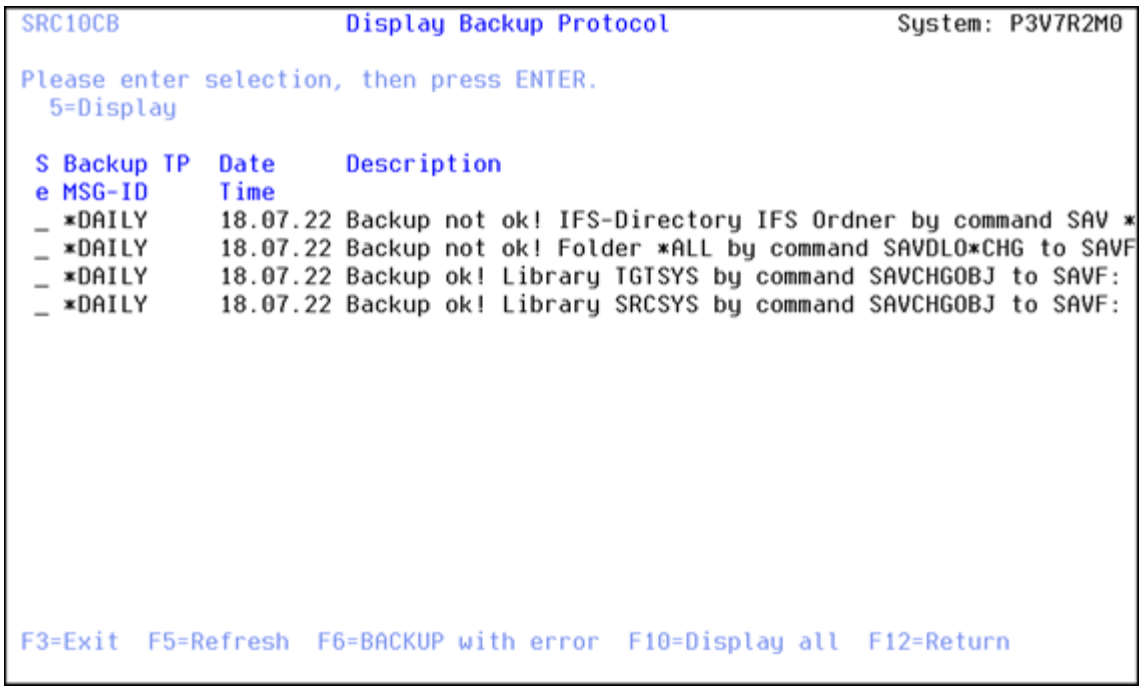
The following input field is available to the user:

Selection
In the "Selection" data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items are in the list. If an invalid option is entered, an error message appears on the screen.

The following options are possible:

Selection 5 - Show backup details
Extended backup details can be displayed for the selected backup.

2.7.11.1 Selection 5 - Display backup log



The backup log shows whether the backup worked or not, as well as what was backed up or what error was detected during the backup.

The following input field is available to the user:

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

The following options are possible:

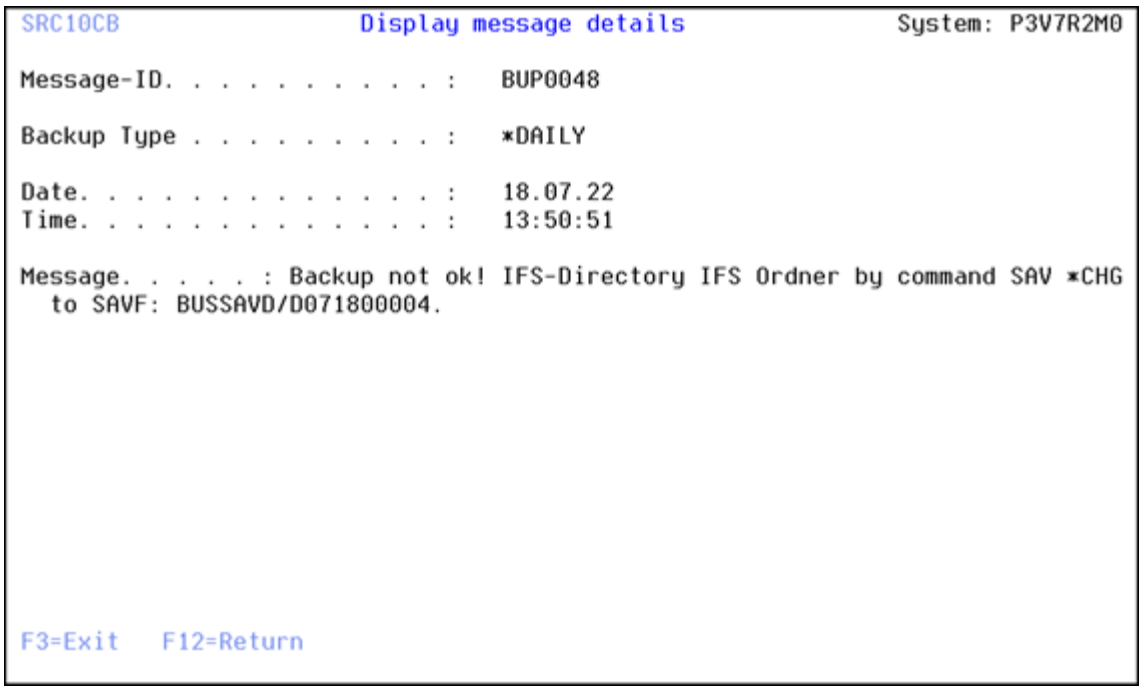
Selection 5 - Display
Display message for log entry in full.

Valid command keys of the current mask:

F6=faulty fuses
Only faulty fuses can be displayed.

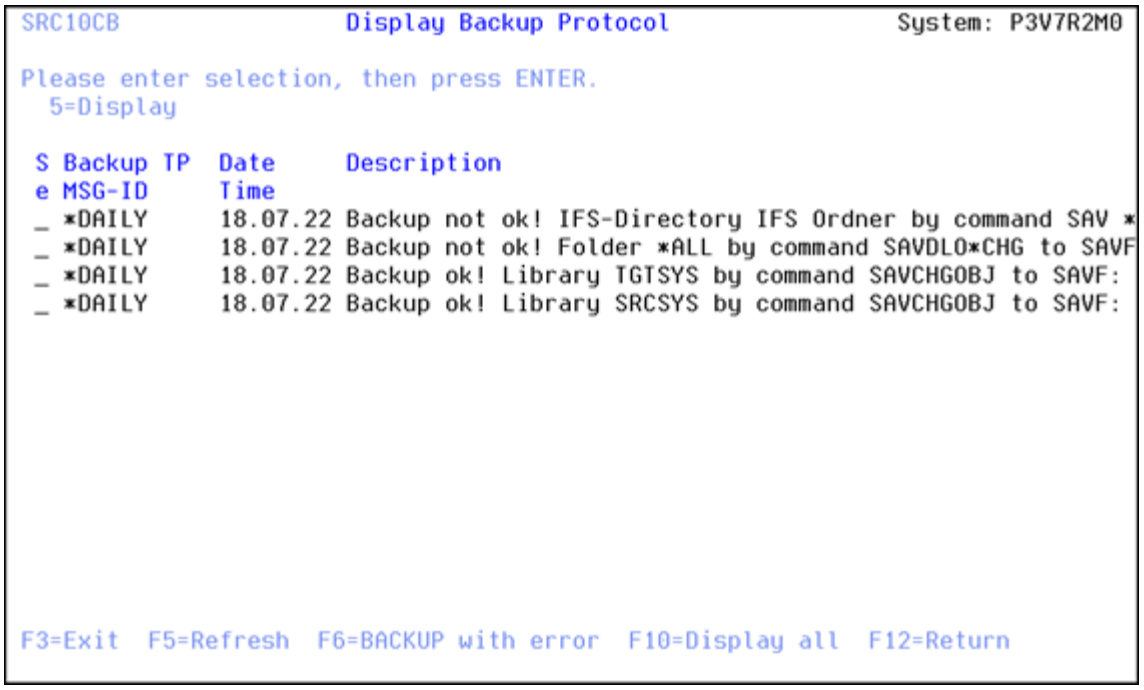
F10=Display all
More information will be displayed.

2.7.11.1.1 Selection 5 - Display message detail



For the selected entry from the log, the complete message is displayed. For the object, the backup type, backup date, backup library and backup file and whether the backup was performed correctly are displayed.

2.7.12 Menu item 21 - Display backup log



This selection is used to select specific log entries. Which entries are listed is defined via the parameters.

The following input field is available to the user:

Backup type
The type of backup can be selected here. For example, only the logs for the daily backup can be displayed with *DAILY.

Valid values for the **Fuse type** parameter are:

***DAILY**
The parameter *DAILY indicates that it is a backup that runs daily.

***WEEKLY**
*WEEKLY states that the backup interval repeats weekly. e.g. A backup is performed every Monday.

***MONTHLY**
The backup was done once a month such as every 1st Sunday of the month.

Message ID
The message ID can be entered here. For example, only the logs with a specific MSG ID can be displayed. (e.g. BUP0047/BUP0048/BUP0049)

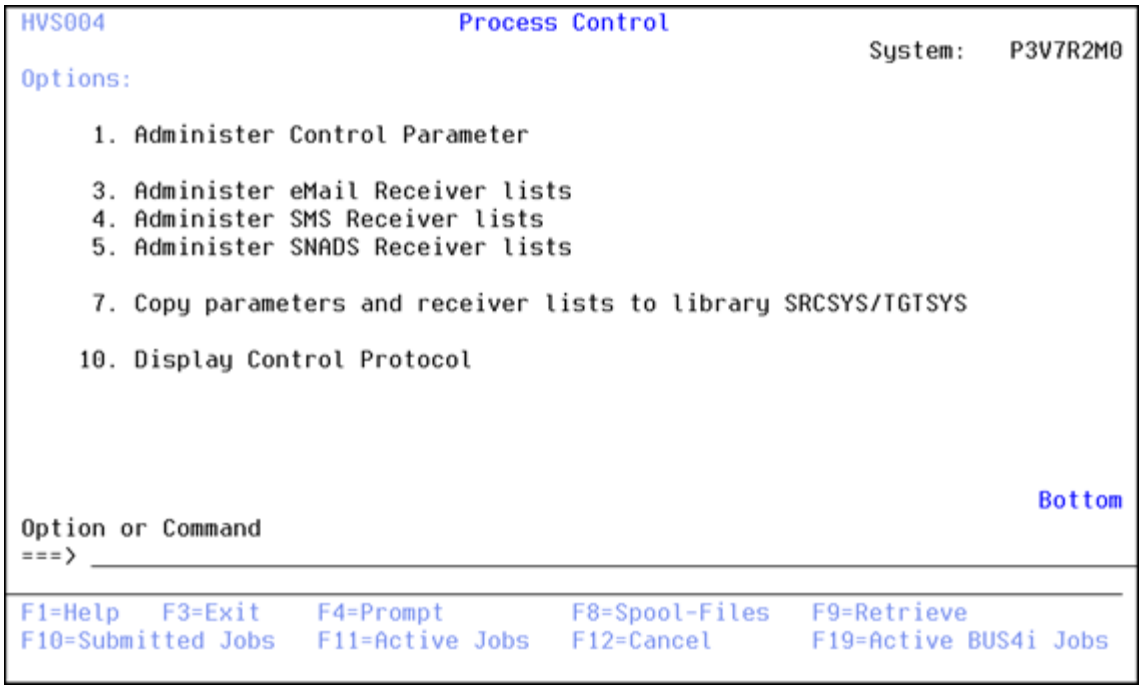
Date from
It lists the message from the log from the specified date to the current date in descending order.

Time from
It lists the message from the log from the specified time to 23.59.59 in descending order.

Message content

Part of the message status can be specified as a selection criterion.

2.8 Main menu selection 8 - Process control



This menu allows the user to set the parameters for monitoring the processes started in the backup system. With the process monitoring every single process (send, synchronization, receive and processing process) of every mirror group can be monitored. If processes are inactive or in MSGW, messages can be sent via SMS and/or eMail and/or SNADS to any number of employees. This is done via the SMS, eMail and SNADS distribution lists.

The following menu items are displayed on the current screen:

Menu item 1: Manage control parameters
Here, general settings of the process monitoring are configured, such as the address of the email server the monitoring period, etc.

Menu item 3: Manage eMail distribution list
An overview of the e-mail distribution lists and the assigned e-mail addresses.

Menu item 4: Manage SMS distribution list
An overview of the SMS distribution lists and the assigned SMS addresses.

Menu item 5: Manage SNADS distributor
An overview of the SNADS distributors and the assigned SNADS addresses.

Menu item 7: Copy parameters and manifolds to library SRCSYS/TGTSYS
Here the configuration of the process monitoring will be copied to TGTSYS or SRCSYS and to the remote system.

Menu item 10: Display monitoring log
The monitoring log lists the messages of the process monitoring.

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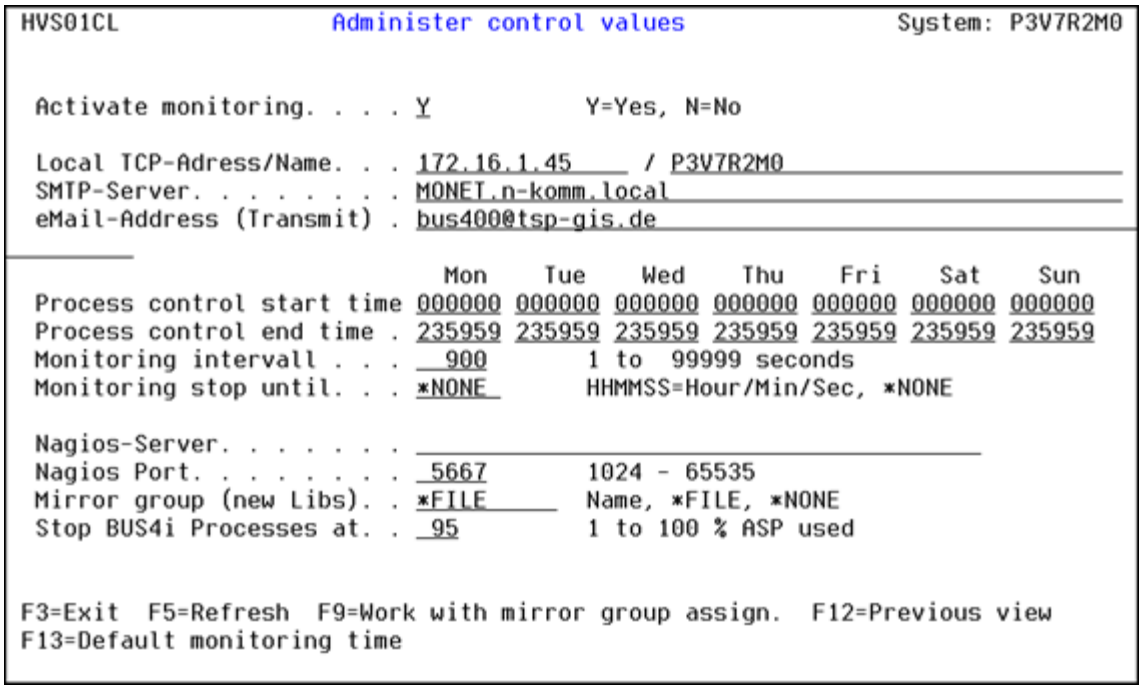
2.8.1 Menu item 1 - Administer control parameters



The user can manage the control parameters via this input mask.

The following valid input fields are available to the user:

Activate monitoring

Y=Yes
Monitoring is activated.

N=No
No monitoring of the control parameters.

Local TCP address/name
The local TCP/IP address of the system and the system name.

SMTP server
The IP address or DNS name of the email server.

eMail address sender
Enter the e-mail address of the sender.

Monitoring start time
Specify time when monitoring should be started.

Monitoring stop time
Specify time when the monitoring should end.

Monitoring interval
Specification in seconds in which the process monitoring job checks all existing mirror groups after the interval has expired.

Nagios Server

The IP address or DNS name of the Nagios server, this specification is only needed if a Nagios server is present in the network.

Nagios Port

The port on which the Nagios server can be reached.

Mirror group (new libraries)

Defines in which mirror group newly created libraries are included.

Name

Name of the mirror group with which the newly created libraries are to be mirrored.

***NONE**

The new libraries are not automatically assigned to a mirror group.

***FILE**

The view for mirror group assignment with F9 is unlocked. See F9 command key.

Stop BUS4i processes at

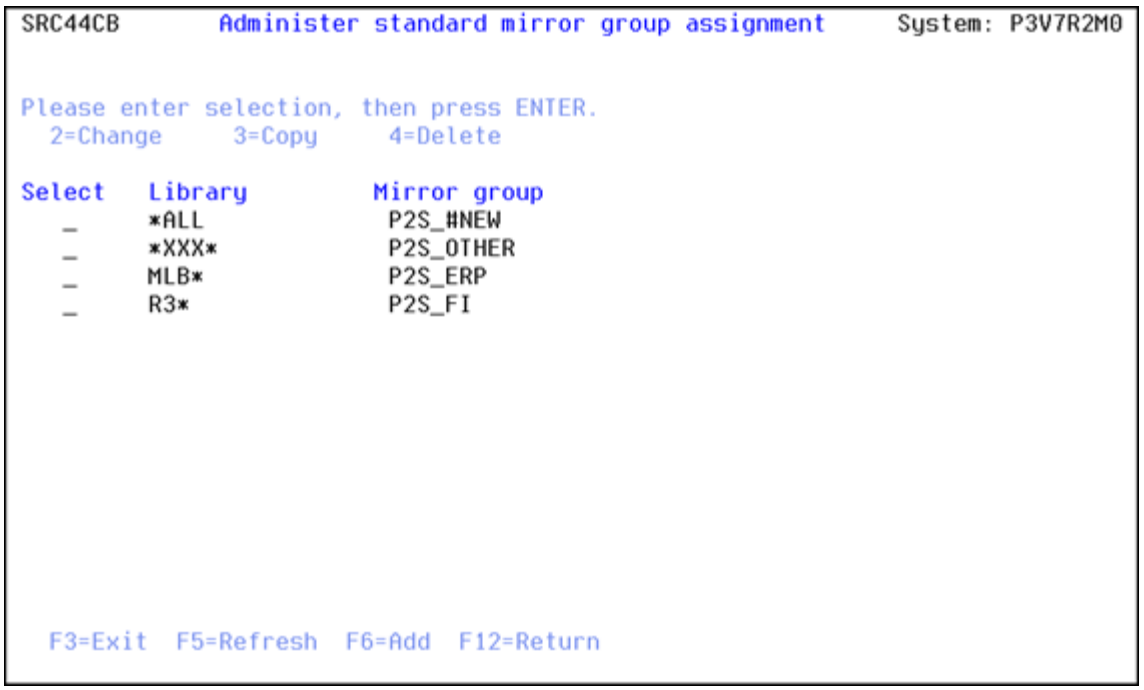
If the ASP occupancy exceeds the specified limit, mirroring is terminated and emails are sent to the defined distribution lists.

Valid command keys of the current mask:

F9=Manage mirror group assignment

This command button opens a new view which can be used to manage the assignment of a new library to a mirror group.

2.8.1.1 F9=Manage mirror group assignment



In this view it is possible to assign newly created libraries to different mirror groups using different generic names. With *ALL the standard mirror group is determined, in which all libraries are included, which do not apply to any of the other generic names.

The following valid input fields are available to the user:

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items are in the list. When entering an option that is not allowed, an error message appears on the screen.

The following options are possible for the implementation:

Selection 2 - Change
With the selection 2 one can edit already existing entries. When editing, the mirror group can be changed, but not the generic name.

Selection 3 - Copy
With selection 3 the entry is copied and the parameters are preset with the copied values. These can then be changed and saved under a new entry.

Selection 4 - Delete
Selection 4 deletes the selected entry from the list.

The following command keys are valid on the current mask:

F6=Add
This command key opens a new view with which a new entry is to be added to the default mirror group assignment.

2.8.2 Menu item 3 - Administer eMail distribution list

The user can manage the e-mail distribution lists via this input mask.

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

Selection 2 - Change
With this selection option the selected eMail distribution list can be changed.

Selection 3 - Copy
With this selection option the selected eMail distribution list can be copied.

Selection 4 - Delete
With this selection option the selected eMail distribution list can be deleted.

Selection 5 - Display
With this selection option details of the selected eMail distribution list can be displayed.

Valid command keys of the current mask:

F6=Add
A new eMail distribution list can be added here.

2.8.3 Menu item 4 - Administer SMS distribution list

The user can manage the SMS distributors via this input mask. In order to receive monitoring messages, a special gateway must first be activated at the responsible network operator. To do this, an SMS with the following text must be sent to the short code that the responsible network operator has set up for this purpose:

Network operator	SMS text	Speed dial
D1 Telecom	OPEN	8000
D2 Vodafone	OPEN	3400
E-Plus	START	7676245
O2	START	6245

After activation you will receive an SMS address consisting of your complete mobile phone number and the name of the responsible server:

Network operator	SMS address
D1 Telecom	Mobilfunknummer@t-mobil.de
D2 Vodafone	Mobilfunknummer@d2-message.de
E-Plus	Mobilfunknummer@smsmail.e-plus.de
O2	Mobilfunknummer@my-genion.de

So, for example, your address might look like this: 01791234567@my-genion.de.

Selection

In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

Selection 2 - Change

Here you can change the SMS address of the selected SMS distribution list.

Selection 3 - Copy
With this menu item you can copy the selected SMS distribution list.

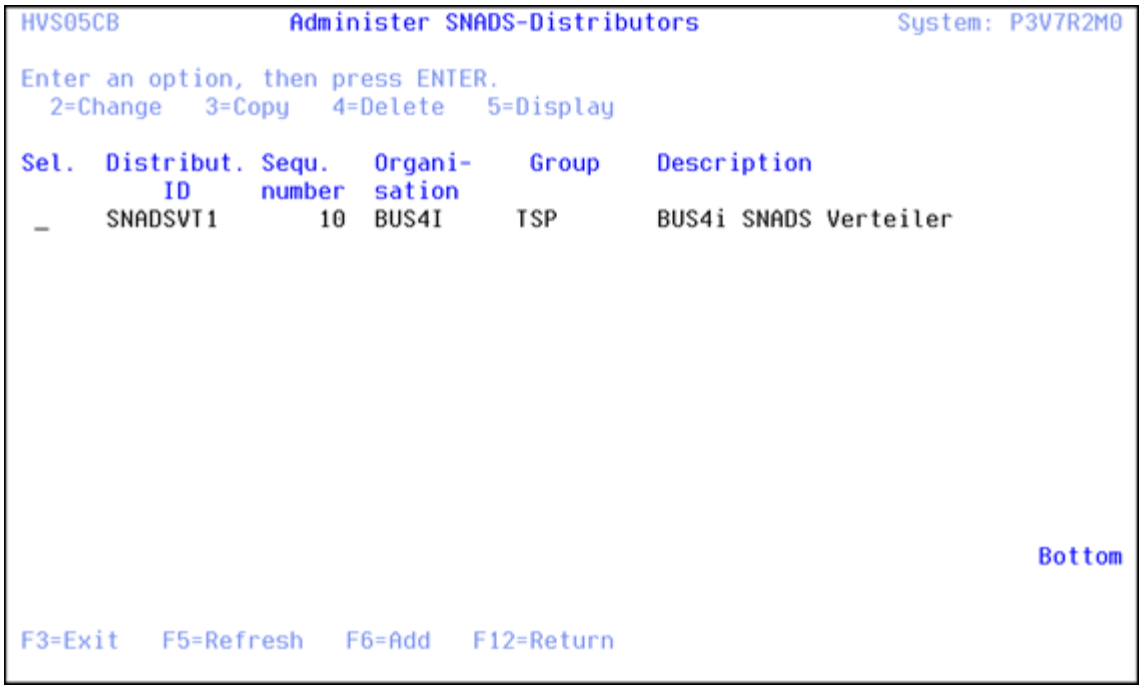
Selection 4 - Delete
Use this selection option to delete the selected SMS distribution list.

Selection 5 - Display
Via this selection you will see the details of the selected SMS distribution list.

Valid command keys of the current mask:

F6=Add
A new SMS distribution list can be added here.

2.8.4 Menu item 5 - Administer SNADS distribution list



The user can manage the SNADS distributor via this input mask.

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

Selection 2 - Change
With this selection option the selected SNADS distributor can be changed.

Selection 3 - Copy
With this selection option the selected SNADS distributor can be copied.

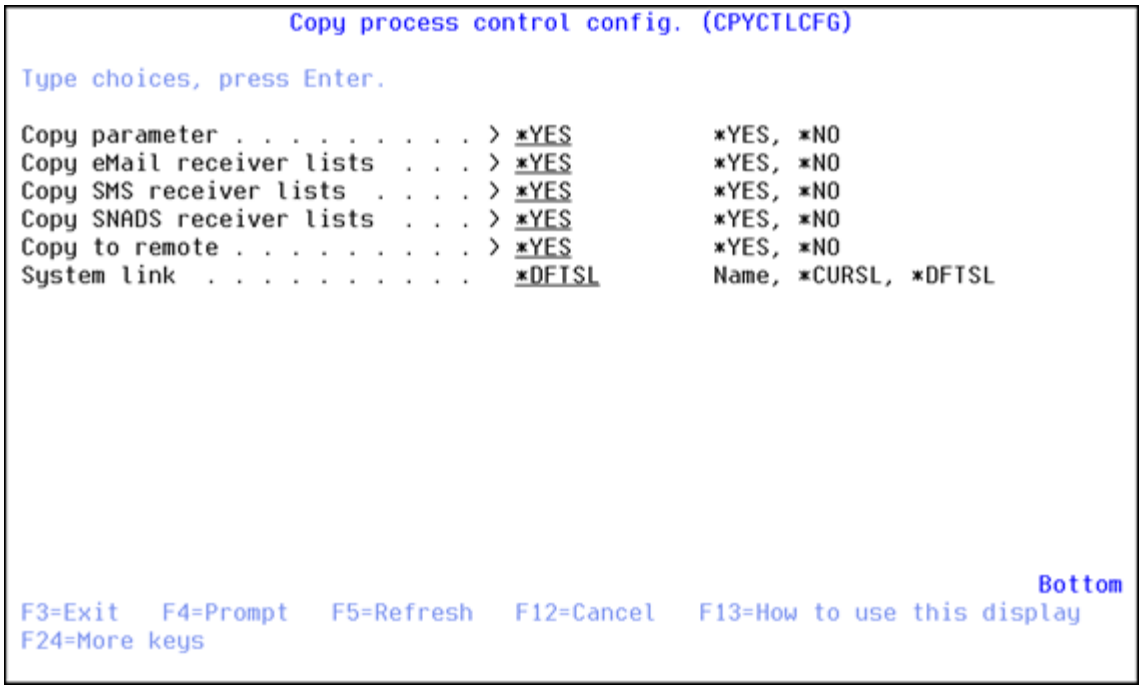
Selection 4 - Delete
With this selection option the selected SNADS distributor can be deleted.

Selection 5 - Display
With this selection option, details of the selected SNADS distributor can be displayed.

Valid command keys of the current mask:

F6=Add
A new SNADS distributor can be added here.

2.8.5 Menu item 7 - Copy parameters and distribution list



This can be used to copy the configuration of the process monitoring to TGTSYS or SRCSYS and to the remote system.

The user has the following input options for the parameters:

Copy parameters
If the parameters are to be copied.

Valid values for the parameter **Copy parameter** are:

***YES**
The process monitoring parameters are copied. *YES is the default value.

***NO**
The process monitoring parameters are not copied.

Copy email distribution list
Should the email distribution lists be copied.

Valid values for the **Copy email distribution list** parameter are:

***YES**
The email distribution lists are copied. *YES is the default value.

***NO**
The email distribution lists are not copied.

Copy SMS distribution list
Should the SMS distribution lists be copied.

Valid values for the **Copy SMS distribution list** parameter are:

***YES**
The SMS distribution lists are copied. *YES is the default value.
***NO**
The SMS distribution lists are not copied.

Copy SNADS distributor
Should the SNADS distributors be copied.

Valid values for the **Copy SNADS distributor** parameter are:

***YES**
The SNADS distributors are copied. *YES is the default value.

***NO**
The SNADS distributors are not copied.

Copy to remote
If the configuration is to be copied to remote.

Valid values for the **Copy to remote** parameter are:

***YES**
The configuration is copied to the remote system.

***NO**
The configuration is not copied to the remote system. *NO is the default value.

System link
Name of the system link used to send the configuration to remote.

Valid values for the **System link** parameter are:

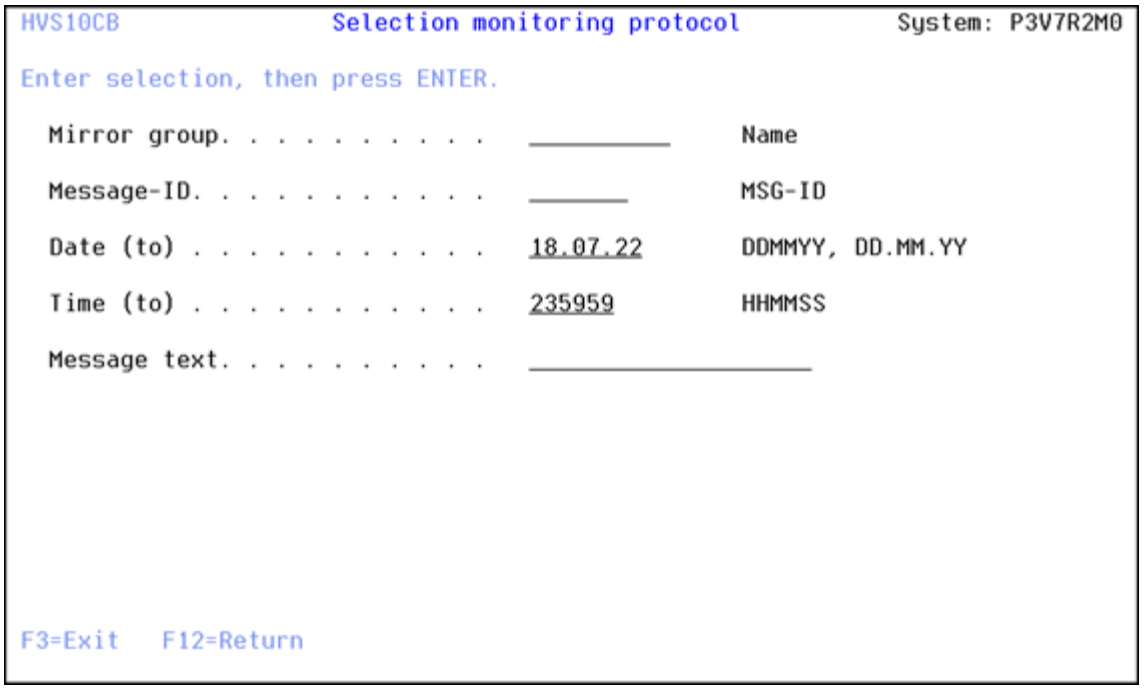
Name
Name of the system link that will be used.

***CURSL**
The current active system link is used.

***DFTSL**
The default system link is used.

The valid command keys are described in detail in the system operator guidance of the current command.

2.8.6 Menu item 10 - Display monitoring log



This function can be used to display messages from the process monitoring file for a mirror group or all mirror groups.

The following input fields are available to the user:

Mirror group
Name of the **mirror group for** which the called command is to be executed.

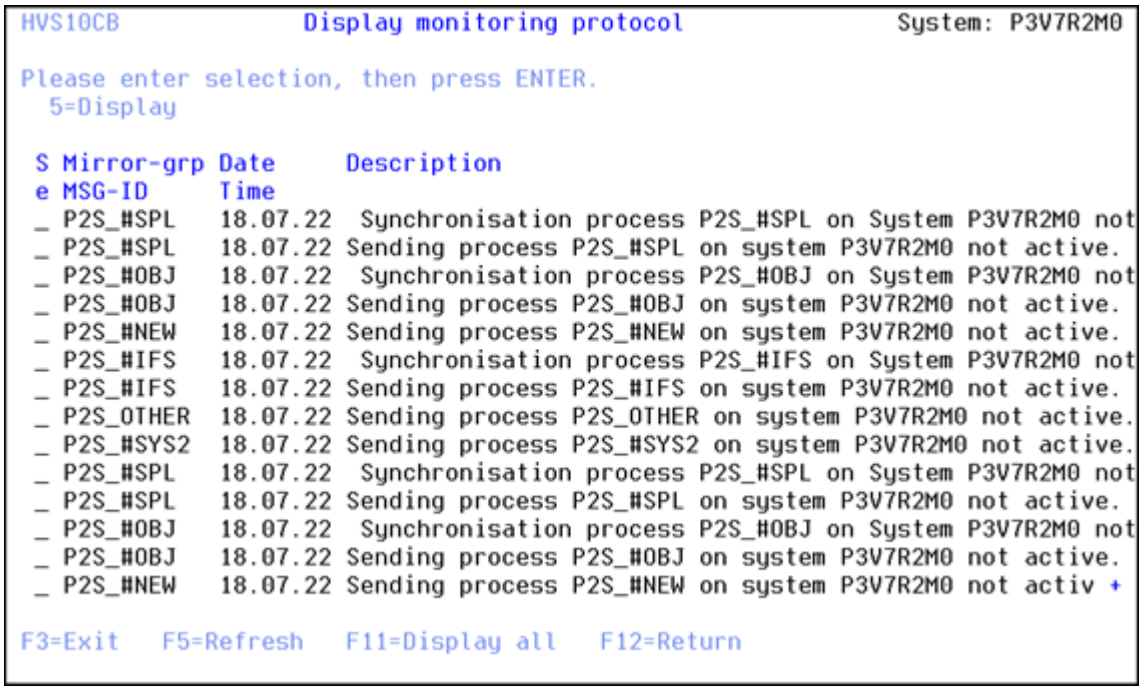
Message ID
Selection on the selected message ID. Only the messages with this message ID are then displayed.

Date (until)
Restriction from the selected date to the current date.

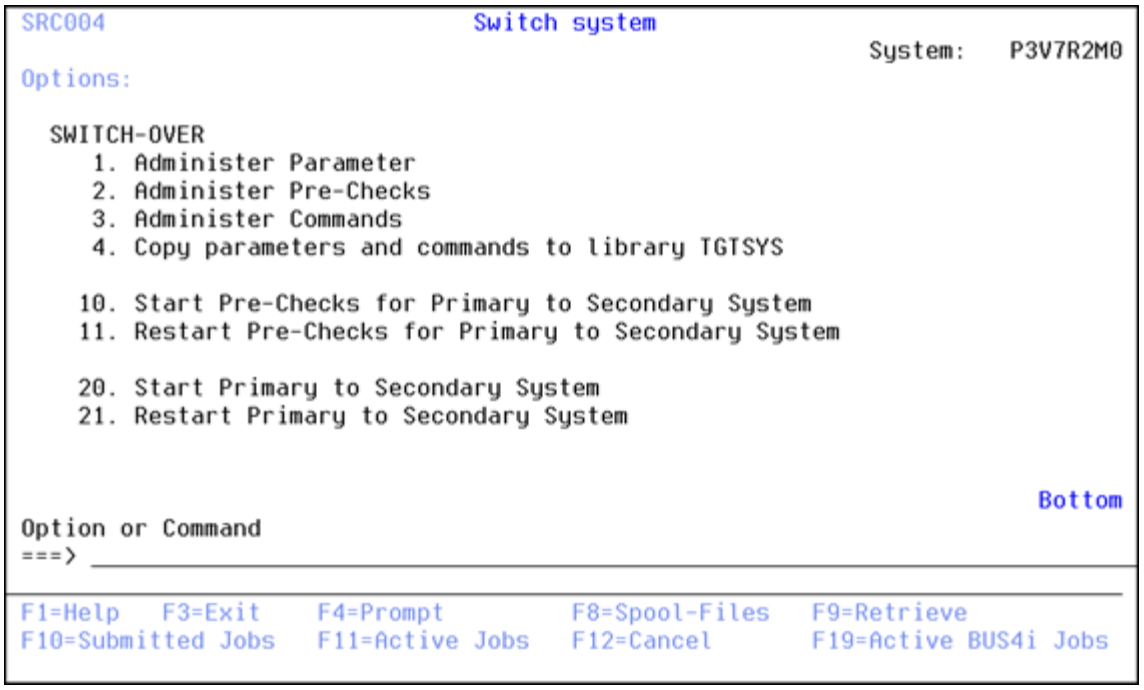
Time (until)
Restriction from the selected time until 23.59.59.

Message content
Selection on the selected message content.

The following mask is displayed.



2.9 Main menu selection 9 - System change (primary to secondary system)



Via this selection the user receives support for the change from the primary to the secondary system. He can define parameters and commands for the system change and execute the system change.

The following menu items can be selected on the screen:

Menu item 1: Manage parameters
The parameters for the system change are managed here.

Menu item 2: Manage preliminary checks
New tests can be added, existing ones changed, copied and deleted here.

Menu item 3: Manage commands
The commands that must be called for the system change can be managed here.

Menu item 4: Copy commands and parameters to library TGTSYS
The parameters are copied to the TGTSYS library when changing from primary to secondary system.

Menu item 10: Restart preliminary checks primary system becomes secondary system
Before switching over, the switchover settings (e.g. if the current system is the primary system) and previously defined checks can be performed.

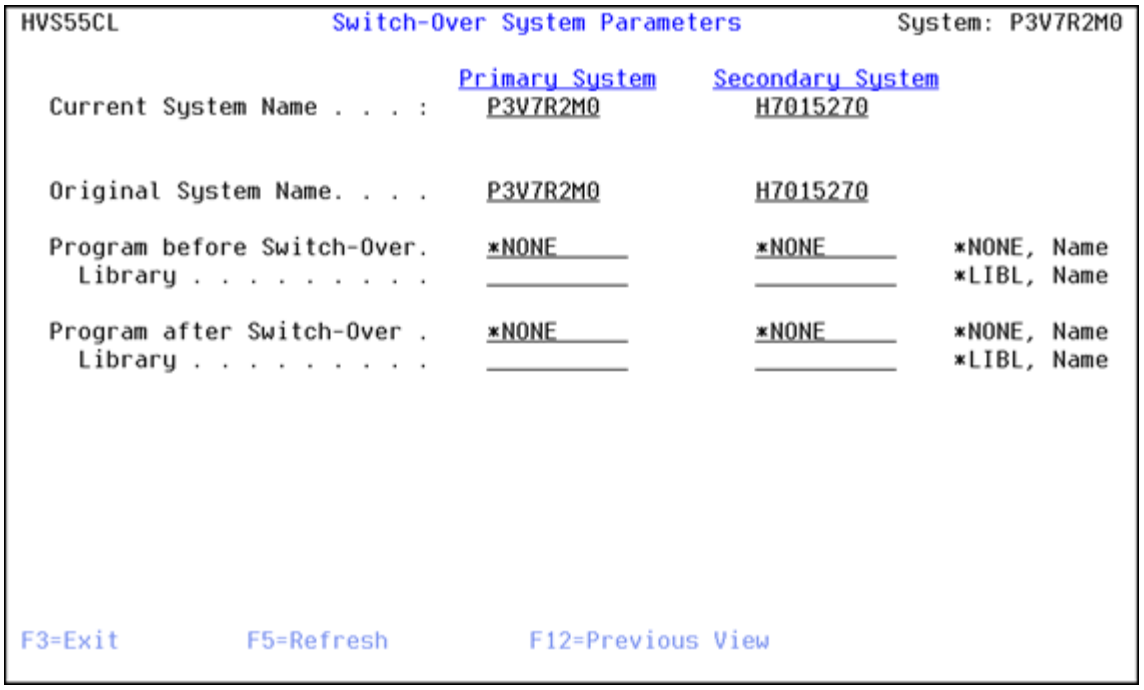
Menu item 11: Restart preliminary checks primary system becomes secondary system
If the preliminary checks were canceled, a restart can be triggered via this item.

Menu item 20: Restart primary becomes secondary system
The switch from primary to secondary system is performed. The operator is guided through the switch-over process. Before the switch-over is carried out, a message is displayed which cancels the process with "N". When confirmed with "Y", the system switch-over is carried out.

Menu item 21: Restart primary to secondary system

An aborted switch-over process can be restarted via this menu item.

2.9.1 Menu item 1 - Administer parameters



The system parameters are defined via this input mask. The system names of the primary and secondary system are specified here. Thus BUS4i can determine whether it is on the primary or secondary system.

The following input fields are available to the user:

Current system name
The current names for the switch-over from the primary and secondary systems are defined here. If the current system on which the switch-over command is executed does not correspond to the current system entered here, an error message is displayed.

Original system name
The original system name contains the names of the systems (primary and secondary system) before the switch-over.

Program before switch-over
A program can be defined here that is to run before the switch-over. This can be defined for the primary and secondary system. With *NONE no program is to run.

Library
Here the name of the library can be specified in which the program to be executed is located. With *LIBL the current library list is searched for the program.

Program after switch over
A program can be defined here that is to run after the switch-over. This can be defined for the primary and secondary system. With *NONE no program is to run.

Library
Here the name of the library can be specified in which the program to be executed is located. With *LIBL the current library list is searched for the program.

2.9.2 Menu item 2 - Administer pre-checks

This input mask is used to record the preliminary checks that must be performed for the system change.

The following input field is available to the user:

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

The following options are possible:

Selection 2 - Change
A command that has already been entered can be changed.

Selection 3 - Copy
With this option a command can be copied. For example, a command that was entered for the primary system can be copied and changed for the secondary system.

Selection 4 - Delete
One or more commands can be deleted from the list.

Selection 5 - Display
The selected command can be displayed completely with this option.

Valid command key of the current mask:

F11=further data
More parts of the command are displayed in a continuation line.

F15=P2S commands only

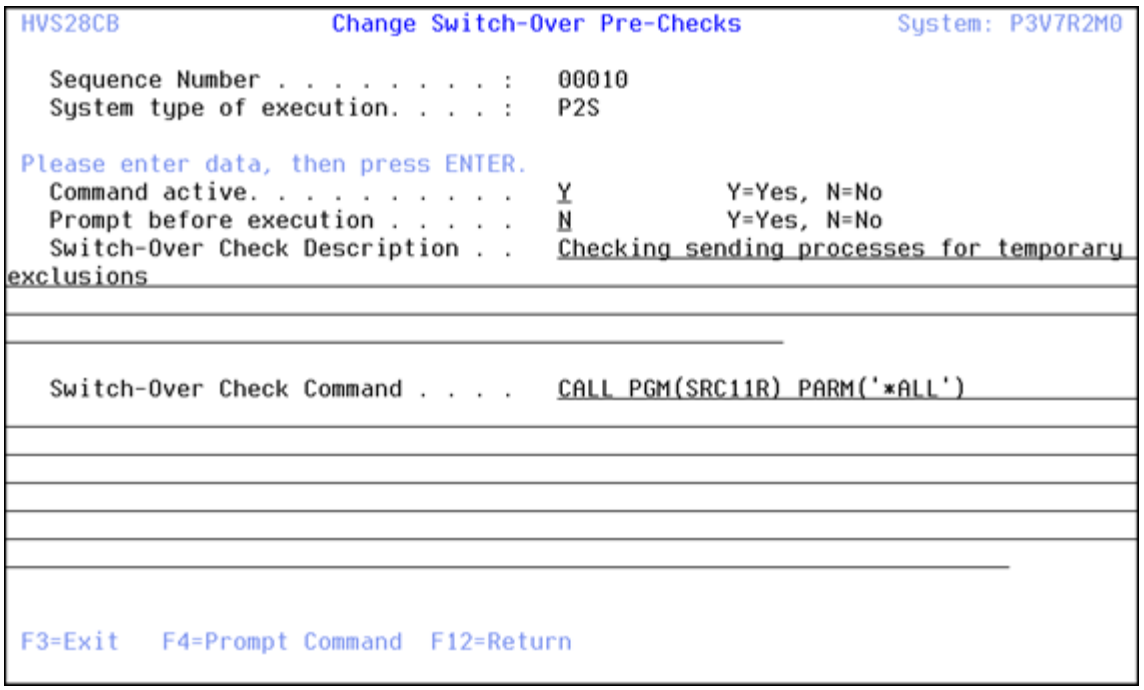
Only the commands for the switch-over from primary to secondary system are displayed.

F16=S2P commands only
Only the commands for the switch-over from secondary to primary system are displayed.

F17=All commands
The commands for switch-over from primary to secondary system and secondary to primary system are displayed.

F18=Reorganize
The commands are sorted according to the new sequence number. This option can be selected when new commands with intermediate numbers are entered.

2.9.2.1 Selection 2 - Change Switch-Over Pre-Checks



This mask is used to modify a pre-check command.

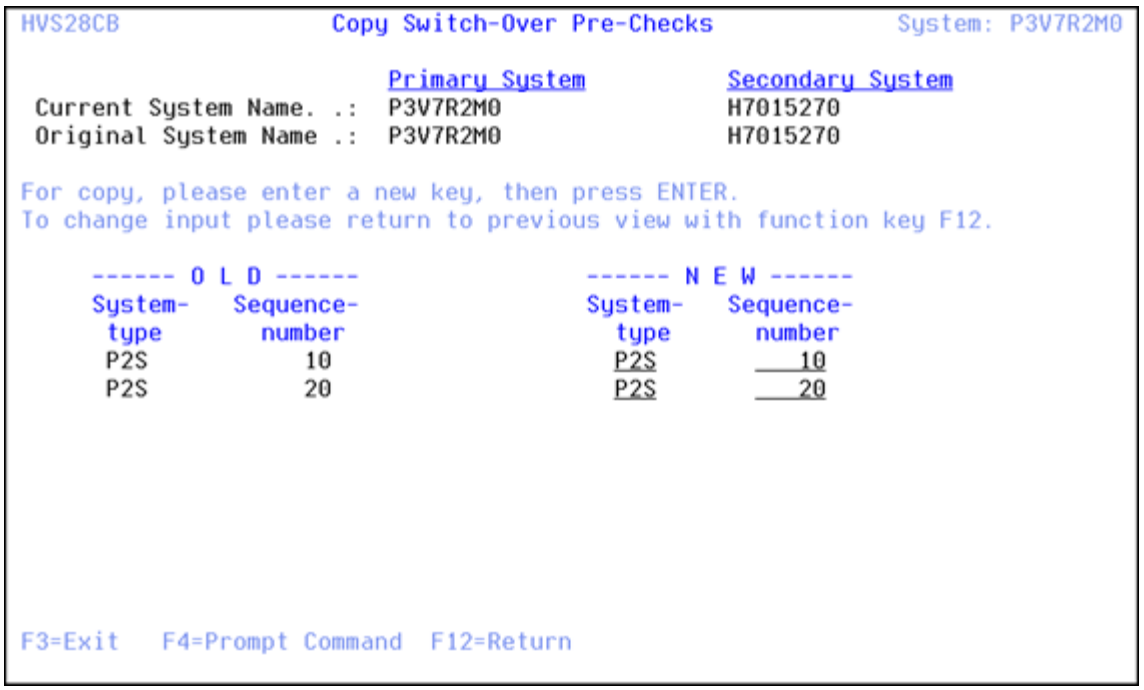
Testing active
Here you can specify whether the command should be executed ("Y") or not ("N").

Prompt command before execution
This indicator decides whether the command is prompted or not. If the command is prompted, it means that it is executed interactively.

Switch-Over Check Description
The text entered here can be used as a description for this command. This is displayed in the administration to have a short description of the command.

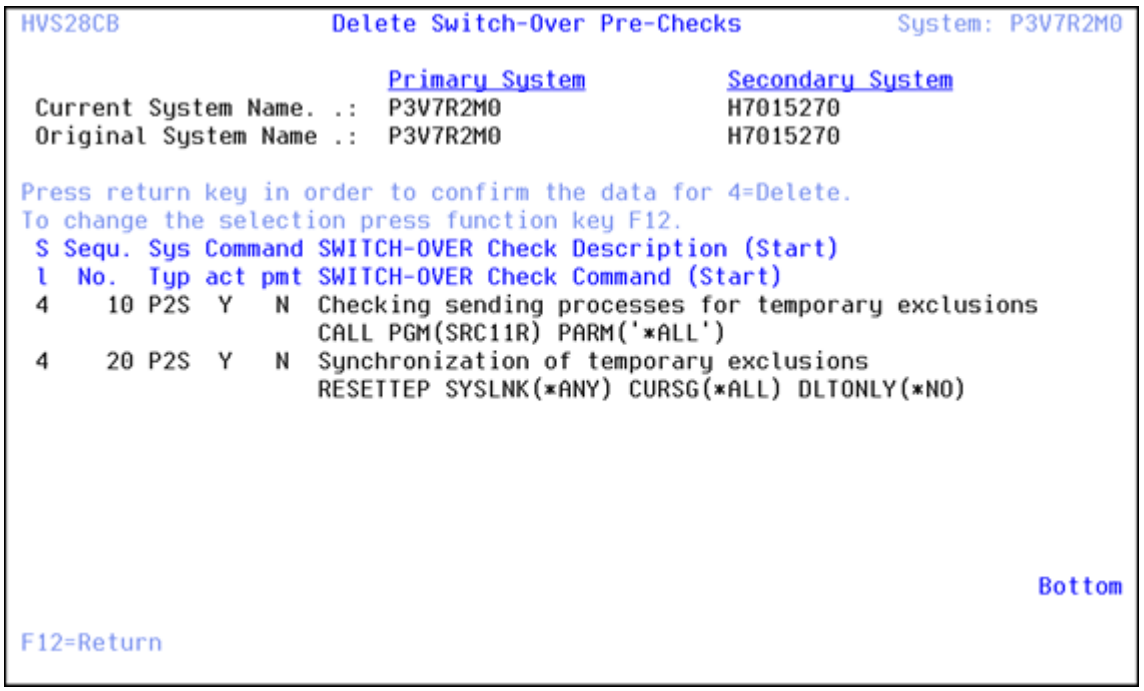
Switch-Over Check Command
A valid command must be specified here, which is to be executed during the pre-check.

2.9.2.2 Selection 3 - Copy Switch-Over Pre-Checks



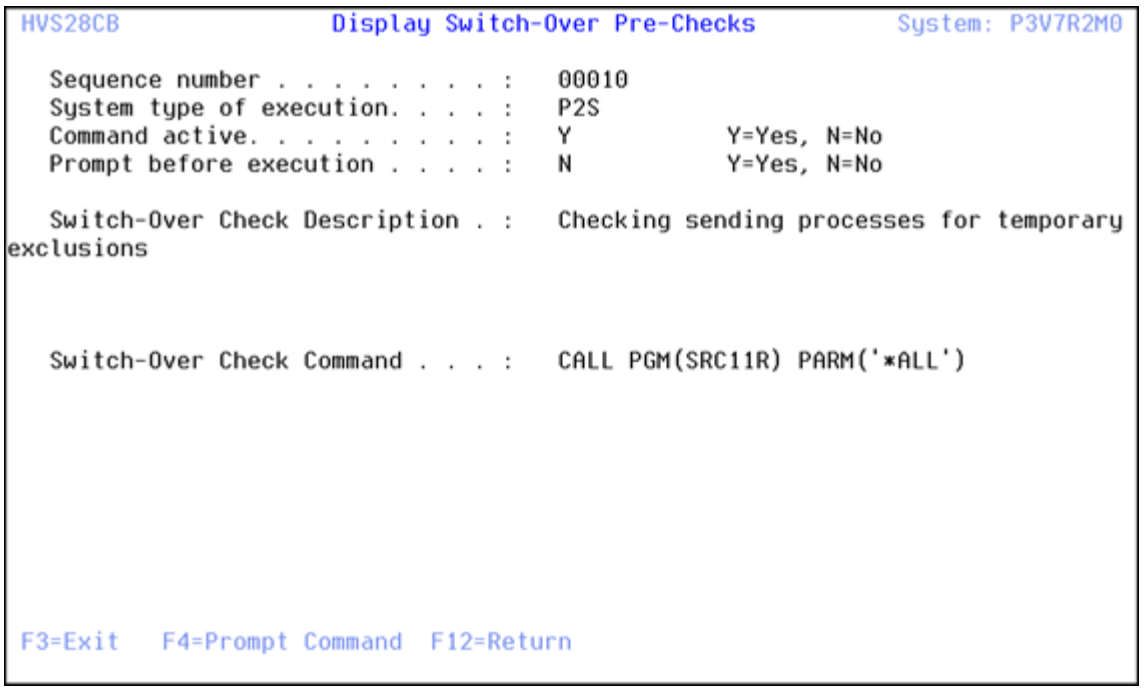
This mask is used to copy a preliminary test. Here you can enter a system type (P2S or S2P) and a new sequence number under which the copied pre-check will be stored. This entry can then be edited via 'Change'.

2.9.2.3 Selection 4 - Delete Switch-Over Pre-Checks



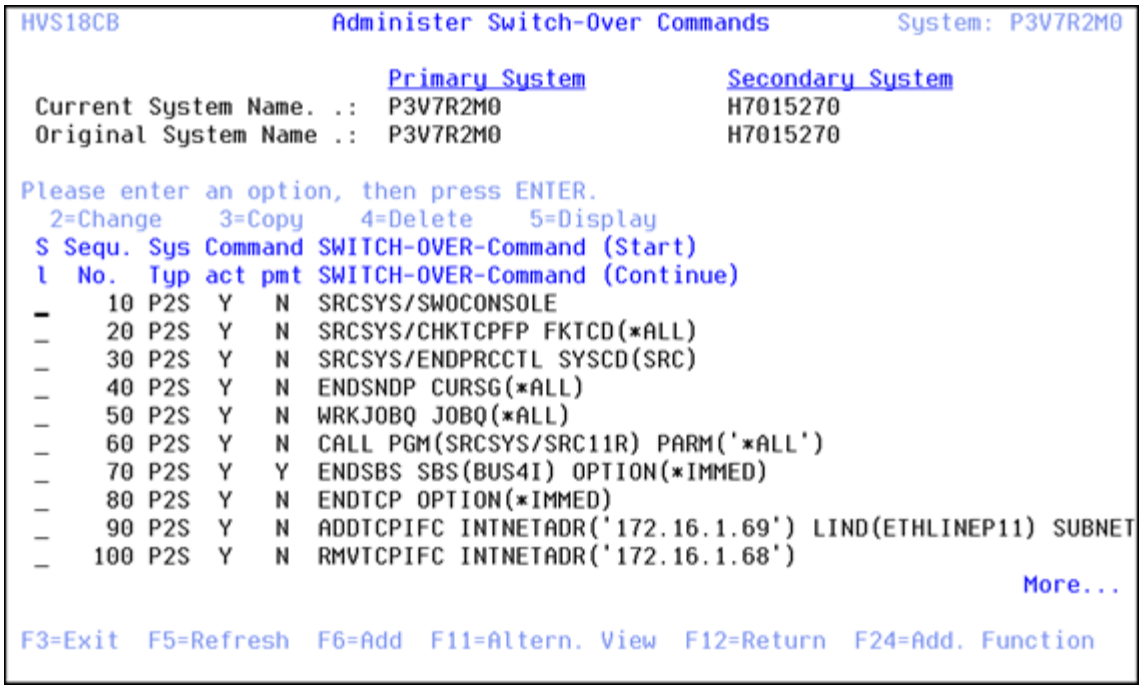
This mask is used to delete one or more pre-check commands from the list. The entries to be deleted are displayed once again and deleted by confirming with the Enter key.
The deletion process can be canceled with F12.

2.9.2.4 Selection 5 - Display Switch-Over Pre-Checks



This mask is used to display all parameters that belong to a pre-check command.

2.9.3 Menu item 3 - Administer commands



This input mask is used to enter the switching commands that must be executed for the system change.

The following input field is available to the user:

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

The following options are possible:

Selection 2 - Change
A command that has already been entered can be changed.

Selection 3 - Copy
With this option a command can be copied. For example, a command that was entered for the primary system can be copied and changed for the secondary system.

Selection 4 - Delete
One or more commands can be deleted from the list.

Selection 5 - Display
The selected command can be displayed completely with this option.

Valid command key of the current mask:

F11=further data
More parts of the command are displayed in a continuation line.

F15=P2S commands only

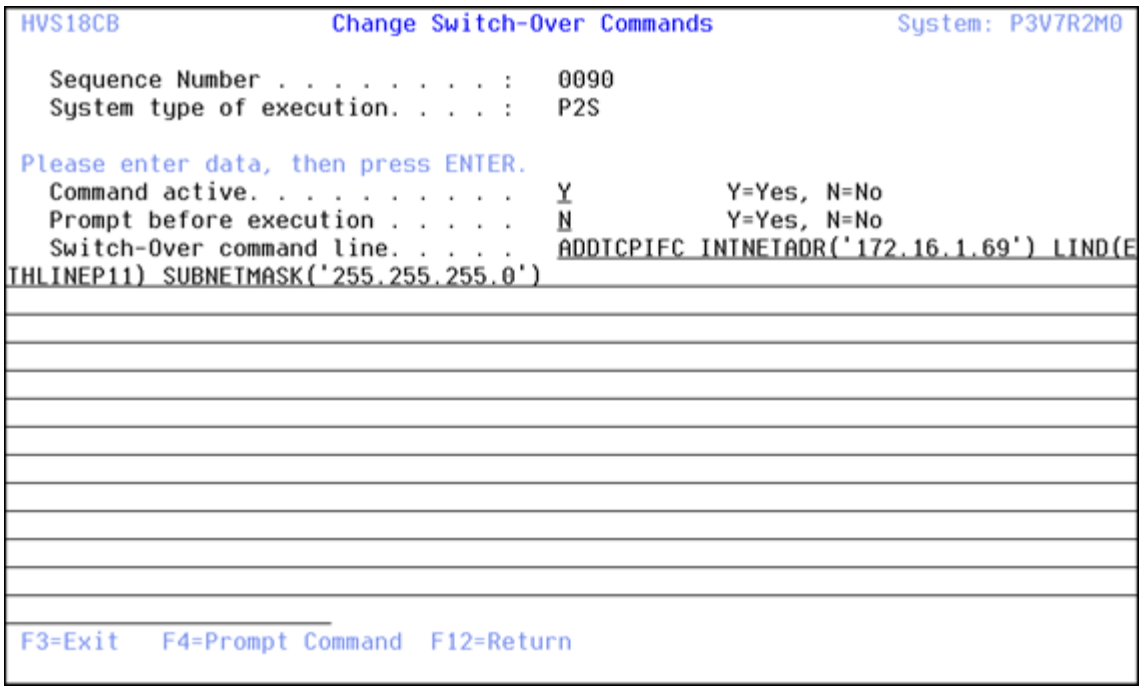
Only the commands for the switch-over from primary to secondary system are displayed.

F16=S2P commands only
Only the commands for the switch-over from secondary to primary system are displayed.

F17=All commands
The commands for switch-over from primary to secondary system and secondary to primary system are displayed.

F18=Reorganize
The commands are sorted according to the new sequence number. This option can be selected when new commands with intermediate numbers are entered.

2.9.3.1 Selection 2 - Change Switch-Over Commands



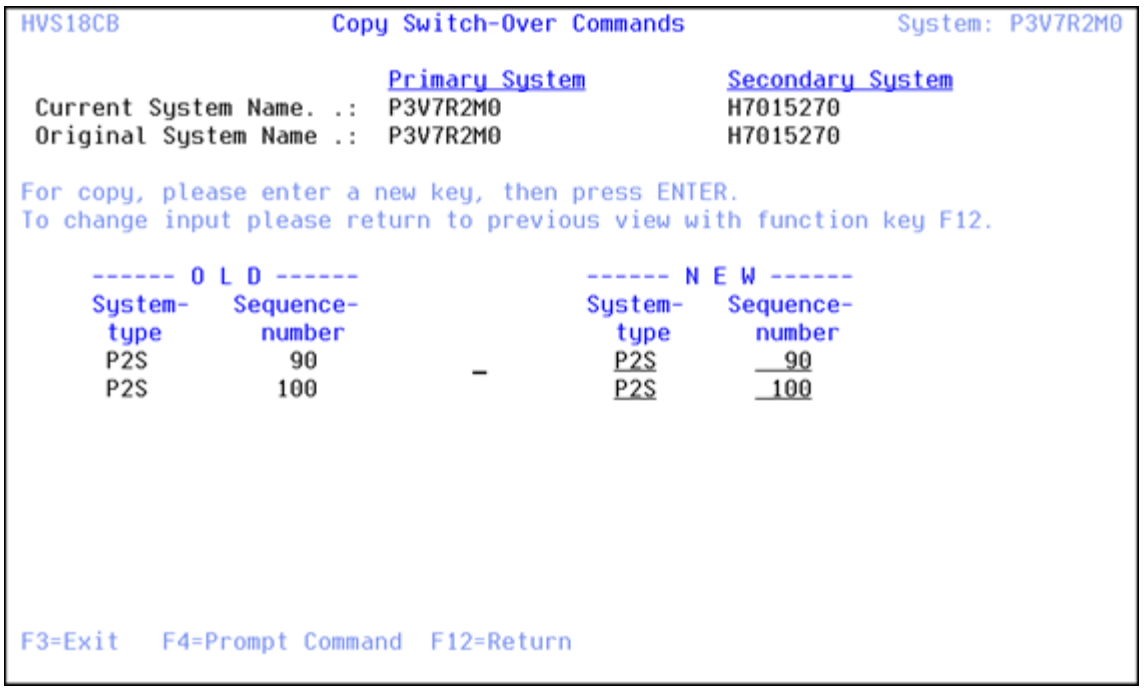
This mask is used to change a switch-over command.

Testing active
Here you can specify whether the command should be executed ("Y") or not ("N").

Prompt command before execution
This flag decides whether the command is prompted or not. If the command is prompted, it means that it is executed interactively.

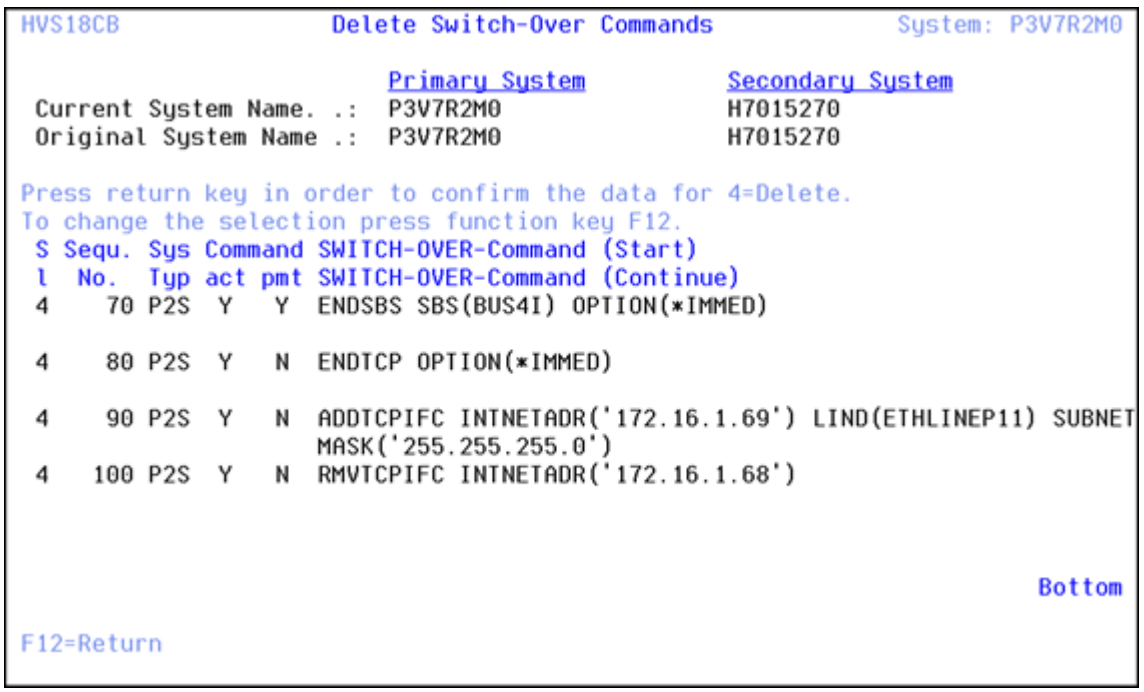
Switch-Over Command Line
A valid command must be specified here, which is to be executed during switch-over.

2.9.3.2 Selection 3 - Copy Switch-Over commands



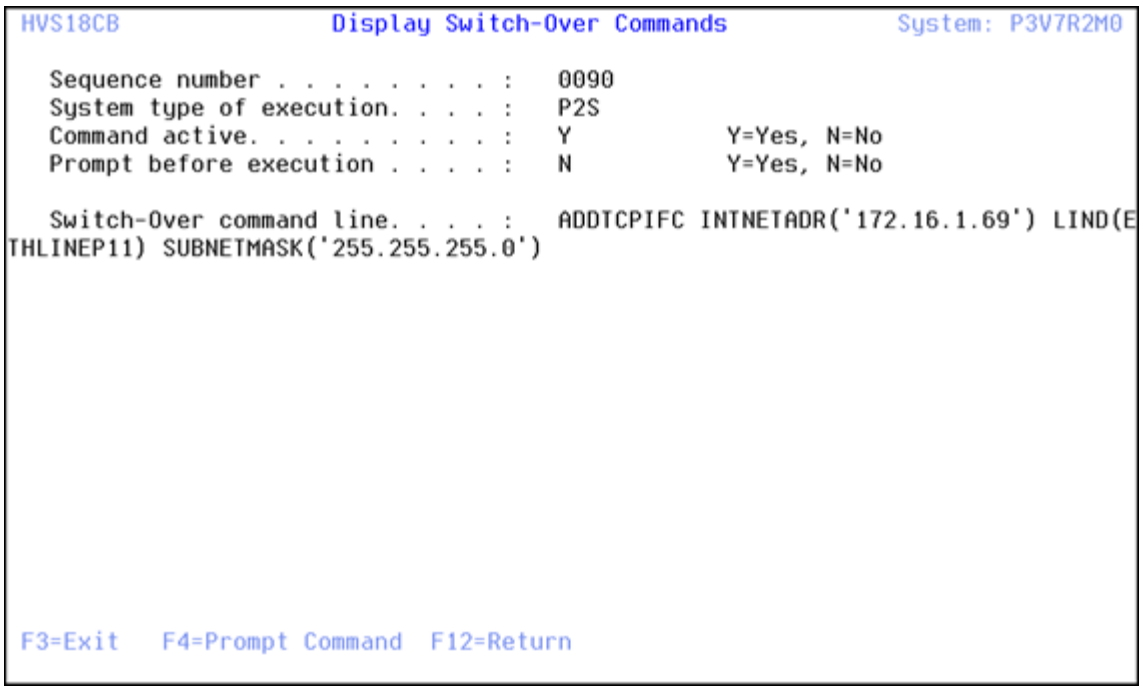
This mask is used to copy a switch-over command. Here you can enter a system type (P2S or S2P) and a new sequence number under which the copied switch-over command is stored. Via 'Modify' this entry can then be edited.

2.9.3.3 Selection 4 - Delete Switch-Over commands



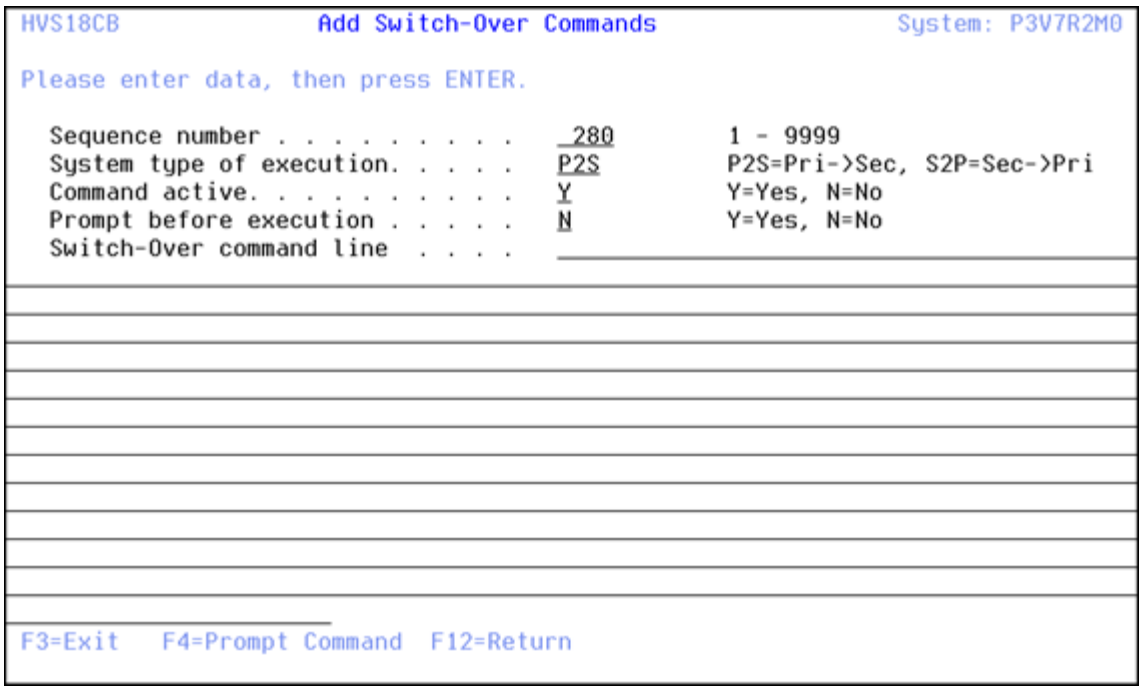
This mask is used to delete one or more switch-over commands from the list. The entries to be deleted are displayed once again and deleted by confirming with the Enter key.The deletion process can be canceled with F12.

2.9.3.4 Selection 5 - Display Switch-Over commands



This mask is used to display all parameters belonging to a Switch-Over command.

2.9.3.5 Command key F6 - Add Switch-Over command



This mask is used to add a SWITCH-Over command.

Sequence number
Enter the new sequence number here. It identifies the sequence in which the respective switch-over commands are executed.

System type of execution
The system type can be specified here (P2S or S2P).

Command active
Here you can specify whether the command should be executed ("Y") or not ("N").

Prompt command before execution
This indicator decides whether the command is prompted or not. If the command is prompted, it means that it is executed interactively.

Switch-Over Command Line
A valid command must be specified here, which is to be executed during switch-over.

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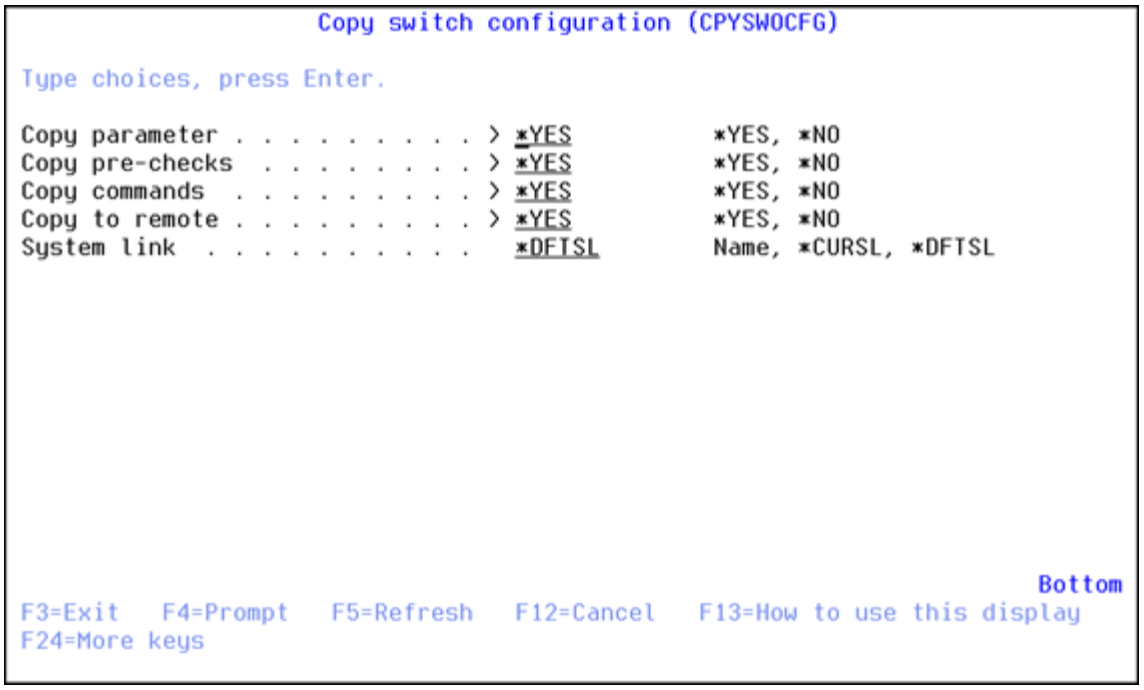
2.9.4 Menu item 4 - Copy commands and parameters to library TGTSYS



This menu item copies the configuration of the switch configuration to TGTSYS or SRCSYS and to the remote system.

The user has the following input options for the parameters:

Copy parameters
If the parameters are to be copied.

Valid values for the parameter **Copy parameter** are:

***YES**
The switch configuration parameters are copied. *YES is the default value.

***NO**
The switch configuration parameters are not copied.

Copy Preliminary Exams
Shall copy the preliminary exams.

Valid values for the **Copy preliminary checks** parameter are:

***YES**
The preliminary checks are copied. *YES is the default value.

***NO**
The preliminary examinations are not copied.

Copy commands
If the switch-over commands are to be copied.

Valid values for the **Copy commands** parameter are:

***YES**
The switch-over commands are copied. *YES is the default value.

***NO**
The switch-over commands are not copied.

Copy to remote
If the configuration is to be copied to remote.

Valid values for the **Copy to remote** parameter are:

***YES**
The configuration is copied to the remote system.

***NO**
The configuration is not copied to the remote system. *NO is the default value.

System link
Name of the system link used to send the configuration to remote.

Valid values for the **System link** parameter are:

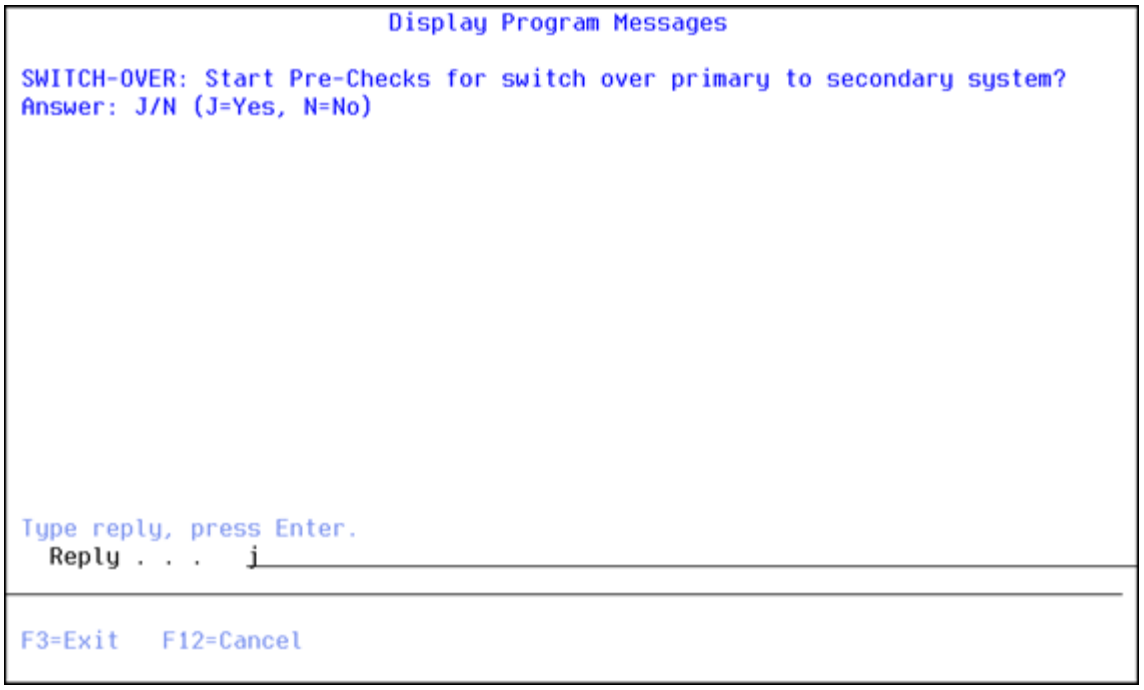
Name
Name of the system link that will be used.

***CURSL**
The current active system link is used.

***DFTSL**
The default system link is used.

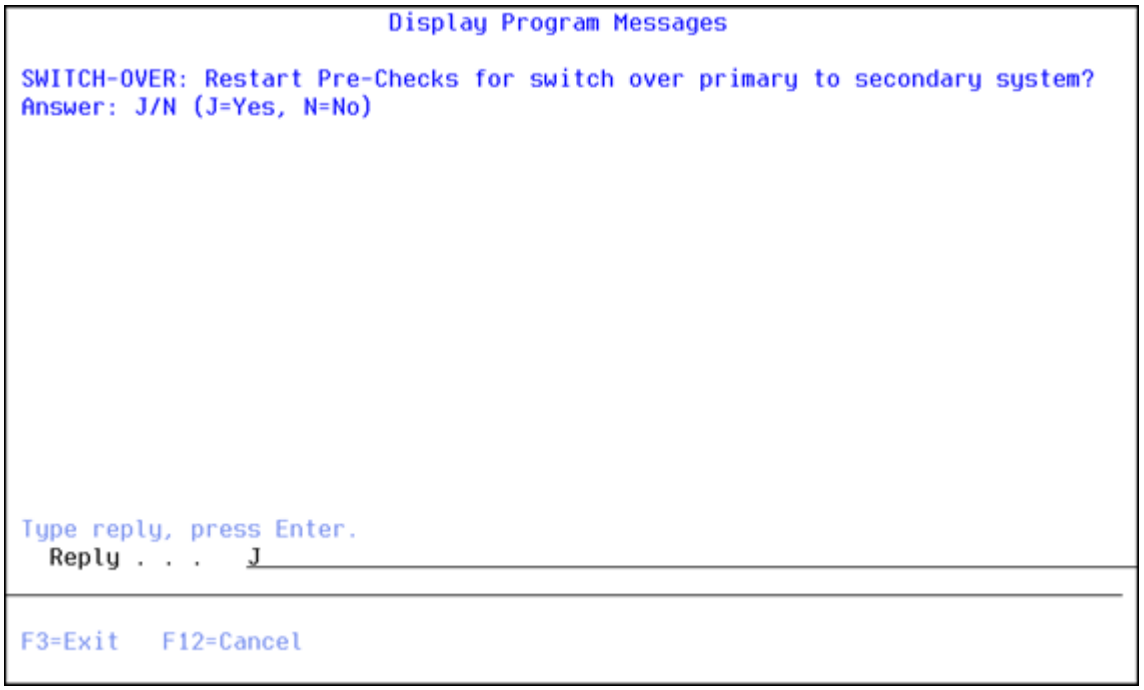
The valid command keys are described in detail in the system operator guidance of the current command.

2.9.5 Menu item 10 - Start Pre-Checks for Primary to Secondary System



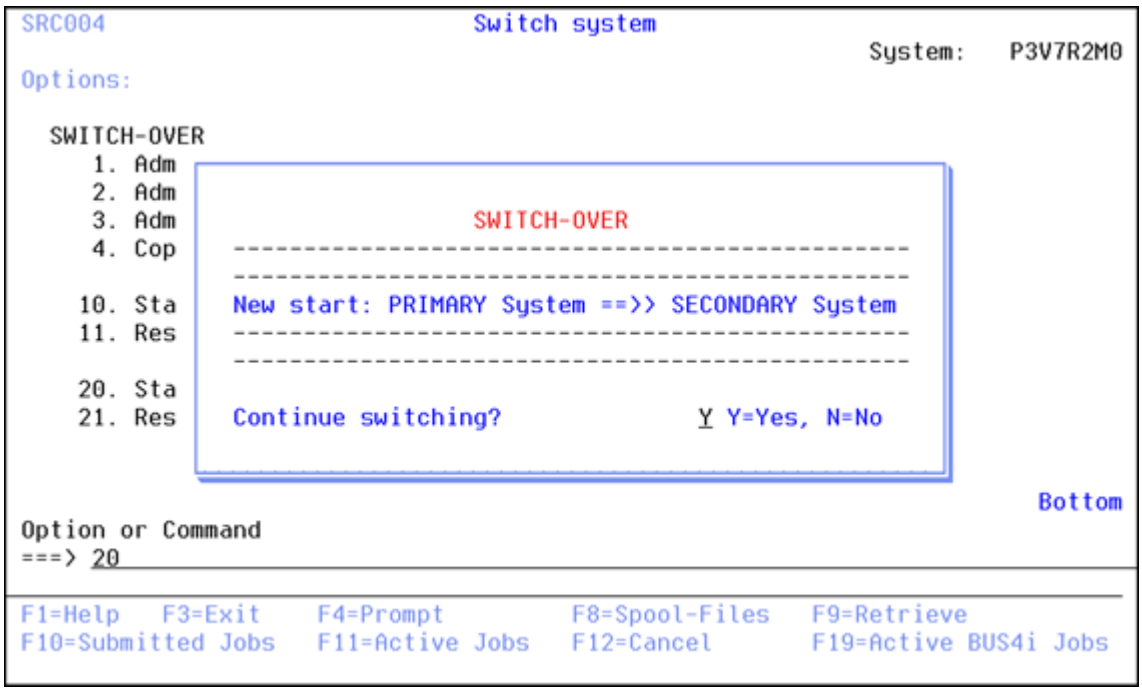
Executes all commands of the preliminary check (menu item 2). Before each command there is a query whether this command should be executed, then the next command is executed.

2.9.6 Menu item 11 - Restart Pre-Checks for Primary to Secondary System



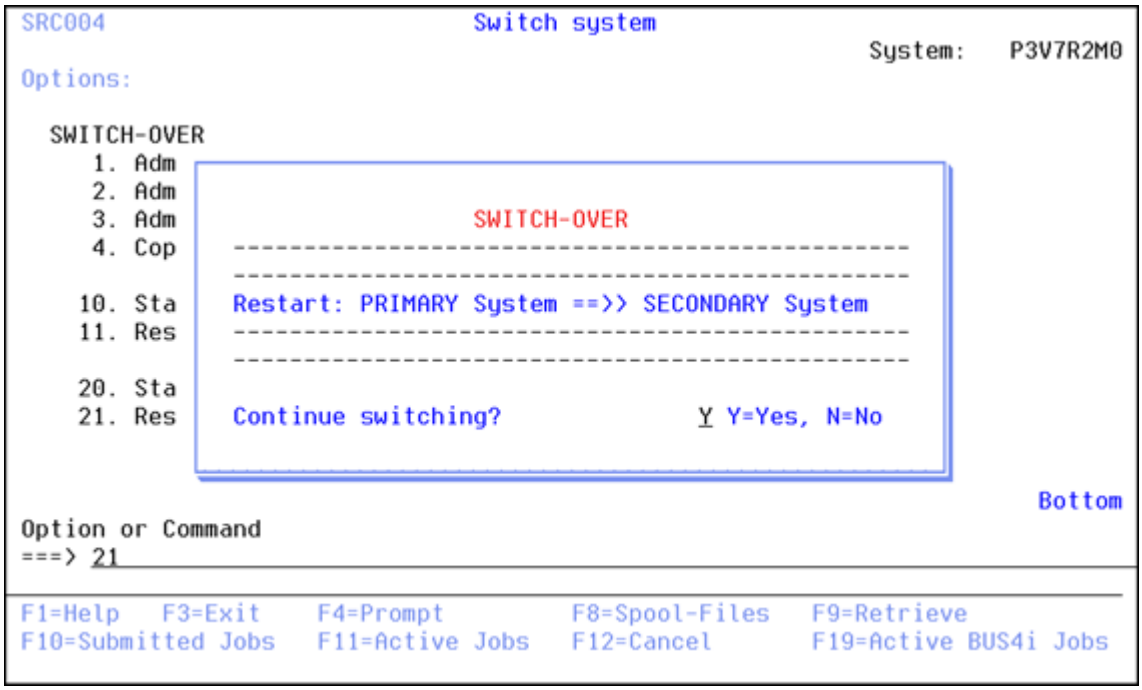
The preliminary check is continued after an abort at the aborted command. As in the case of the preliminary check, a query is made before each command, and then the next command is continued as normal.

2.9.7 Menu item 20 - Start primary becomes secondary system



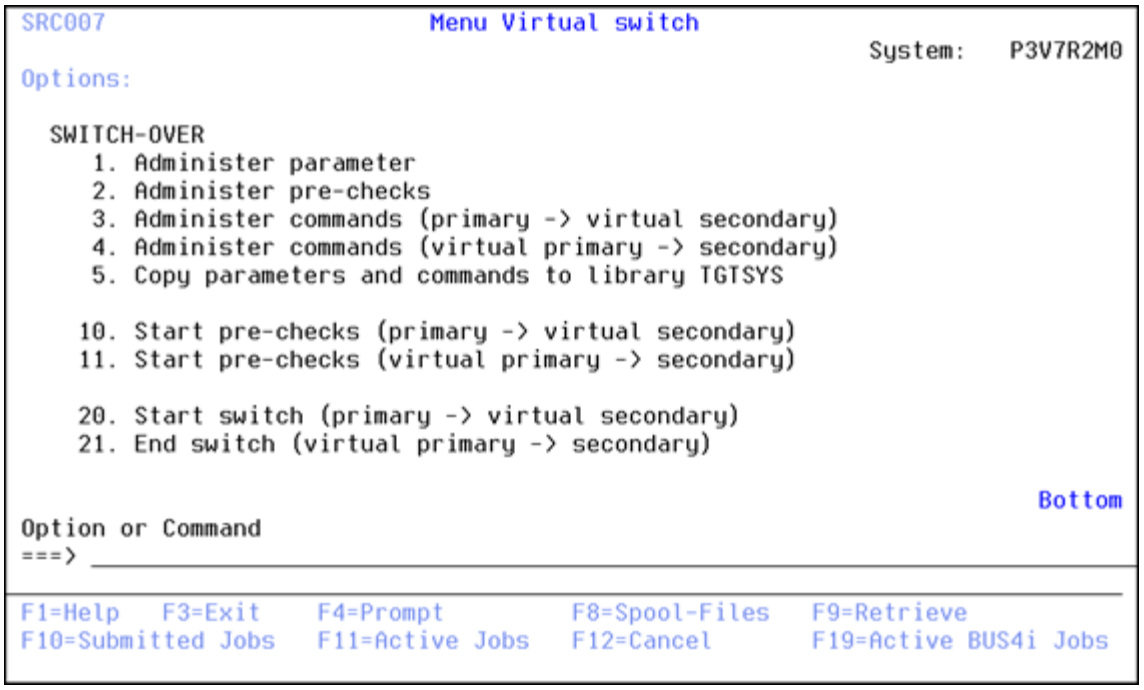
This menu item starts the switch-over from the primary system to the secondary system. All active commands that were entered under menu item 3 are executed. Each successfully executed command gets a status.

2.9.8 Menu item 21 - Restart primary becomes secondary system



The system change is continued after an abort at the aborted command.
All active commands that have not yet been executed are executed. Each successfully executed command gets a status.

2.10 Main menu selection 10 – Switch system (virtual)



Via this selection the user gets support for the virtual system change from the primary to the virtual secondary system. He can define parameters and commands for the system change and execute the system change.

The following menu items can be selected on the screen:

Menu item 1: Manage parameters
The parameters for the virtual system change are managed here.

Menu item 2: Manage preliminary checks
New tests can be added, existing ones changed, copied and deleted here.

Menu item 3: Manage commands (primary -> virtual secondary)
The commands that must be called for the virtual system change can be managed here.

Menu item 4: Manage commands (Virtual Primary -> Secondary)
The commands that must be called for the virtual system change can be managed here.

Menu item 5: Copy commands and parameters to library TGTSYS
The parameters for the virtual system change from primary to secondary system are copied to the TGTSYS library.

Menu item 10: Preliminary checks System change (primary→ virtual secondary)
Before switching over, the switchover settings and previously defined checks can be performed.

Menu item 11: Preliminary checks System change (Virtual Primary→ Secondary)
Before switching over, the switchover settings and previously defined checks can be performed.

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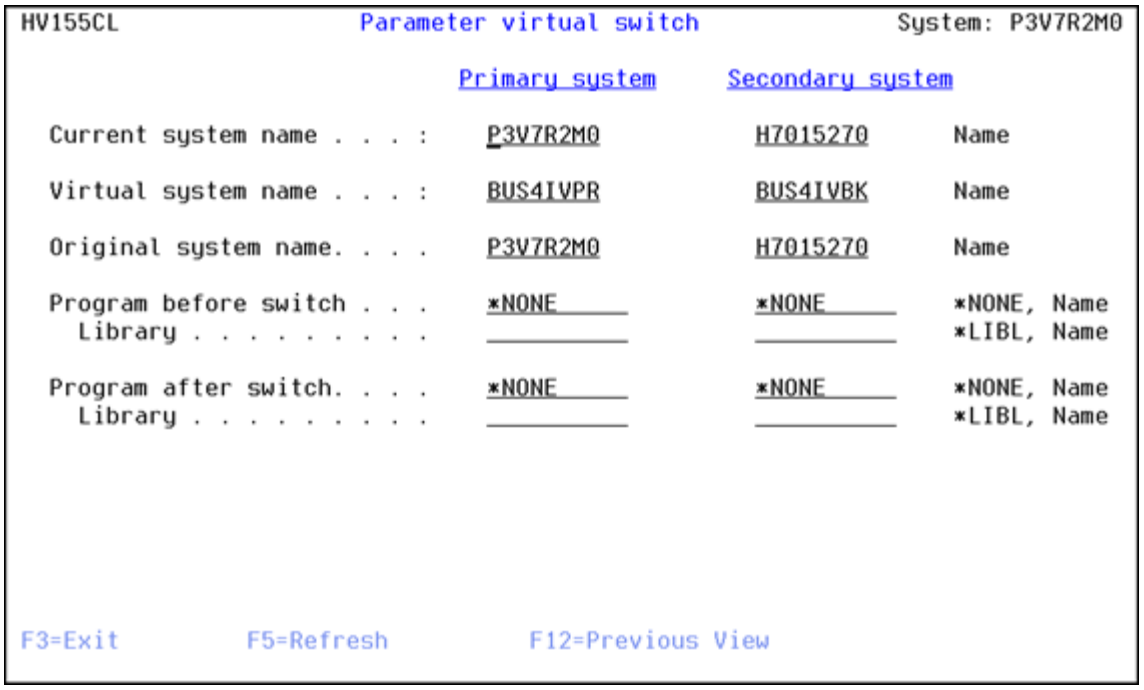
Menu item 20: Start system change (primary→ virtual secondary)

The system switch from the primary to the virtual secondary system is performed. The operator is guided through the switch-over process. Before the switch-over is carried out, a message is displayed which cancels the process with "N". When confirmed with "Y", the system switch is carried out.

Menu item 21: End system change (Virtual Primary→ Secondary)

The system change from the virtual primary to the secondary system is finished.

2.10.1 Menu item 1 - Administer parameters



The system parameters are defined via this input mask. The system names of the primary and secondary system and the virtual system names are specified here. Thus BUS4i can determine whether it is on the primary or secondary system or on a virtual system.

The following input fields are available to the user:

Current system name
The current names for the switch-over from the primary and secondary systems are defined here. If the current system on which the switch-over command is executed does not correspond to the current system entered here, an error message is displayed.

Virtual system name
Here the virtual names for the switch-over from the primary and and virtual secondary system are defined. If the current system on which the switch-over command is executed does not correspond to the current system entered here, an error message is displayed.

Original system name
The original system name contains the names of the systems (primary and secondary system) before the switch-over.

Program before switch-over
A program can be defined here that is to run before the switch-over. This can be defined for the primary and secondary system. With *NONE no program is to run.

Library
Here the name of the library can be specified in which the program to be executed is located. With *LIBL the current library list is searched for the program.

Program after switch over
A program can be defined here that is to run after the switch-over. This can be defined for the primary and secondary system. With *NONE no program is to run.

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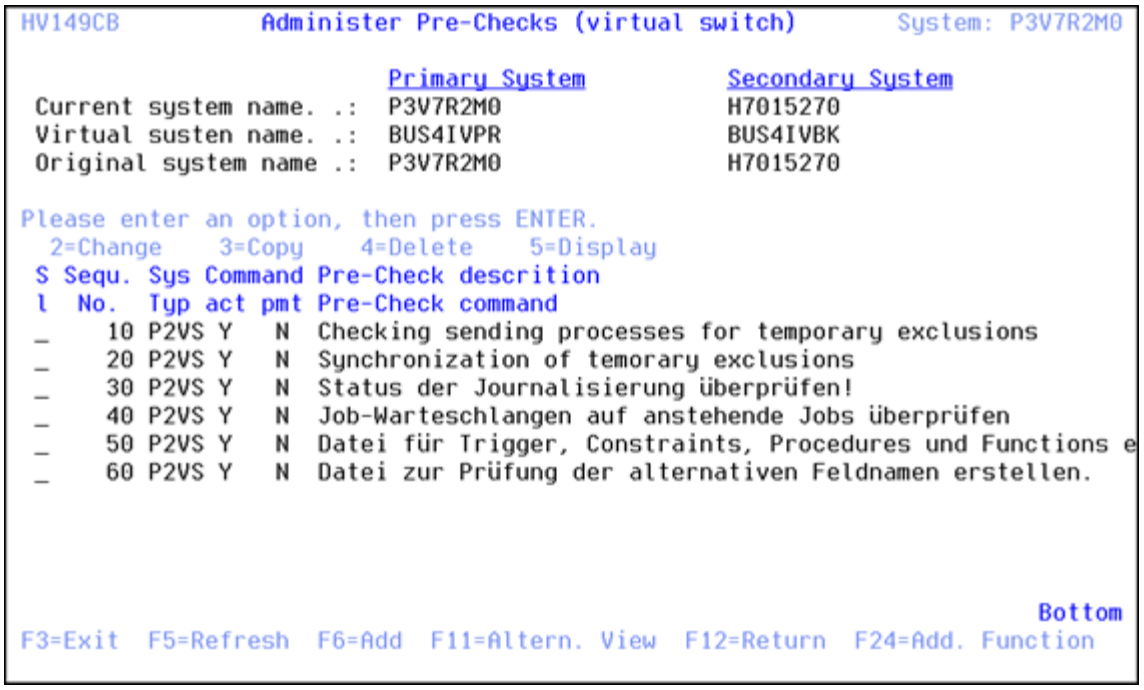
Library
Here the name of the library can be specified in which the program to be executed is located. With *LIBL the current library list is searched for the program.

2.10.2 Menu item 2 - Administer pre-checks (virtual switch)



This input mask is used to record the preliminary checks that must be performed for the virtual system change.

The following input field is available to the user:

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

The following options are possible:

Selection 2 - Change
A command that has already been entered can be changed.

Selection 3 - Copy
With this option a command can be copied. For example, a command that was entered for the primary system can be copied and changed for the secondary system.

Selection 4 - Delete
One or more commands can be deleted from the list.

Selection 5 - Display
The selected command can be displayed completely with this option.

Valid command key of the current mask:

F11=further data
More parts of the command are displayed in a continuation line.

F13=P2VS commands only

Only the commands for switch-over from primary to virtual secondary system are displayed.

F14=VS2P commands only
Only the commands for switch-over from virtual secondary to primary system are displayed.

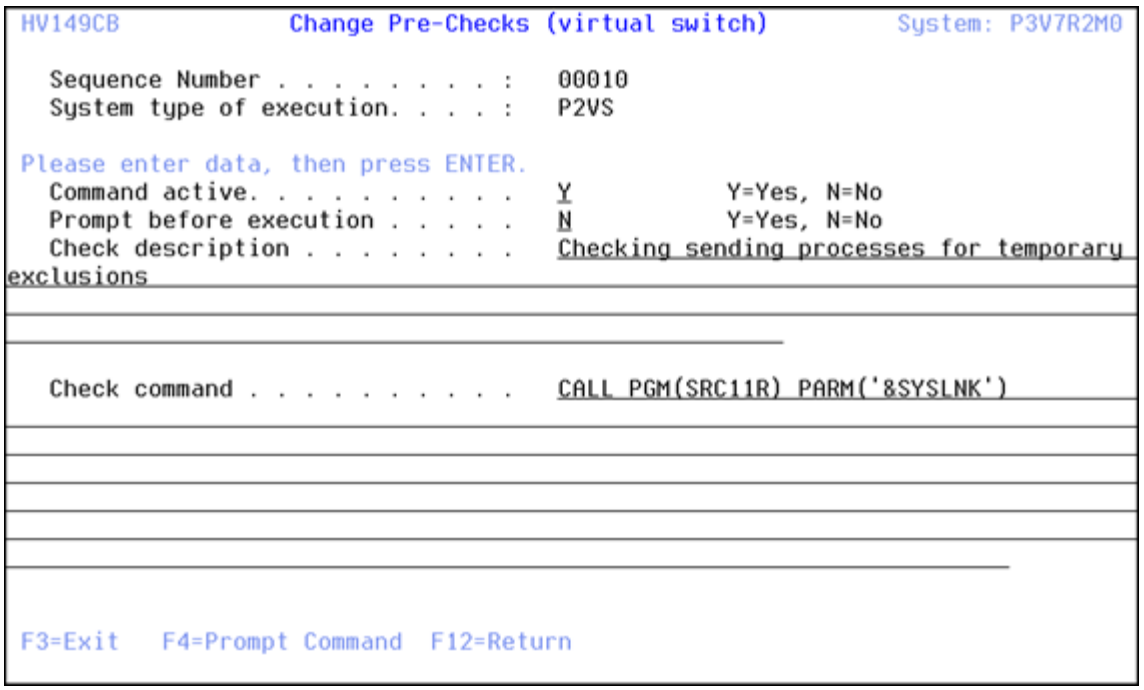
F15=S2VP commands only
Only the commands for switch-over from secondary to virtual primary system are displayed.

F16=Only VP2S commands
Only the commands for switch-over from virtual primary to secondary system are displayed.

F17=All commands
The commands for switch-over from primary to secondary system and secondary to primary system are displayed.

F18=Reorganize
The commands are sorted according to the new sequence number. This option can be selected when new commands with intermediate numbers are entered.

2.10.2.1 Selection 2 - Change pre-checks (virtual switch)



This mask is used to modify a pre-check command.

Testing active
Here you can specify whether the command should be executed ("Y") or not ("N").

Prompt command before execution
This indicator decides whether the command is prompted or not. If the command is prompted, it means that it is executed interactively.

Switch-Over Check Description
The text entered here can be used as a description for this command. This is displayed in the administration to have a short description of the command.

Switch-Over Check command
A valid command must be specified here, which is to be executed during the pre-check.

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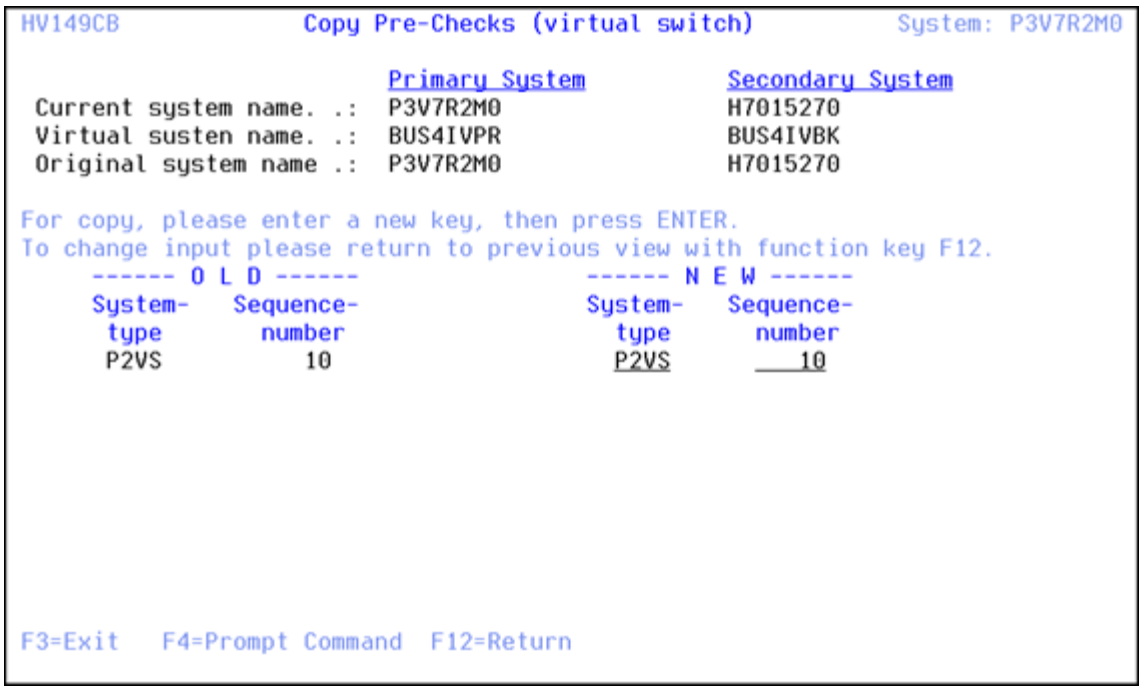
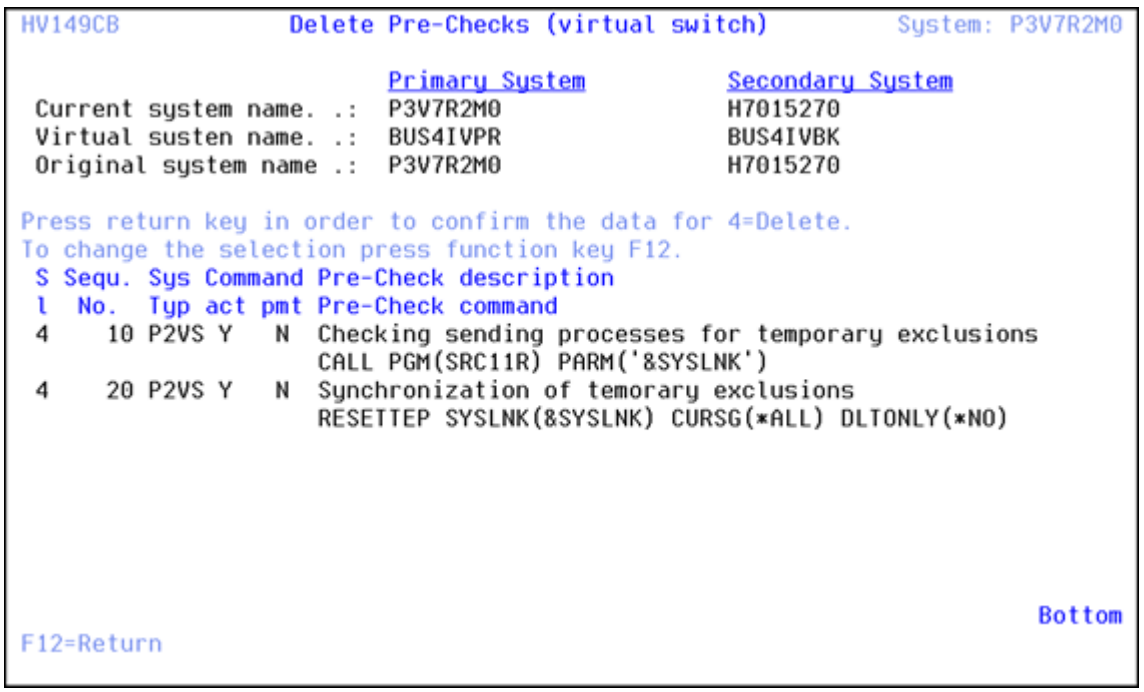
2.10.2.2 Selection 3 - Copy Pre-Checks (Virtual Switch)



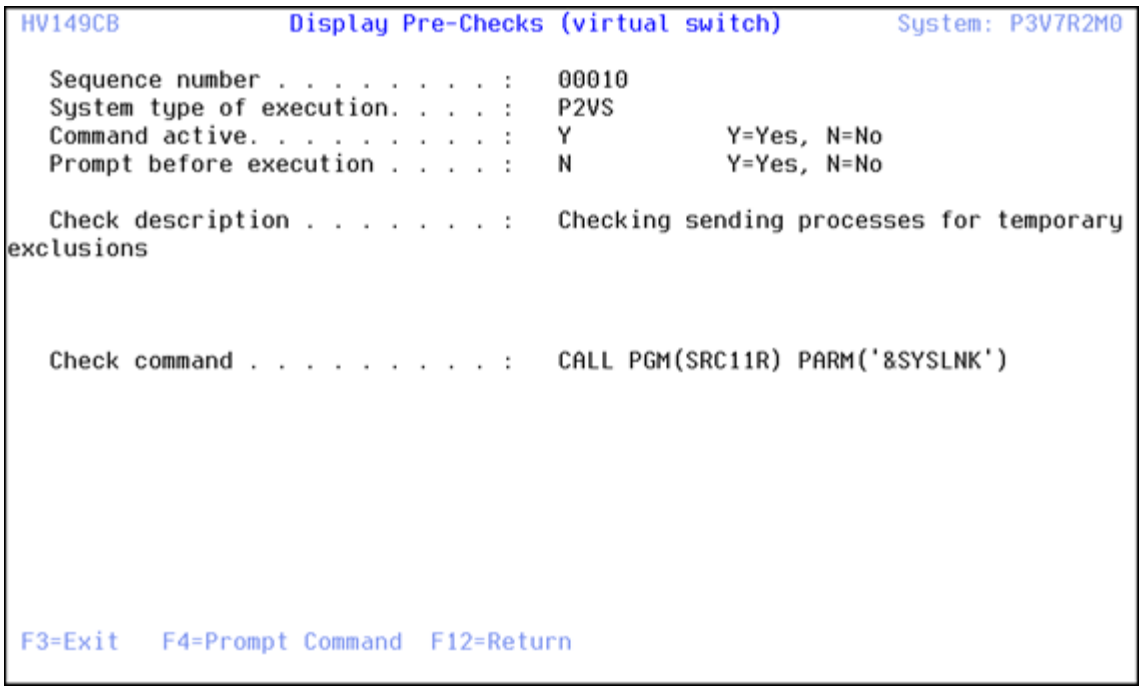
This mask is used to copy a preliminary test. Here you can enter a system type (P2VS, VP2S, S2VP or VP2S) and a new sequence number under which the copied pre-check will be stored. This entry can then be edited via 'Change'.

2.10.2.3 Selection 4 - Delete Pre-Checks (virtual switch)



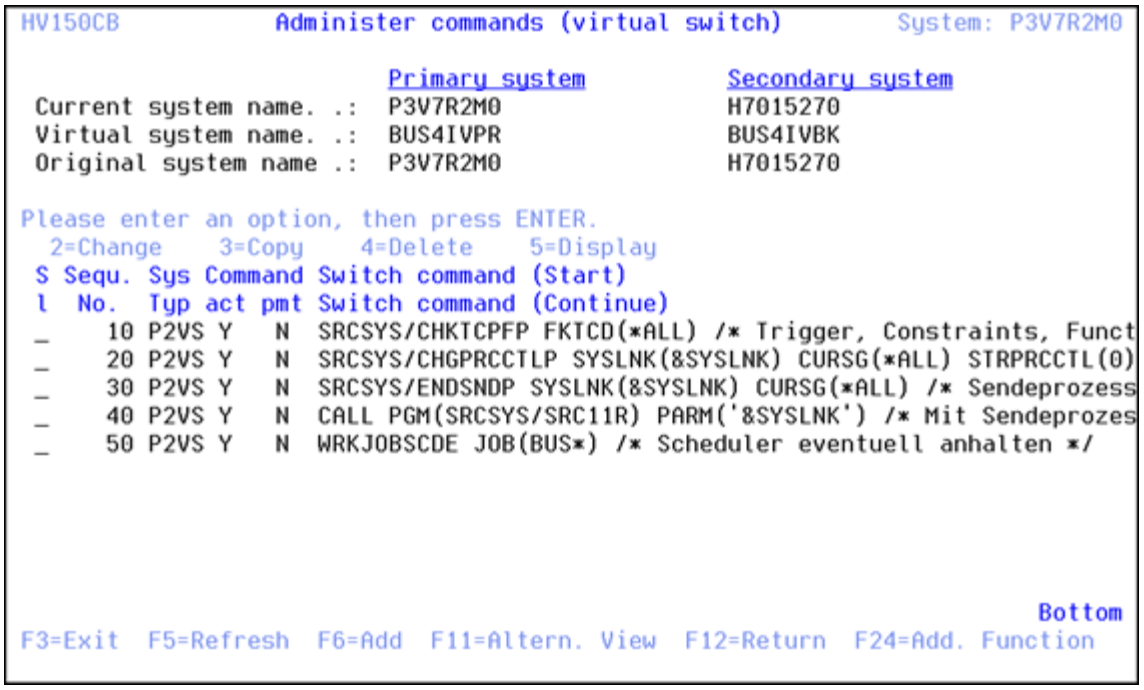
This mask is used to delete one or more pre-check commands from the list. The entries to be deleted are displayed once again and deleted by confirming with the Enter key.The deletion process can be canceled with F12.

2.10.2.4 Selection 5 – Display Pre-Checks (virtual switch)



This mask is used to display all parameters that belong to a pre-check command.

2.10.3 Menu item 3 - Manage commands (primary to virtual secondary)



This input mask is used to enter the switching commands that must be executed for the system change.

The following input field is available to the user:

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

The following options are possible:

Selection 2 - Change
A command that has already been entered can be changed.

Selection 3 - Copy
With this option a command can be copied. For example, a command that was entered for the primary system can be copied and changed for the secondary system.

Selection 4 - Delete
One or more commands can be deleted from the list.

Selection 5 - Display
The selected command can be displayed completely with this option.

Valid command key of the current mask:

F11=further data
More parts of the command are displayed in a continuation line.

F13=P2VS commands only

Only the commands for switch-over from primary to virtual secondary system are displayed.

F14=VS2P commands only
Only the commands for switch-over from virtual secondary to primary system are displayed.

F15=S2VP commands only
Only the commands for switch-over from secondary to virtual primary system are displayed.

F16=Only VP2S commands
Only the commands for switch-over from virtual primary to secondary system are displayed.

F17=All commands
The commands for virtual switch-over from primary to secondary system and secondary to primary system are displayed.

F18=Reorganize
The commands are sorted according to the new sequence number. This option can be selected when new commands with intermediate numbers are entered.

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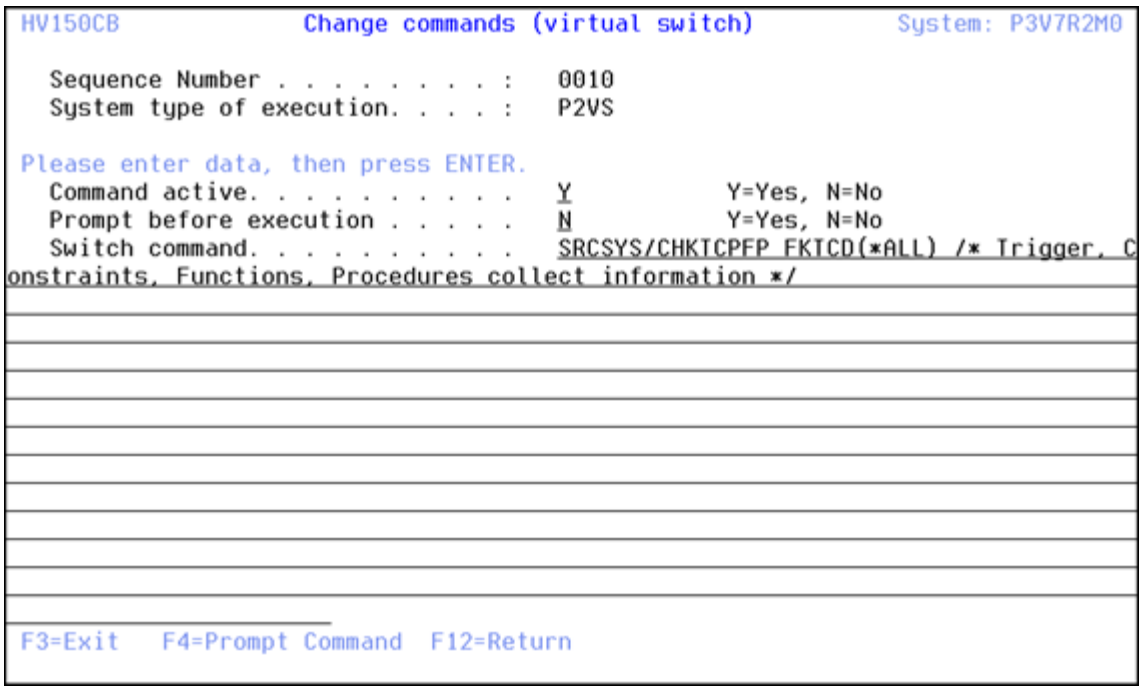
2.10.3.1 Selection 2 - Change commands (virtual switch)



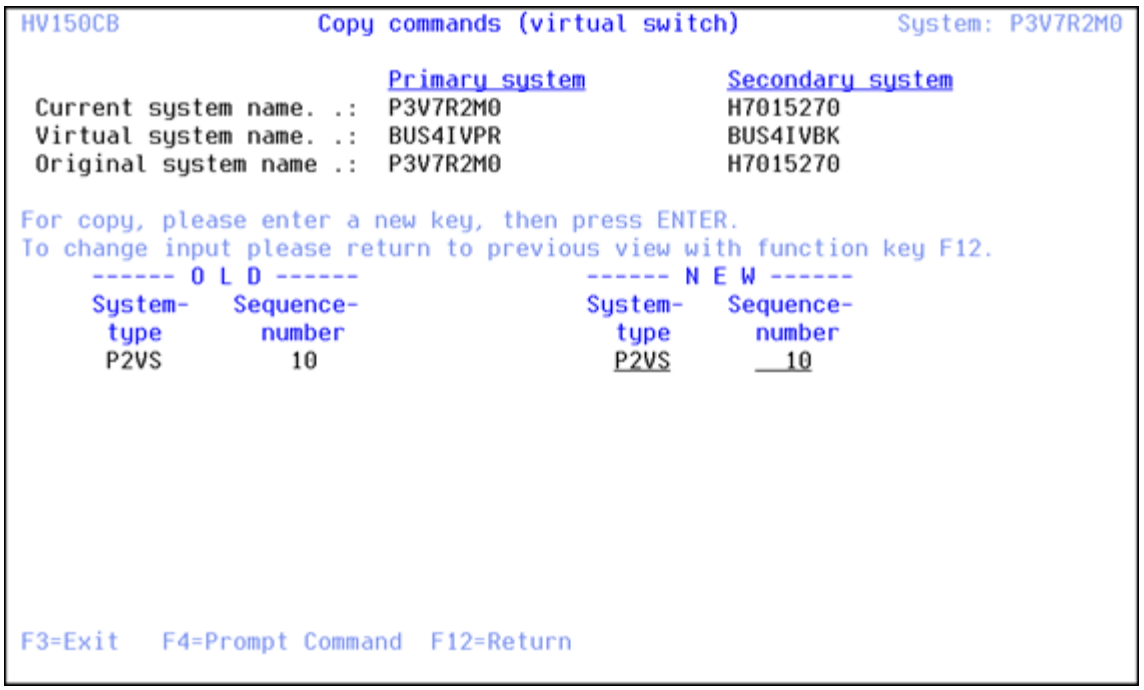
This mask is used to change a switch-over command.

Testing active
Here you can specify whether the command should be executed ("Y") or not ("N").

Prompt command before execution
This flag decides whether the command is prompted or not. If the command is prompted, it means that it is executed interactively.

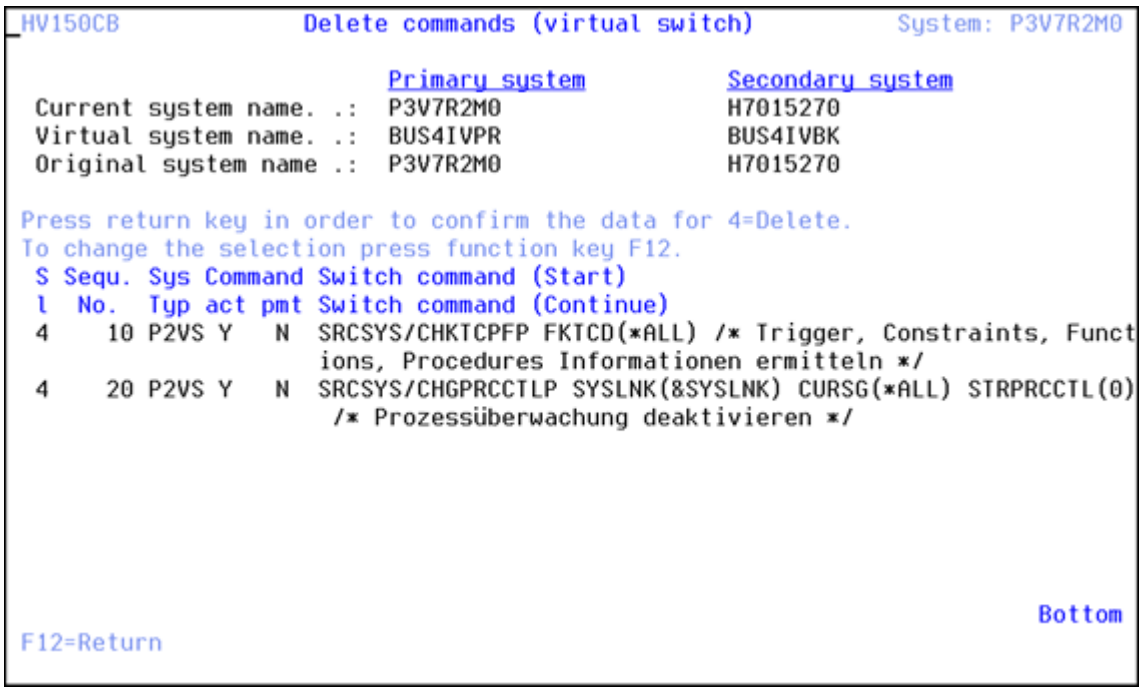
Switch-Over Command Line
A valid command must be specified here, which is to be executed during switch-over.

2.10.3.2 Selection 3 - Copy commands (virtual switch)



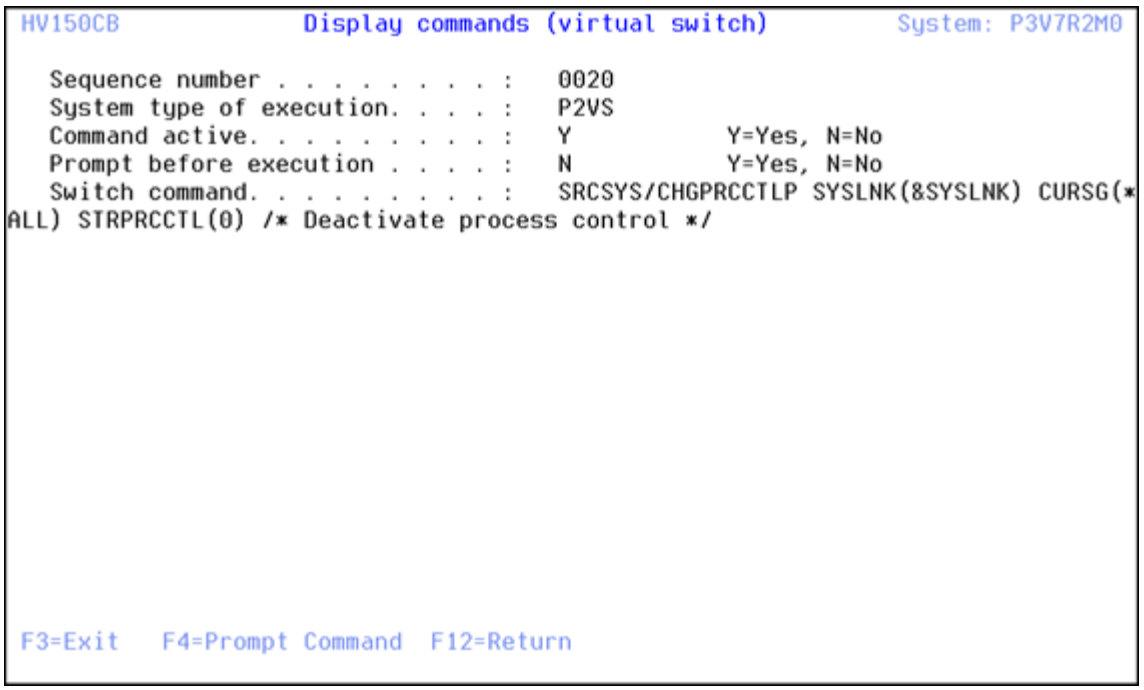
This mask is used to copy a switch-over command. Here you can enter a system type (P2VS, VS2P, S2VP or VP2S) and a new sequence number under which the copied switch-over command is stored. Via 'Change' this entry can then be edited.

2.10.3.3 Selection 4 - Delete commands (virtual switch)



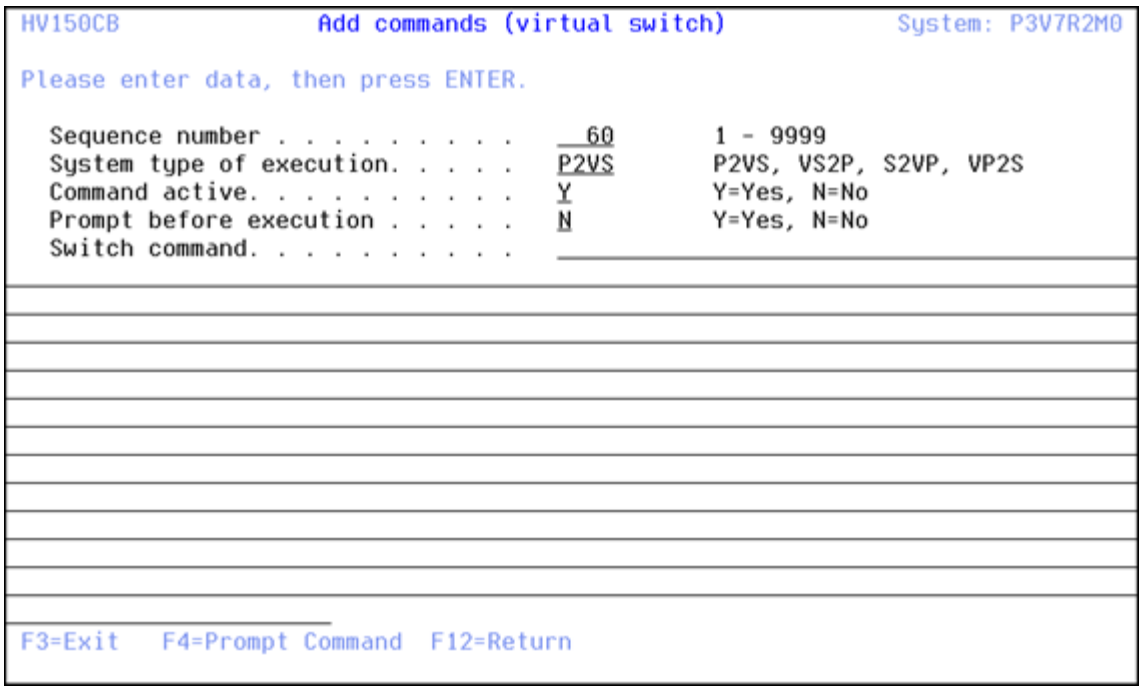
This mask is used to delete one or more switch-over commands from the list. The entries to be deleted are displayed once again and deleted by confirming with the Enter key.
The deletion process can be canceled with F12.

2.10.3.4 Selection 5 - Display commands (virtual switch)



This mask is used to display all parameters belonging to a Switch-Over command.

2.10.3.5 Command key F6 - Add command (virtual switch)



This mask is used to add a SWITCH-Over command.

Sequence number
Enter the new sequence number here. It identifies the sequence in which the respective switch-over commands are executed.

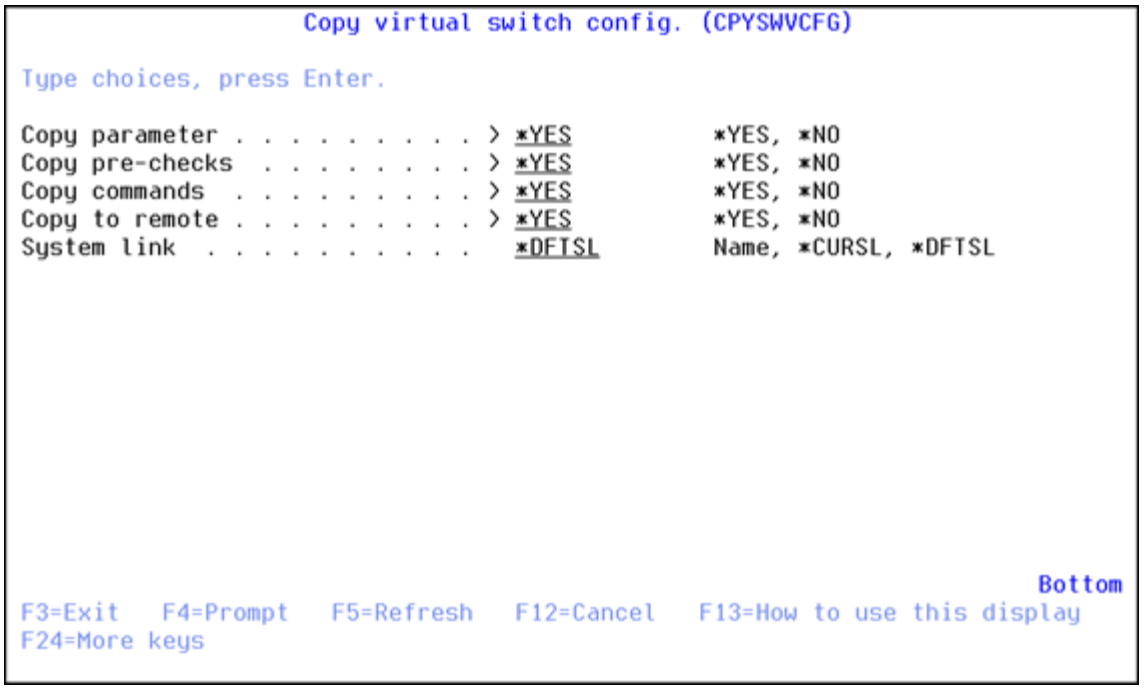
System type of execution
The system type can be specified here (P2VS, VS2P, S2VP or VP2S).

Command active
Here you can specify whether the command should be executed ("Y") or not ("N").

Prompt command before execution
This indicator decides whether the command is prompted or not. If the command is prompted, it means that it is executed interactively.

Switch-Over Command Line
A valid command must be specified here, which is to be executed during switch-over.

2.10.4 Menu item 5 - Copy commands and parameters to library TGTSYS



This menu item copies the configuration of the switch configuration to TGTSYS or SRCSYS and to the remote system.

The user has the following input options for the parameters:

Copy parameters
If the parameters are to be copied.

Valid values for the parameter **Copy parameter** are:

***YES**
The switch configuration parameters are copied. *YES is the default value.

***NO**
The switch configuration parameters are not copied.

Copy Pre-Checks
Shall copy the pre-checks.

Valid values for the **Copy preliminary checks** parameter are:

***YES**
The preliminary checks are copied. *YES is the default value.

***NO**
The preliminary examinations are not copied.

Copy commands
If the switch-over commands are to be copied.

Valid values for the **Copy commands** parameter are:

***YES**
The switch-over commands are copied. *YES is the default value.

***NO**
The switch-over commands are not copied.

Copy to remote
If the configuration is to be copied to remote.

Valid values for the **Copy to remote** parameter are:

***YES**
The configuration is copied to the remote system.

***NO**
The configuration is not copied to the remote system. *NO is the default value.

System link
Name of the system link used to send the configuration to remote.

Valid values for the **System link** parameter are:

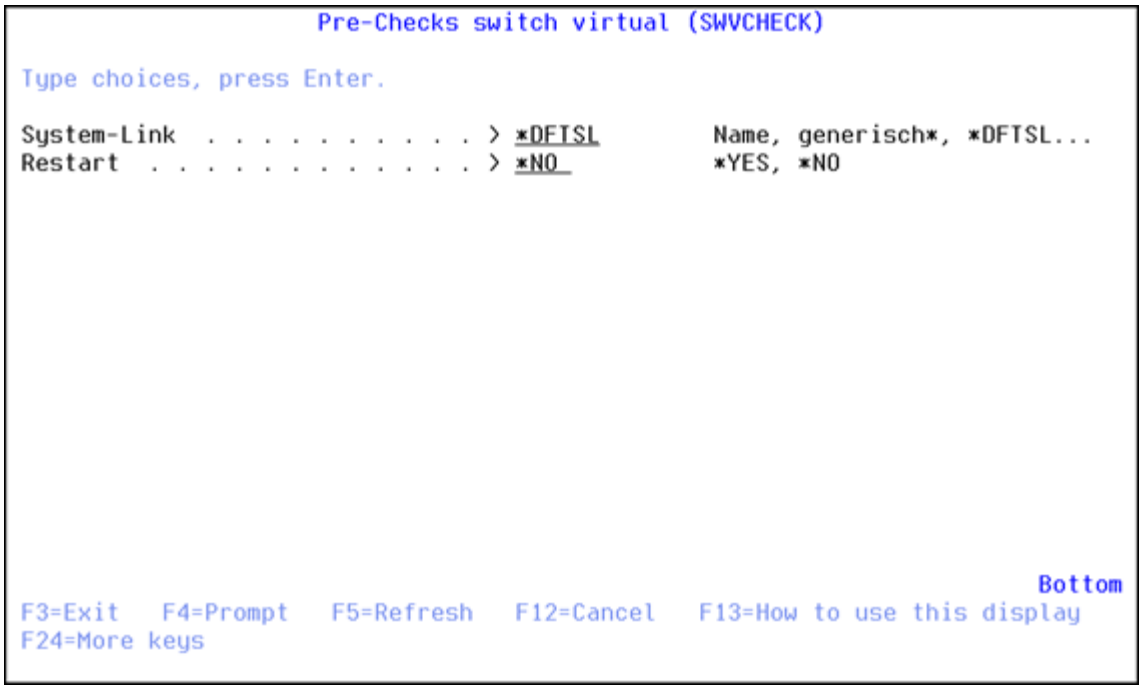
Name
Name of the system link that will be used.

***CURSL**
The current active system link is used.

***DFTSL**
The default system link is used.

The valid command keys are described in detail in the system operator guidance of the current command.

2.10.5 Menu item 10 - Start pre-checks (primary -> virtual secondary)



Executes all commands of the preliminary check (menu item 2). Before each command there is a query whether this command should be executed, then the next command is executed.

The user has the following input options for the parameters:

System link
Name of the system link for which the virtual switch is run.

Valid values for the **System link** parameter are:

Name
Name of the system link that will be used.

generic*
Specify the generic name of the system link. A generic name consists of one or more characters followed by an asterisk (*). All system links whose name has the same prefix as the generic name are taken.

***DFTSL**
The default system link is used.

***ALL**
The command is executed for all system links defined in the HA system.

Restart
Should a restart or reboot be performed.

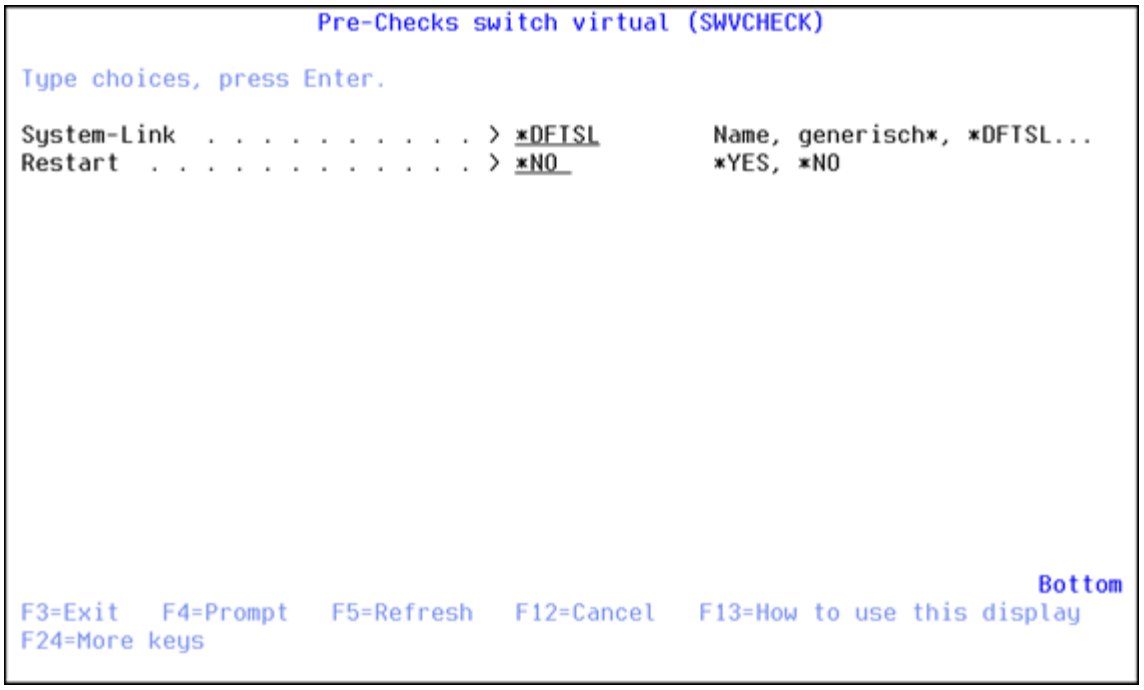
Valid values for the **Restart** parameter are:

***YES**
The virtual switch is restarted.

***NO**

The virtual switch is restarted *NO is the default value.

2.10.6 Menu item 11 – Start pre-checks (virtual primary -> secondary)



Executes all commands of the preliminary check (menu item 3). Before each command there is a query whether this command should be executed, then the next command is executed.

The user has the following input options for the parameters:

System link
Name of the system link for which the virtual switch is run.

Valid values for the **System link** parameter are:

Name
Name of the system link that will be used.

generic*
Specify the generic name of the system link. A generic name consists of one or more characters followed by an asterisk (*). All system links whose name has the same prefix as the generic name are taken.

***DFTSL**
The default system link is used.

***ALL**
The command is executed for all system links defined in the HA system.

Restart
Should a restart or reboot be performed.

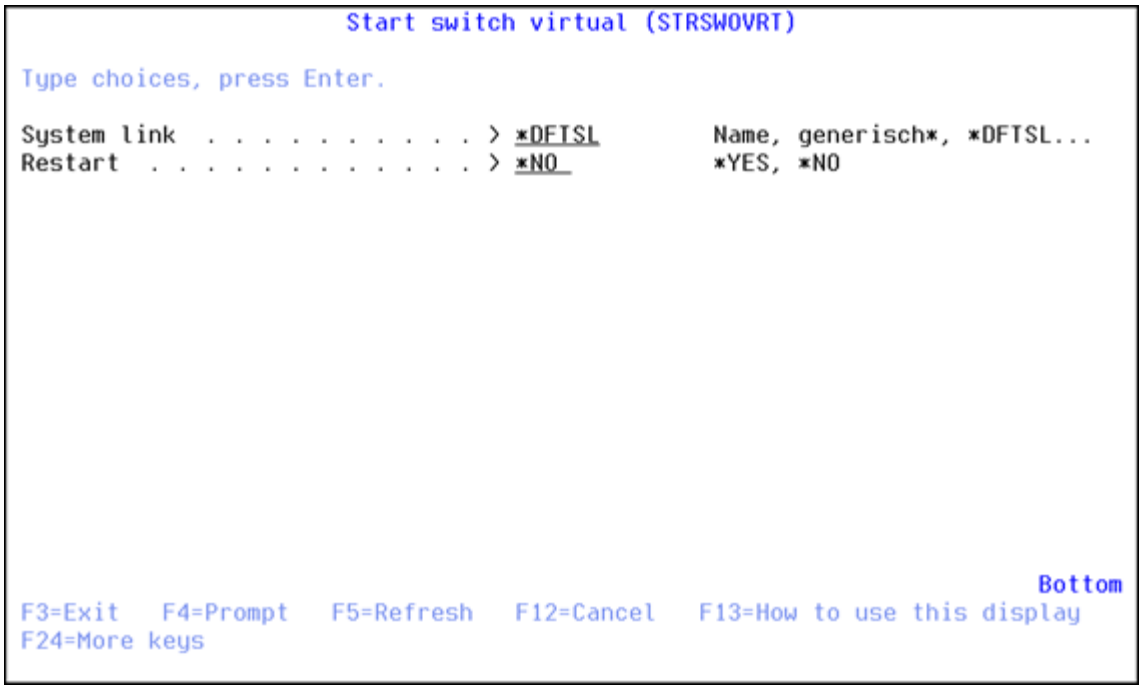
Valid values for the **Restart** parameter are:

***YES**
The virtual switch is restarted.

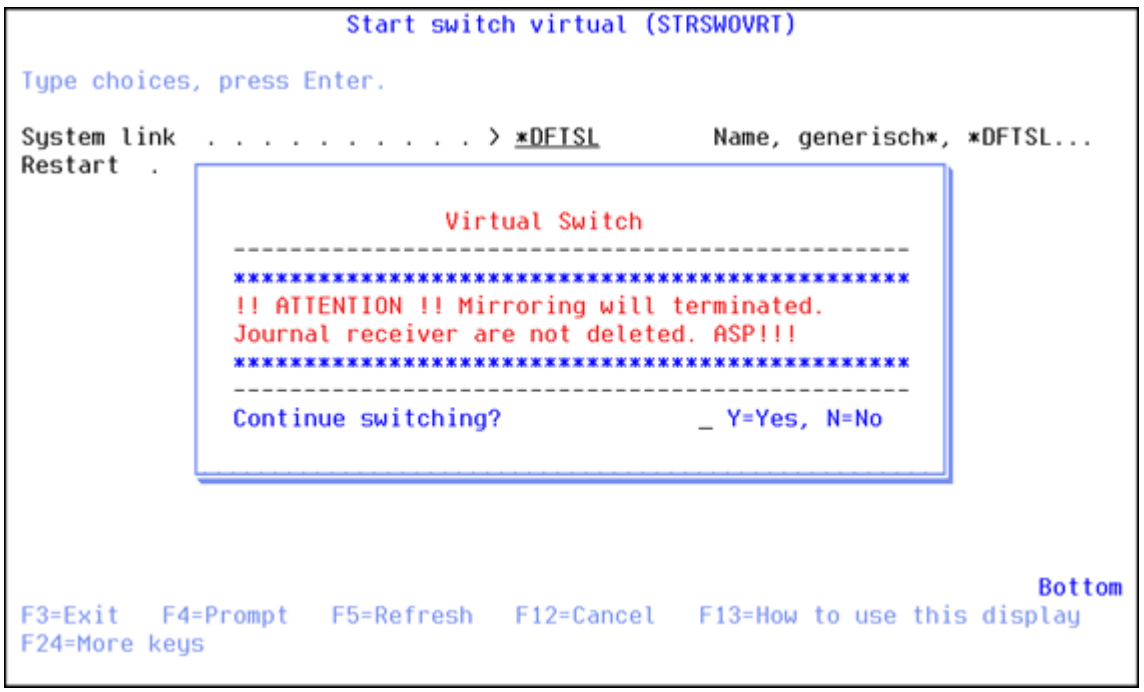
***NO**

The virtual switch is restarted *NO is the default value.

2.10.7 Menu item 20 - Start switch (primary -> virtual secondary)

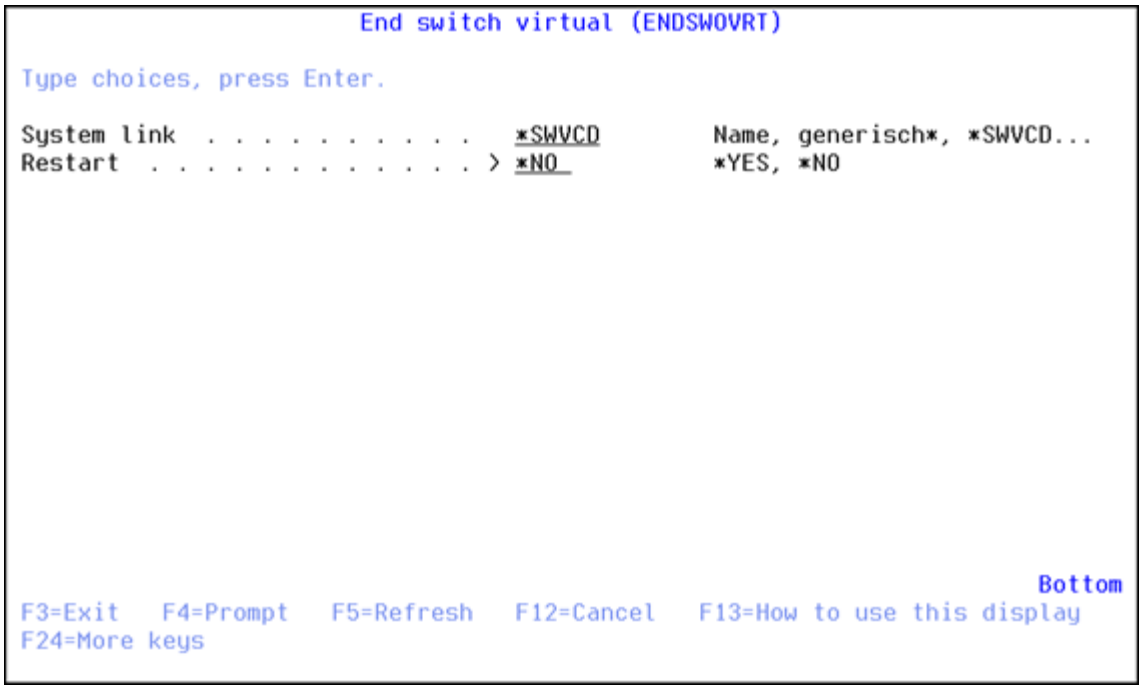


This menu item starts the switch-over from the primary system to the virtual secondary system.

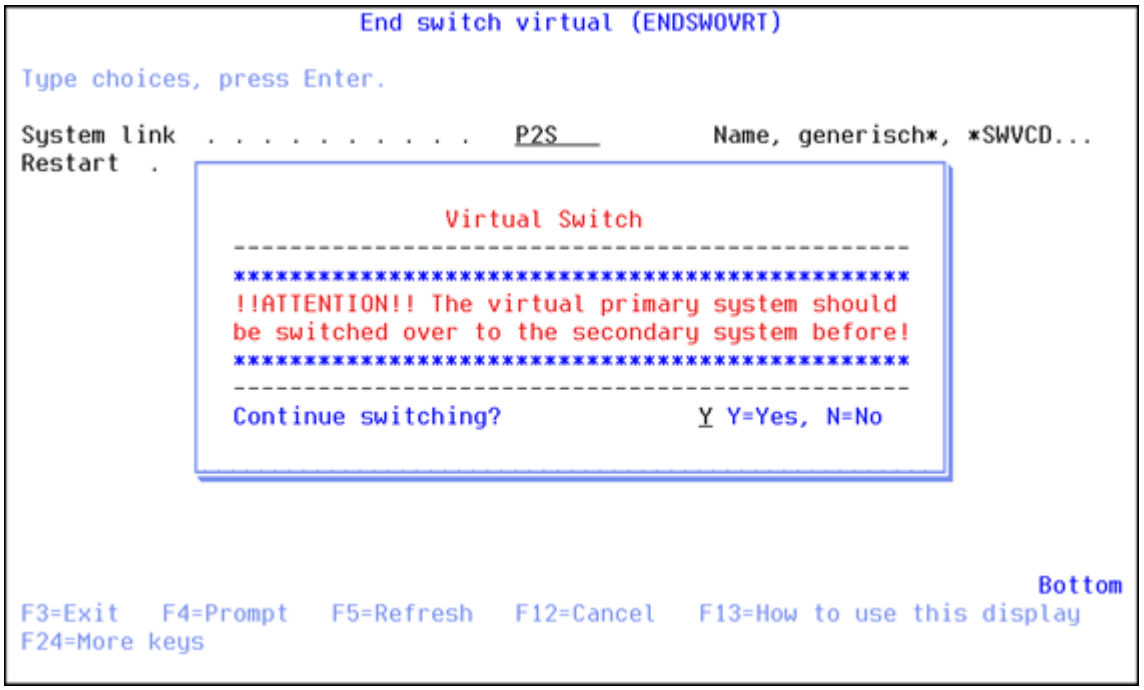


All active commands that were entered under menu item 3 are executed. Each successfully executed command gets a status.

2.10.8 Menu item 21 - End switch (Virtual primary -> Secondary)

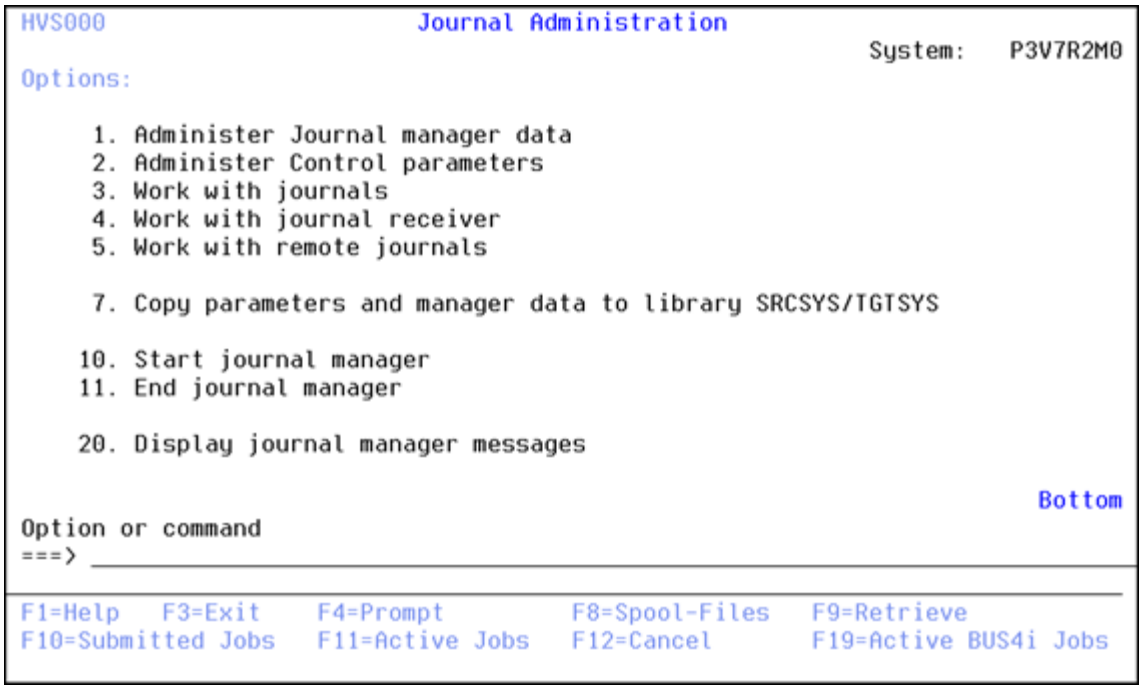


This menu item terminates the switch-over from the virtual primary system to the secondary system.



All active commands that were entered under menu item 4 are executed. Each successfully executed command gets a status.

2.11 Main menu selection 20 – Administer Journals



The following menu items can be selected on the screen:

Menu item 1: Manage journal manager data
This menu item is used to manage the journal manager data. It is possible to add, modify and delete journals to the manager.

Menu item 2: Manage control parameters
Here you can manage the parameters with which you control the journal manager.

Menu item 3: Work with journals
This menu item can be used to display all (blank or *ALL entries in both selection fields) or individual journals defined on the system. Via options, changes can be made to the journals as well as the journal recipients. The journals and attributes are displayed.

Menu item 4: Work with journal receivers
This menu item can be used to display all (blank or *ALL entries in both selection fields) or individual journals defined on the system. The journals, with the attributes, the deletion options and the retention time for journal receivers are displayed. Options can be used to make changes to the journal recipients and their retention period.

Menu item 5: Work with remote journals
This menu item can be used to display all (blank or *ALL entries in both selection fields) or individual remote journals defined on the system. Parameters for remote journals are displayed. Options can be used to add, activate or deactivate remote journals, for example.

Menu item 7: Copy parameters and data to library SRCSYS/TGTSYS
This menu item can be used to copy the configuration of the journal manager to TGTSYS or SRCSYS and to the remote system.

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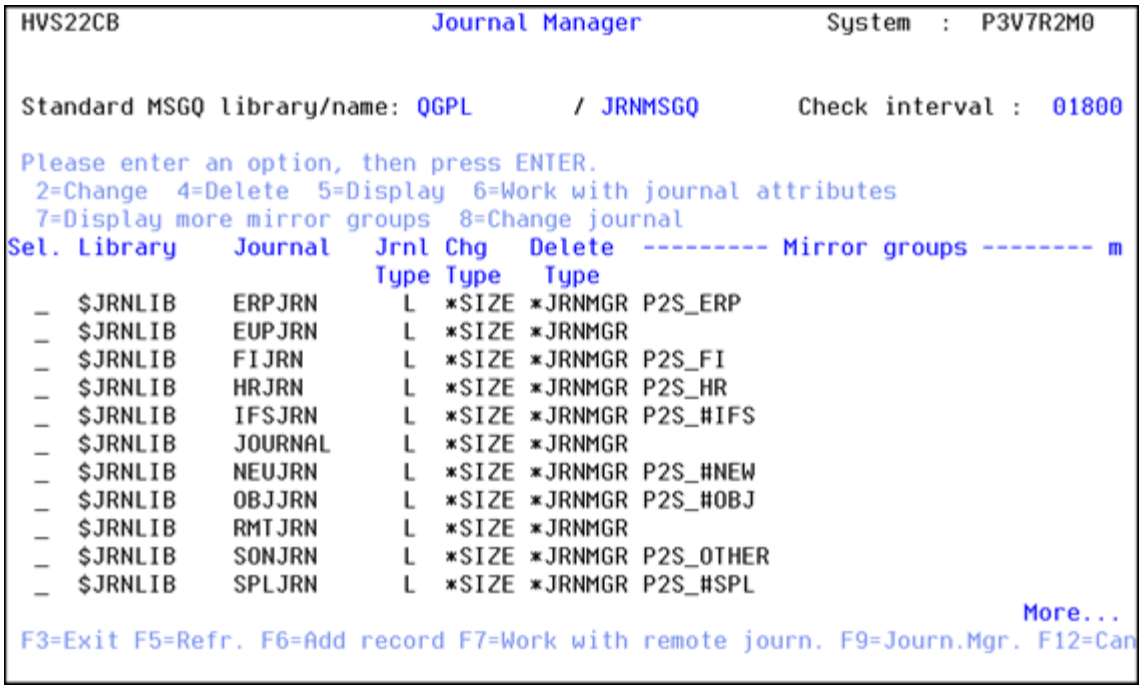
Menu item 10: Start journal manager
This menu item can be used to start the journal manager.

Menu item 11: Exit journal manager
This menu item can be used to exit the Journal Manager.

Menu item 20: Display journal manager messages
This menu item can be used to display the messages of the journal manager.

2.11.1 Menu item 1 - Administer journal manager data



The following input field is available to the user:

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

The following options are possible:

Selection 2 - Change
An entry that has already been entered can be changed.

Selection 4 - Delete
One or more records can be deleted from the list.

Selection 5 - WRKJRNA
The WRKJRNA (Work with Journal Attributes) command displays the creation and operational attributes of a journal, as well as the names of journal recipients currently attached to the journal.

Selection 6 - Show more mirror groups
If more than three mirror groups are assigned to the journal, you can use this selection to display the remaining mirror groups.

Selection 7 - Change journal
The journal manager data is checked periodically (monitoring interval) against the journals and deviations are corrected. If a change is to be executed immediately, it can be done with this selection.

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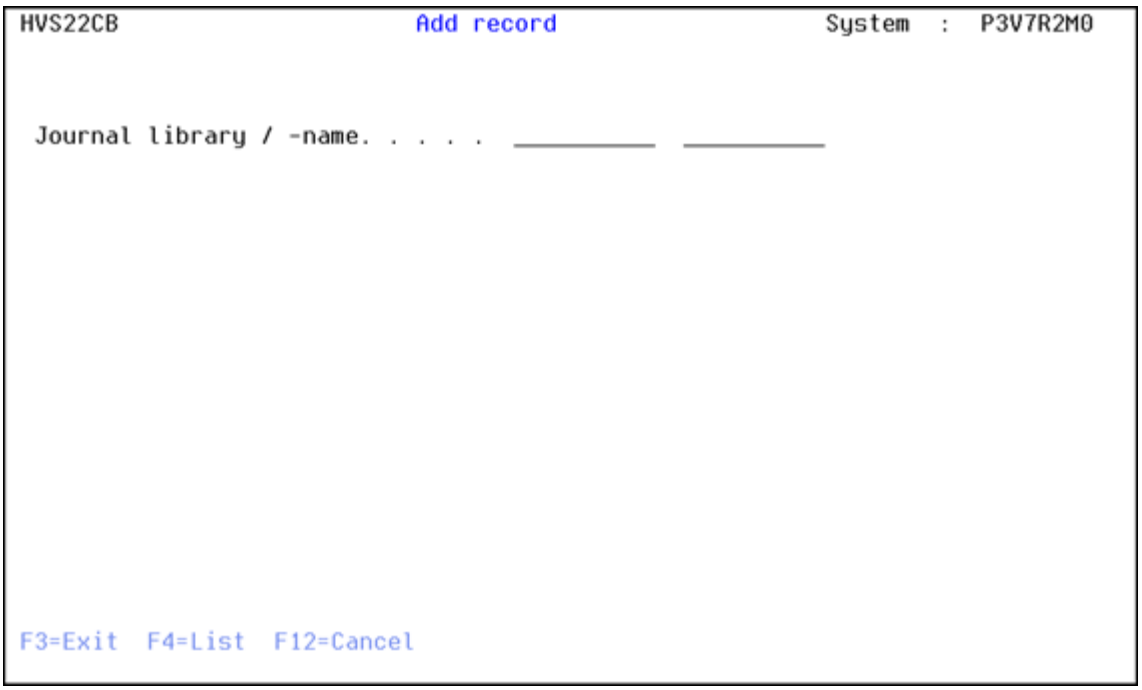
2.11.1.1 Command key F6 - Add record



With this mask you can add an entry to the list of journals.

The following input fields are available to the user:

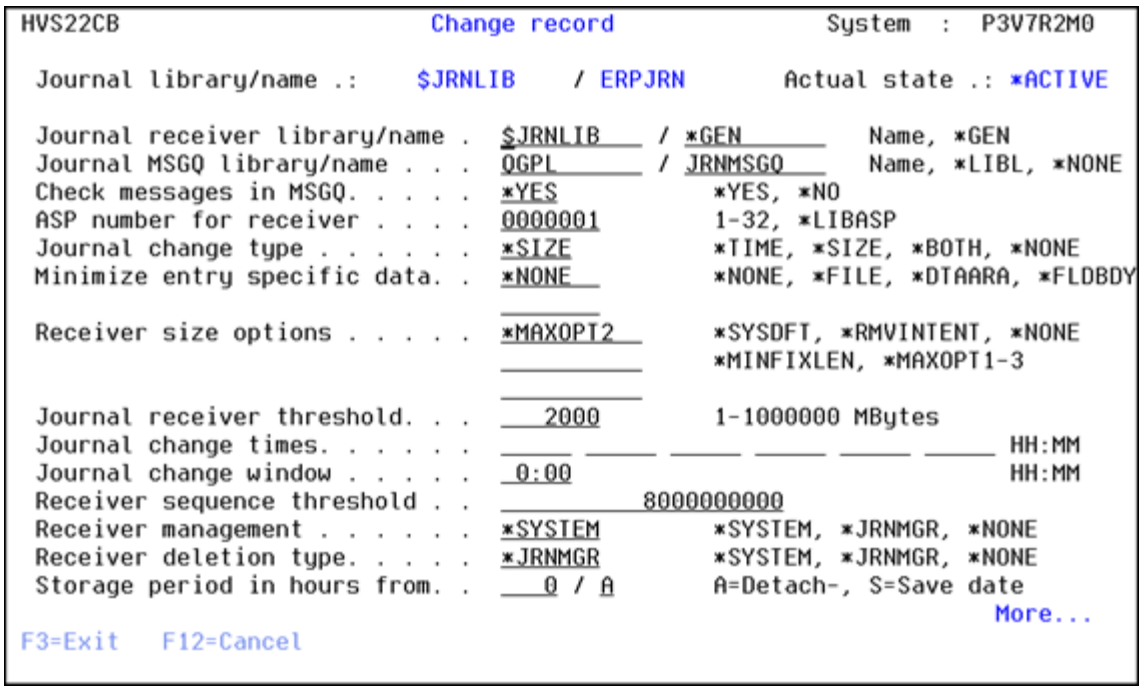
Journal Library
Library on the primary system in which the journal is created.

Name
Name of the journal that will be created.

Valid command keys of the current masks:

F4=List
A list of all journals in the system is displayed for selection.

2.11.1.2 Selection 2 - Change record



With the selection option 2 in the journal manager data management list, the user has the possibility to change journal parameters. The Enter key can be used to display additional parameters.

Receiver library/name
Specify the name of the journal receiver library and the receiver name. If *GEN is specified as the receiver name, the system generates the receiver name.

Journal-MSGQ Library/Name
Specifies the qualified name of the message queue associated with the journal. Under certain circumstances, messages are sent to this queue: and processed by the journal manager.

Check message in MSGQ
Specifies whether messages are checked in MSGQ.

Valid values for the parameter are:

***YES=Yes**
Messages in the MSGQ of the journal are checked and processed.

***NO=No**
Messages in the MSGQ of the journal are not checked.

ASP number for receiver
Specifies the auxiliary storage pool (ASP) from which the system allocates storage to the journal receiver.

Journal change type
Specifies the method by which the journal receivers are reassigned.

Valid values for the parameter are:

***TIME**
The journal receivers are reassigned on a time-controlled basis. Either by fixed times or periodically.

***SIZE**
The journal receivers are re-hung depending on the size.
audited.

***BOTH**
The journal receivers are time-controlled and reassigned depending on the size. Timed either by fixed times or periodically.

***NONE**
The journal manager does not reassign the journal receivers.

Minimize entry-specific data
Specifies the object types for which minimized, entry-specific data is allowed.

Valid values for the **Minimize entry-specific data** parameter are:

***NONE**
No object type allows journal entries with minimized, entry-specific data. Journal entries for all recorded objects are written to the journal along with complete, entry-specific data.

***FILE**
Recorded files can have journal entries with minimized, entry-specific data. Minimized is not at field boundaries. Therefore, the entry-specific data could not be displayed and could not be used for audit purposes. This value cannot be specified if *FLDBDY is specified.

***DTAARA**
Recorded Data Areas Files can have journal entries with minimized, entry-specific data.

***FLDBDY**
Recorded files can have journal entries with minimized, entry-specific data. Minimized is for the recorded files at field boundaries. Therefore, the entry-specific data could be displayed and used for audit purposes.

Specifications for receiver size
Specifies the options that affect the size of the recipient attached to the journal.

Valid values for the parameter **Specifications for receiver size** are:

***SYSDFT**
The system uses the currently recommended values. The specification of this value corresponds to the specification *MAXOPT2 and *RMVINTENT at this time.

***NONE**
There are no options that affect the size of journal receivers attached to the journal. All journal entries placed in the receiver are permanent. The fixed length data defined by FIXLENDTA is included in each entry placed in the attached journal receiver. When this value is specified for the journal, the size of the journal receiver attached to the journal is approximately 2 GB (2,147,483,647 bytes), and the maximum sequence number is 2,147,483,136. The maximum size of the journal entry is 15,761,440 bytes.

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***RMVINTENT**
The size of the receiver attached to the journal is reduced by automatically removing the internal entries that are only required for recovery during initial program loading (IPL) and attachment of an independent ASP once they are no longer needed.

***MINFIXLES**
The size of the journal entries placed in the attached journal receiver is reduced by automatically removing the fixed-length data that is not considered necessary for recovery. This selection is not valid if FIXLENDTA is also specified.

***MAXOPT1**
When this value is specified for the journal, the maximum size of the journal receiver attached to the journal is approximately one terabyte (1,099,511,627,776 bytes), and the maximum possible sequence number is 9,999,999,999. The maximum size of the journal entry is 15,761,440 bytes. This value cannot be specified if *MAXOPT2 or *MAXOPT3 is specified.

***MAXOPT2**
When this value is specified for the journal, the maximum size of the journal receiver attached to the journal is approximately one terabyte (1,099,511,627,776 bytes), and the maximum possible sequence number is 9,999,999,999. The maximum size of the journal entry is 4,000,000,000 bytes. This value cannot be specified if *MAXOPT1 or *MAXOPT3 is specified.

***MAXOPT3**
When this value is specified for the journal, the maximum size of the journal receiver attached to the journal is approximately one terabyte (1,099,511,627,776 bytes), and the highest possible sequence number is 18,446,744,073,709,551,600. The maximum size of the journal entry is 4,000,000,000 bytes. These journal receivers cannot be saved and restored under a release prior to V5R3M0. Further, they cannot be replicated to remote journals on systems with a release prior to V5R3M0. In addition, if MNGRC(*SYSTEM) is specified, during an initiating program load (IPL) or when attaching an independent ASP, the system executes the CHGJRN (Change Journal) command to create and attach a new journal receiver and reset the journal sequence numbers unless the sequence number exceeds the sequence number threshold of 18,446,600,000,000,000. This value cannot be specified if *MAXOPT1 or *MAXOPT2 is specified.

Journal receiver threshold
Specifies a threshold value for the memory area (in KB) for the journal receiver.

Times journal change
It is possible to define 6 fixed times when the journal receiver is reassigned.

Time interval journal change
You can define a fixed time interval at which the journal receiver will be reassigned.

Threshold journal sequence number
When the specified threshold is reached, the journal manager attaches a new journal receiver with sequence number 1 to the journal.

Manage recipients
Specifies how changing journal receivers (detaching the currently attached journal receiver and attaching a new journal receiver) is performed.

Valid values for the **Manage receiver** parameter are:

***SYSTEM**
The system manages the journal receivers.

***JRNMGR**
The journal manager manages the journal receivers.

***NONE**
No one manages the journal receivers. The user is responsible for them.

Delete recipient
Specifies how the deletion of journal receivers is performed.

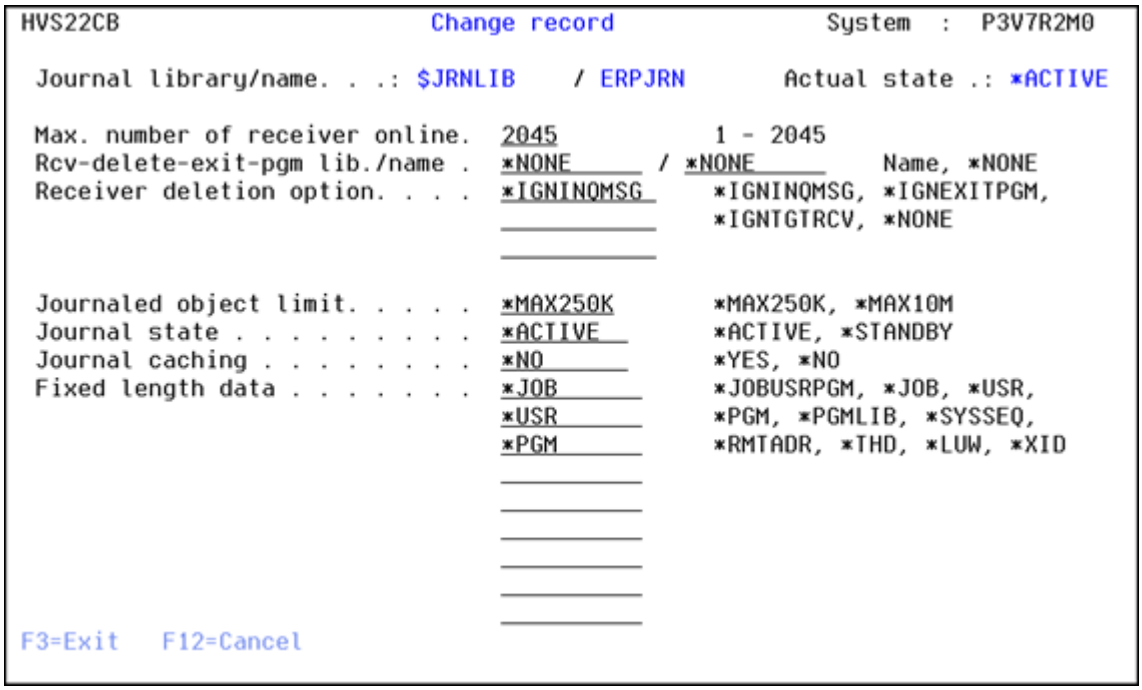
Valid values for the parameter **Delete receiver** are:

***SYSTEM**
The system deletes the journal receivers after reassignment.

***JRNMGR**
The journal manager deletes the journal receivers depending on the dwell time.

***NONE**
Nobody deletes the journal receivers. The user is responsible for this.

Dwell time in hours from
If a journal receiver is suspended and it is processed by the BUS4i HA system, then it is deleted when it has been suspended or saved for the specified number of hours.



By pressing the Enter key, the user has the possibility to change the journal manager data.

Max. Number of recipients online

If the maximum number of journal receivers is exceeded and they are processed by the BUS4i HA system, they are deleted. The definition is an either/or specification for the retention period. I.e. if the retention period has not yet been exceeded (suspended or saved) but the number has been exceeded, then the recipients will still be deleted. This should be considered when working with the save date to ensure that all recipients are saved.

Rcv delete exit pgm lib/name

Name of the library and the program that is called to check whether the journal receiver can be deleted when using third-party products (such as CDC or ISOX).

Receiver delete options

Specifies whether additional checks should be performed before the journal receiver is deleted.

Valid values for the **Receiver delete options** parameter are:

***IGNINQMSG**

Ignore request message. Request message CPA7025 is not displayed even if this recipient has not yet been fully backed up (for example, if a backup was performed after the recipient was detached). Request message CPA705E is also not displayed even if the recipient is attached to a remote journal. The delete operation is performed.

***IGNEXITPGM**

Ignore user exit programs. User exit programs registered for exit point QIBM_QJO_DLT_JRNRCV are not called and do not influence the decision whether this journal receiver can be deleted.

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***IGNTGTRCV**
The system does not check whether all remote journals assigned to this journal, which are located directly behind this journal on a target system, have complete copies of this journal receiver. The delete operation is performed even if one of these
remote journal does not yet have a complete copy. This protection for a journal recipient starts when the remote journal is added using the QjoAddRemoteJournal API and ends when the journal is removed using the QjoRemoveRemoteJournal API or when it is deleted.

***NONE**
The deletion of the journal receiver should be attempted without ignoring the protection checks that are performed before deleting a journal receiver.

Journal object limit
This option affects the maximum number of objects that can be recorded in the journal.

Valid values for the **Journal object limit** parameter are:

***MAX250K**
The maximum number of objects that can be recorded in the journal is 250,000.

***MAX10M**
The maximum number of objects that can be recorded in the journal is 10,000,000. The journal receivers of such a journal cannot be saved and restored under a release prior to V5R4M0. Furthermore, they cannot be replicated to remote journals on systems with a release prior to V5R4M0.

Journal status
Specifies whether journal entries may be placed in the journal.

Valid values for the **Journal Status** parameter are:

***ACTIVE**
All journal entries may be placed in the journal.

***STANDBY**
Most journal entries are not placed in the journal. If an attempt is made to place an entry in the journal, no error message informs that the entry has not been placed in the journal. In the *STANDBY state, recording can be started or stopped. However, COMMIT control is not allowed in *STANDBY status. Since COMMIT control is not allowed, functions where the system uses COMMIT control internally are also not allowed. Similarly, access paths created via files recorded in a journal in the *STANDBY state will not be selectable for SMAPP (System-Managed Access Path Protection). This potentially affects system performance, the duration of the system's initial program load, or the attachment of IASPs (Independent Auxiliary Storage Pools) when the system attempts to restore the specified access path in the specified time.

Journalcache
Specifies whether to cache journal entries before writing them to disk.

Valid values for the **Journalcache** input parameter are:

***YES=Yes**
Journal entries are written to the main memory. If there are multiple journal entries in main memory, they are written from main memory to disk. If the application makes many changes, fewer synchronous writes to disk might be required and performance might be improved. However, this option is not recommended if it is not acceptable to lose even one change in case a system failure does not preserve the contents of main memory. This type of journaling

is mainly suitable for batch jobs and might not be suitable for interactive applications where system recovery is the main reason for using the journal function.

***NO=No**
Journal entries are written to disk immediately if necessary to ensure system recovery.

Fixed length data

Specifies the data to be included in the fixed length section of journal entries placed in the connected journal receiver. This parameter is not valid if RCVSIZOPT(*MINFIXLEN) is also specified.

Valid values for the **fixed length data** parameter are:

***JOBUSRPGM**
The job name, user name and program name are included in the entries placed in the connected journal receiver.

***JOB**
The job name is included in the entries that are placed in the connected journal receivers.

***USR**
The effective user profile name is included in the entries placed in the connected journal receiver.

***PGM**
The program name is included in the entries placed in the connected journal receiver.

***PGMLIB**
The name of the program library and the name of the ASP unit that contains the program library is included in the entries placed in the connected journal receiver.

***SYSSEQ**
The system sequence number is contained in the entries that are placed in the connected journal receiver. The system sequence number represents a relative sequence of all journal entries in all journal receivers on the system.

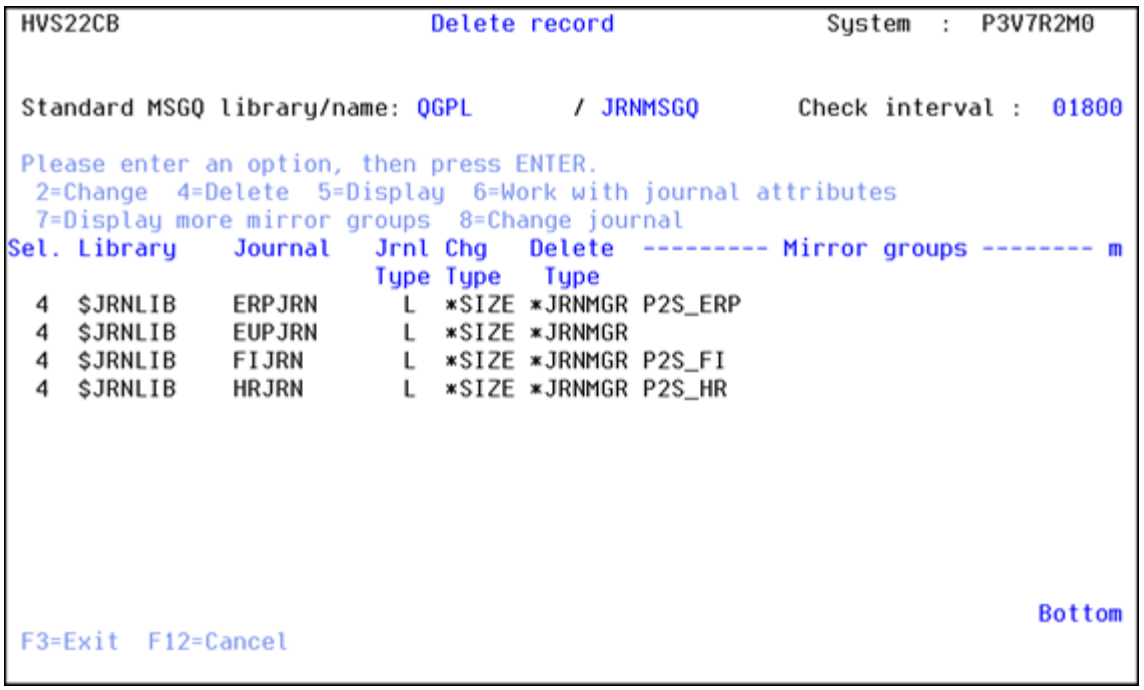
***RMTADR**
If applicable, the remote address, address family, and remote port are included in the entries placed in the connected journal receiver.

***THD**
The thread ID is included in the entries that are placed in the connected journal receiver. The thread ID helps to distinguish between multiple threads running in the same job.

***LUW**
If applicable, the ID of the logical unit of work is included in the entries placed in the connected journal receiver. The logical unit of work denotes the work belonging to specific COMMIT cycles.

***XID**
If applicable, the transaction ID is included in the entries made in the connected journal receivers. The transaction ID identifies the transactions related to a specific COMMIT cycle.

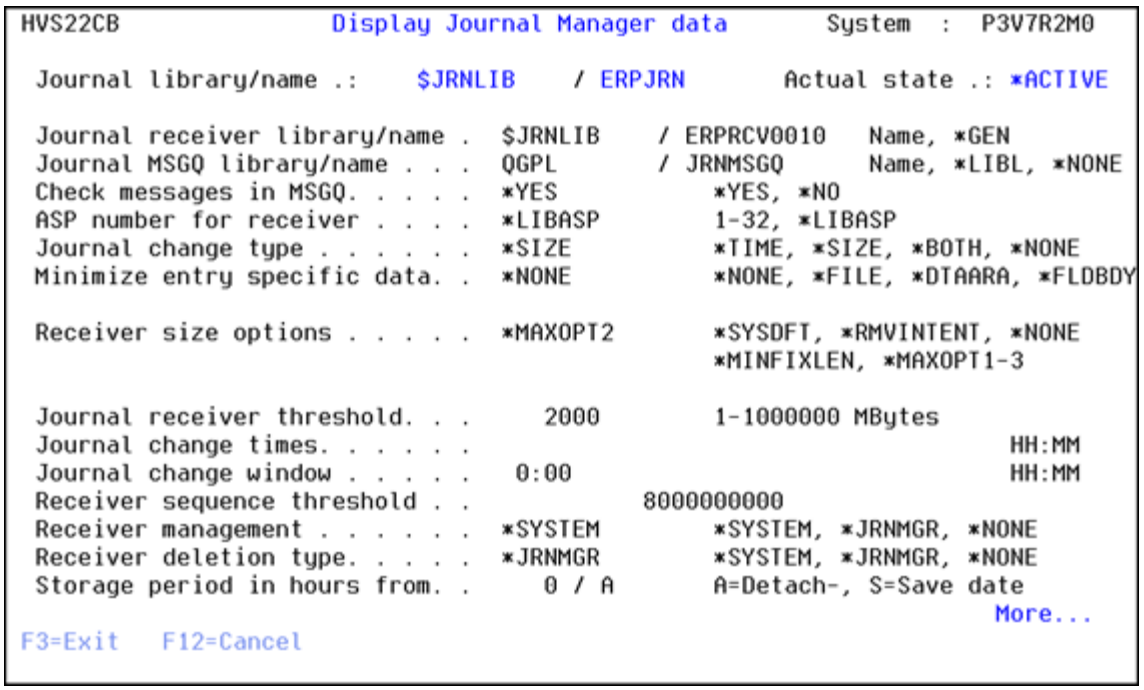
2.11.1.3 Selection 4 - Delete record



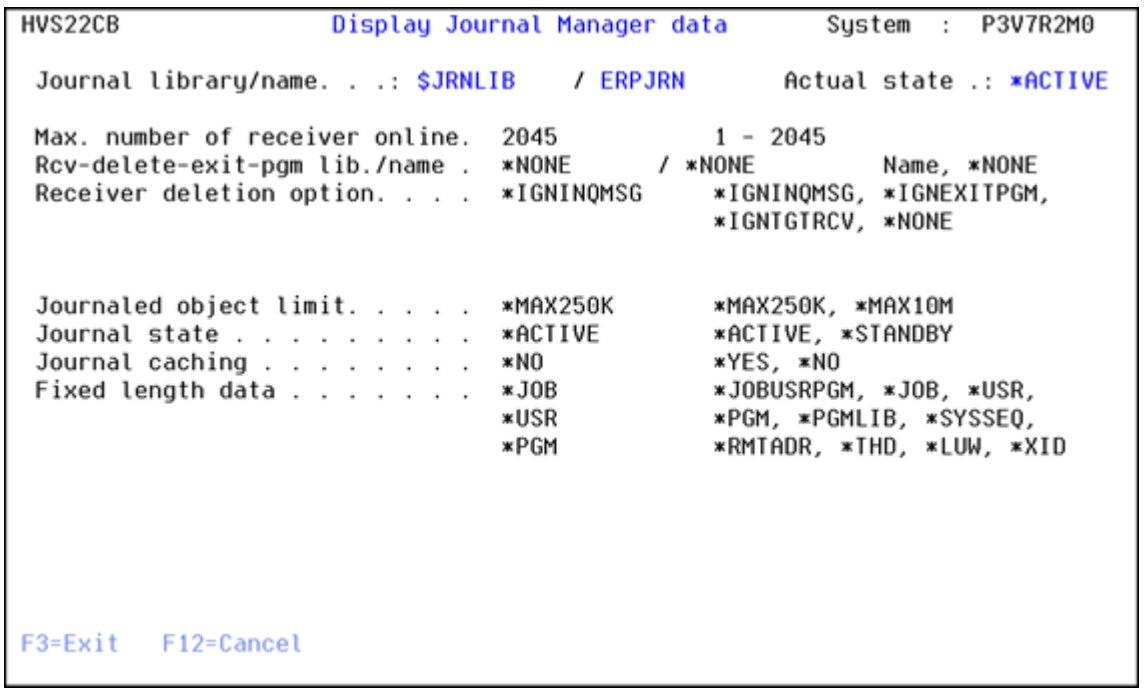
In the administration list of the journals of the journal manager, one or more list entries can be removed via selection option 4. This removes the journals from the journal manager's administration.

After confirming with the Enter key, the entries are deleted.

2.11.1.4 Selection 5 - Display journal manager data



```
HVS22CB              Display Journal Manager data       System  :  P3V7R2M0

 Journal library/name .:    $JRNLIB    / ERPJRN       Actual state .: *ACTIVE

 Journal receiver library/name .  $JRNLIB    / ERPRCV0010   Name, *GEN
 Journal MSGQ library/name . . .  QGPL       / JRNMSGQ      Name, *LIBL, *NONE
 Check messages in MSGQ. . . . .  *YES           *YES, *NO
 ASP number for receiver . . . .  *LIBASP        1-32, *LIBASP
 Journal change type . . . . . .  *SIZE          *TIME, *SIZE, *BOTH, *NONE
 Minimize entry specific data. .  *NONE          *NONE, *FILE, *DTAARA, *FLDBDY

 Receiver size options . . . . .  *MAXOPT2       *SYSDFT, *RMVINTENT, *NONE
                                                 *MINFIXLEN, *MAXOPT1-3

 Journal receiver threshold. . .     2000        1-1000000 MBytes
 Journal change times. . . . . .                                      HH:MM
 Journal change window . . . . .   0:00                               HH:MM
 Receiver sequence threshold . .             8000000000
 Receiver management . . . . . .  *SYSTEM        *SYSTEM, *JRNMGR, *NONE
 Receiver deletion type. . . . .  *JRNMGR        *SYSTEM, *JRNMGR, *NONE
 Storage period in hours from. .     0 / A       A=Detach-, S=Save date
                                                                   More...
F3=Exit    F12=Cancel
```

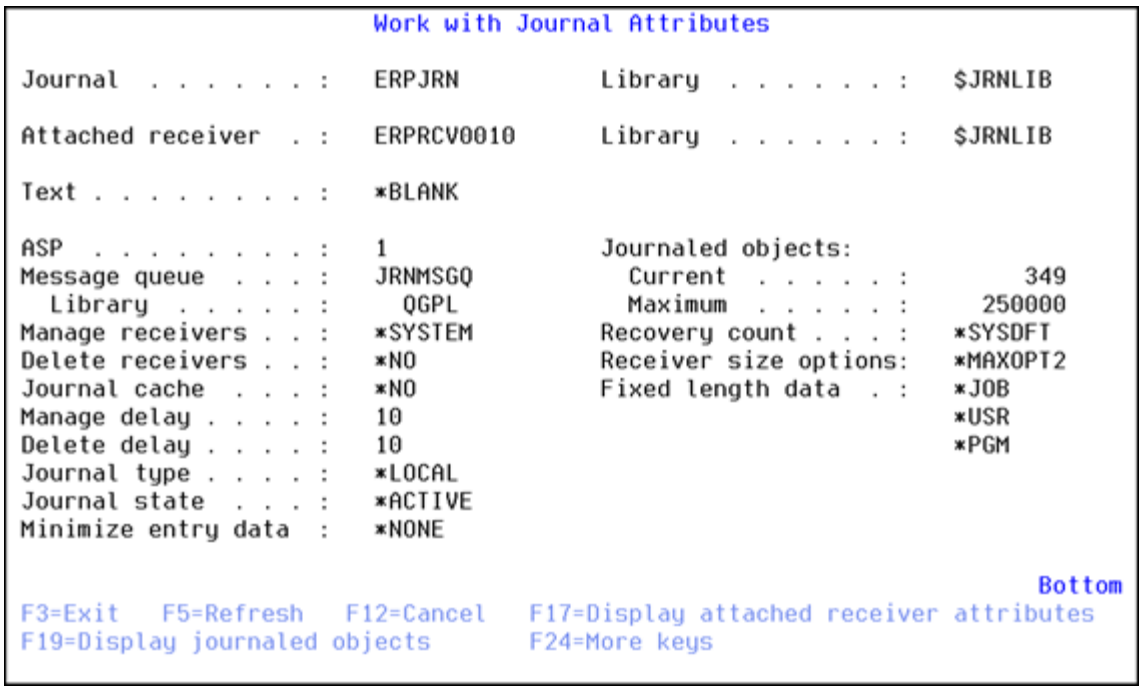


```
HVS22CB              Display Journal Manager data       System  :  P3V7R2M0

 Journal library/name. . .: $JRNLIB    / ERPJRN       Actual state .: *ACTIVE

 Max. number of receiver online.  2045            1 - 2045
 Rcv-delete-exit-pgm lib./name .  *NONE       / *NONE          Name, *NONE
 Receiver deletion option. . . .  *IGNINQMSG      *IGNINQMSG, *IGNEXITPGM,
                                                  *IGNTGTRCV, *NONE


 Journaled object limit. . . . .  *MAX250K        *MAX250K, *MAX10M
 Journal state . . . . . .  . .   *ACTIVE        *ACTIVE, *STANDBY
 Journal caching . . . . . .  .   *NO            *YES, *NO
 Fixed length data . . . . . .    *JOB           *JOBUSRPGM, *JOB, *USR,
                                  *USR           *PGM, *PGMLIB, *SYSSEQ,
                                  *PGM           *RMTADR, *THD, *LUW, *XID




F3=Exit    F12=Cancel
```

With the selection "Display journal manager data" additional details about the selected journal can be displayed.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

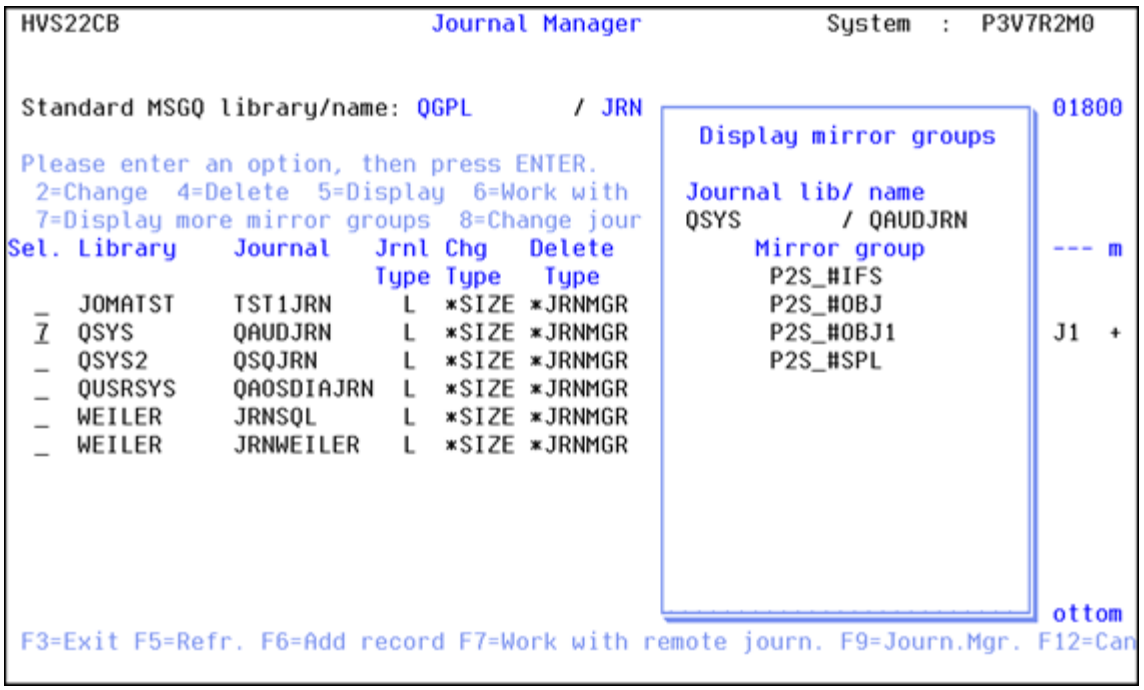
2.11.1.5 Selection 6 - Work with journal attributes



In this mask the journal attributes are displayed for the journal defined in the mirror group. With the "F1" key in this display you get detailed information.

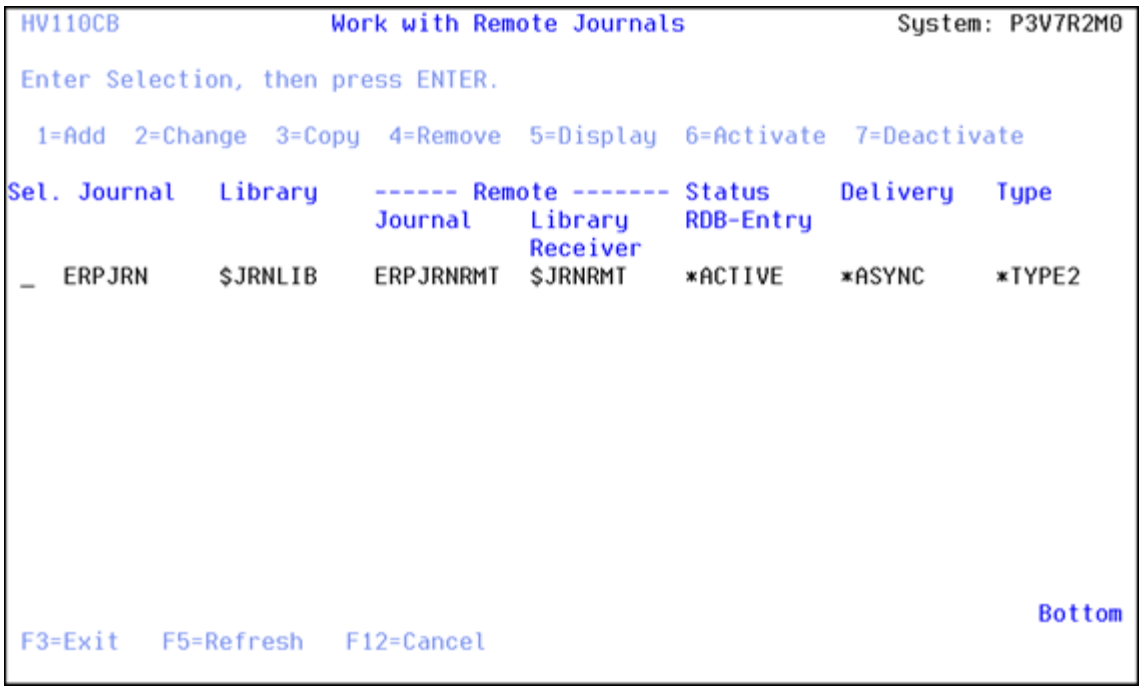
The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

2.11.1.6 Selection 7 - Display more mirror groups



This screen displays the mirror groups assigned to the journal if more than three mirror groups are assigned.

2.11.1.7 Command key F7 - Work with remote journals



The following input field is available to the user:

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

The following options are possible:

Selection 1 - Add
Creates a new Remote Journal.

Selection 2 - Change
An entry that has already been entered can be changed.

Selection 3 - Copy
Copies an existing entry.

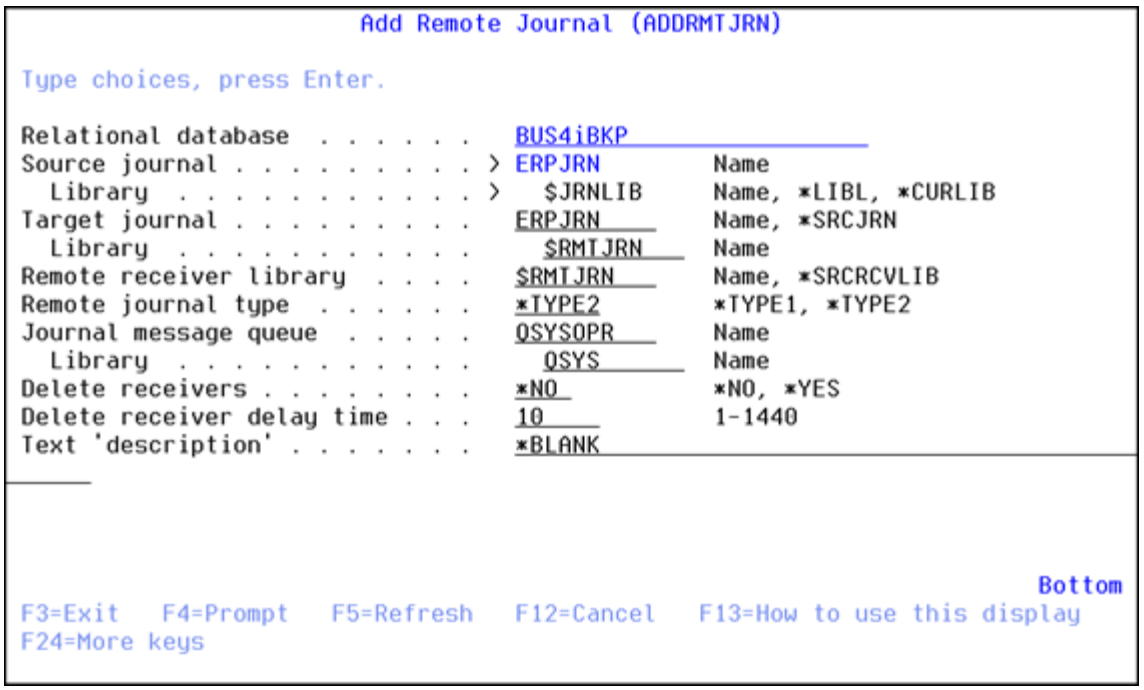
Selection 4 - Delete
One or more records can be deleted from the list.

Selection 5 - Display
The WRKJRNA (Work with Journal Attributes) command displays the creation and operational attributes of a journal, as well as the names of journal recipients currently attached to the journal.

Selection 6 - Enable
This is used to activate the remote journal.

Selection 7 - Disable
This can be used to deactivate the remote journal.

2.11.1.7.1 Selection 1 - Add remote journal



This input mask is used to add another remote journal to a local journal.
A check is made to see if the specified system link already exists.

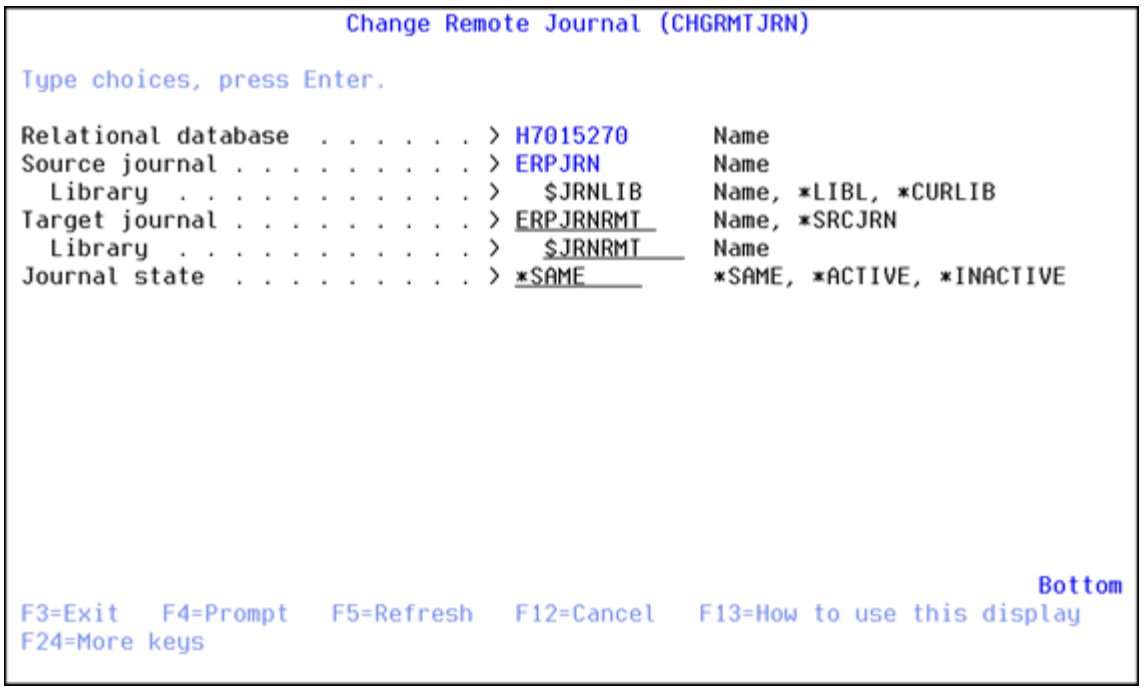
The following input fields are available to the user:

Relational database
Specifies the name of the RDB directory entry (relational database directory entry) that contains the remote site name of the target system. This name should correspond to the name of the *LOCAL entry in the relational database directory on the target system.

Destination journal / library
Specify the target journal to be added to the source journal as a remote journal.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

2.11.1.7.2 Selection 2 - Change remote journal



This input mask is used to add another remote journal to a local journal.
A check is made to see if the specified system link already exists.

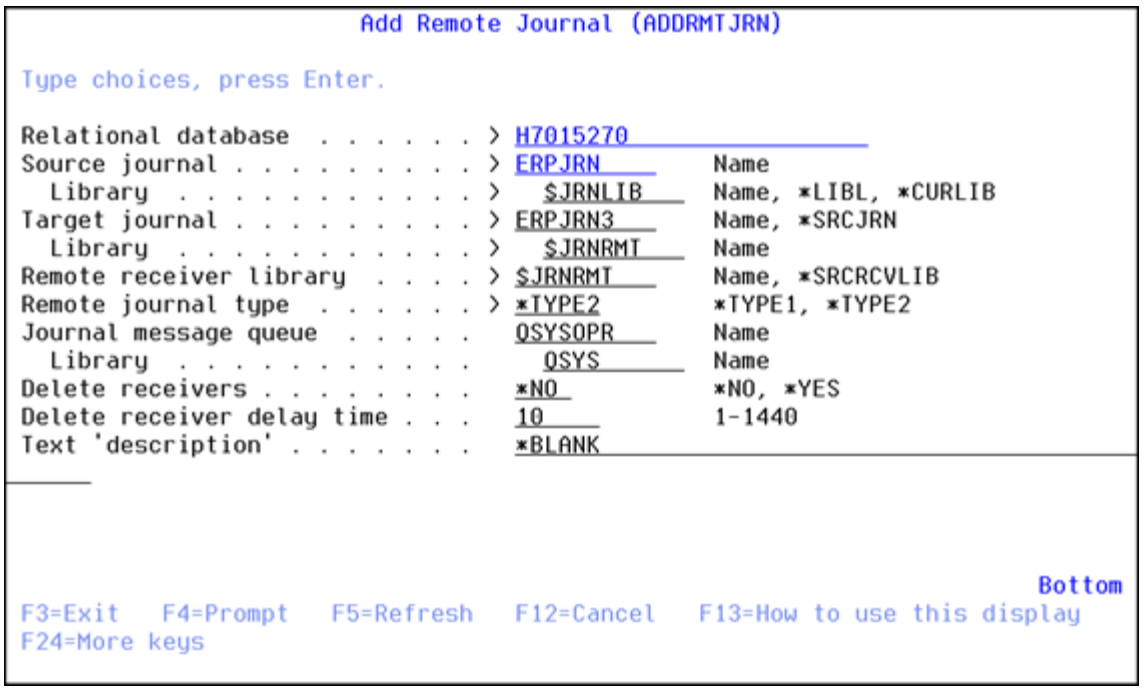
The following input fields are available to the user:

Destination journal / library
Specify the name of the destination journal to be changed.

Journal status
Indicates whether the remote journal is ready to receive journal entries from a source journal.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

2.11.1.7.3 Selection 3 - Add remote journal (copy)



This selection can be used to copy existing remote journals to facilitate the addition of a new remote journal.

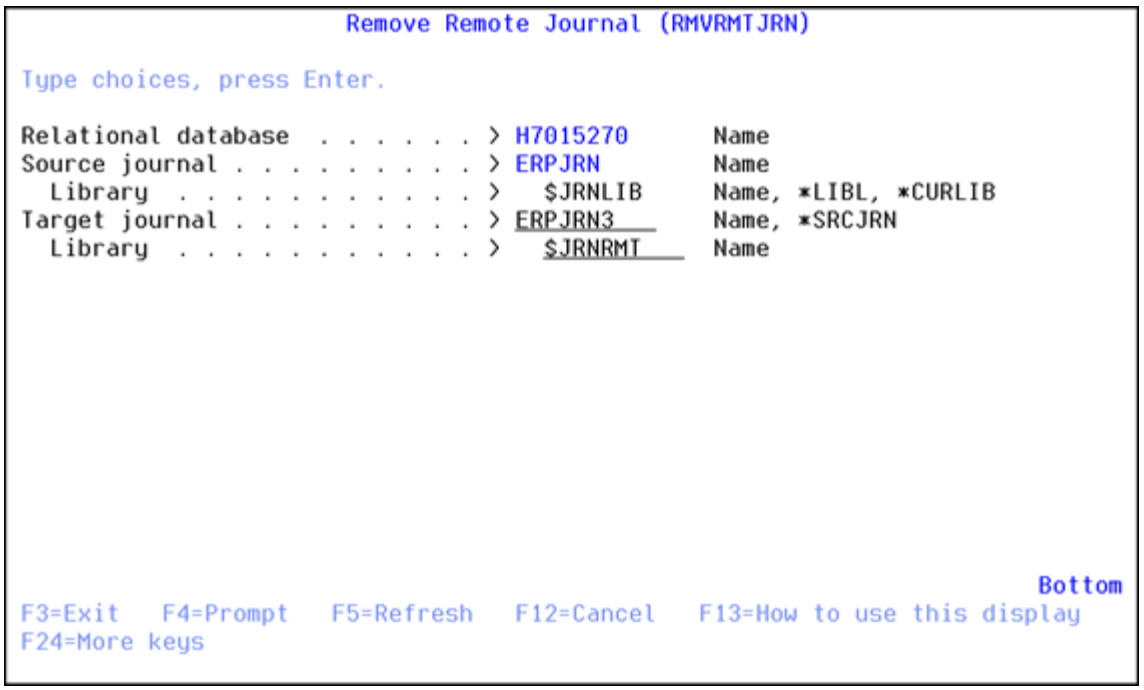
The following input fields are available to the user:

Relational database
Specifies the name of the RDB directory entry (relational database directory entry) that contains the remote site name of the target system. This name should correspond to the name of the *LOCAL entry in the relational database directory on the target system.

Destination journal / library
Specify the target journal to be added to the source journal as a remote journal.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

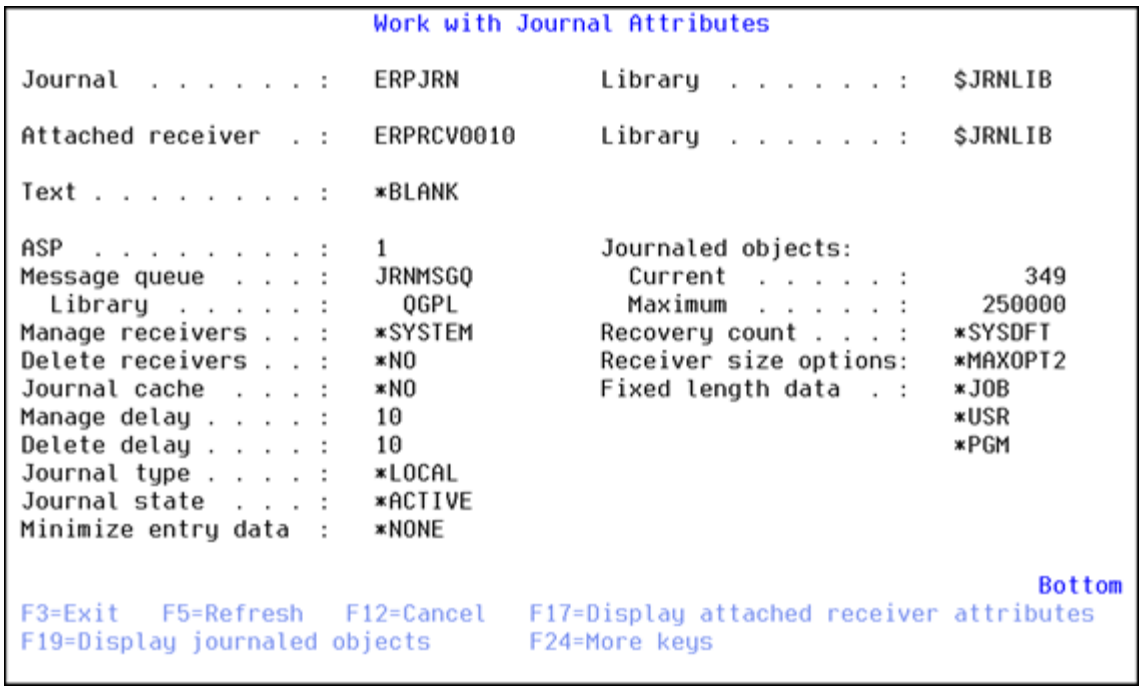
2.11.1.7.4 Selection 4 - Remove remote journal



In the management list of remote journals, one or more list entries can be removed via selection option 4.

After confirming with the Enter key, the entries are deleted.

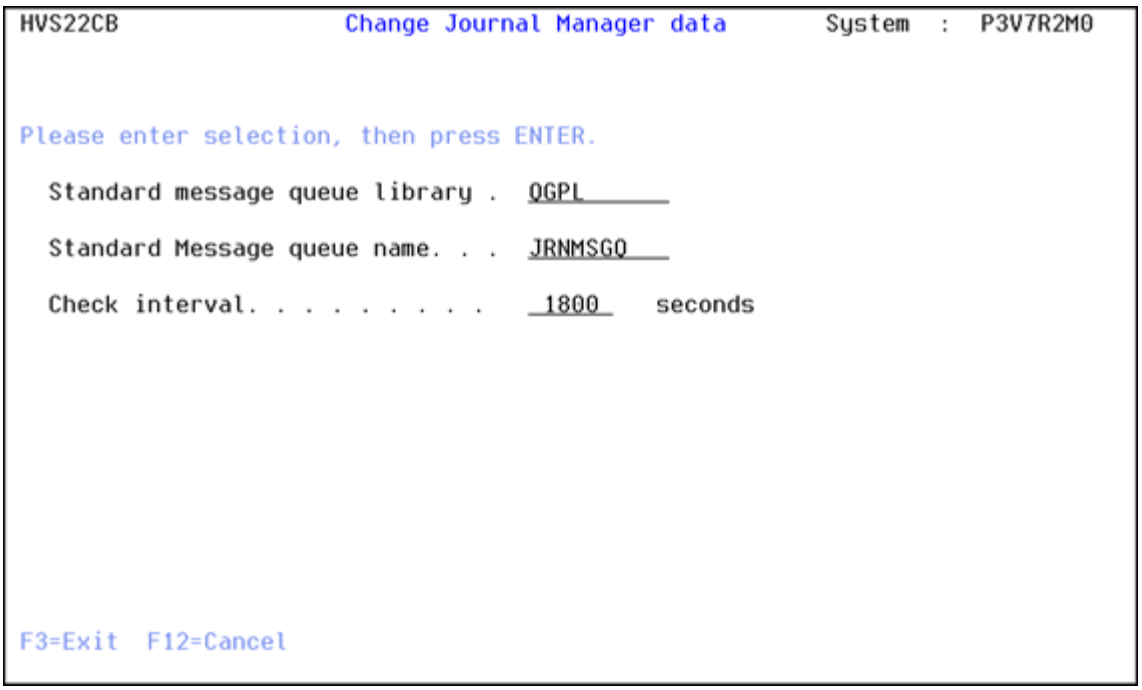
2.11.1.7.5 Selection 5 – Display remote journal attributes



This screen displays the journal attributes for the remote journal. With the "F1" key in this display you get detailed information.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

2.11.1.8 Command key F9 - Change Data Journal Manager



With this mask you can change the control parameters of the journal manager.

The following input fields are available to the user:

Standard MSGQ library
Library name of the MSGQ of the journal manager.

Default MSGQ Name
Name of the MSGQ of the journal manager.

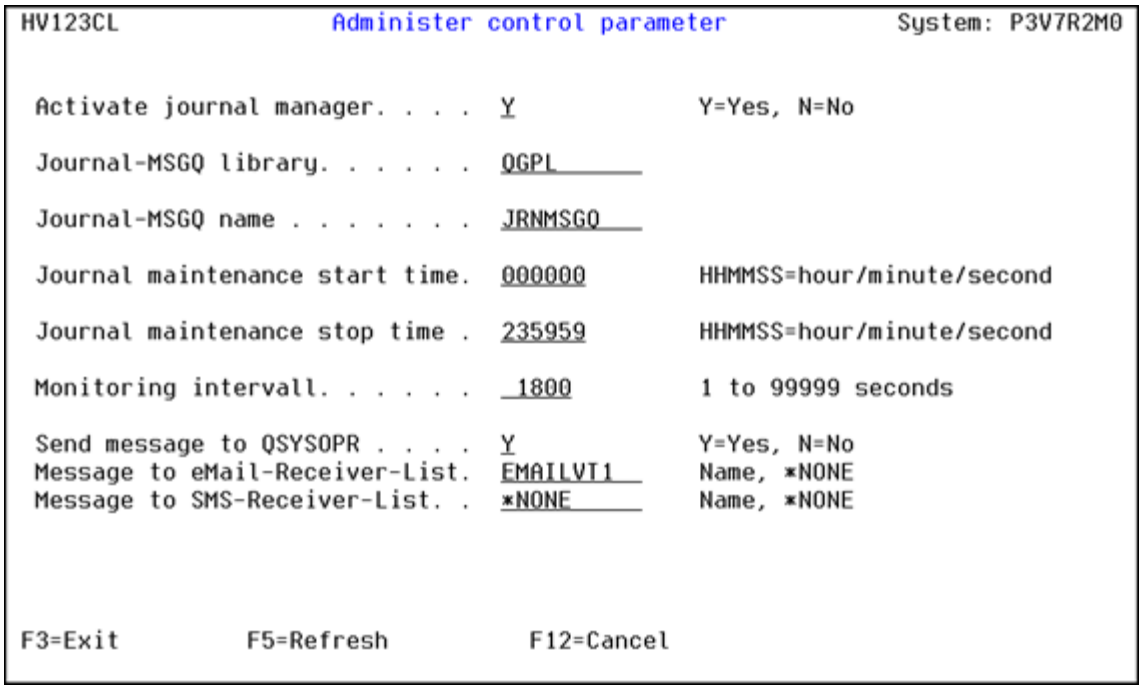
Test interval
Interval in seconds at which the journal manager checks the journals.

Valid command keys of the current masks:

F3=End
Program is terminated.

F12=End
Return to the previous display.

2.11.2 Menu item 2 - Administer control parameters



The user can manage the control parameters via this input mask.

The following valid input fields are available to the user:

Activate journal manager

Y=Yes
The journal manager is activated by the process monitoring.

N=No
The journal manager is not activated by the process monitoring.

Standard MSGQ library
Library name of the MSGQ of the journal manager.

Default MSGQ Name
Name of the MSGQ of the journal manager.

Journal maintenance start time
Time in which the journal manager should be started.

Journal maintenance stop time
Time in which the journal manager should be stopped.

Test interval
Interval in seconds at which the journal manager checks the journals.

Send message to QSYSOPR
If "Y"=Yes is entered, the journal manager messages are sent to the QSYSOPR.

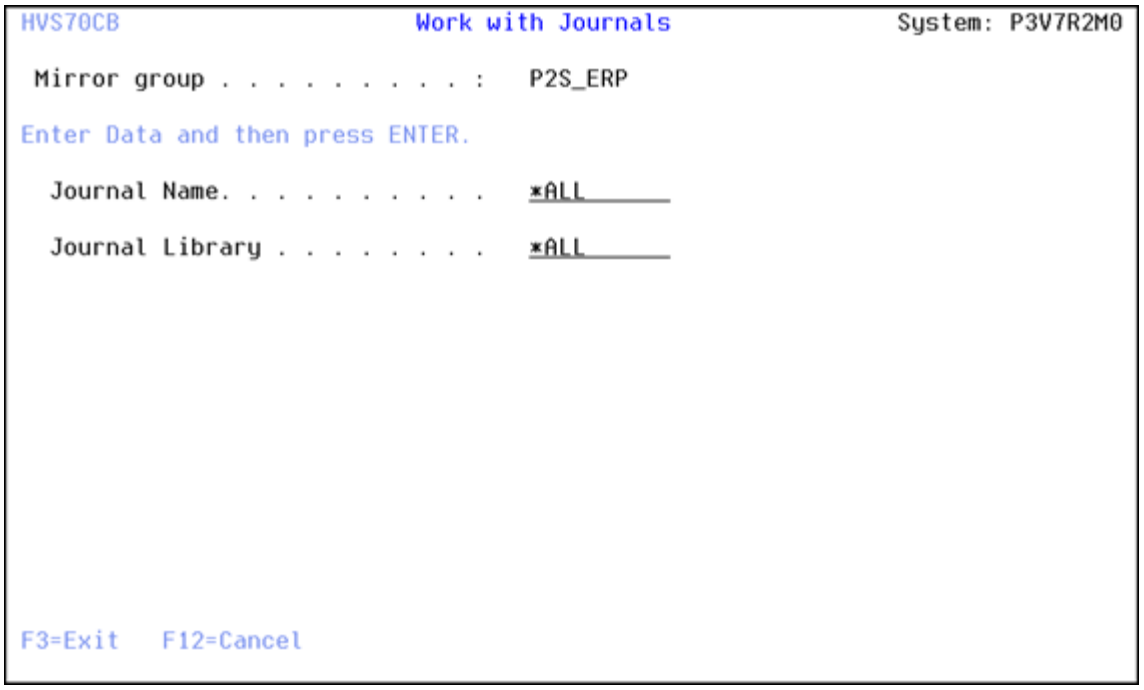
Message to eMail distribution list ID

Specification of the unique name ID for the distribution list. An error message is sent to this distribution list in case of an error.

Message to SMS distribution ID

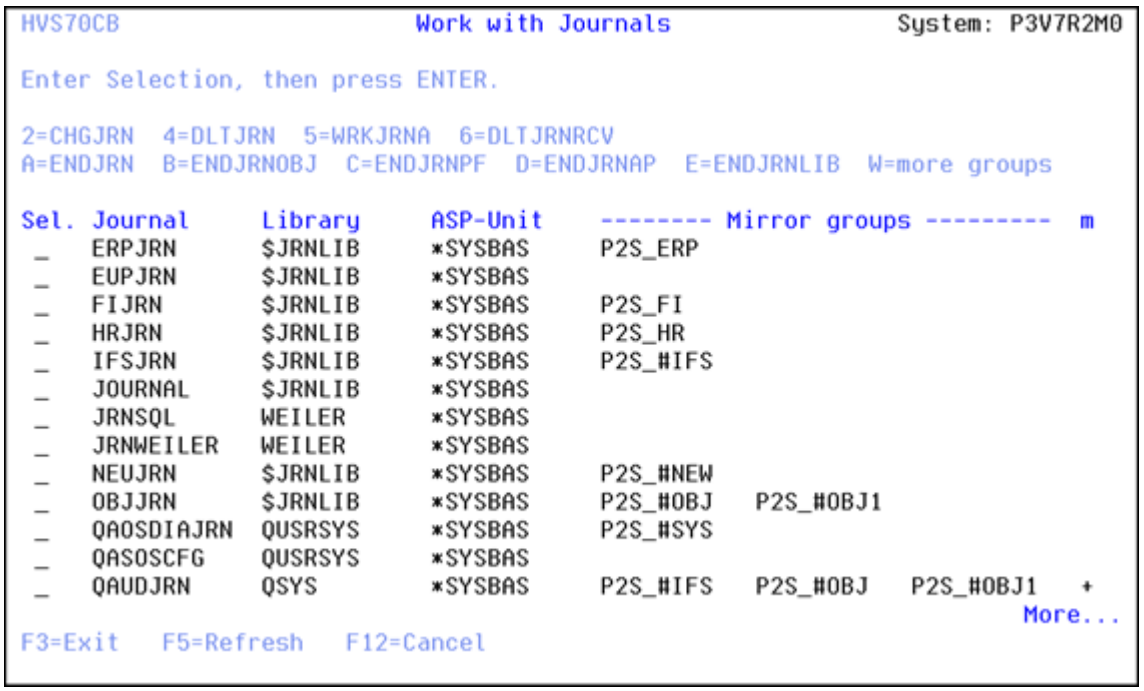
Specification of the unique name ID for the distribution list. An error message is sent to this distribution list in case of an error.

2.11.3 Menu item 3 - Work with journals



In this mask the journal parameters of the current application are displayed. To display all journals available in the system, set journal name as well as journal library to blank or enter *ALL.

The following mask appears:



The following input keys are available to the user on this screen:

Selection 2 - CHGJRN
The system command CHGJRN 'Change journal' is called with the corresponding parameters.

Selection 4 - DLTJRN
The system command DLTJRN 'Delete journal' is called with the corresponding parameters.

Selection 5 - WRKJRNA
The system command WRKJRNA 'Work with journal attributes' is called.

Selection 6 - DLTJRNRCV
The system command DLTJRNRCV 'Delete journal receivers' is called with the corresponding parameters. With the default parameters all journal receivers - except the active one - are deleted.

Selection A - ENDJRN
The system command ENDJRN 'End recording' is called.

Selection B - ENDJRNOBJ
The system command ENDJRNOBJ 'End recording of the object' is called.

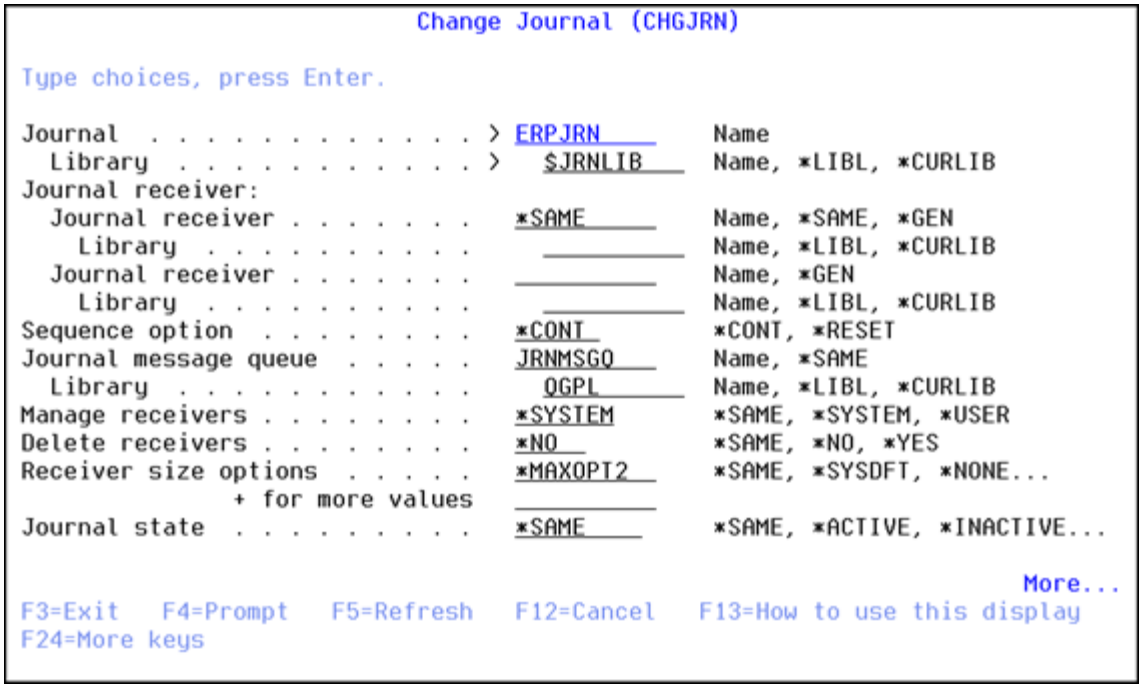
Selection C - ENDJRNPF
The system command ENDJRNPF 'End recording PF changes' is called.

Selection D - ENDJRNAP
The ENDJRNAP (Stop Access Path Recording) command stops recording the access paths of a file for which journal entries are recorded.

Selection E - ENDJRNLIB
The ENDJRNLIB (End Library Recording) command ends the recording of changes for one or more libraries.

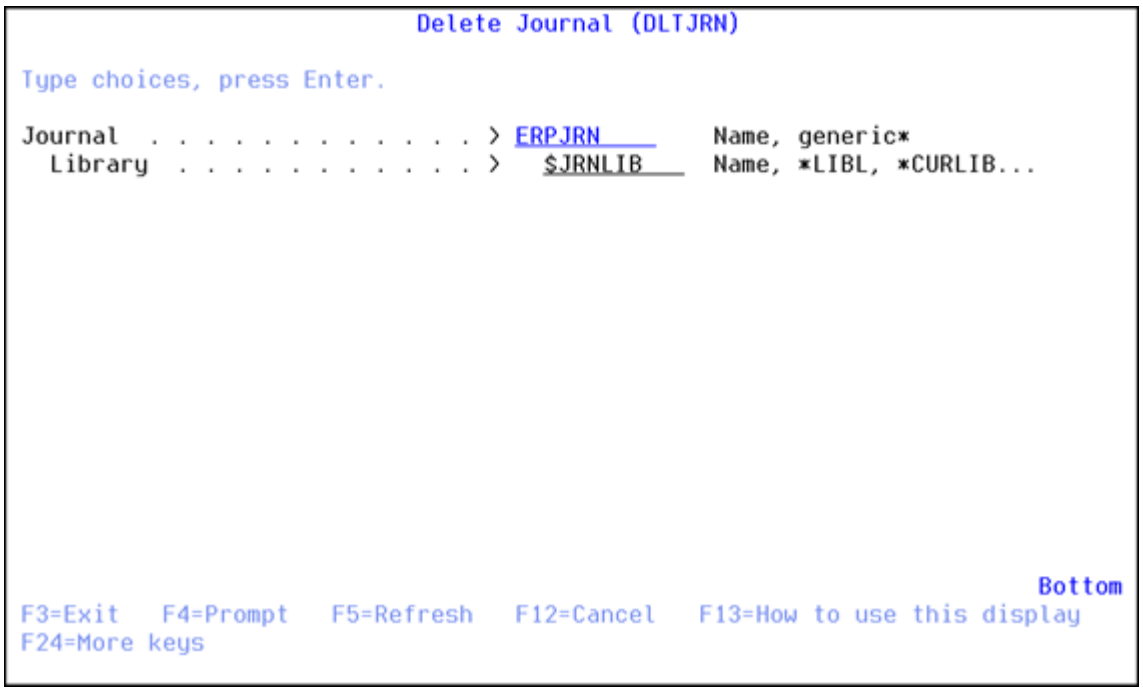
Selection W - Show more mirror groups
If more than three mirror groups are assigned to the journal, you can use this selection to display the remaining mirror groups.

2.11.3.1 Selection 2 - Change journal



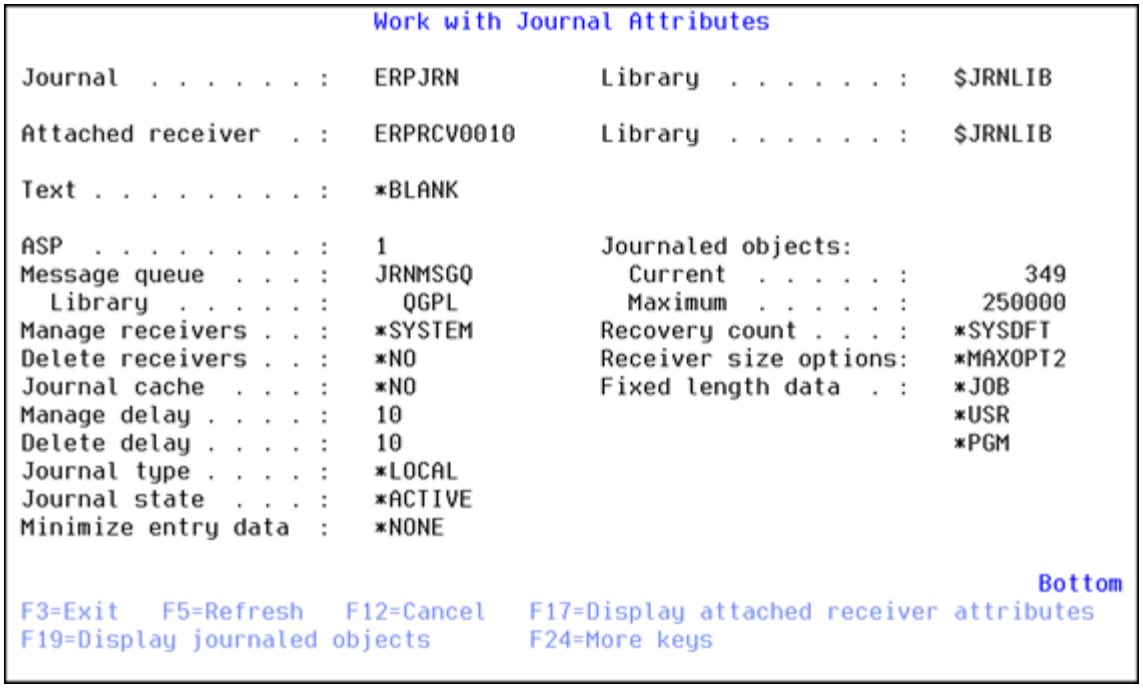
The CHGJRN (Change Journal) system command changes the journal recipient, the journal's message queue, the Manage Recipient attribute, the Delete Recipient attribute, the options that affect the recipient size, the journal status (allows minimized, entry-specific data), journal caching, the journal recipient threshold, the journal object threshold, or the text associated with the specified journal. The command can be used to attach exactly one journal receiver to the specified journal. This receiver replaces the previously attached journal receiver. The newly attached receiver immediately starts receiving journal entries for the journal.

2.11.3.2 Selection 4 - Delete journal



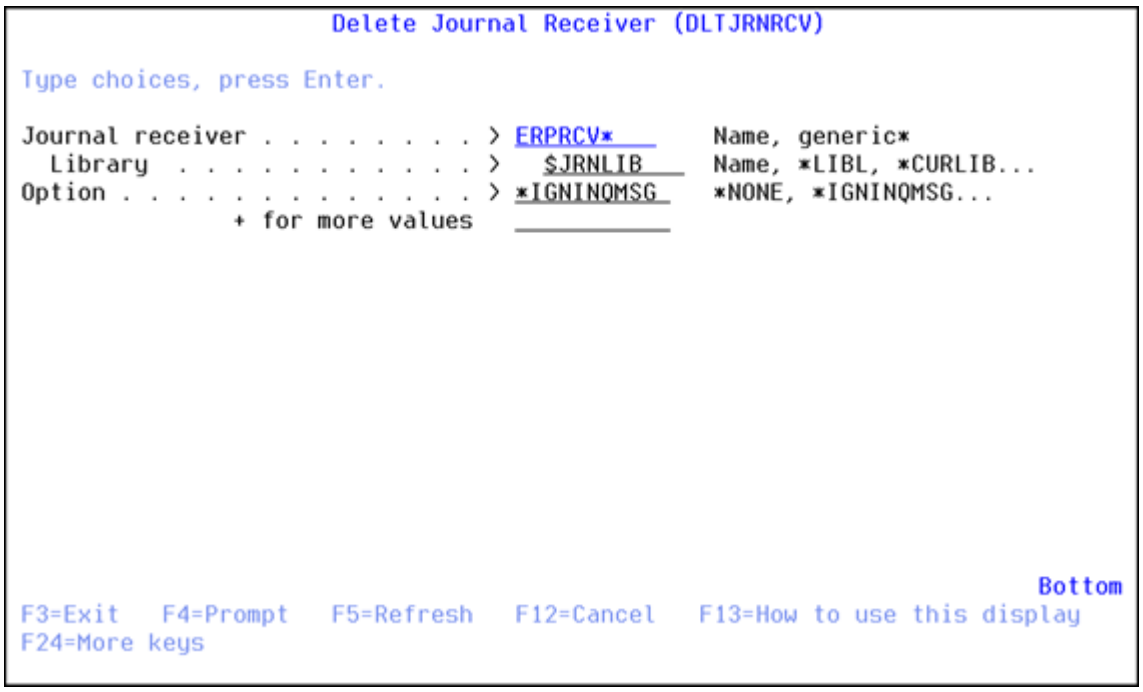
The DLTJRN system command deletes the specified journal(s) from the system.

2.11.3.3 Selection 5 - Work with journal attributes



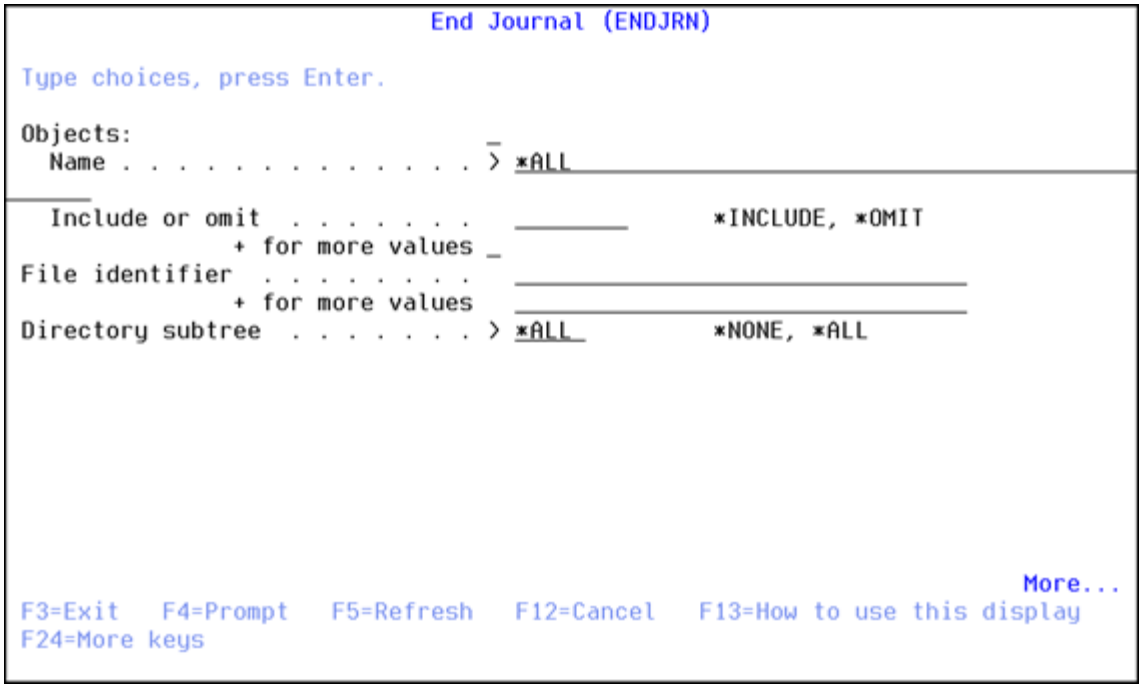
The WRKJRNA (Work with Journal Attributes) system command displays or prints the creation and operational attributes of a journal, as well as the names of journal receivers currently attached to the journal. The selections and functions in the initial display can be used to view the names of all objects currently recorded in the journal, the names of all remote journals currently attached to this journal, and details about a remote journal, the recipient directory, or details about a journal recipient. Furthermore, recipients can be deleted from the recipient directory from this display.

2.11.3.4 Selection 6 - Delete journal receiver



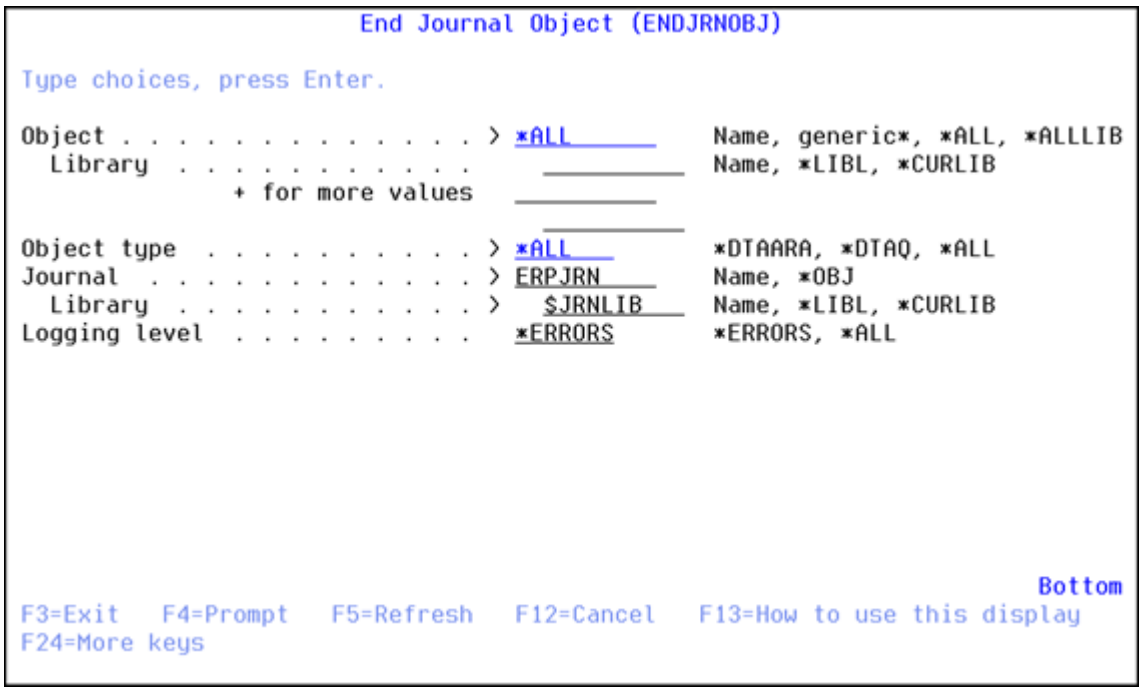
The DLTJRNRCV (Delete Journal Recipients) system command deletes the specified journal recipients from the system, thereby freeing the memory area allocated to the journal recipients.

2.11.3.5 Selection A - End journaling of IFS objects



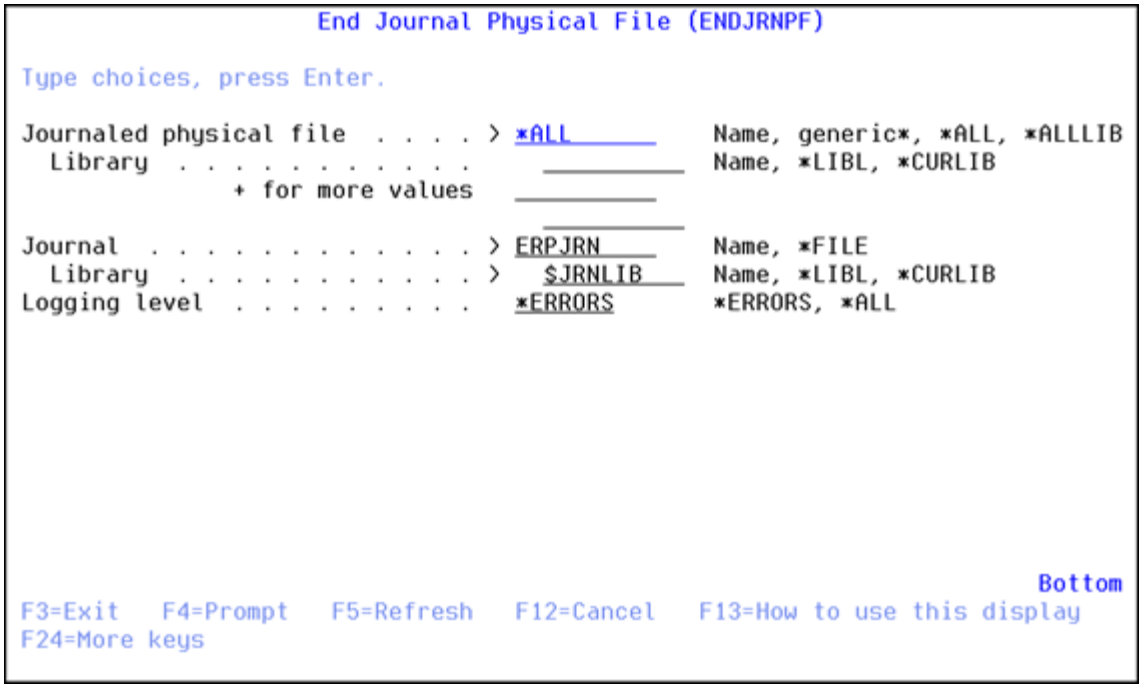
The ENDJRN (Stop Recording) system command is used to stop recording changes for one or more objects. The following object types, are supported by this interface: Data areas (*DTAARA), data queues (*DTAQ), data stream files (*STMF), directories (*DIR) and symbolic links (*SYMLNK). Only objects of type *STMF, *DIR or *SYMLNK located in the "root" (/) directory, QOpenSys and user-defined file systems are supported.

2.11.3.6 Selection B - End journaling of objects



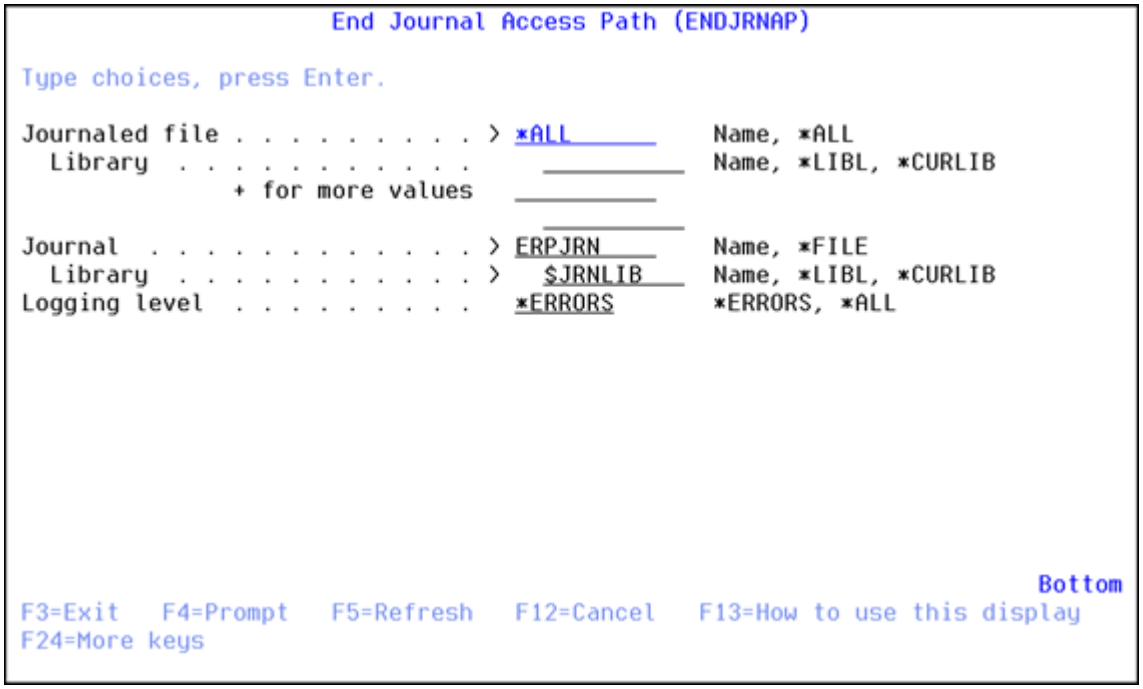
The ENDJRNOBJ (End object recording) system command ends the recording of changes for one or more objects.

2.11.3.7 Selection C - End journaling physical files



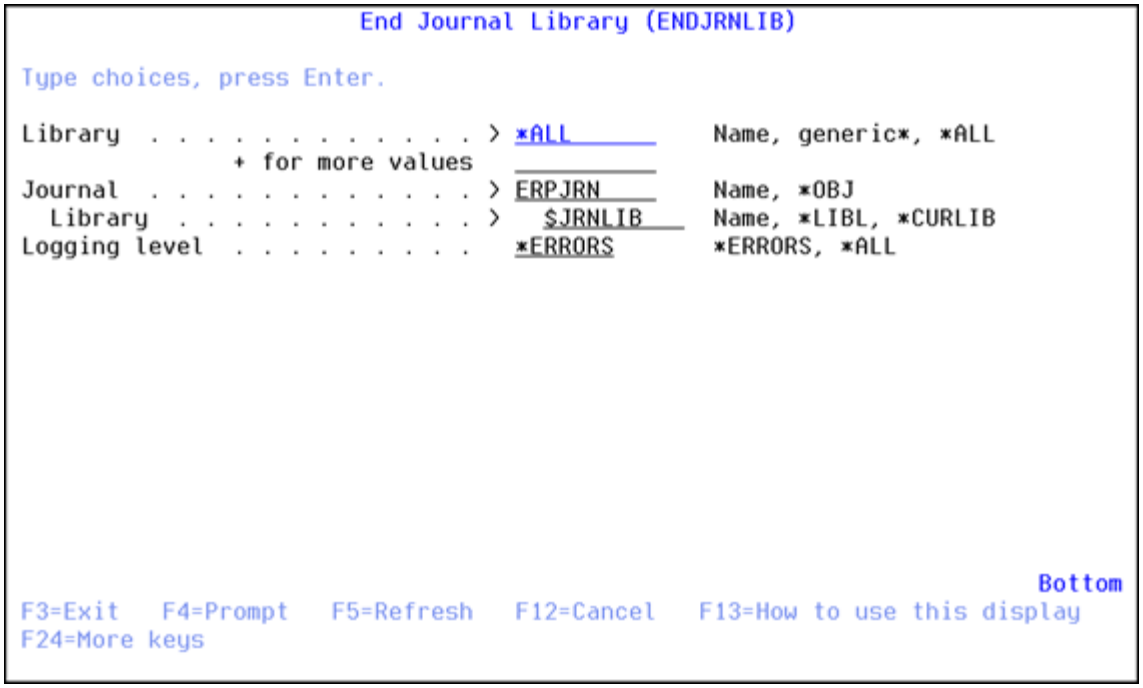
The ENDJRNPF (Stop recording PF changes) system command stops recording the changes of a given physical file and its part files.

2.11.3.8 Selection D – End journaling access paths



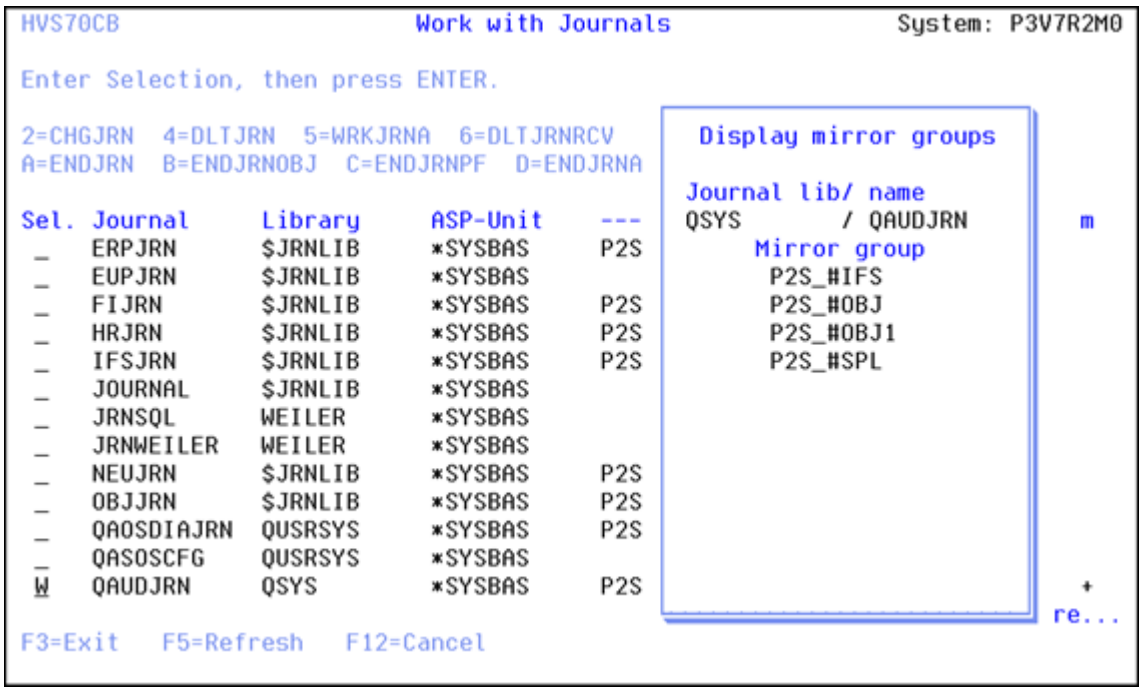
The ENDJRNAP (Stop Access Path Recording) command stops recording the access paths of a file for which journal entries are recorded.

2.11.3.9 Selection E - End journaling libraries



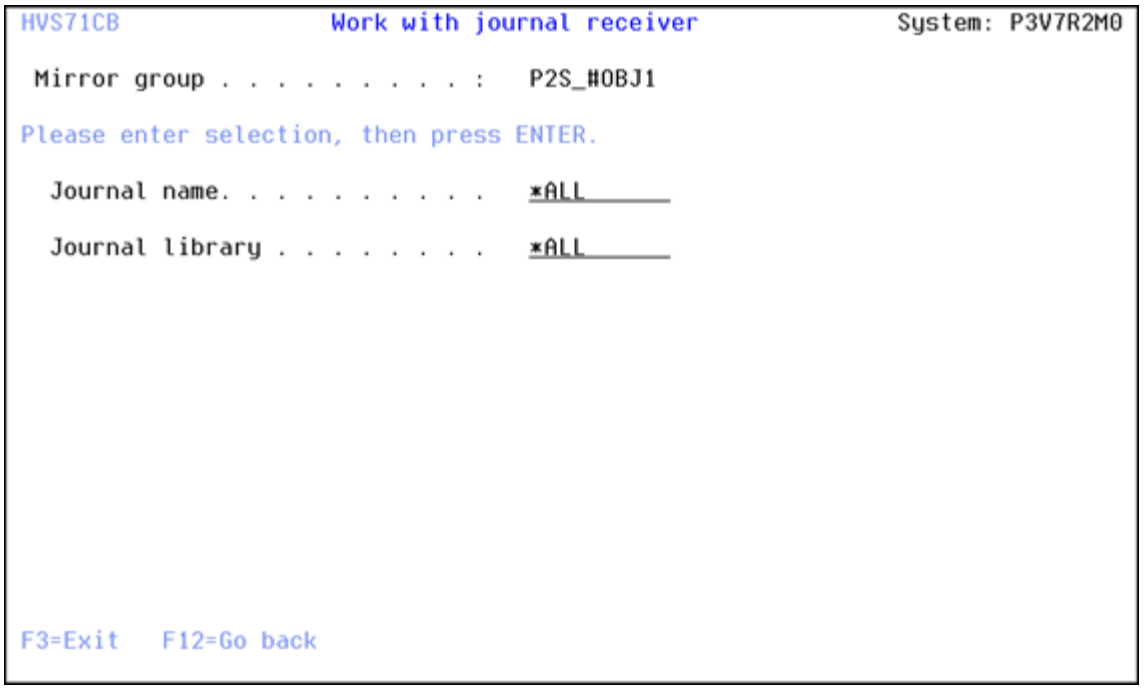
The ENDJRNLIB (End Library Recording) system command ends the recording of changes for one or more libraries.

2.11.3.10 Selection W - Display more mirror groups



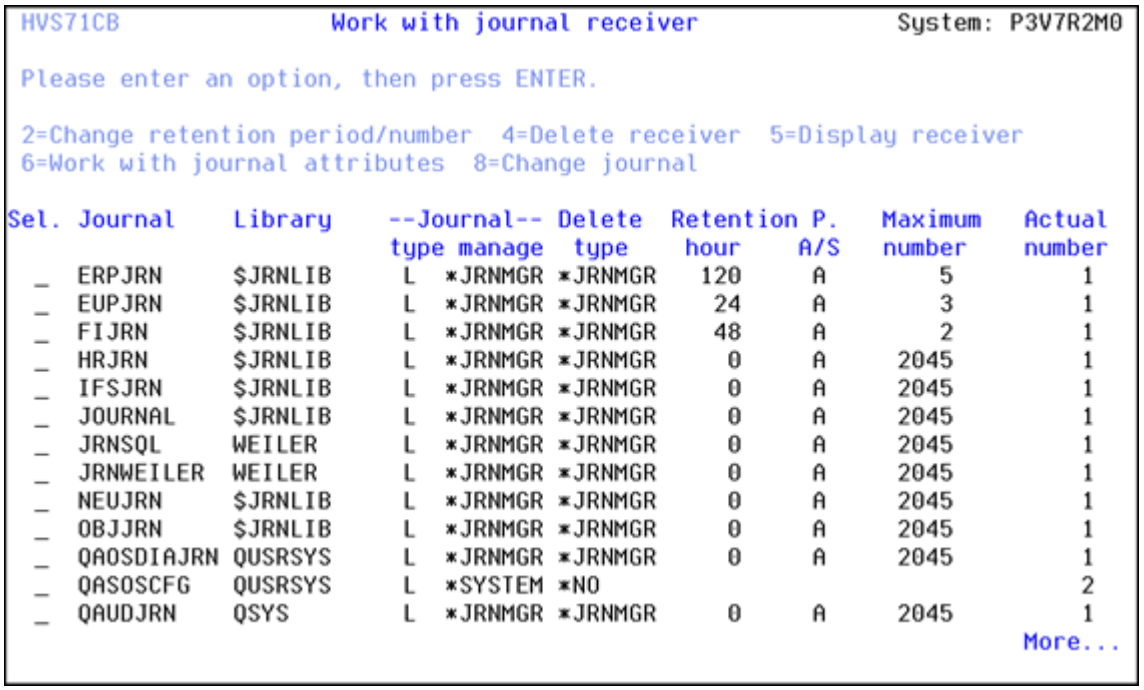
If more than three mirror groups are assigned to the journal, you can use this selection to display the remaining mirror groups.

2.11.4 Menu item 4 - Work with journal receivers



In this mask the journal parameters of the current application are displayed. To display all journals available in the system, the journal name as well as the journal library must be set to Blank or *ALL.

The following mask appears:



The following input keys are available to the user on this screen:

Selection 2 - Change dwell time/number
With this selection, the retention period, the type of recipients to delete and the maximum number of journal recipients can be changed. This can also be done via the "Manage journal manager data" function.

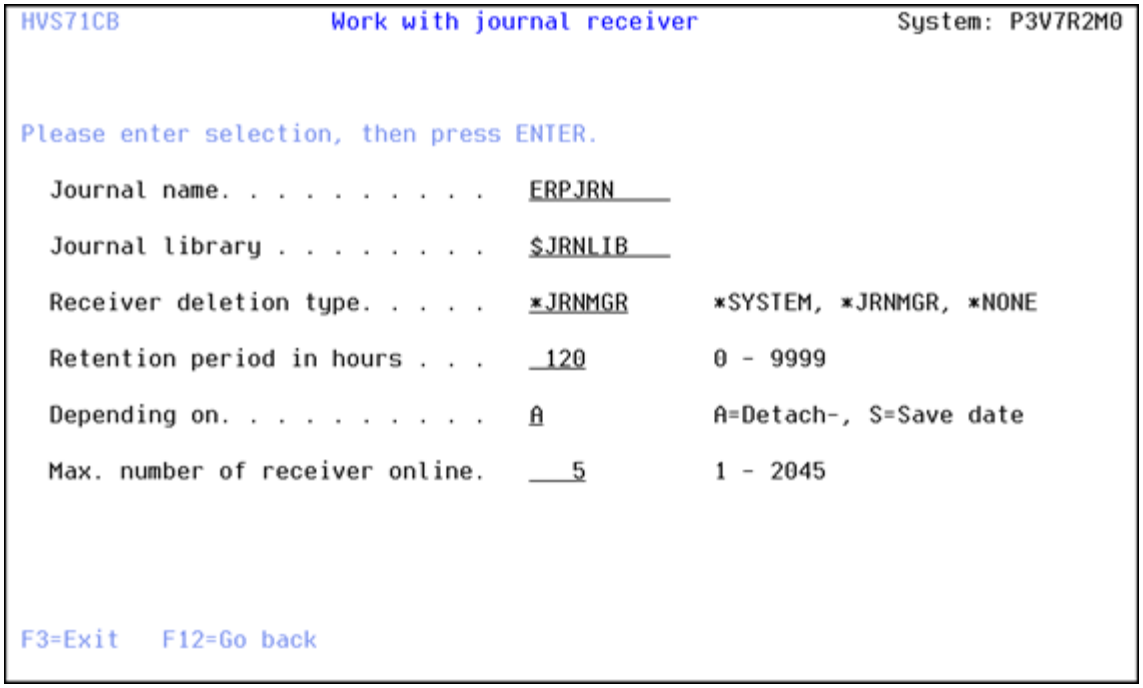
Selection 4 - Delete receiver
The system command DLTJRNRCV 'Delete journal receivers' is called with the corresponding parameters. With the default parameters all journal receivers - except the active one - are deleted.

Selection 5 - Show receiver
The system command WRKJRNRCV 'Work with journal receiver' is called with the corresponding parameters.

Selection 6 - Work with journal attributes
The system command WRKJRNA 'Work with journal attributes' is called.

Selection 8 - Change journal
A DTAQ entry triggers the journal manager to change the journal according to the possibly changed data.

2.11.4.1 Selection 2 - Change retention period / number



With the selection option 2 in the administration list of journal receivers the user has the possibility to change journal parameters. By pressing the Enter key, additional parameters can be displayed.

Journal name/library
Name of the journal and library whose parameters are changed is displayed.

Delete recipient
Specifies how the deletion of journal receivers is performed.

Valid values for the parameter are:

***SYSTEM**
The system deletes the journal receivers after reassignment.

***JRNMGR**
The journal manager deletes the journal receivers depending on the dwell time.

***NONE**
Nobody deletes the journal receivers. The user is responsible for this.

Dwell time in hours from
If a journal receiver is suspended and it is processed by the BUS4i HA system, then it is deleted when it has been suspended or saved for the specified number of hours.

Depending on
Specifies which date is used as the basis for calculating the dwell time.

Valid values for the parameter are:

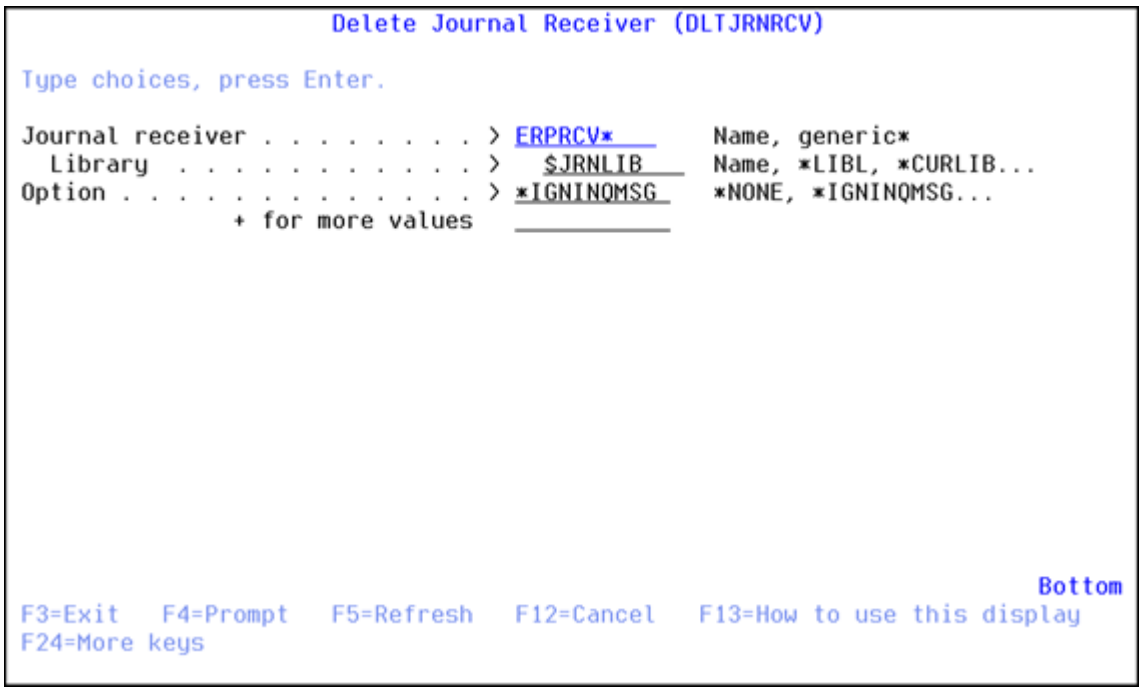
A=Dependent date and time
The dwell time is calculated according to the suspension date.

S=Save date and time

The retention time is calculated according to the first backup date.

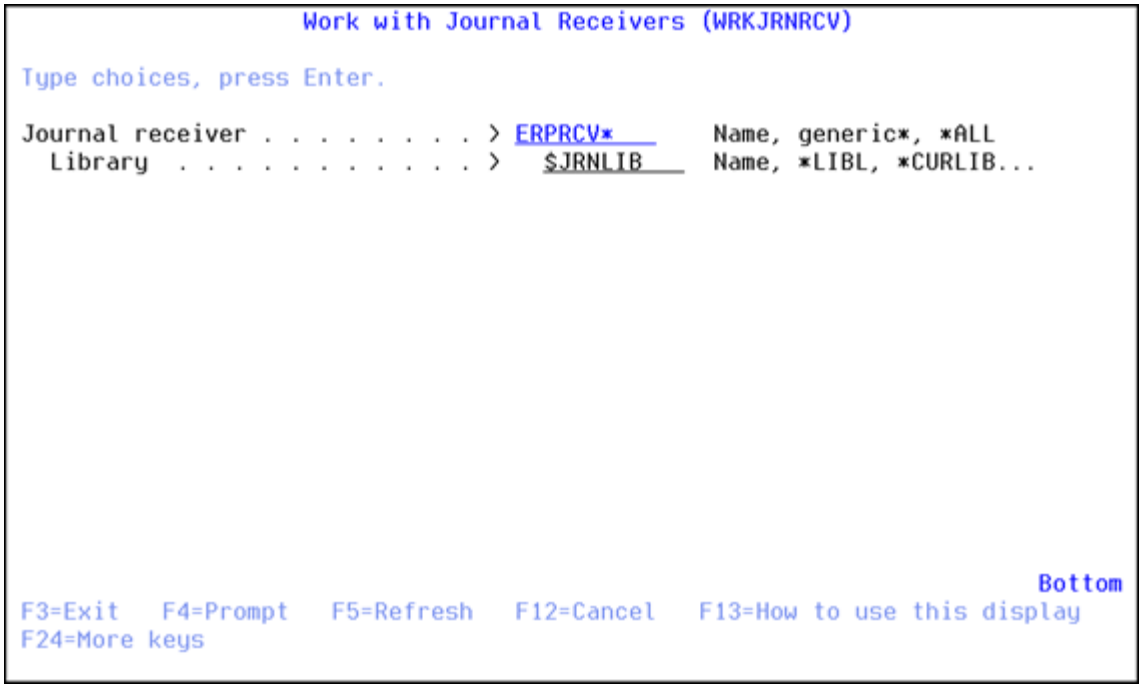
Max. Number of recipients online.
If the maximum number of journal receivers is exceeded and they are processed by the BUS4i HA system, they are deleted. The definition is an either/or specification for the retention period. I.e. if the retention period has not yet been exceeded (suspended or saved) but the number has been exceeded, then the recipients will still be deleted. This should be considered when working with the save date to ensure that all recipients are saved.

2.11.4.2 Selection 4 - Delete receiver



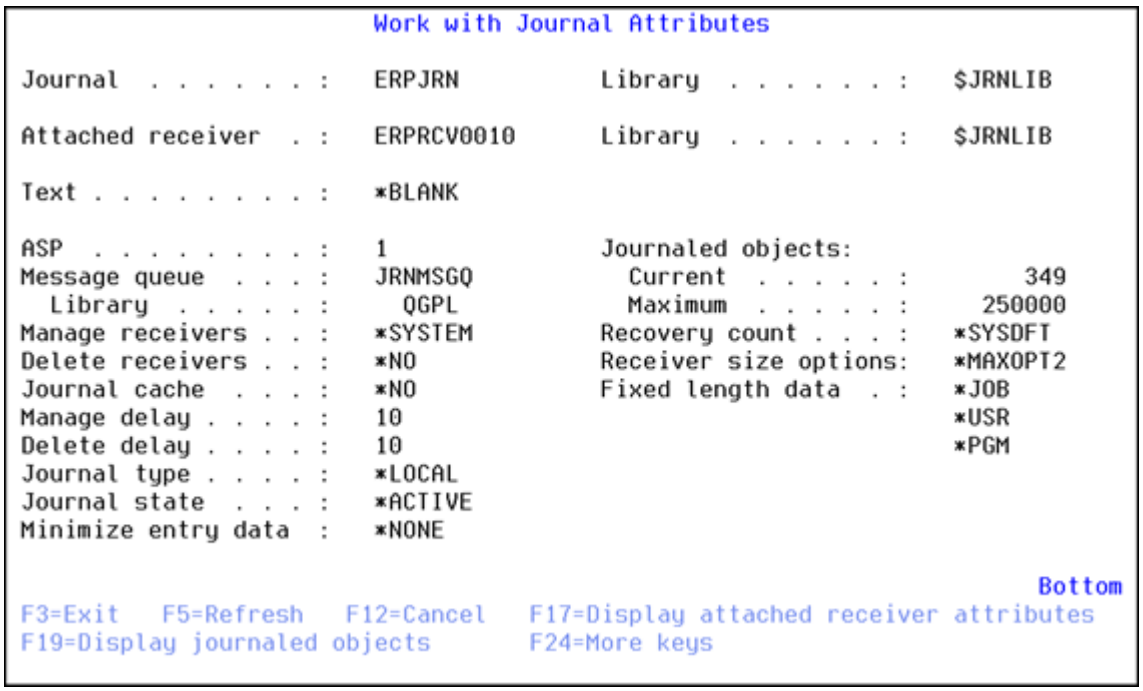
The DLTJRNRCV (Delete Journal Recipients) system command deletes the specified journal recipients from the system, thereby freeing the memory area allocated to the journal recipients.

2.11.4.3 Selection 5 - Display receiver



The WRKJRNRCV (Work with Journal Recipients) system command gives the user the ability to view, create, delete a list of journal recipients from one or more libraries and display attributes.

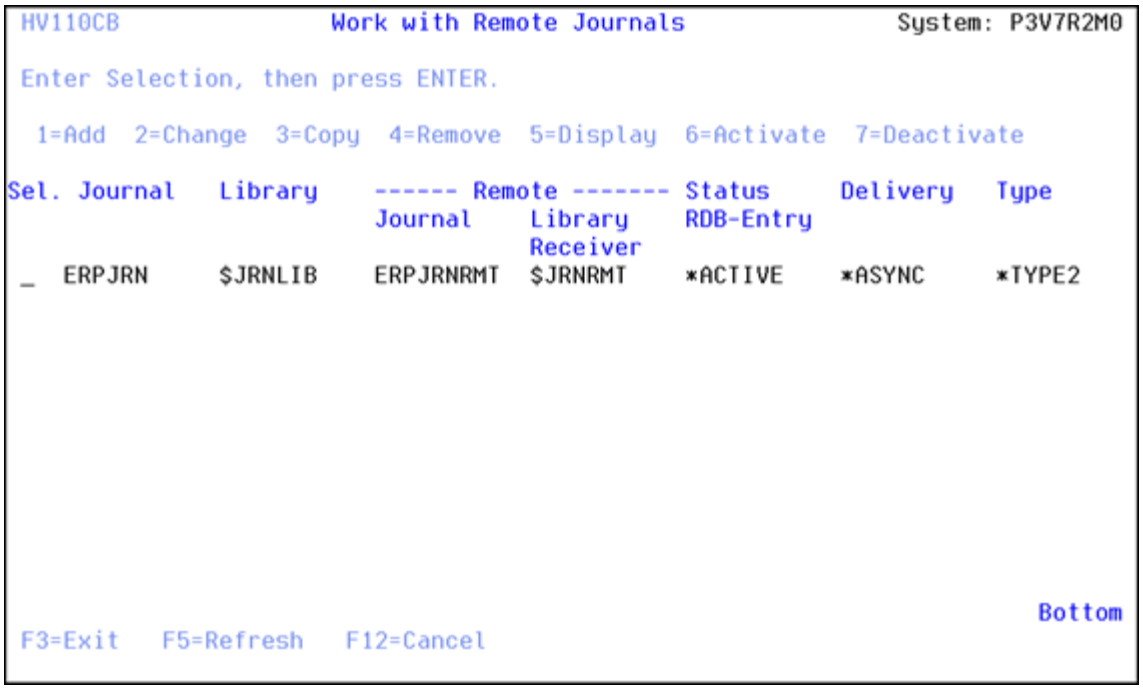
2.11.4.4 Selection 6 - Work with journal attributes



The WRKJRNA (Work with Journal Attributes) system command displays or prints the creation and operational attributes of a journal, as well as the names of journal receivers currently attached to the journal. The selections and functions in the initial display can be used to view the names of all objects currently recorded in the journal, the names of all remote journals currently attached to this

journal, and details about a remote journal, the recipient directory, or details about a journal recipient. Furthermore, recipients can be deleted from the recipient directory from this display.

2.11.5 Menu item 5 - Work with remote journals



The following input keys are available to the user on this screen:

Selection 1 - Add
The system command "ADDRMTJRN" is called to add a remote journal.

Selection 2 - Change
The system command "CHGRMTJRN" is called to change a remote journal.

Selection 3 - Copy
The system command "ADDRMTJRN" is called to copy a remote journal.

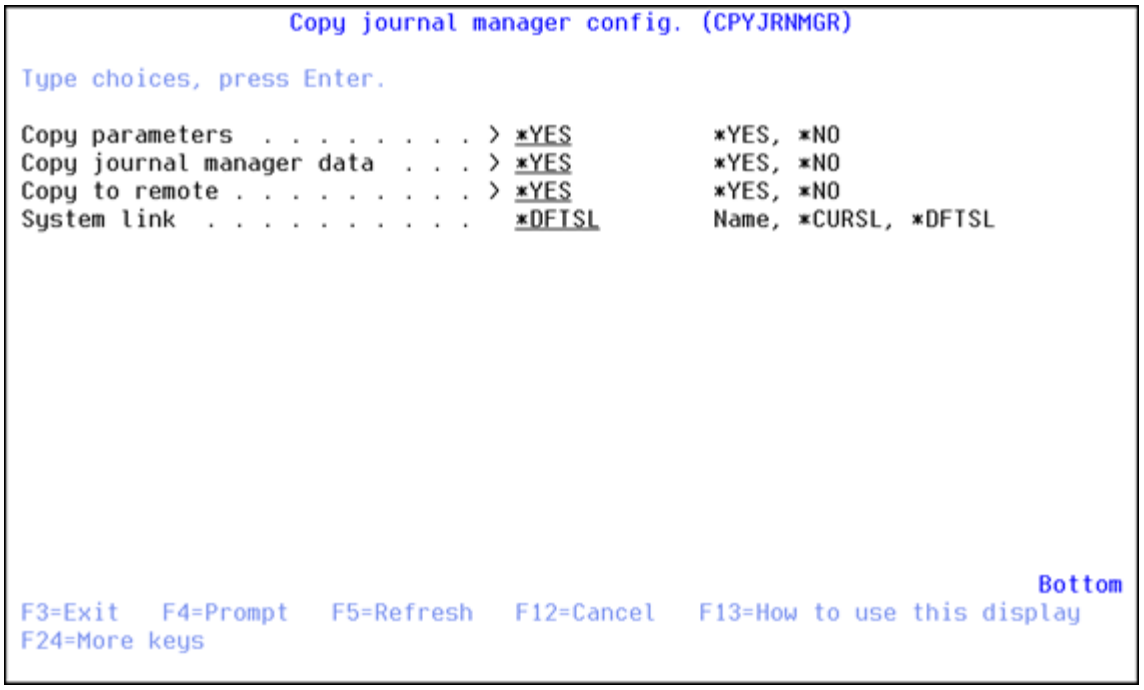
Selection 4 - Remove
The system command "RMVRMTJRN" is called to remove a remote journal.

Selection 5 - Display
The system command "WRKJRNA" is called to display the journal attributes.

Selection 6 - Active.
The remote journal is activated.

Selection 7 - Deactivate.
The remote journal is disabled.

2.11.6 Menu item 7 - Copy parameters and data



Herewith the configuration of the journal manager can be copied to TGTSYS or SRCSYS and to the remote system.

The user has the following input options for the parameters:

Copy parameters
If the parameters are to be copied.

Valid values for the parameter **Copy parameter** are:

***YES**
The journal manager parameters are copied. *YES is the default value.

***NO**
The journal manager parameters are not copied.

Copy journal manager data
Should the journal manager data be copied.

Valid values for the **Copy journal manager data** parameter are:

***YES**
The journal manager data is copied. *YES is the default value.

***NO**
The journal manager data is not copied.

Copy to remote
If the configuration is to be copied to remote.

Valid values for the **Copy to remote** parameter are:

***YES**
The configuration is copied to the remote system.

***NO**
The configuration is not copied to the remote system. *NO is the default value.

System link
Name of the system link used to send the configuration to remote.

Valid values for the **System link** parameter are:

Name
Name of the system link that will be used.

***CURSL**
The current active system link is used.

***DFTSL**
The default system link is used.

The valid command keys are described in detail in the system operator guidance of the current command.

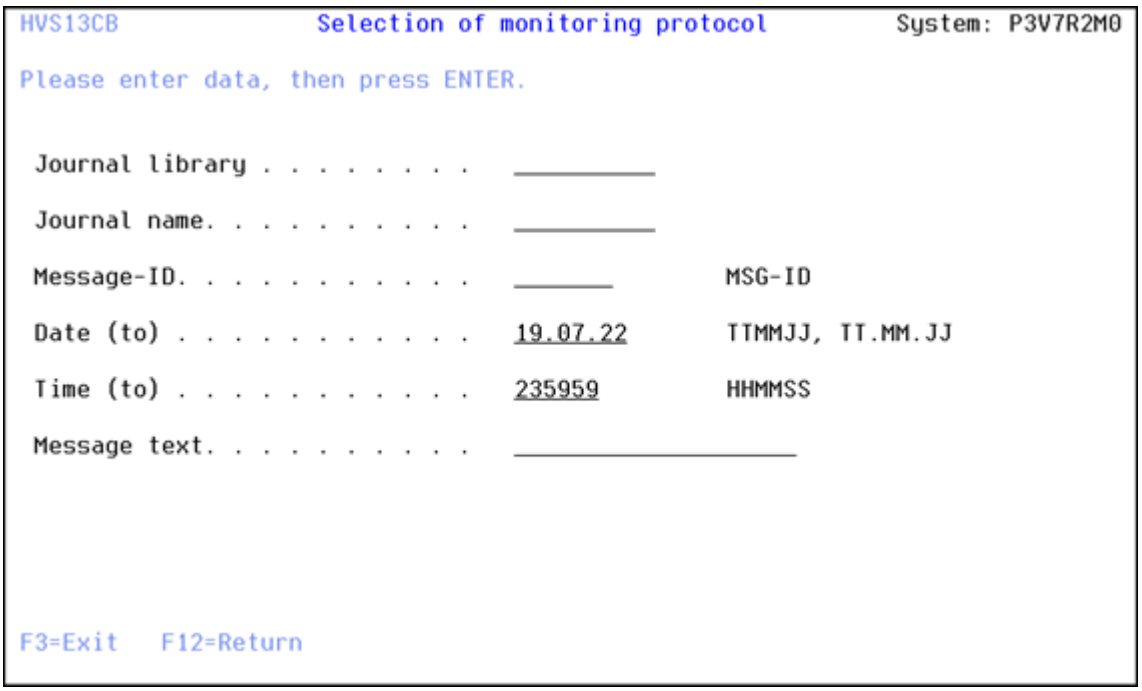
2.11.7 Menu item 10 - Start journal manager

This can be used to start the journal manager if it is not active and the value in the "Activate journal manager" control parameters is set to "Y".

2.11.8 Menu item 11 - End journal manager

This can be used to end the journal manager if it is active.

2.11.9 Menu item 20 - Display journal manager messages



This function can be used to display messages from the journal manager log file for a journal or all journals.

The following input fields are available to the user:

Journal library
Name of the **journal library** for which the called command is to be executed.

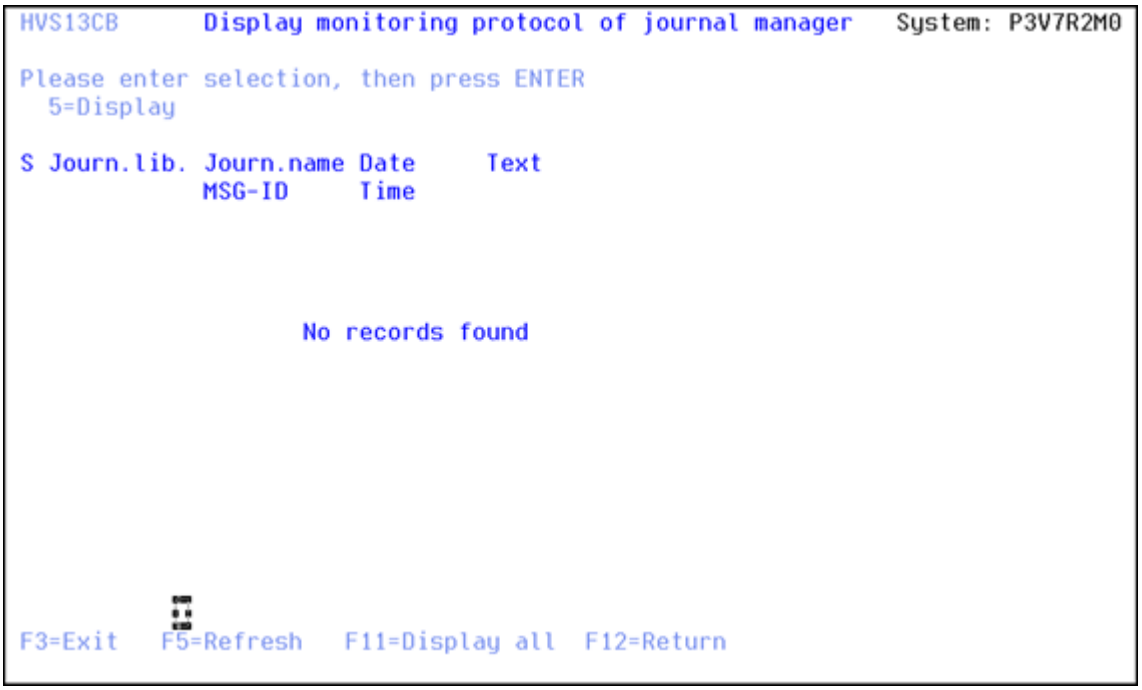
Journal Name
Name of the **journal name** for which the invoked command is to be executed.

Message ID
Selection on the selected message ID. Only the messages with this message ID are then displayed.

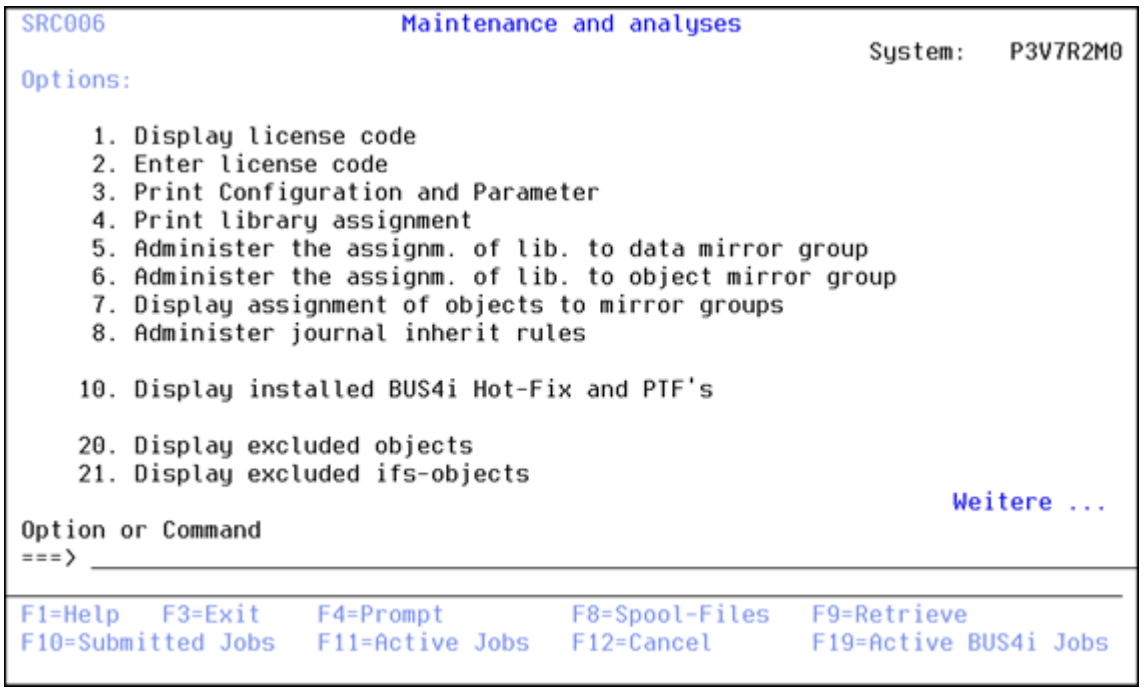
Date (until)
Restriction from the selected date to the current date.

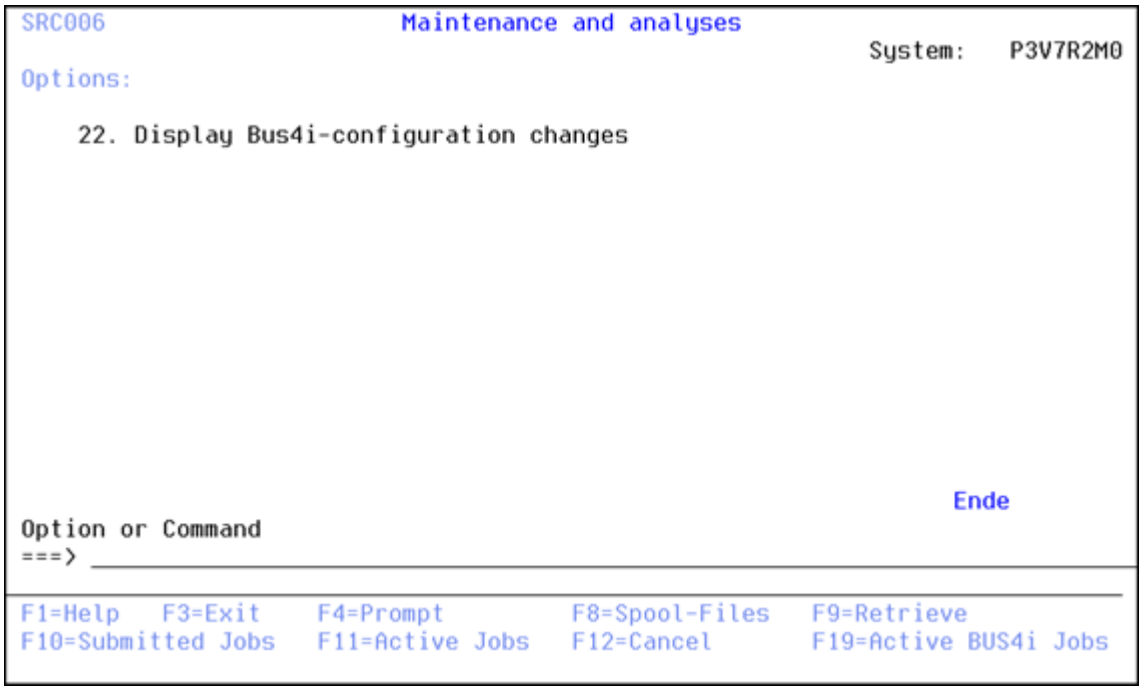
Time (until)
Restriction from the selected time until 23.59.59.

Message content
Selection on the selected message content.
The following mask is displayed.


HVS13CB Display monitoring protocol of journal manager System: P3V7R2M0
Please enter selection, then press ENTER
5=Display
S Journ.lib. Journ.name Date Text
MSG-ID Time
No records found
F3=Exit F5=Refresh F11=Display all F12=Return

2.12 Main menu selection 21 - Maintenance and analyses





The following menu items can be selected on the screen:

Menu item 1: Display current license code
With this menu item the user can display the current license code.

Menu item 2: Enter license code
With this menu item the license code can be entered.

Menu item 3: Print configuration and parameters
This menu item can be used to print out the BUS4i configuration.

Menu item 4: Print mirror group assignment
This menu item can be used to print the assignment of the libraries to the mirror groups. This is also the basis for the splitter of the current data mirror group in "Manage **assignment of libraries to data mirror groups**".

Menu item 5: Manage assignment of libraries to data mirror groups
This menu item can be used to manage the assignment of the libraries to the data mirror groups.

Menu item 6: Manage assignment of libraries to object mirror groups
This menu item can be used to manage the assignment of the libraries to the object mirror groups.

Menu item 7: Display assignment of objects to mirror groups
This menu item can be used to display the assignment of objects to the mirror groups.

Menu item 8: Manage journal transfer rules
This menu item can be used to manage the default takeover rules. These rules specify which objects created in a recorded library, moved to a recorded library or saved back to a recorded library take over the journal status of the library and which recording attributes they should have.

Menu item 10: Display current BUS4i software status
This menu item can be used to display the current BUS4i software status.

Menu item 20: Show excluded objects
This menu item can be used to display the non-mirrored objects, depending on the system link.

Menu item 21: Show excluded IFS objects
This menu item can be used to display the non-mirrored IFS objects, depending on the system link.

Menu item 22: Display BUS4i configuration changes
This menu item can be used to display the changes made to the BUS4i configuration.

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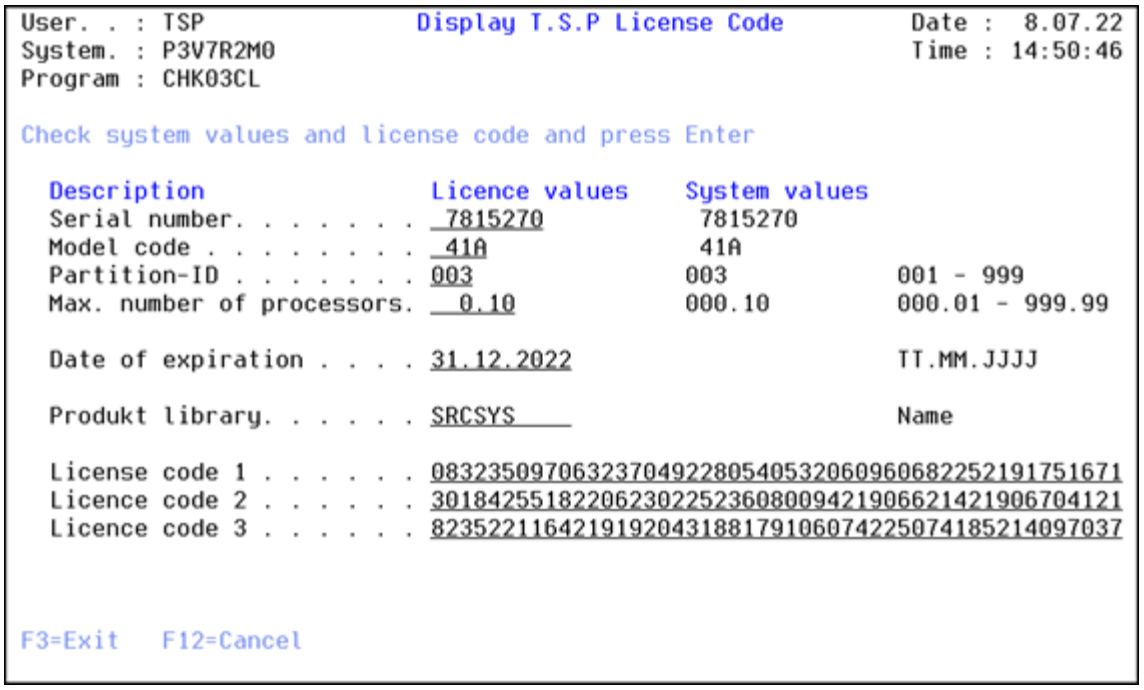
2.12.1 Menu item 1 - Display current license code



This selection menu allows the user to view the current license code.

The following menu items are displayed on the current screen:

Serial number
The serial number is displayed in this field.

Model number
This field displays the model number.

Partition ID
The partition ID is displayed.
Valid input values are: 000.10 - 999.99

Max. Number of processors
The number of maximum processors is displayed.
Valid input values are: 001 - 999

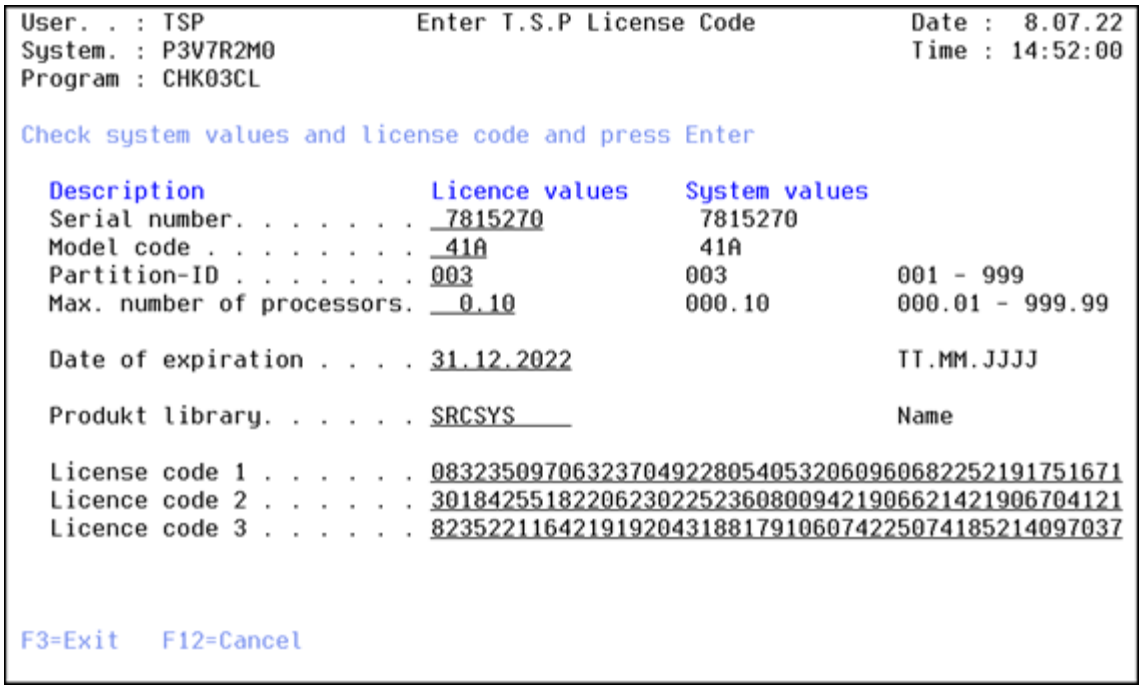
Validity date
The validity date BIS is displayed here.
Valid input values are: DD (day), MM (month), YYYY (year)

Product Library
The name of the associated product library is displayed.

License code 1-3
License codes 1-3 are displayed here.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

2.12.2 Menu item 2 - Enter license code



This selection menu allows the user to enter the current license code.

The following menu items are displayed on the current screen:

Serial number
The serial number is entered in this field.

Model number
The model number is entered in this field.

Partition ID
The partition ID is entered in this field.
Valid input values are: 000.10 - 999.99

Max. Number of processors
The number of maximum processors is entered in this field.
Valid input values are: 001 - 999

Validity date
The validity date BIS is entered here.
Valid input values are: DD (day), MM (month), YYYY (year)

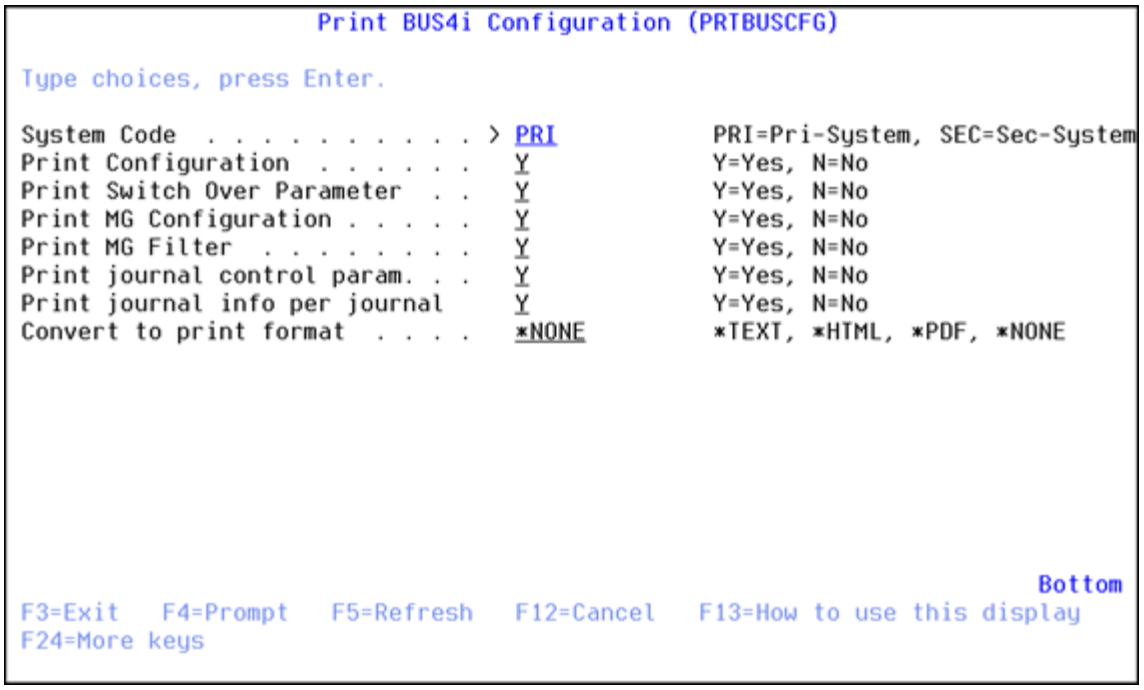
Maximum number of users
Here the user can enter the maximum number of users.
Valid input values are: 001-999.

Product Library
The name of the associated product library can be entered here.

License code 1-3
License codes 1-3 can be entered in this field.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

2.12.3 Menu item 3 - Print configuration and parameters



The "System Code" parameter is used to specify whether the configuration is to be printed for the primary or secondary system.

The various parameters of the BUS4i configuration can be printed via the other selection options.

Thereby the output format can be determined via the "Convert to print format" parameter as follows:

***NONE:**
A spool file (SRC56D) is created for the user BUS4i (WRKSPLF BUS4i)

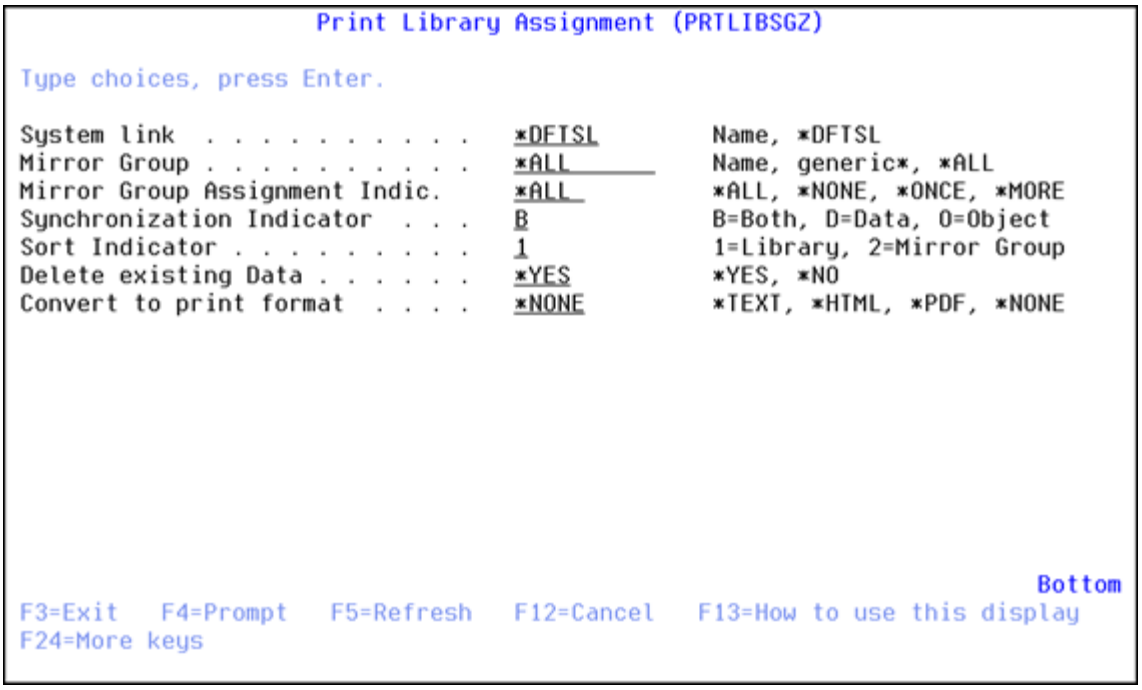
***TEXT:**
Spool file SRC56D is converted to text file src56d.txt and placed in \tmp directory

***HTML:**
Spool file SRC56D is converted to text file src56d.html and placed in \tmp directory

***PDF:**
Spool file SRC56D is converted to text file src56d.pdf and placed in \tmp directory

The default value is *NONE.

2.12.4 Menu item 4 - Print library assignment



Via this command the user has the possibility to create a print list which contains the assignment of the libraries to the individual mirror groups. The print list with the name SR128D is created in the output queue BUS4I.

With the function key "F4" you get the operator guidance.

For the command parameters, the user has the following input options:

System link
Name of the system link for which the command is executed.

Valid values for the **System link** parameter are:

Name
Name of the system link

***DFTSL**
The system link, which is set as default, is used.

Mirror group
Specify for which mirror groups the assignment is to be printed.

Valid values for the **Mirror group** parameter are:

Name
Name of the mirror group for which the assignment is to be printed.

generic*
Specify the generic name of the mirror group for which the mapping is to be printed. A generic name consists of one or more characters followed by an asterisk (*). All mirror groups are taken whose name has the same prefix as the generic name.

***CURRENT**

The assignment is printed for the current mirror group.

***ALL**
The assignment is printed for all mirror groups. *ALL is the default value.

Mirror group assignment indicator
Specify which assignments are to be printed.

Valid values for the **Mirror Group Assignment Indicator** parameter are:

***ALL**
All assignments are printed. *ALL is the default value.

***NONE**
Only libraries that are not assigned to a mirror group are printed.

***ONCE**
Only libraries that are assigned to a mirror group are printed.

***MORE**
Only libraries that are assigned to multiple mirror groups are printed.

Synchronization indicator
Specification of the synchronization type.

Valid values for the parameter **Synchronization flag** are:

B=All
Libraries are printed which are mirrored either via data synchronization or via object synchronization. B=All is the default value.

D=data
Only libraries that are mirrored via data synchronization are printed.

O=Objects
Only libraries that are mirrored via object synchronization are printed.

Sorting indicator
Specify by which the expression is to be sorted.

Valid values for the **Sort flag** parameter are:

1=Library
The list is sorted by library name. 1=Library is the default value.

2=Mirror groups
The list is sorted by mirror groups.

Delete existing data
Indication whether already existing, determined data should be deleted.

Valid values for the **Delete existing data** parameter are:

***YES**
Existing data will be deleted. *YES is the default value.

***NO**
Existing data will remain.

Convert to print format
Specify whether the print list (SR128D) should additionally be converted to a specific print format.

Valid values for the **Convert to print format** parameter are:

***NONE**
No additional conversion of the print list. *NONE is the default value.

***TEXT**
Additional conversion of the print list into a text document. The spool file (SR128D) is converted to the text file (sr128d.txt) and placed in the \tmp directory.

***HTML**
Additional conversion of the print list into a HTML document. The spool file (SR128D) is converted to the text file (sr128d. html) and placed in the \tmp directory.

***PDF**
Additional conversion of the print list into a PDF document. The spool file (SR128D) is converted to the text file (sr128d. pdf) and placed in the \tmp directory.

The valid command keys are described in detail in the system operator guidance of the current command.

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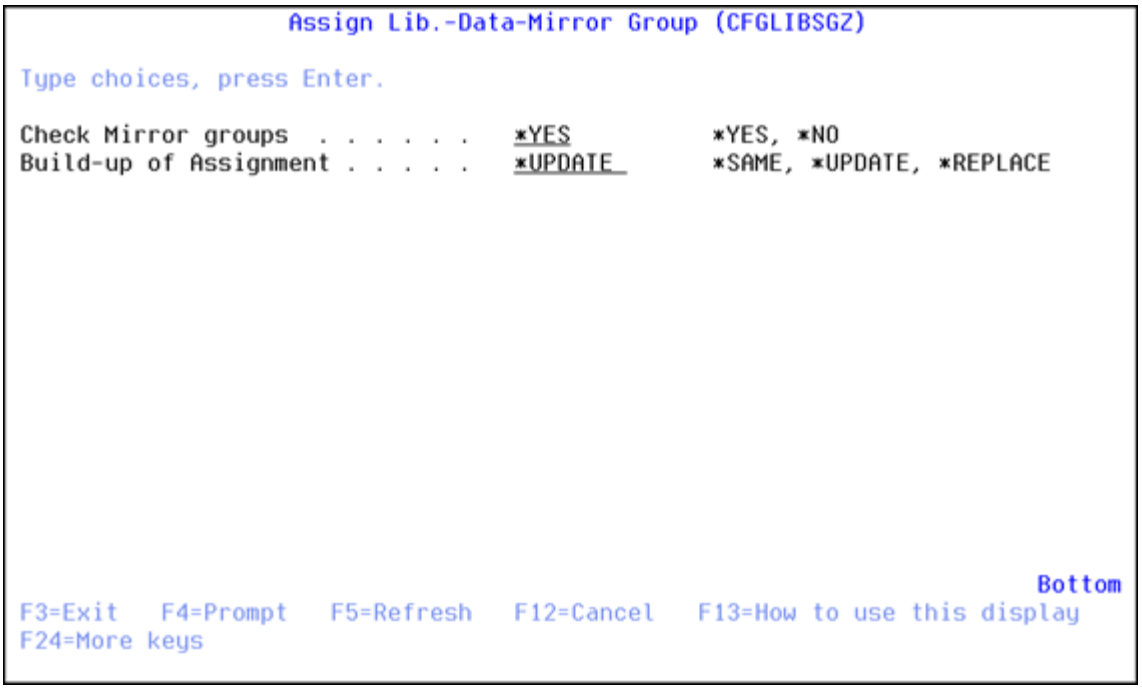
2.12.5 Menu item 5 - Manage assignment of libraries to data mirror groups



This menu item allows the user to assign the libraries to be mirrored to the mirror groups.

For the command parameters, the user has the following input options:

Check mirror groups
Specify whether to check for existing mirror groups.

Valid values for the parameter **Check mirror groups** are:

***YES=Yes**
The inputs are checked for existing mirror groups, BUS4I must exist as primary system. The file SRC11P in library SRCSYS must exist, otherwise this flag is automatically set to N. Y=Yes is the default value.

***NO=No**
The inputs are not checked for existing mirror groups.

Assignment structure
Indication whether the existing assignments remain.

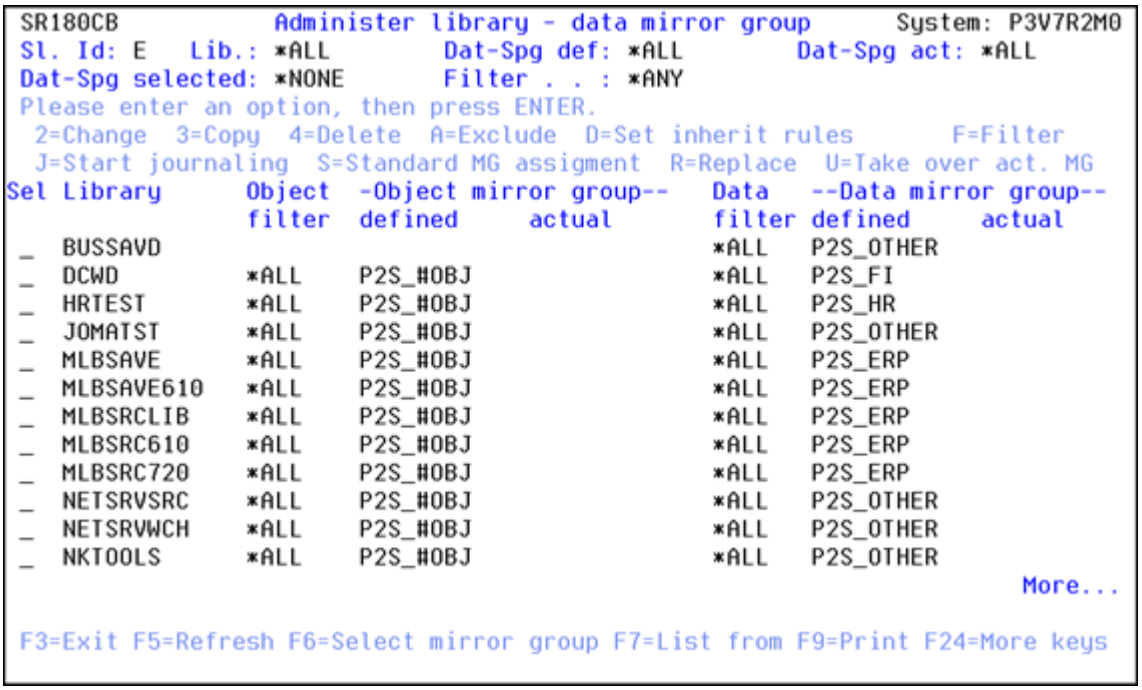
Valid values for the parameter **Structure of assignment** are:

***UPDATE**
Libraries existing on the system are determined anew, the already registered allocations remain. *UPDATE is the default value.

***SAME**
Existing libraries on the system are not redetermined; the assignments already recorded remain.

***REPLACE**
Libraries existing on the system are redetermined, and the assignments already recorded are deleted.

The following mask is then displayed:



The following input keys are available to the user on this screen:

Selection 2 - Change
The data mirror group assignment of the library is changed. Subsequently, the journaling should be checked with selection "J".

Selection 3 - Copy
The library can be added to another data mirror group.

Selection 4 - Delete
The mirror group assignment can be deleted.

Selection A - Exclude
The library can be marked as an exclusion.

Selection D - Set transfer rules
The library is journalized and the transfer rule is set or changed.

Selection F - Filter
The data filter of the mirror group can be managed.

Selection J - Start journaling
The library journalizes and the transfer rule is set and all physical files, data queues and data areas are checked if and how they are journalized.

Selection S - Manage default mirror mapping
This selection can be managed the default assignment of a new library to a mirror group.

Selection R - Replace
Excluded libraries can be generically excluded with this selection.

Selection U - Take over current mirror group

When printing the mirror group assignment, the column "Current mirror group" is filled. With this selection this current mirror group can be taken over.

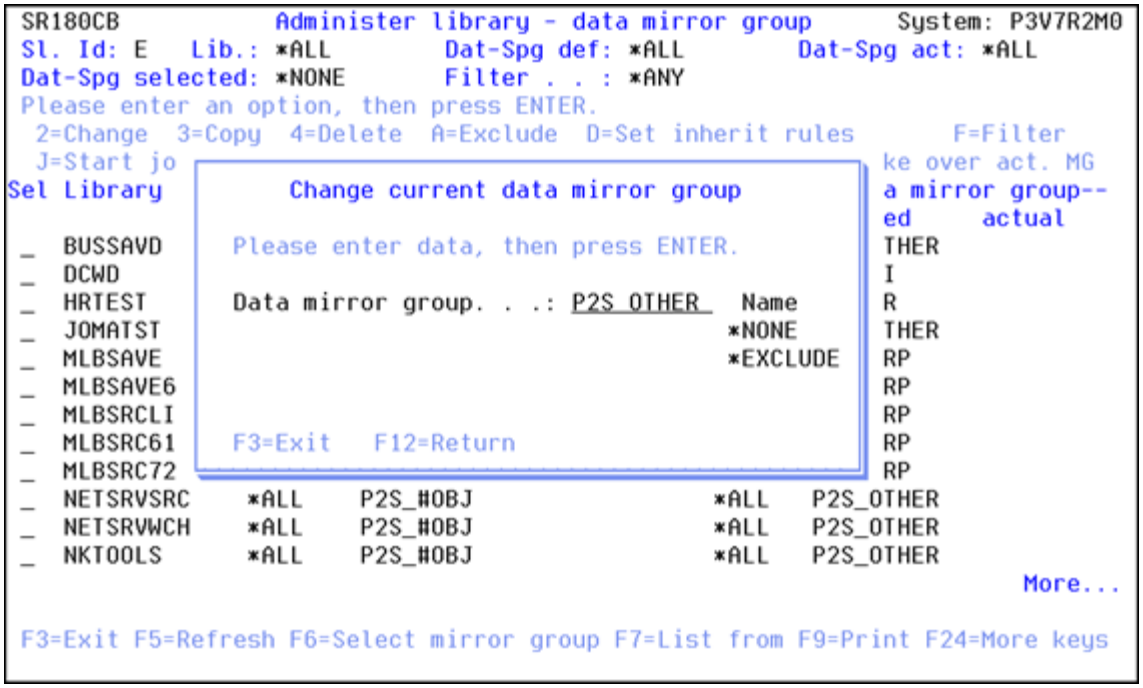
The following command keys are valid on the current mask:

F6=Change selected data mirror group
With this command key a data mirror group can be selected for further processing.

F7=List from
This command key can be used to set up in the list of libraries.

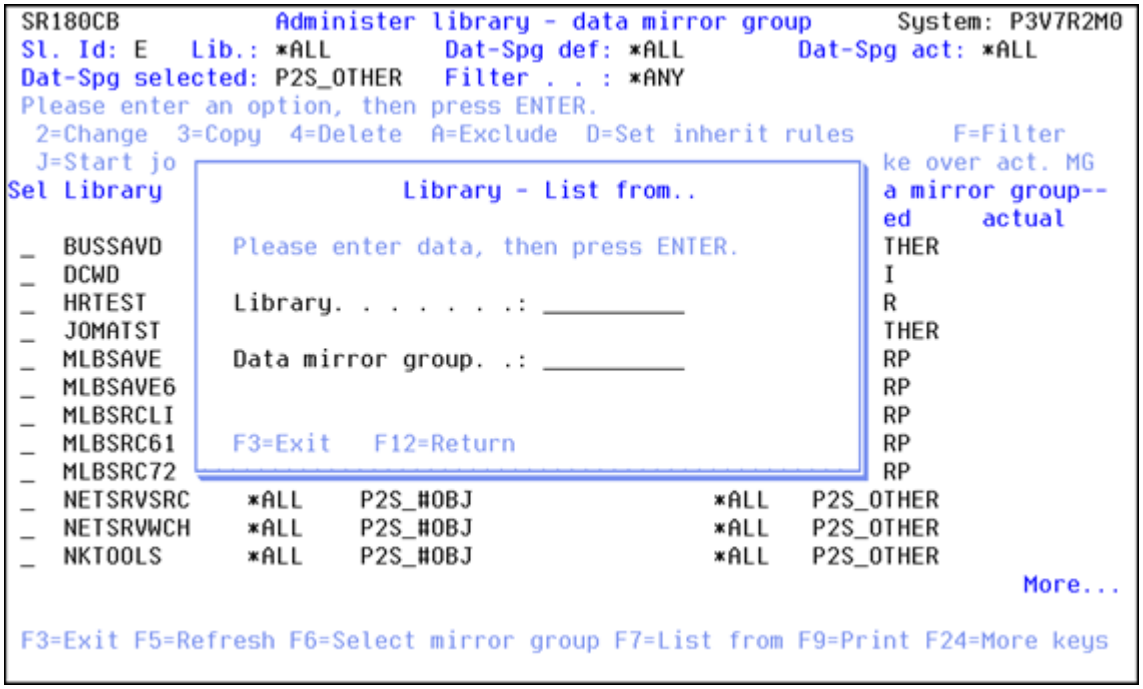
F9=Print
This command key can be used to print the list of seal group assignment.

2.12.5.1 Command key F6 - Change selected data mirror group



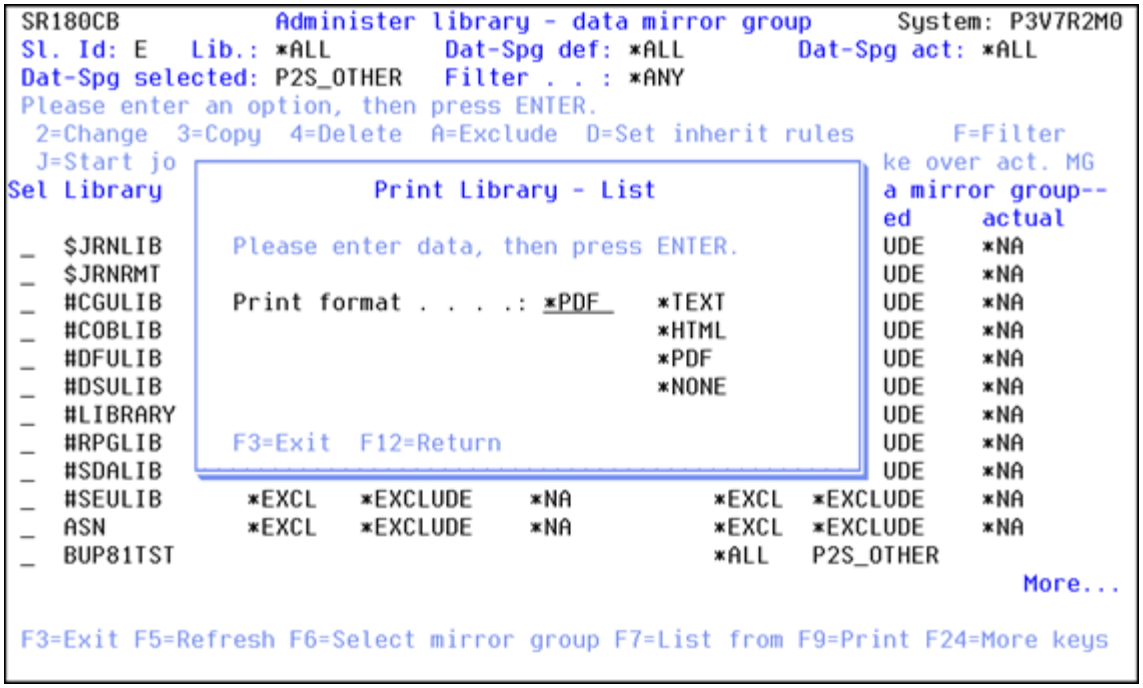
A data mirror group for further processing can be selected.

2.12.5.2 Command key F7 - Library - List from..



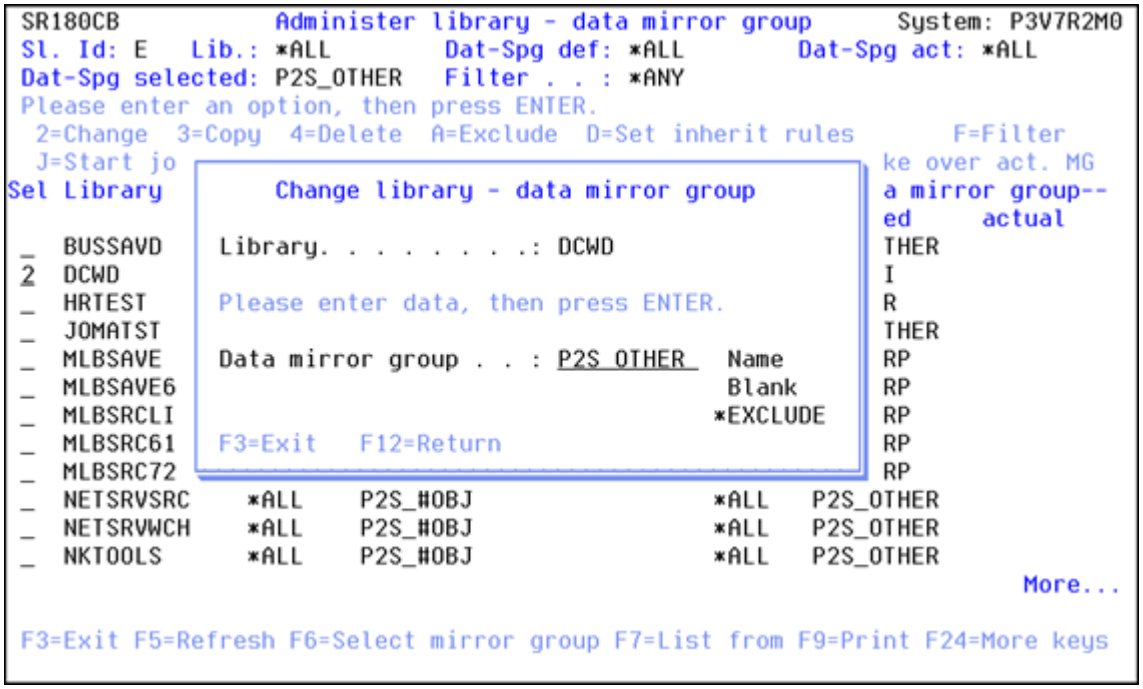
One of these input can be set up in the list of libraries

2.12.5.3 Command key F9 - Library - Print list



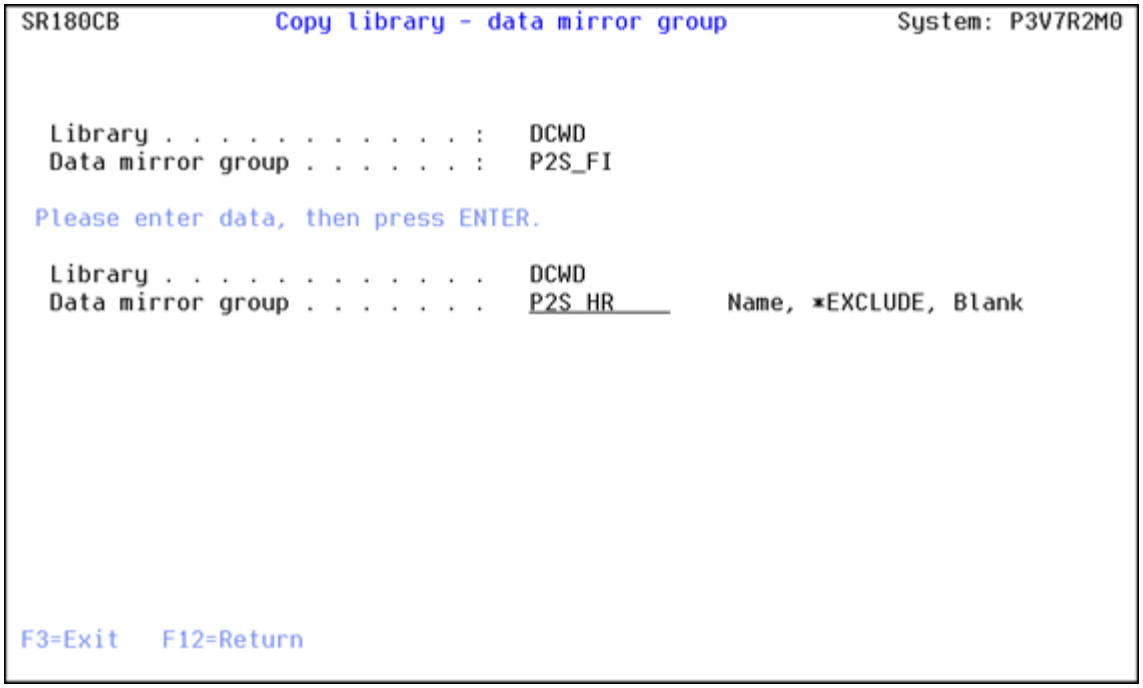
The list will be printed in the selected print format.

2.12.5.4 Selection 2 - Change data mirror group



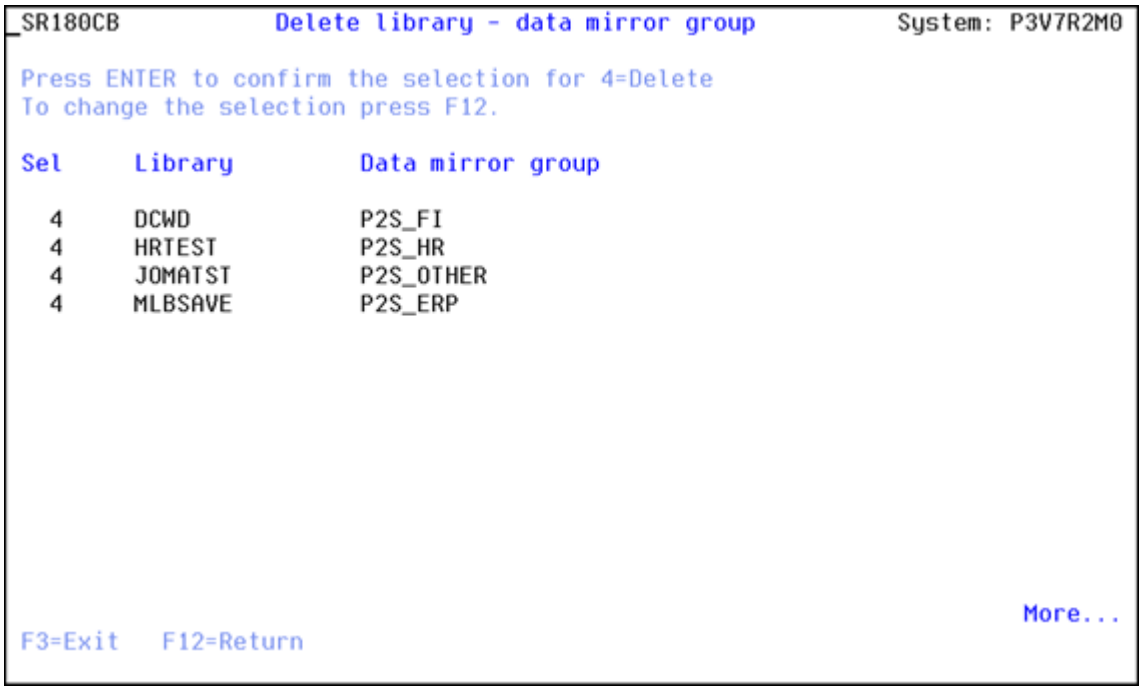
The assignment of the library to a data mirror group is changed. Subsequently, the journaling should be checked with selection "J".

2.12.5.5 Selection 3 - Copy data mirror group



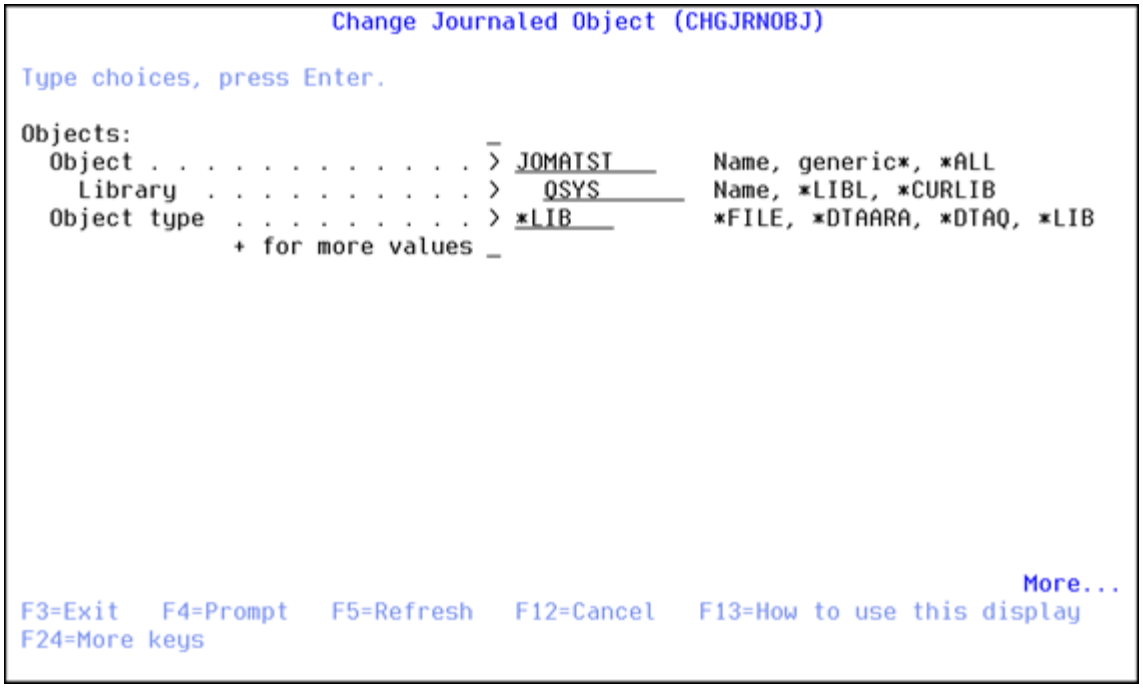
The library can be added to another data mirror group.

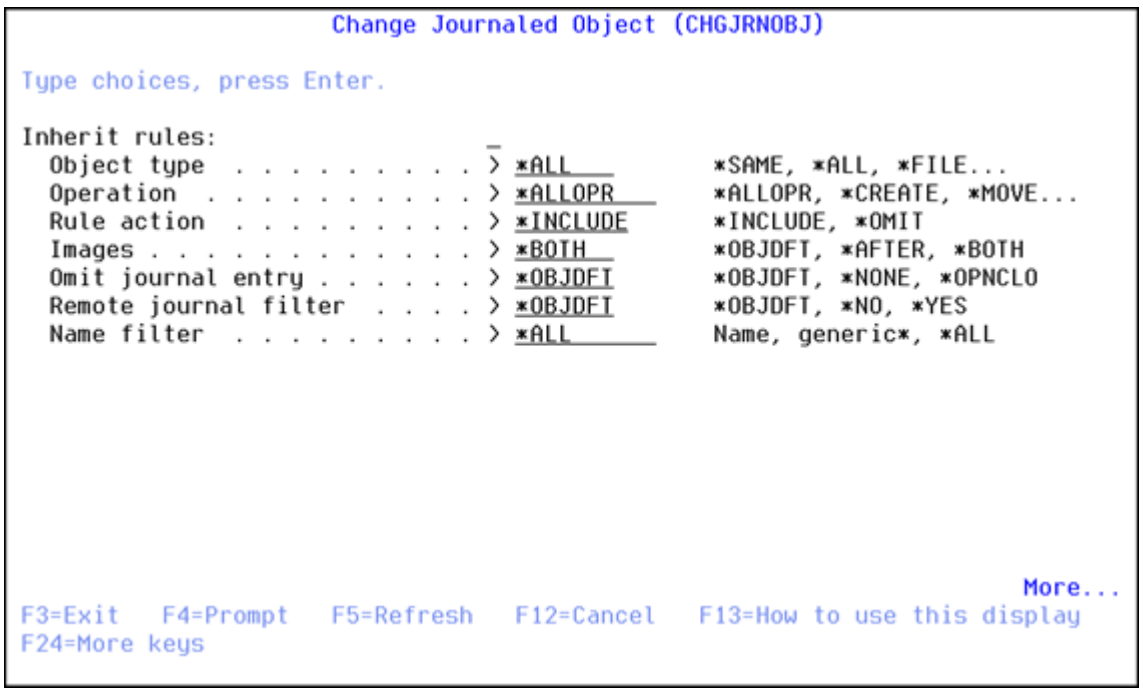
2.12.5.6 Selection 4 - Delete data mirror group

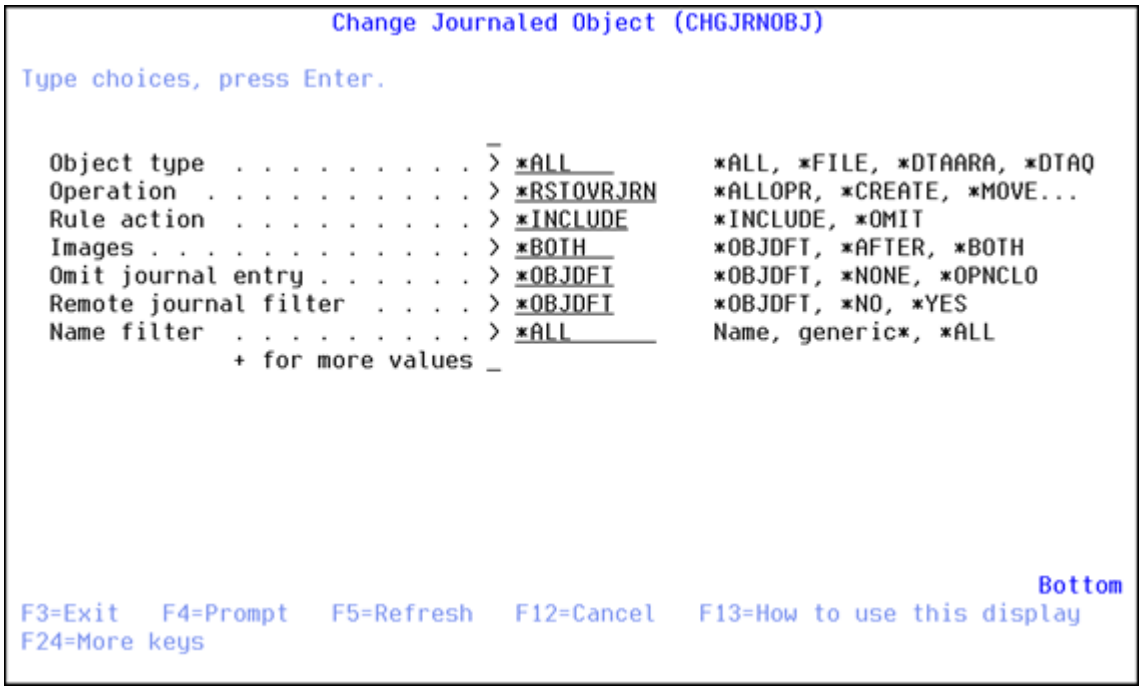


One or more mirror group assignments can be deleted via selection 4 in the management list of libraries.
After confirming with the Enter key, the mirror group assignments are deleted

2.12.5.7 Selection D - Set inherit rules

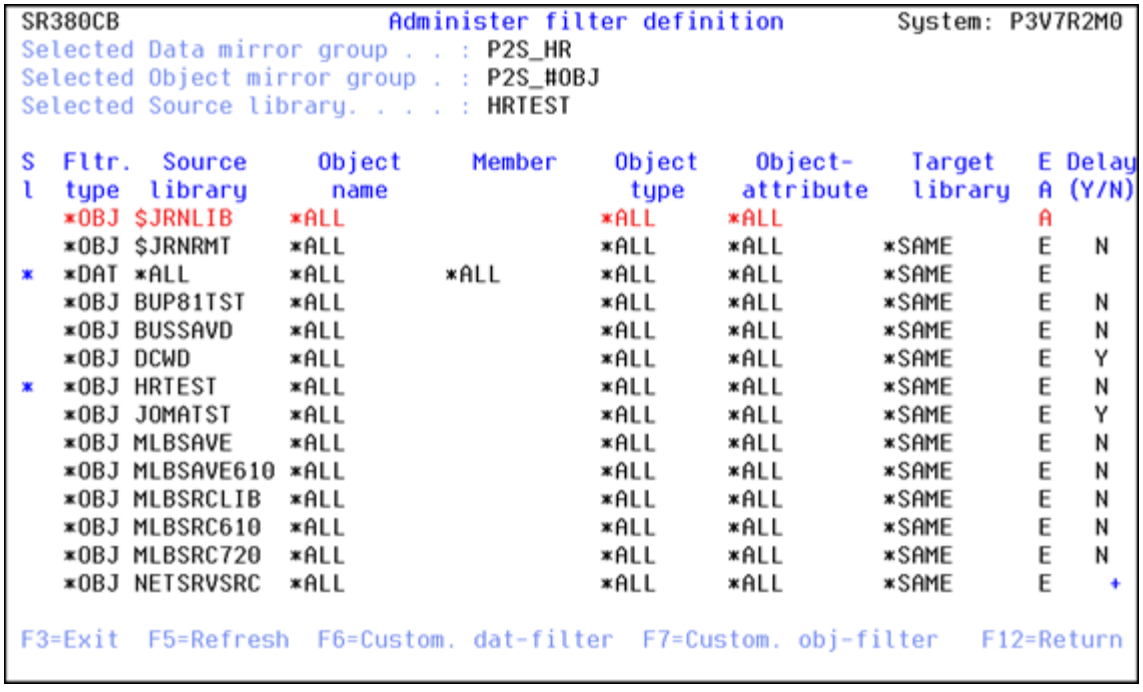






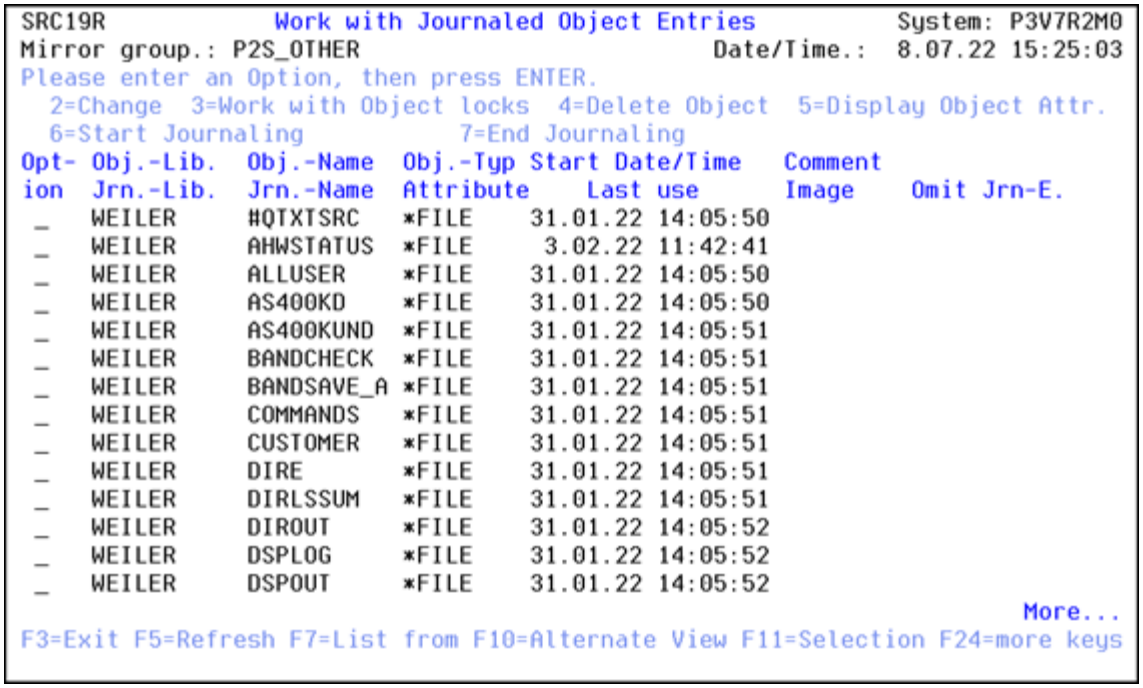
By selecting D in the libraries management list, the libraries can be journalized and the transfer rule can be set or changed.

2.12.5.8 Selection F - Administer filter definition



Command key 6 can be used to adjust the data filter of the mirror group

2.12.5.9 Selection J - Edit object journaling



Here you can change, start and stop the journaling of the objects in the previously selected library.

The following options are available in **Edit object journaling:**

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

Selection 2 - Change
This selection option can be used to change the journal of the selected object.

Selection 3 - Display object locks
This selection option displays the object locks of the respective object.

Selection 4 - Delete object
This selection option deletes the object from the library.

Selection 5 - Display object attributes
With this selection option you can display the attributes of the object.

Selection 6 - Start journaling
This option allows you to start journalizing the object with the journal of the selected mirror group.

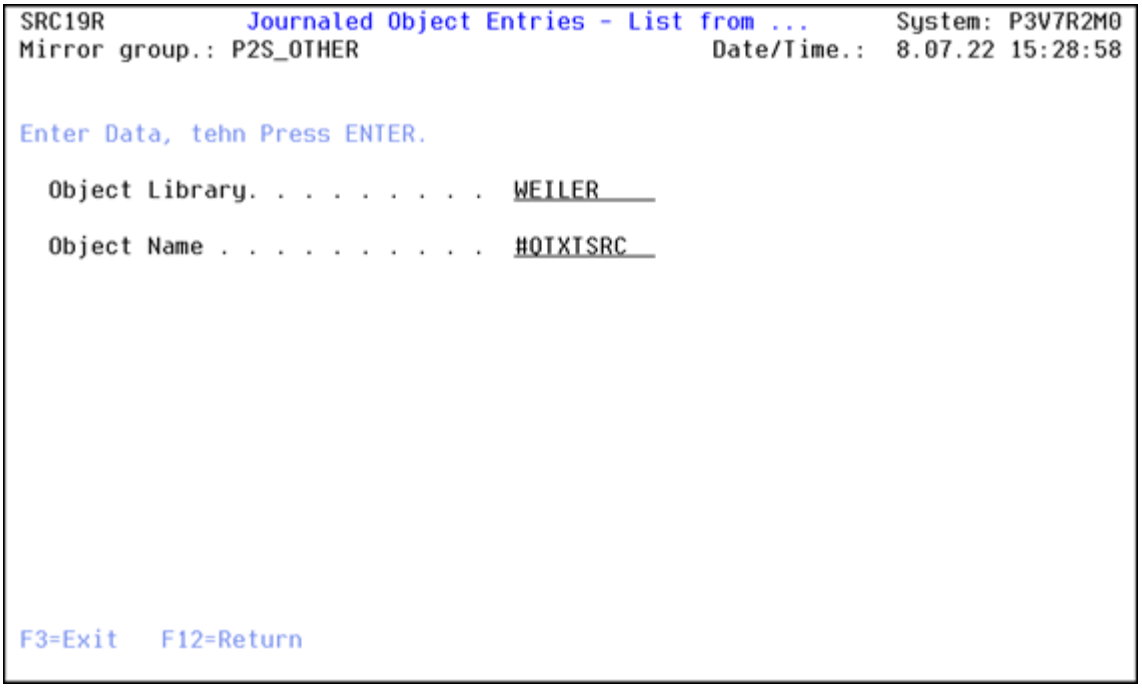
Selection 7 - Exit journaling
This option allows you to stop journalizing the object.

The following command keys are valid on the current mask:

F7=List from
This command key can be used to set up in the list of libraries.

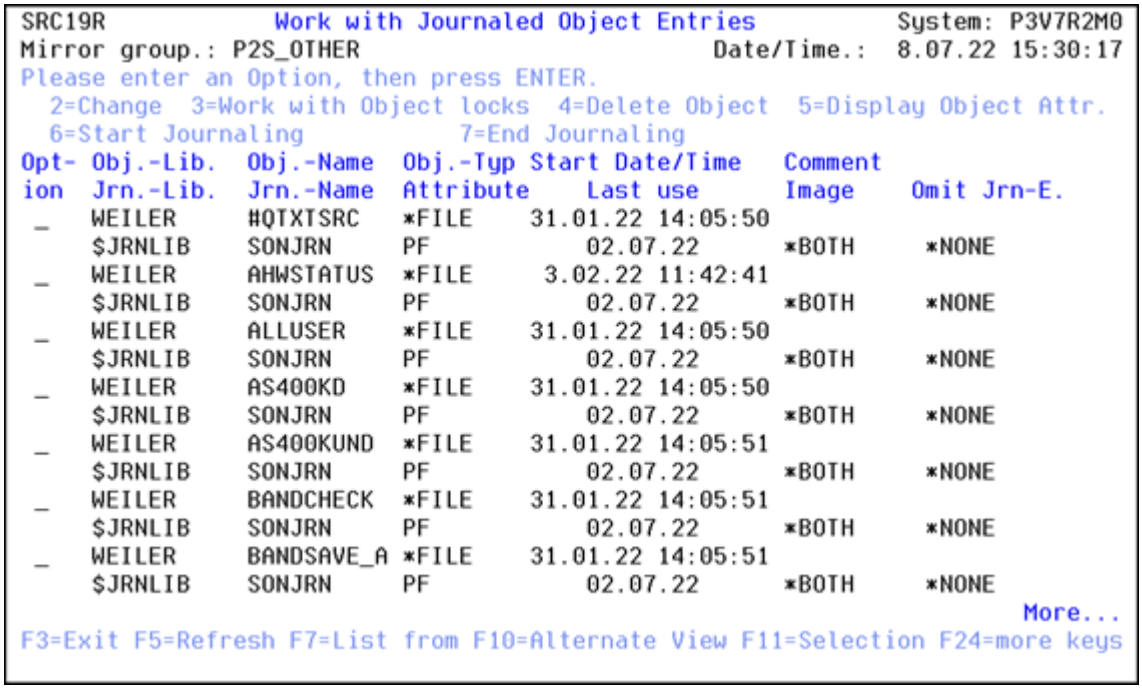
F10=More data
This command button can be used to display more detailed information about the journalized objects.

2.12.5.9.1 Command key F7 - List from..



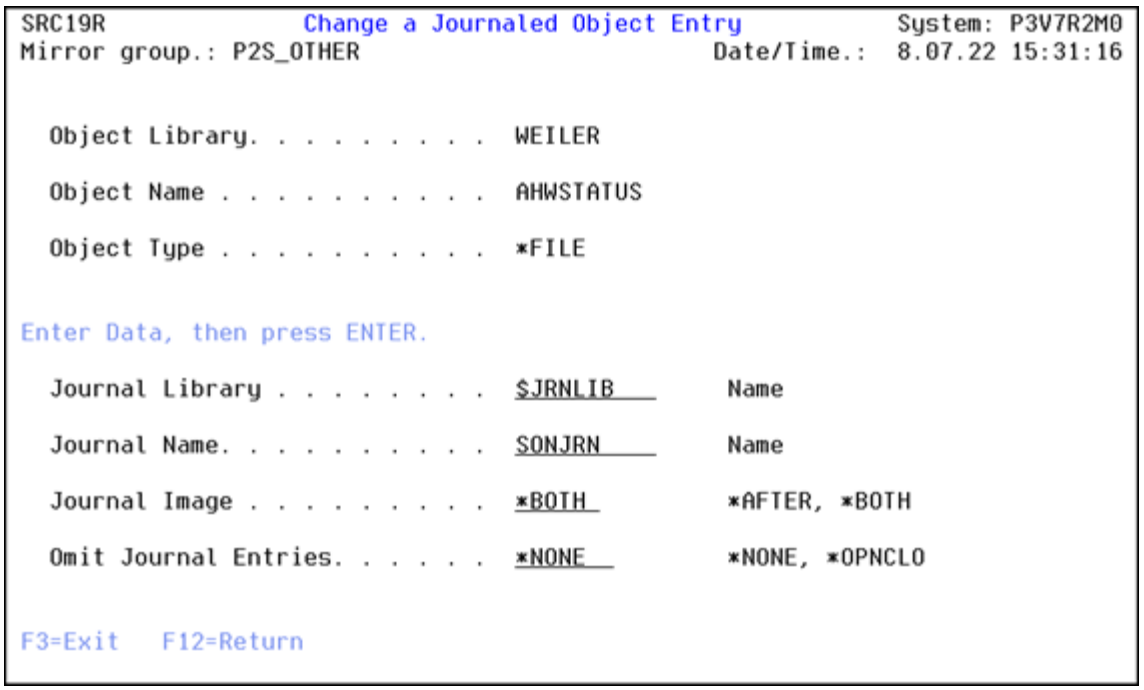
One of these entries can be placed in the list of objects within the library

2.12.5.9.2 Command key F10 - More data



This command button can be used to display more detailed information about the journalized objects.

2.12.5.9.3 Selection 2 – Change a journaled object entry



This selection allows to change the journalization of the selected object to the journal of the mirror group.

The following input fields are available to the user:

Journal Library
The name of the journal's library is specified here.

Journal name
Name of the journal through which the object is to be journalized.

Journal image
The journal image can be defined with this parameter. Here it can be selected whether the journaling is recorded before and/or after.

***AFTER**
Only one entry is written to the journal after the file change with the new status. The default value is *AFTER.

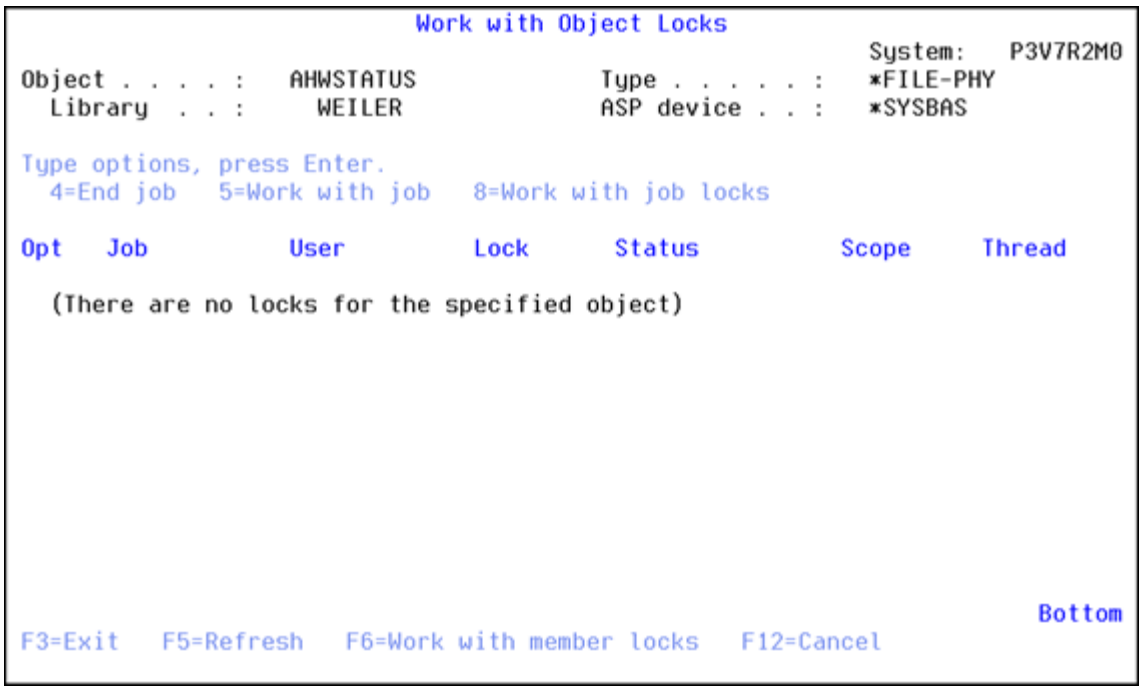
***BOTH**
When a file is changed, the state before and after the change is recorded in the journal.

Journal entries to be omitted
Journal entries that are not to be recorded can be selected here.

***NONE**
All actions are recorded by the journal. The default value is *NONE.

***OPNCLO**
Open and close file is not recorded in the journal.

2.12.5.9.4 Selection 3 - Display object locks



Calls a display that shows all jobs that lock the selected object. These jobs can then be displayed, terminated, or additional job locks can be displayed.

Selection

In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

Selection 4 - Finish job

With this selection option, the job that maintains the selected lock can be terminated to remove the lock.

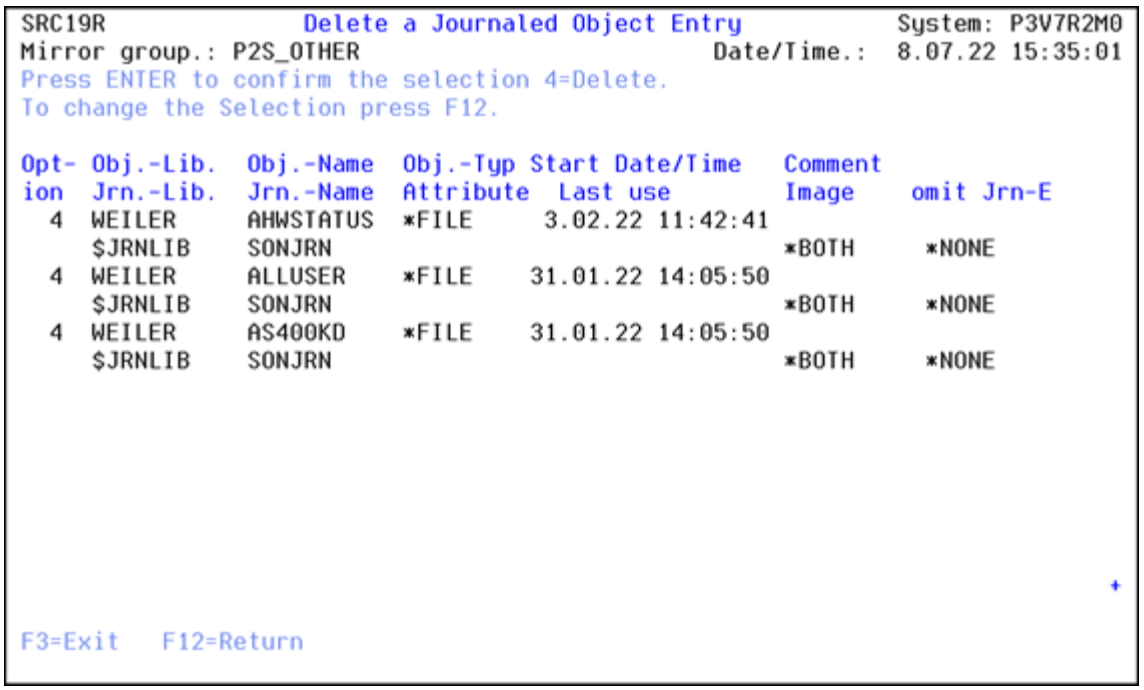
Selection 5 - Work with Job

This selection option calls the system command "WRKJOB" and displays the corresponding menu.

Selection 8 - Working with job locks

This selection option lists the additional locks of the selected job.

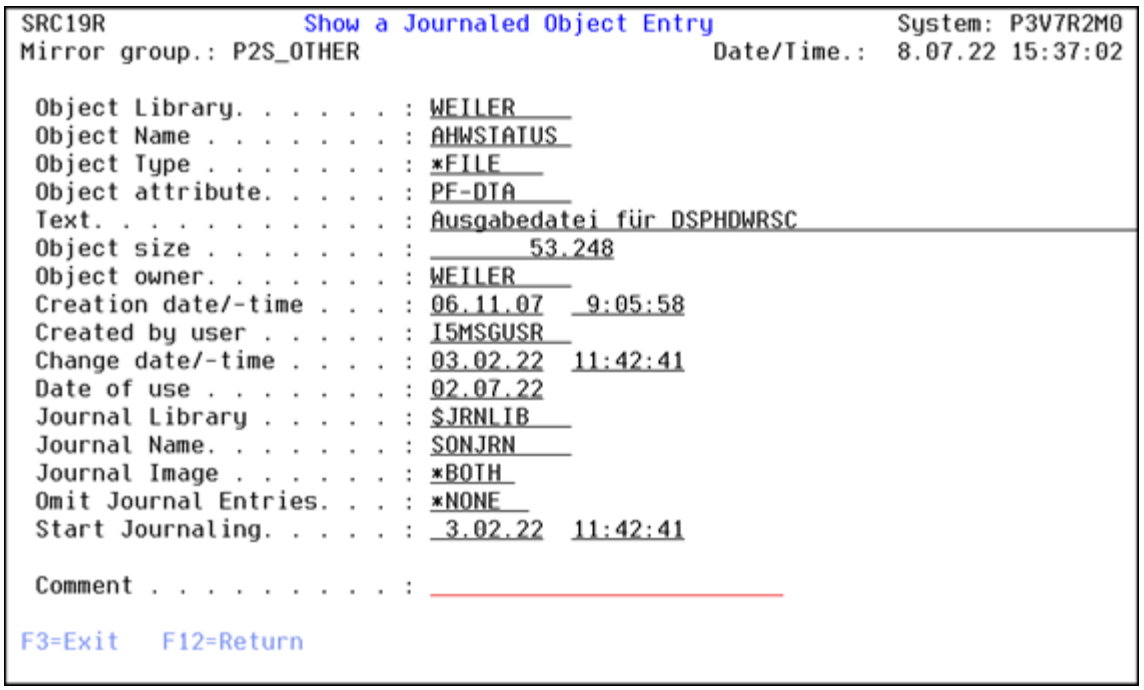
2.12.5.9.5 Selection 4 - Delete a journaled object entry



The selected object is irrevocably deleted from the machine; this must be confirmed beforehand by pressing the Enter key. The delete operation can be aborted with the F12 function key.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

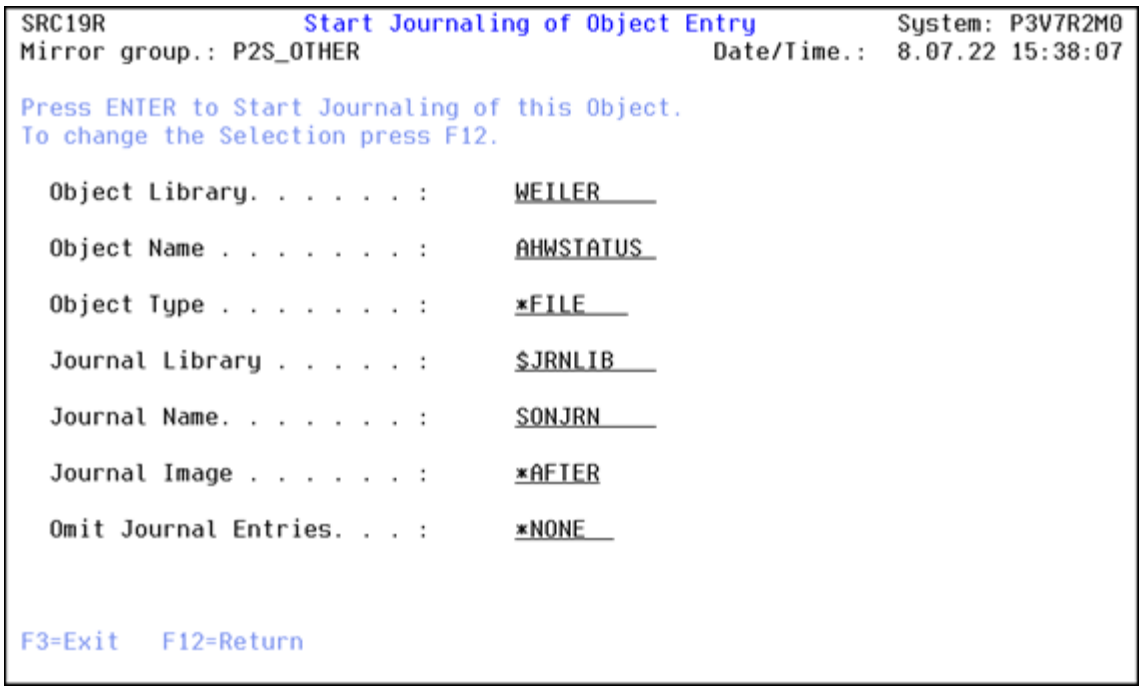
2.12.5.9.6 Selection 5 - Display object attributes



With the selection "Show object attributes" additional details about the selected object can be displayed. Among others, the creation date, the text, the owner and journaling information.

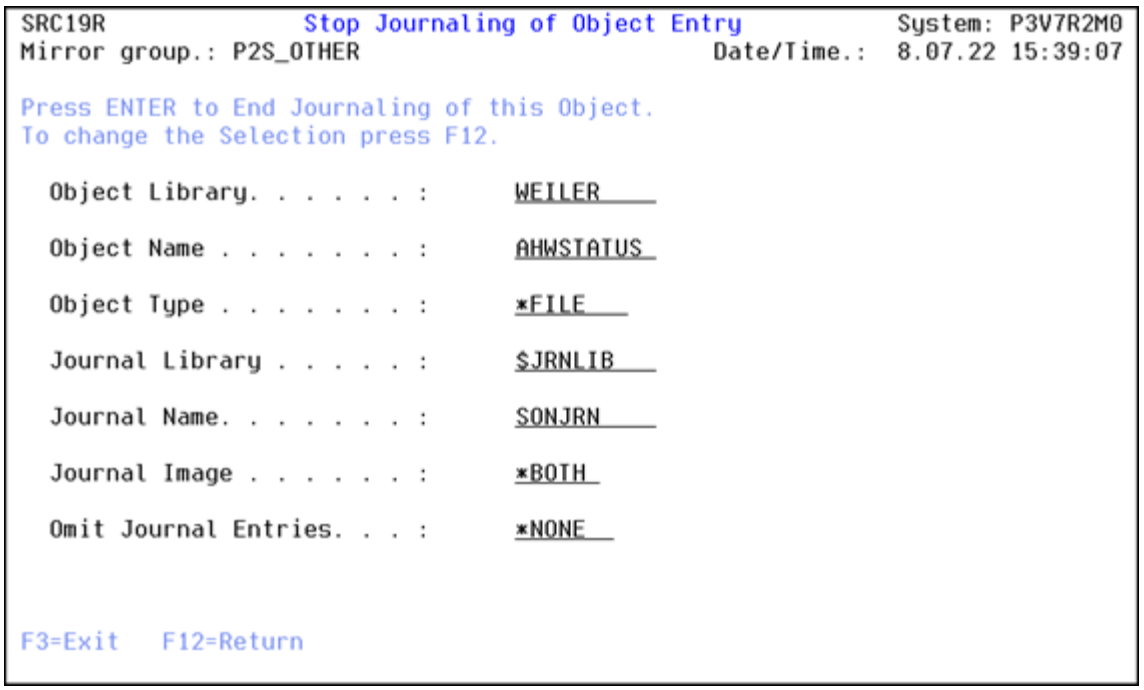
The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

2.12.5.9.7 Selection 6 - Start journaling



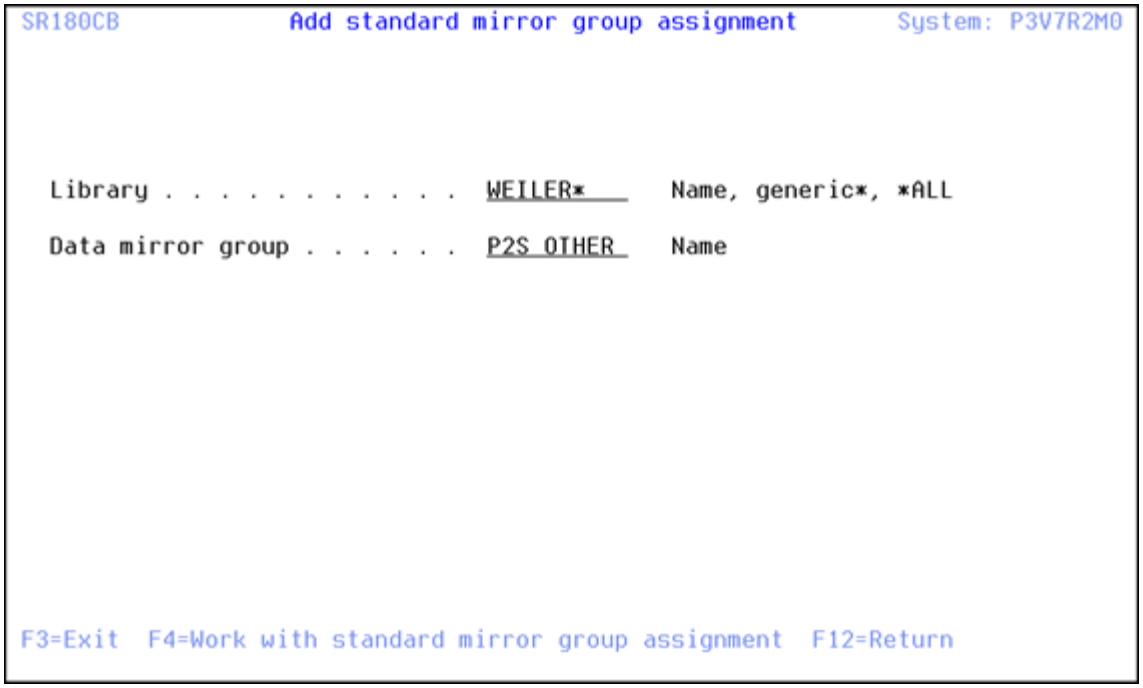
This selection starts the journalization of the selected object with the journal of the previously selected mirror group. This is only possible if the object is marked as "not journalized" and the object is not locked.

2.12.5.9.8 Selection 7 - End journaling



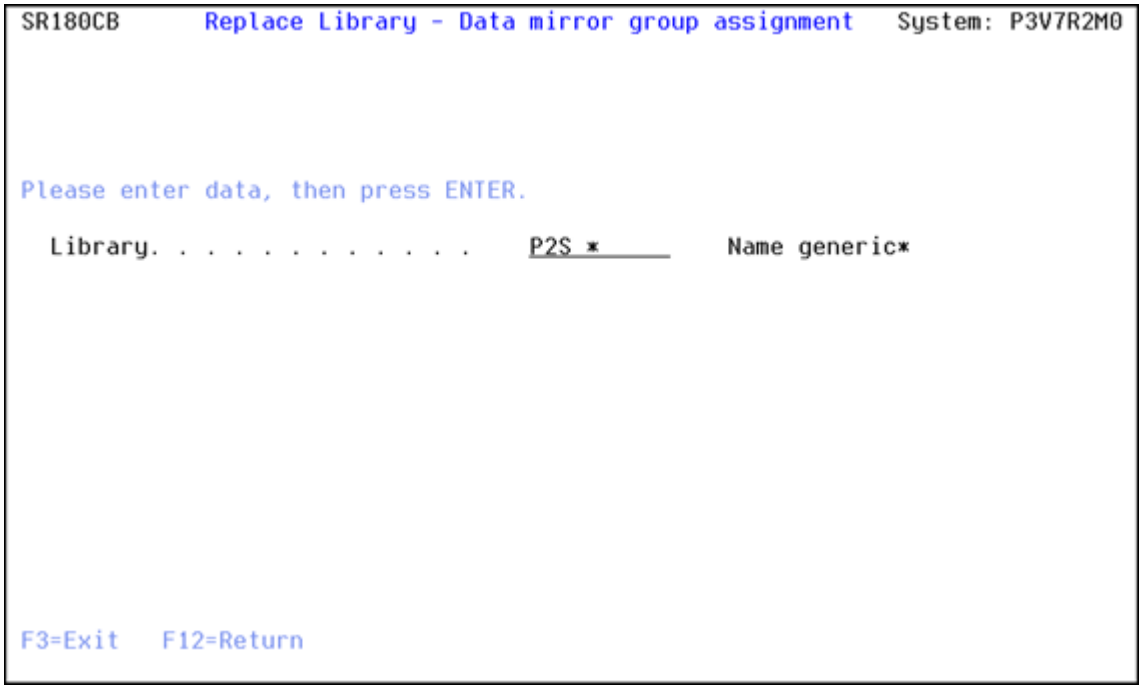
This selection ends the journaling of the selected object, so that it is displayed "not journaled". After that you can assign the object to another journal.

2.12.5.10 Selection S - Add standard data mirror group assignment



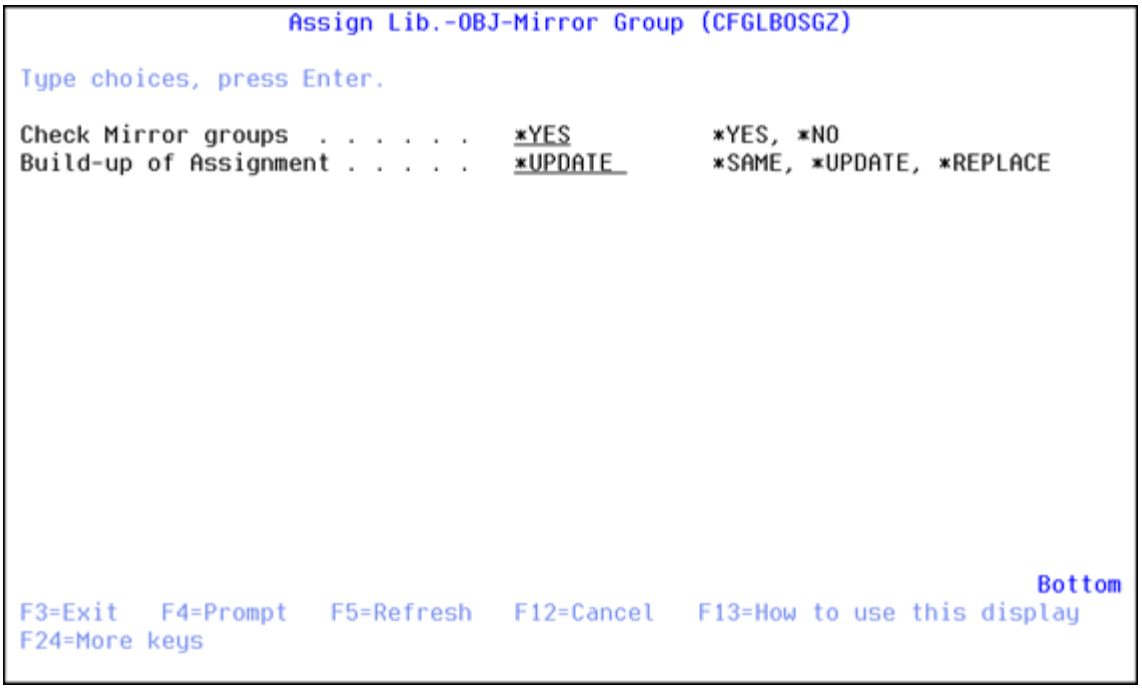
This selection can be captured the default assignment of a new library to a mirror group.

2.12.5.11 Selection R - Replace data mirror group



Excluded libraries can be generically excluded with this selection.

2.12.6 Menu item 6 - Manage assignment of libraries to object mirror groups



This menu item allows the user to assign the libraries to be mirrored to the mirror groups.

For the command parameters, the user has the following input options:

Check mirror groups
Specify whether to check for existing mirror groups.

Valid values for the parameter **Check mirror groups** are:

***YES=Yes**
The inputs are checked for existing mirror groups, BUS4I must exist as primary system. The file SRC11P in library SRCSYS must exist, otherwise this flag is automatically set to N. *YES=Yes is the default value.

***NO=No**
The inputs are not checked for existing mirror groups.

Assignment structure
Indication whether the existing assignments remain.

Valid values for the parameter **Structure of assignment** are:

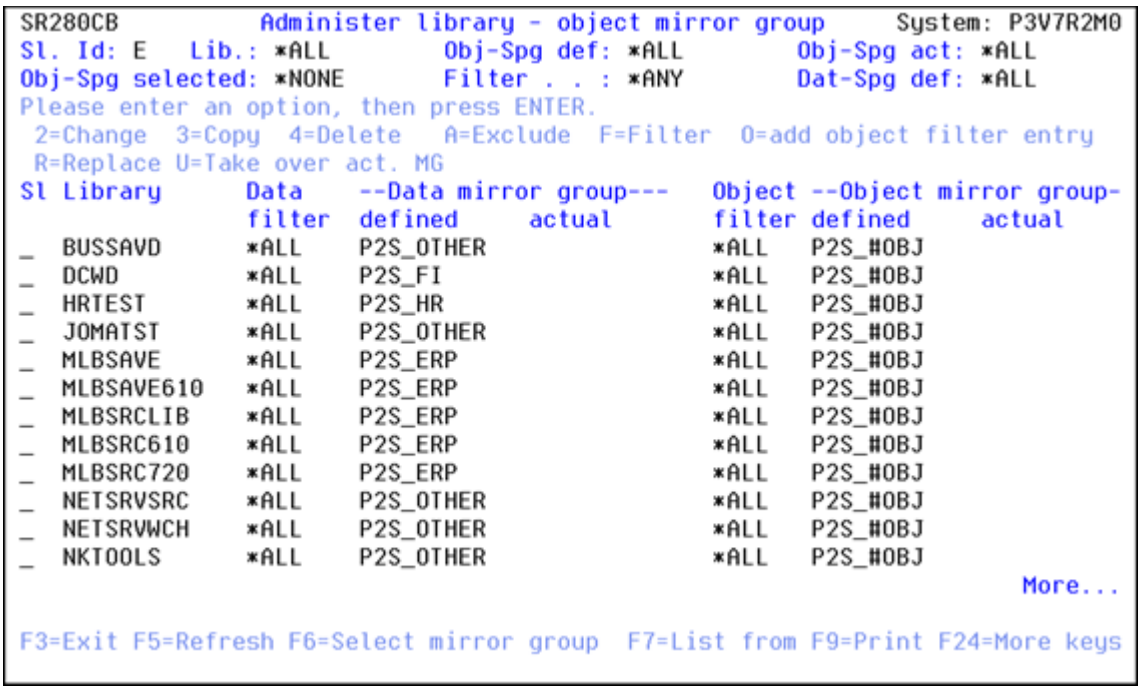
***UPDATE**
Libraries existing on the system are determined anew, the already registered allocations remain. *UPDATE is the default value.

***SAME**
Existing libraries on the system are not redetermined; the assignments already recorded remain.

***REPLACE**

Libraries existing on the system are redetermined, and the assignments already recorded are deleted.

The following mask is then displayed:



The following input keys are available to the user on this screen:

Selection 2 - Change
The data mirror group assignment of the library is changed. Subsequently, the journaling should be checked with selection "J".

Selection 3 - Copy
The library can be added to another data mirror group.

Selection 4 - Delete
The mirror group assignment can be deleted.

Selection A - Exclude
The library can be marked as an exclusion.

Selection D - Set transfer rules
The library is journalized and the transfer rule is set or changed.

Selection O - Add object filter entry
The object filter of the mirror group can be managed.

Selection R - Replace
Excluded libraries can be generically excluded with this selection.

Selection U - Take over current mirror group
When printing the mirror group assignment, the column "Current mirror group" is filled. With this selection this current mirror group can be taken over.

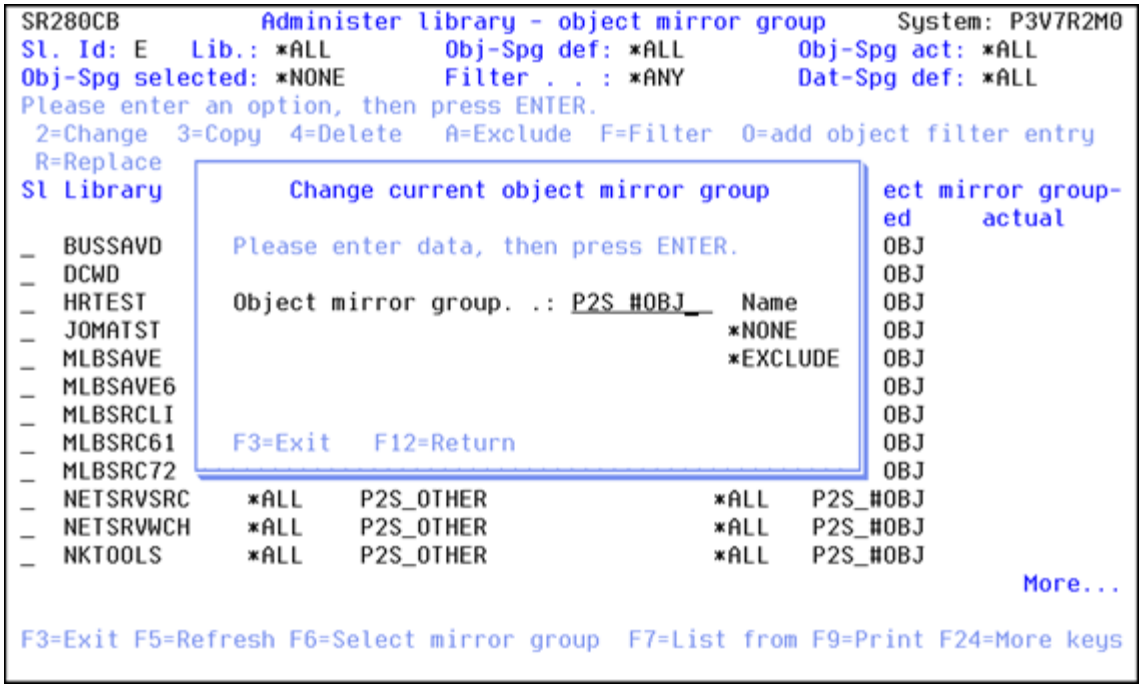
The following command keys are valid on the current mask:

F6=Change selected object mirror group
With this command key a data mirror group can be selected for further processing.

F7=List from
This command key can be used to set up in the list of libraries.

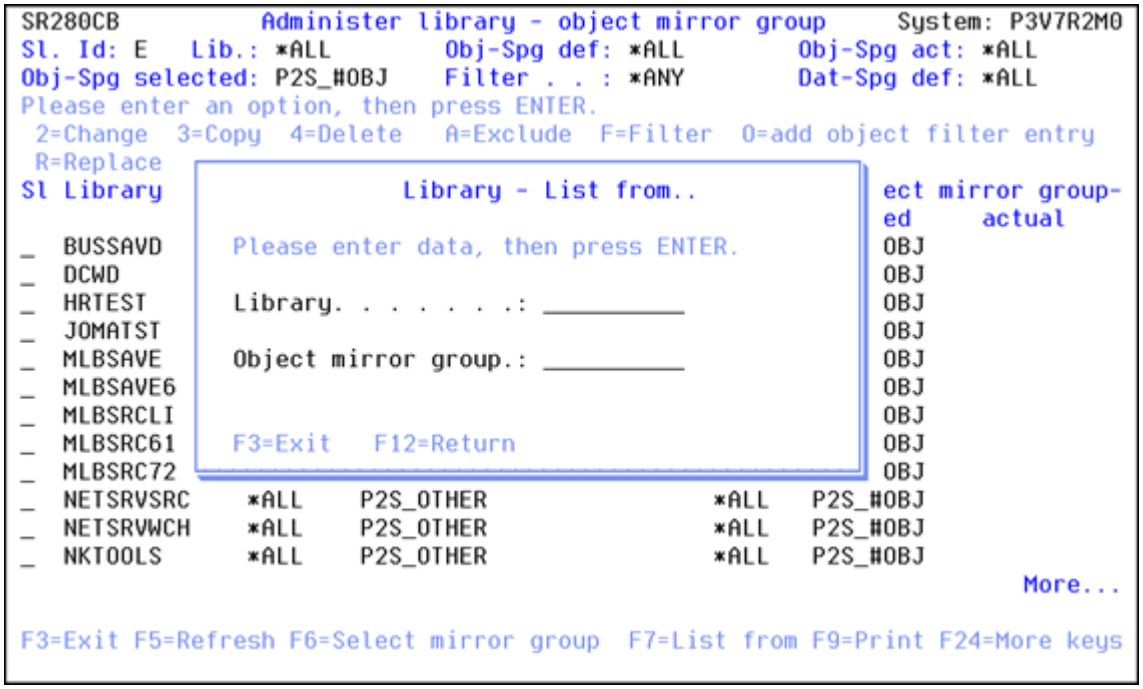
F9=Print
This command key can be used to print the list of seal group assignment.

2.12.6.1 Command key F6 - Change selected object mirror group



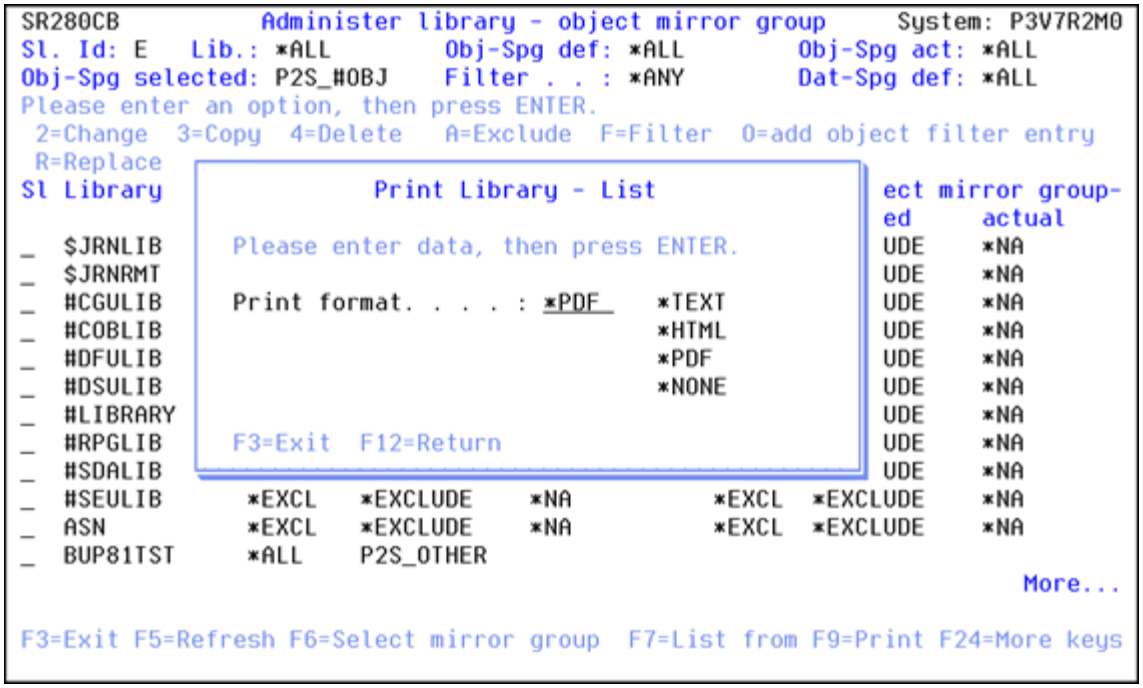
An object mirror group for further processing can be selected.

2.12.6.2 Command key F7 - Library - List from..



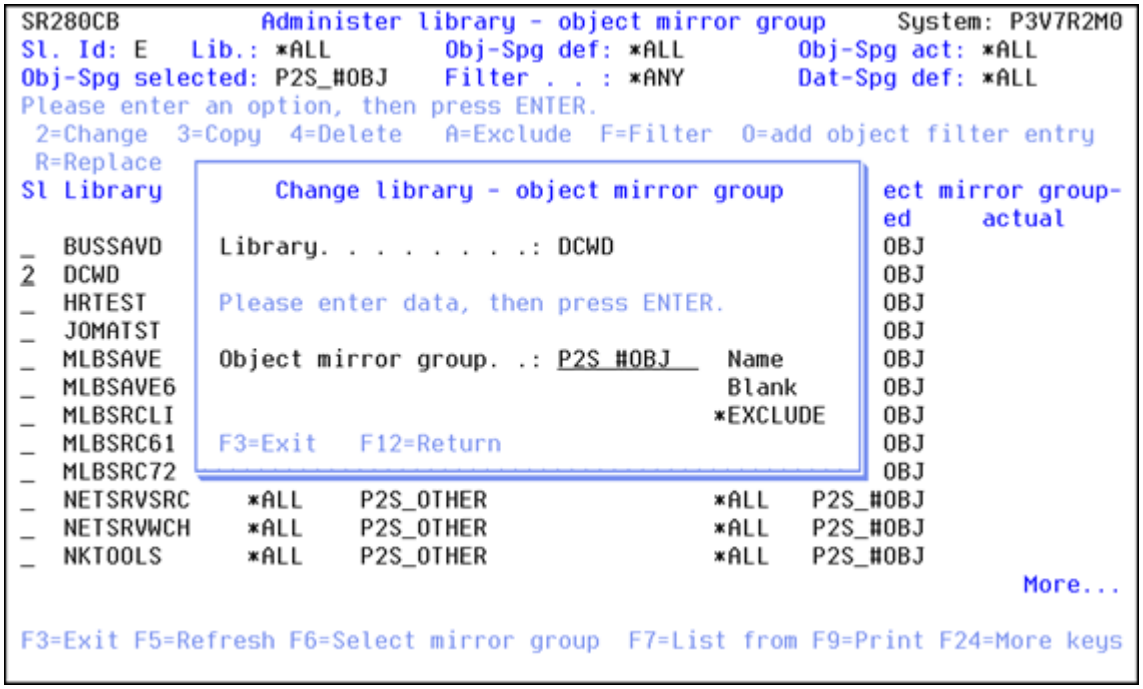
One of these input can be set up in the list of libraries

2.12.6.3 Command key F9 - Print library list



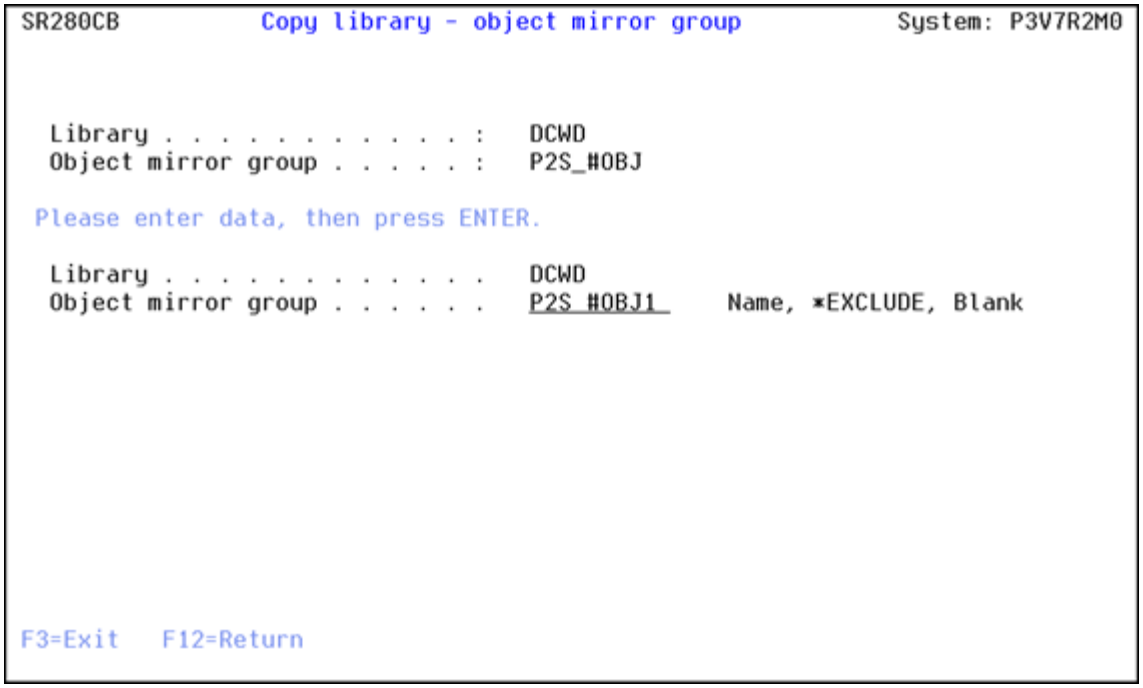
The list will be printed in the selected print format.

2.12.6.4 Selection 2 - Change object mirror group



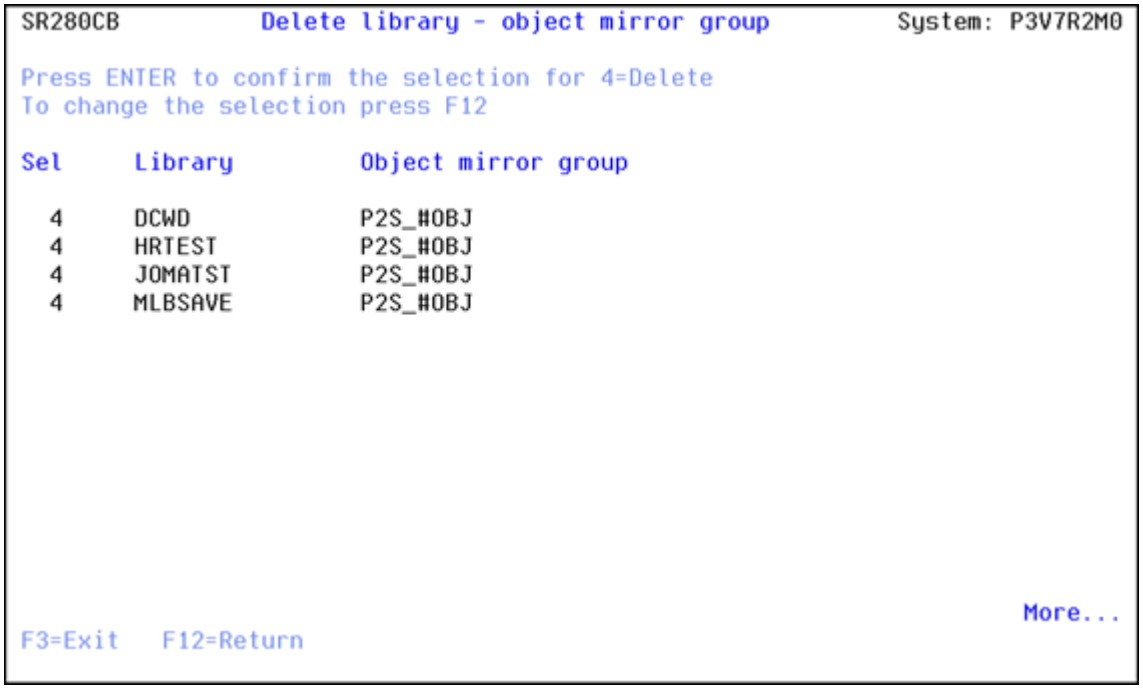
The assignment of the library to an object mirror group is changed.

2.12.6.5 Selection 3 - Copy object mirror group



The library can be added to another data mirror group.

2.12.6.6 Selection 4 - Delete object mirror group assignment



One or more mirror group assignments can be deleted via selection 4 in the management list of libraries.

After confirming with the Enter key, the mirror group assignments are deleted

2.12.6.7 Selection F - Administer filter definition

```
SR380CB                  Administer filter definition          System: P3V7R2M0
Selected Data mirror group . . : P2S_FI
Selected Object mirror group . : P2S_#OBJ
Selected Source library. . . . : DCWD

S  Fltr.  Source     Object     Member     Object     Object-     Target     E Delay
l  type   library    name                  type       attribute   library    A (Y/N)
   *OBJ $JRNLIB    *ALL                   *ALL       *ALL                   A
   *OBJ $JRNRMT    *ALL                   *ALL       *ALL        *SAME      E   N
*  *DAT *ALL       *ALL       *ALL        *ALL       *ALL        *SAME      E
   *OBJ BUP81TST   *ALL                   *ALL       *ALL        *SAME      E   N
   *OBJ BUSSAVD    *ALL                   *ALL       *ALL        *SAME      E   N
*  *OBJ DCWD       *ALL                   *ALL       *ALL        *SAME      E   Y
   *OBJ HRTEST     *ALL                   *ALL       *ALL        *SAME      E   N
   *OBJ JOMATST    *ALL                   *ALL       *ALL        *SAME      E   Y
   *OBJ MLBSAVE    *ALL                   *ALL       *ALL        *SAME      E   N
   *OBJ MLBSAVE610 *ALL                   *ALL       *ALL        *SAME      E   N
   *OBJ MLBSRCLIB  *ALL                   *ALL       *ALL        *SAME      E   N
   *OBJ MLBSRC610  *ALL                   *ALL       *ALL        *SAME      E   N
   *OBJ MLBSRC720  *ALL                   *ALL       *ALL        *SAME      E   N
   *OBJ NETSRVSRC  *ALL                   *ALL       *ALL        *SAME      E    +

F3=Exit  F5=Refresh  F6=Custom. dat-filter  F7=Custom. obj-filter  F12=Return
```

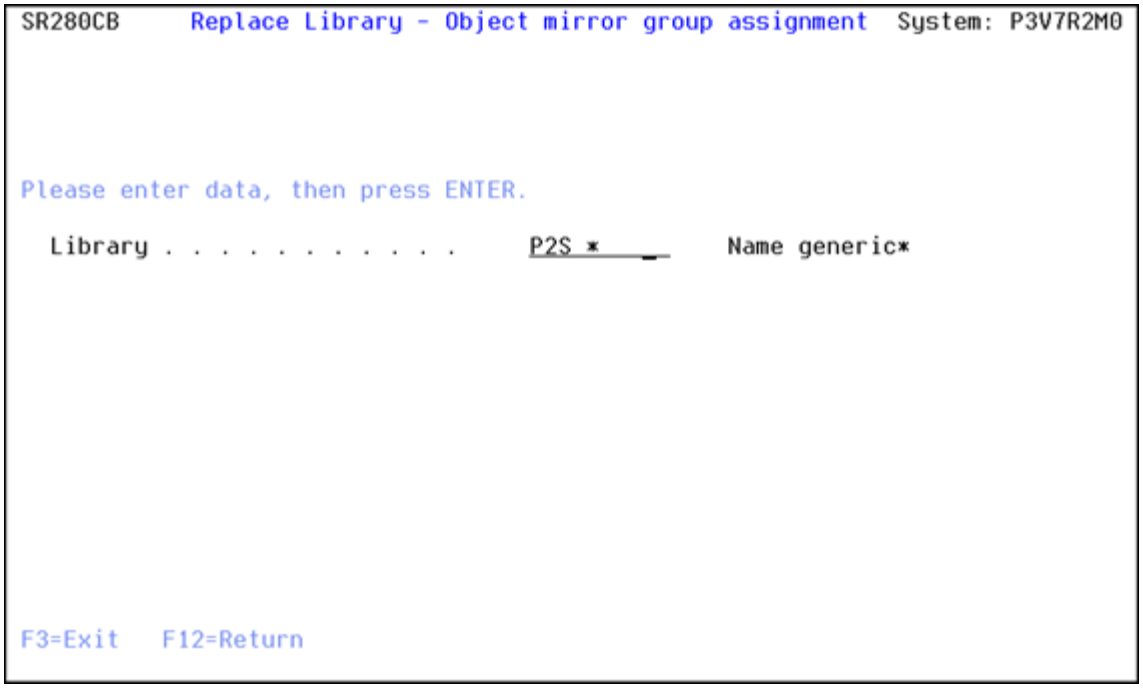
Command key 7 can be used to adjust the object filter of the mirror group

2.12.6.8 Selection O - Add object filter entry

```
                    ADD object filter entry (ADDOFLTE)

Type choices, press Enter.

Mirror Group . . . . . > P2S_#OBJ      Name, *CURRENT
Object (Primary system)  . . . > *ALL  Name, generisch*, *ALL
  Library  . . . . . >   DCWD          Name, generisch*, *ALL
Object Type  . . . . . > *ALL          Name, *ALL, *ALTTBL, *AUTL...
Object Attribute . . . . . > *ALL      Name, *ALL
Library (Secondary System) . . > *SAME Name, *SAME
Include-/Exclude-Indicator . . > *INCLUDE  *INCLUDE, *EXCLUDE

                                                                    Bottom
F3=Exit   F4=Prompt   F5=Refresh   F12=Cancel   F13=How to use this display
F24=More keys
```

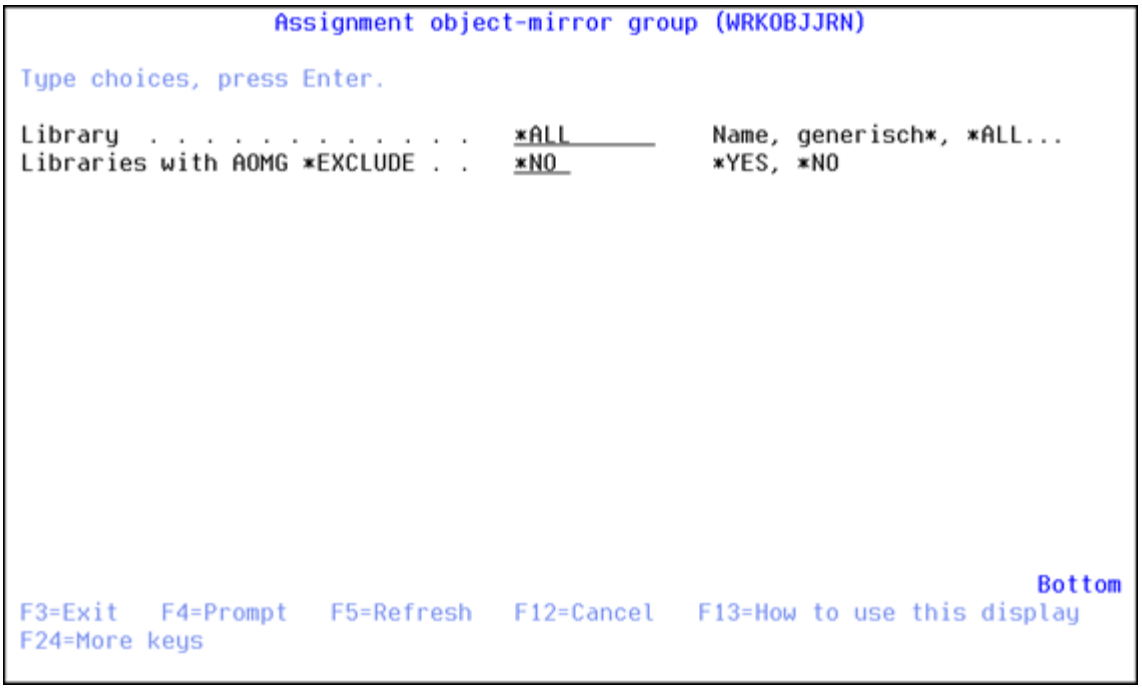
With this selection, the default object filter entries can be easily added for all included libraries. By selecting the included libraries with command key 11 and then processing them with command key 18 and 19.

2.12.6.9 Selection R - Replace object mirror group



Excluded libraries can be generically excluded with this selection.

2.12.7 Menu item 7 - Display assignment of objects to mirror groups



This menu item allows the user to display which mirror group is used to mirror an object.

For the command parameters, the user has the following input options:

Library
Name of the library for which the called command is to be executed.

Valid values for the **Library** parameter are:

Name
Name of the library from which the mirror group assignment is displayed.

generic*
Specify the generic name of the library for which the mirror group mapping should be displayed. A generic name consists of one or more characters followed by an asterisk (*). All libraries are taken whose name has the same prefix as the generic name.

***ALLUSR**
The mirror group assignment of all user libraries is displayed.

***ALL**
The mirror group assignment of all libraries is displayed.

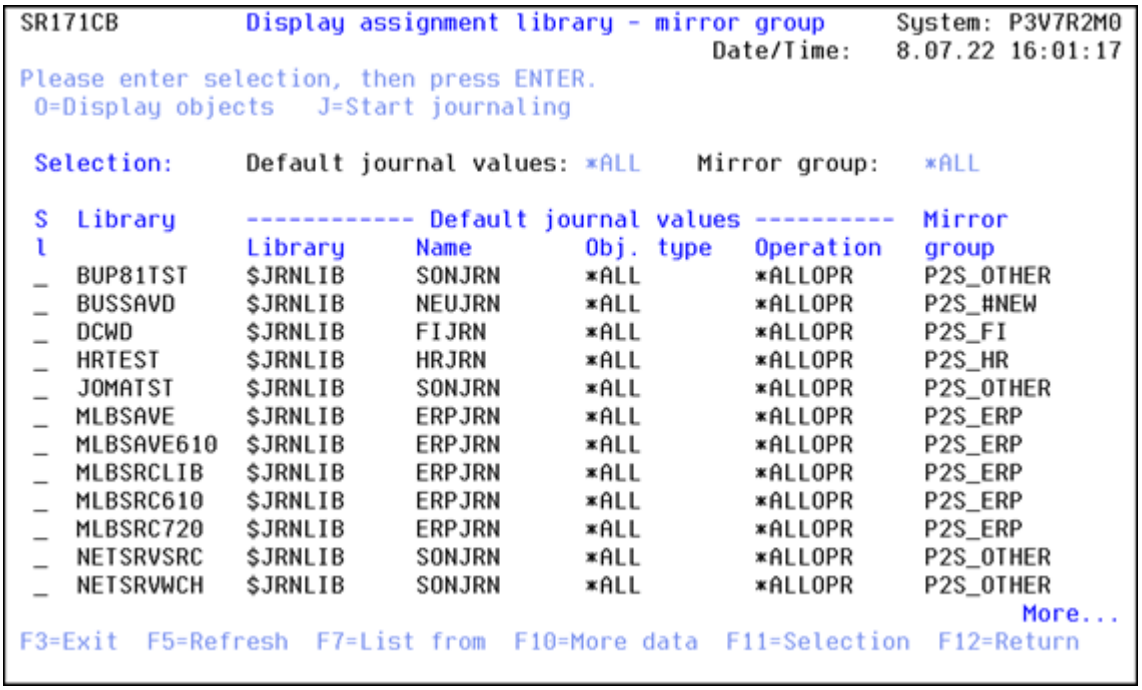
Libraries with SGZ *EXCLUDE
Specify whether libraries with the mirror group assignment *EXCLUDE should be displayed.

Valid values for the parameter **Libraries with SGZ *EXCLUDE** are:

***YES**
All selected libraries are displayed, including libraries marked as *EXCLUDE in the mirror group assignment.

***NO**
Only the selected libraries that are not marked with *EXCLUDE in the mirror group assignment are displayed. *NO is the default value.

The following mask is then displayed:



The following input keys are available to the user on this screen:

Selection O - Display objects
The objects of the selected library are displayed.

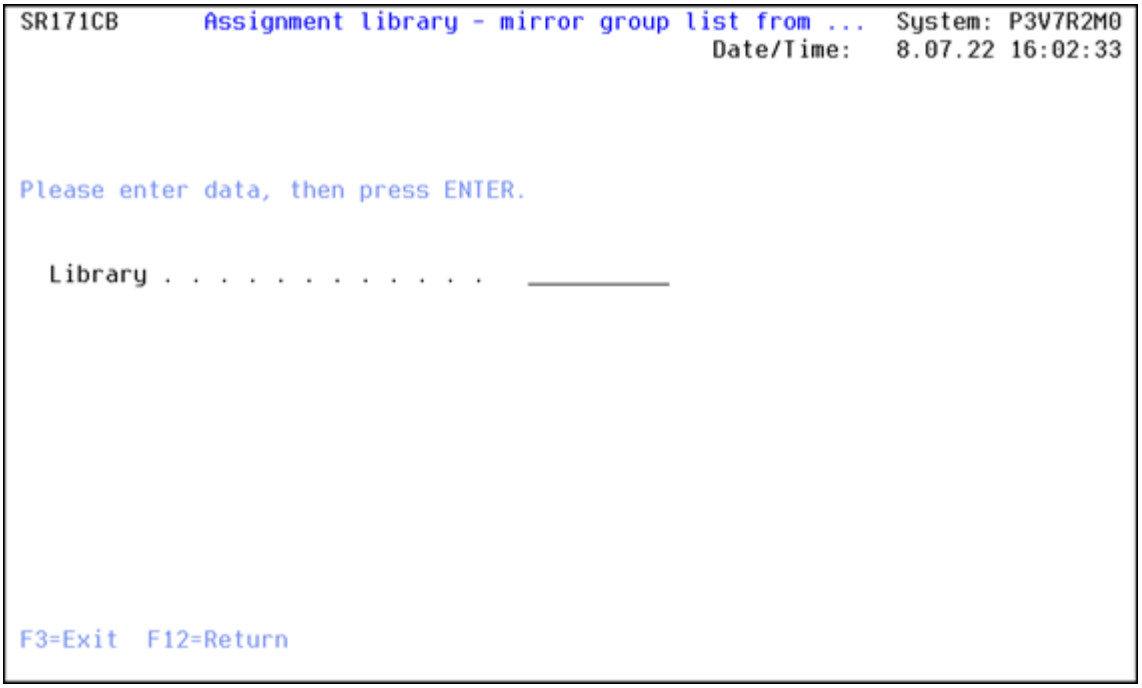
Selection J - Start journaling
The library journalizes and the transfer rule is set and all physical files, data queues and data areas are checked if and how they are journalized.

The following command keys are valid on the current mask:

F7=List from
This command key can be used to set up in the list of libraries.

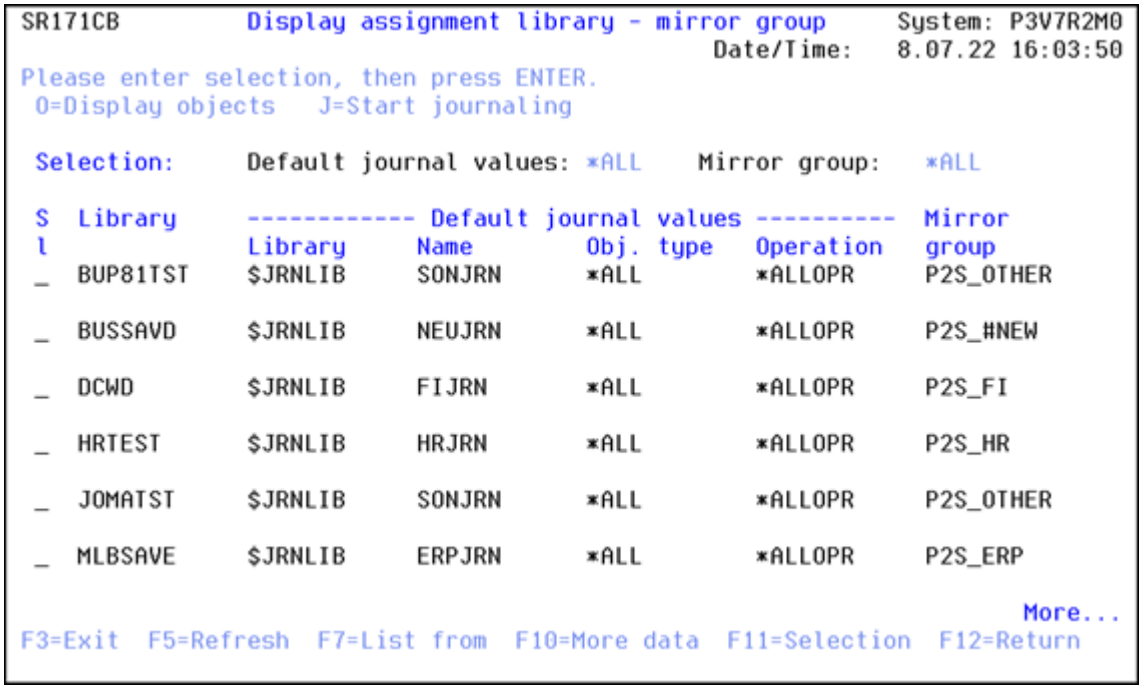
F10=More data
This command button can be used to display more detailed information about the journalized objects.

2.12.7.1 Command key F7 - List from..



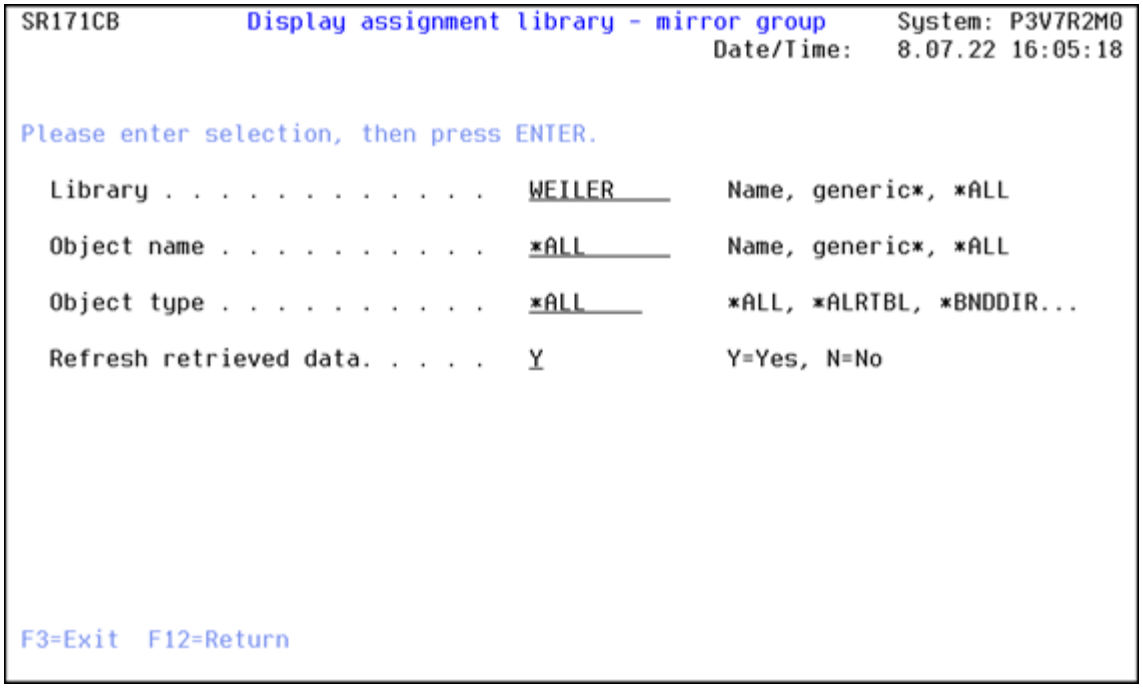
One of these inputs can be set up in the list of libraries.

2.12.7.2 Command key F10 - More data



This command button can be used to display more detailed information about the journalized objects.

2.12.7.3 Selection O - Display objects



Via the selection O the user has the possibility to display individual objects

For the command parameters, the user has the following input options:

Library
Name of the library for which the called command is to be executed.

Valid values for the **Library** parameter are:

Name
Name of the library from which the mirror group assignment is displayed.

generic*
Specify the generic name of the library for which the mirror group mapping should be displayed. A generic name consists of one or more characters followed by an asterisk (*). All libraries are taken whose name has the same prefix as the generic name.

***ALL**
The mirror group assignment of all libraries is displayed.

Object name
Name of the object, for displaying the mirror group information.

Valid values for the **Object name** parameter are:

Name
Name of the object from which the mirror group assignment is displayed.

generic*
Specify the generic name of the object for which the mirror group assignment is to be displayed. A generic name consists of one or more characters followed by an asterisk (*). All objects are taken whose name has the same prefix as the generic name.

***ALL**
The mirror group assignment of all libraries is displayed.

Object type
Type of object, for displaying the mirror group information.

Valid values for the **Object type** parameter are:

Name
Object type from which the mirror group assignment is displayed.

***ALL**
The mirror group assignment of all libraries is displayed.

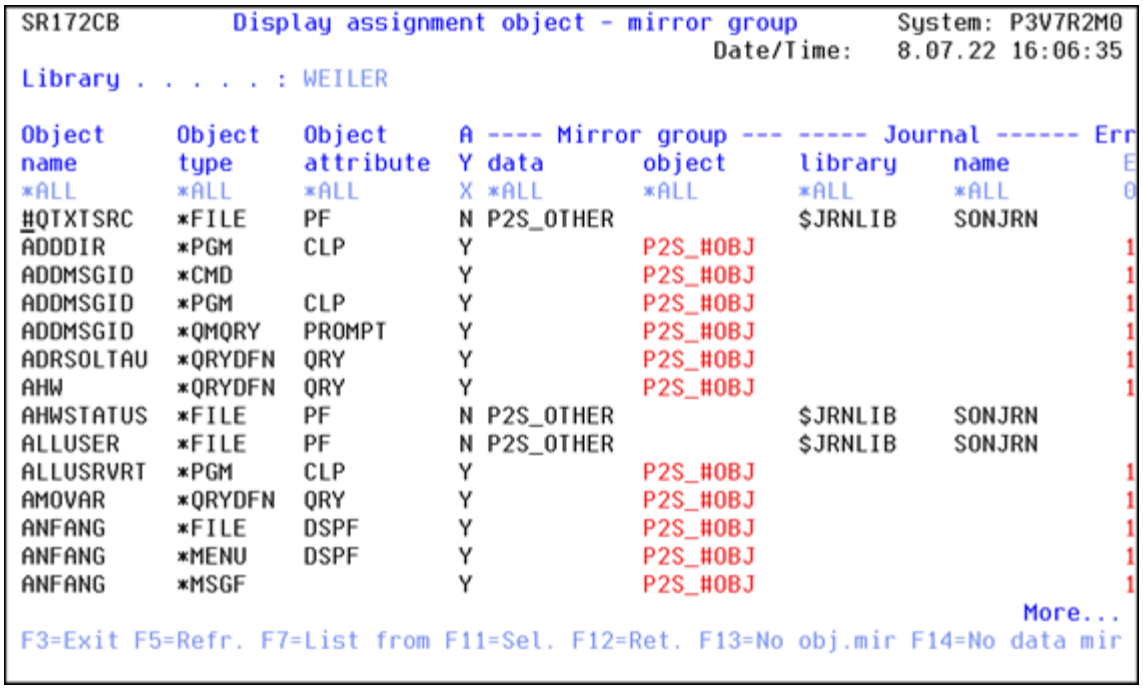
Reprocess data
Specifies whether the mirror group assignment of the objects in the library should be reprocessed.

Valid values for the parameter **Rebuild data** are:

Y=Yes
The objects selected in the mirror group assignment are redetermined.

N=No
The data in the mirror group assignment of the selected objects are not determined again. The previously determined data is displayed. "N" is the default value.

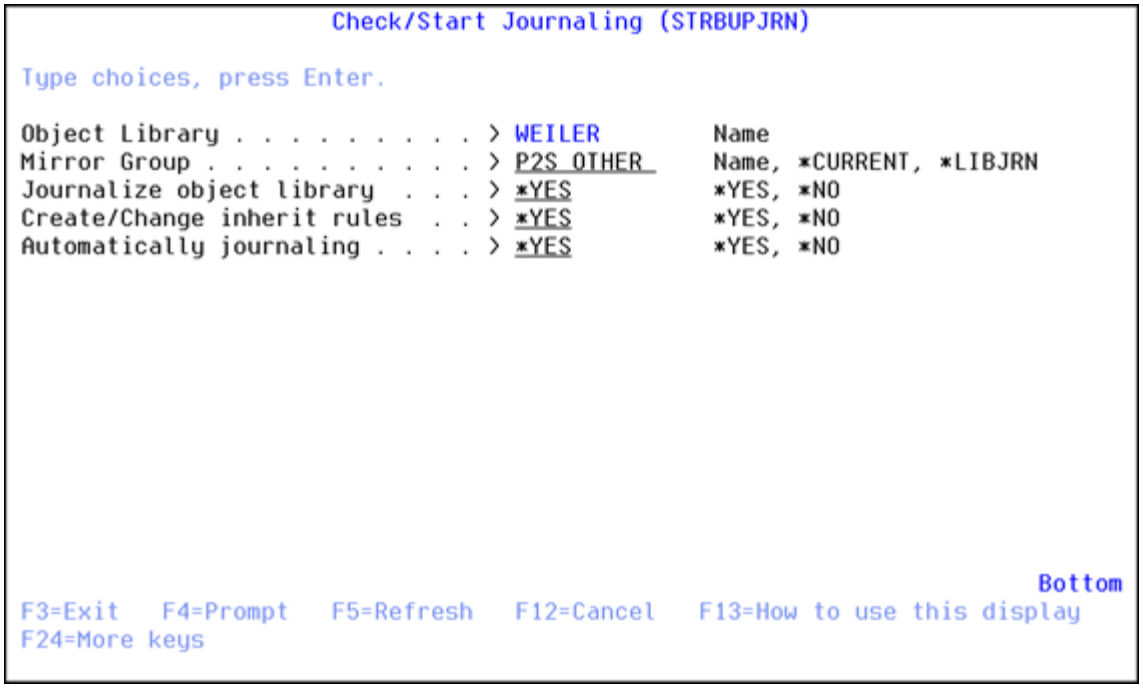
The following mask is then displayed:



```
SR172CB        Display assignment object - mirror group       System: P3V7R2M0
                                                    Date/Time:   8.07.22 16:06:35
Library . . . . . : WEILER

Object     Object    Object     A ---- Mirror group ---  ----- Journal ------ Err
name       type      attribute  Y data       object      library     name        E
*ALL       *ALL      *ALL       X *ALL       *ALL        *ALL        *ALL        0
#QTXTSRC   *FILE     PF         N P2S_OTHER              $JRNLIB     SONJRN
ADDDIR     *PGM      CLP        Y            P2S_HOBJ                           1
ADDMSGID   *CMD                 Y            P2S_HOBJ                           1
ADDMSGID   *PGM      CLP        Y            P2S_HOBJ                           1
ADDMSGID   *QMQRY    PROMPT     Y            P2S_HOBJ                           1
ADRSOLTAU  *QRYDFN   QRY        Y            P2S_HOBJ                           1
AHW        *QRYDFN   QRY        Y            P2S_HOBJ                           1
AHWSTATUS  *FILE     PF         N P2S_OTHER              $JRNLIB     SONJRN
ALLUSER    *FILE     PF         N P2S_OTHER              $JRNLIB     SONJRN
ALLUSRVRT  *PGM      CLP        Y            P2S_HOBJ                           1
AMOVAR     *QRYDFN   QRY        Y            P2S_HOBJ                           1
ANFANG     *FILE     DSPF       Y            P2S_HOBJ                           1
ANFANG     *MENU     DSPF       Y            P2S_HOBJ                           1
ANFANG     *MSGF                Y            P2S_HOBJ                           1
                                                                          More...
F3=Exit F5=Refr. F7=List from F11=Sel. F12=Ret. F13=No obj.mir F14=No data mir
```

This shows which mirror groups are used to mirror the respective objects.

2.12.7.4 Selection J - Start journaling



If a mirror group is set up, this command can be used to assign the libraries that are to be mirrored via this mirror group. This command can be used to check / start the journaling of a library. The journalized and non-journalized objects are displayed. See also the description for "Service functions - Journal management" - menu item 7=Check / start journaling of a library.

For the command parameters, the user has the following input options:

OBJLIB - Object library
Name of the library for which journaling is to be checked/started.

Valid values for the **Object library** parameter are:

Name
Name of the **object library for** which the command is to be executed.

CURSG - Mirror group
Name of the mirror group for which the called command is to be executed.

Valid values for the **Mirror group** parameter are:

Name
Name of the mirror group for which the command is to be executed.

***CURRENT**
The application activated as "current" mirror group is used for command execution. *CURRENT is the default value

***LIBJRN**
The journal with which the library is journalized is used.

STRJRN - Start Journaling
Specify whether the library should be journalized.

Valid values for the **Start journaling** parameter are:

***YES**
*YES Library is journalized. *YES is the default value.

***NO**
*NO The library is not journalized. This means that objects that are newly created in this library are no longer automatically journalized. The objects are synchronized as a whole via object mirroring.

CHGDFT - Change transfer rules

It is possible to define whether the transfer rules are changed for each library that is mirrored via the defined mirror group. The default transfer rules are used. If the library is journalized and these transfer rules exist, then every new data object created in this library will be recorded in this journal.

Valid values for the parameter **Create change transfer rules** are:

***YES**
The transfer rules are changed. *YES is the default value.

***NO**
The takeover rules are not changed.

AUTOJRN - Automatic Journaling

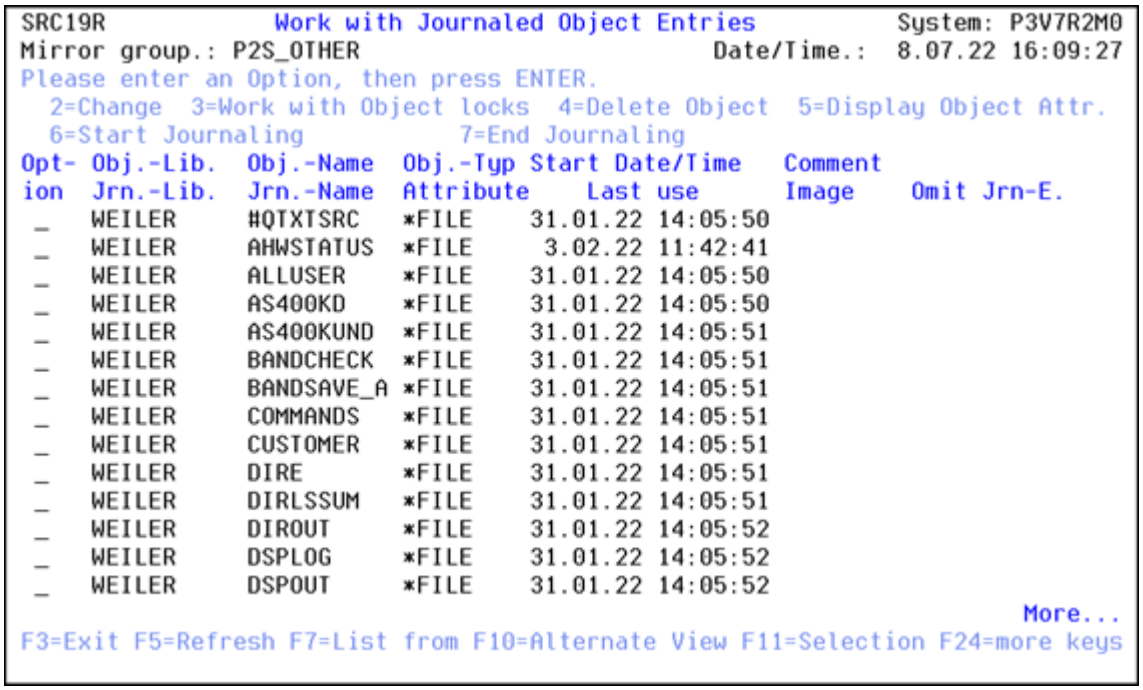
Specify whether objects newly created in selected library should be journalized automatically.

Valid values for the **Automatic journaling** parameter are:

***YES**
*YES Objects are journalized automatically. *YES is the default value.

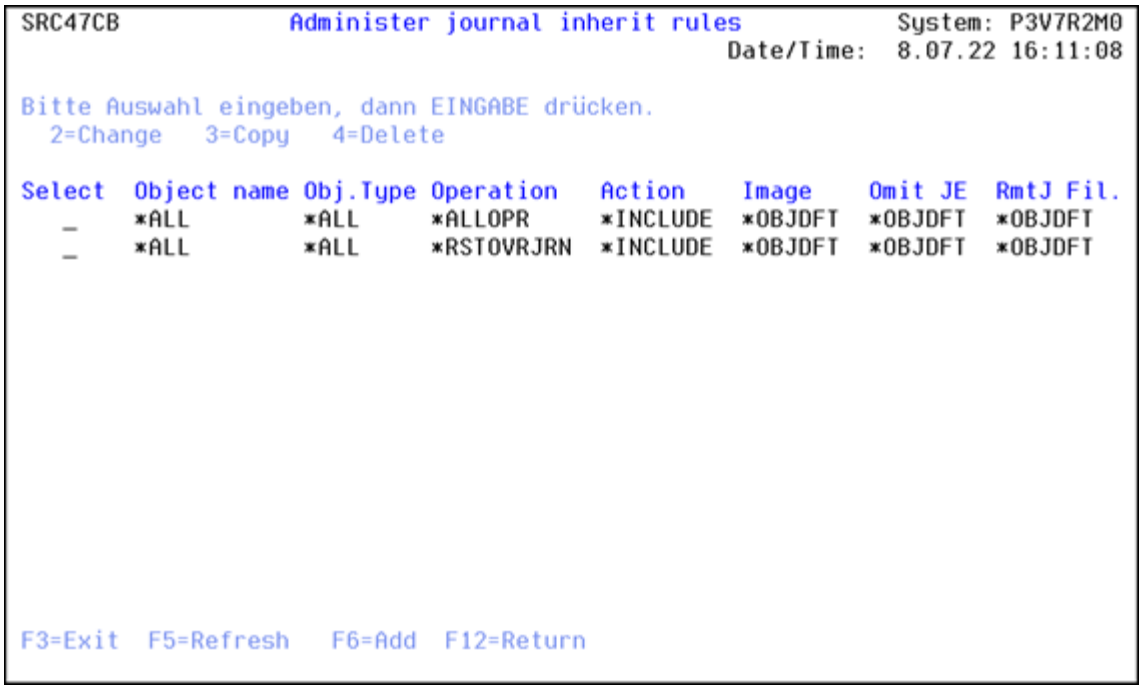
***NO**
*NO The transfer rules are all changed to *OMIT. This means that objects that are newly created in this library will no longer be journalized automatically. The objects are synchronized as a whole via object mirroring.

The following mask is then displayed:



The selection options and command keys are described in 1.1.12.5.9.

2.12.8 Menu item 8 – Administer journal inherit rules



This mask shows the current standard transfer rules for the HA system BUS4i. These are used when a library is journalized in the mirror group assignment.

The following options are available for **managing the transfer rules:**

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

Selection 2 - Change
This selection option can be used to change application-specific control parameters.

Selection 3 - Copy
With this selection option, transfer rules link can be copied.

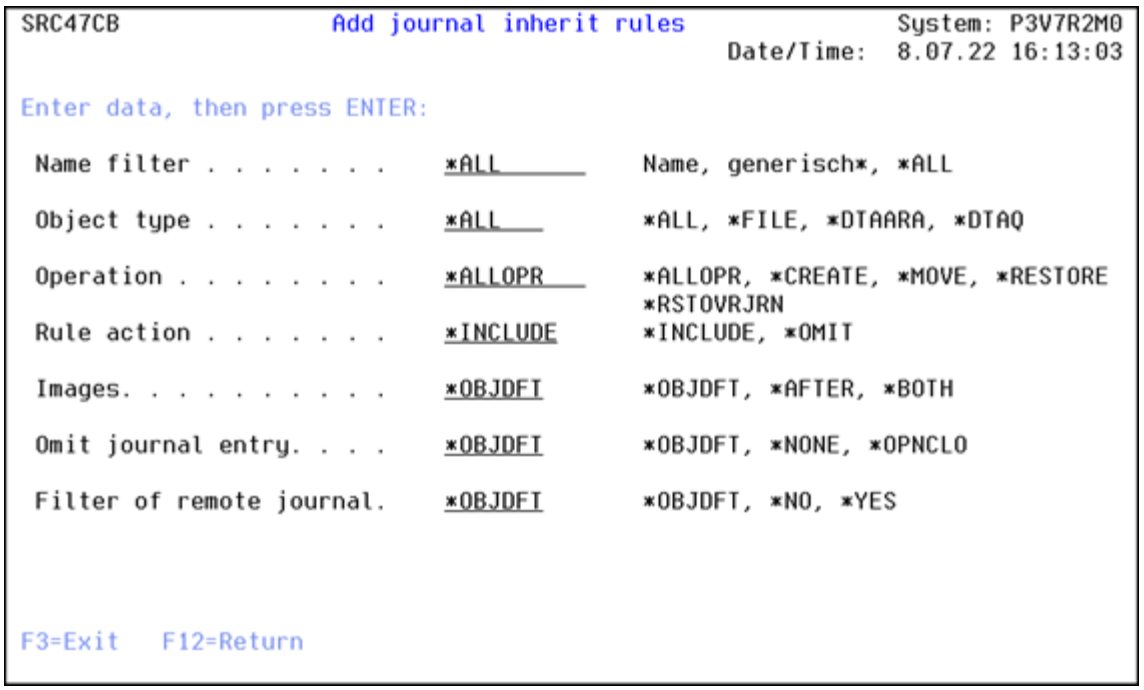
Selection 4 - Delete
With this selection option system links can be deleted.

The following command keys are valid on the current mask:

F5=Update
This command key is used for updating the selection lists. All options currently entered on the screen are deleted. The display list is rebuilt so that any list entries added, modified or deleted by other users are also displayed or removed.

F6=Add
This function key is used to add a new rule.

2.12.8.1 Command key F6 - Add inherit rule



A new takeover rule is added to the BUS4i HA system via this input mask.
A check is made to see if the specified rule already exists.

The following input fields are available to the user:

Name filter
Specifies which objects created in, moved to, or restored from a recorded library take on the journal state of the library and which recording attributes they should have. When adding a system link, a descriptive text can be additionally specified for better identification.

Object type
Specify the object type of the objects identified by this rule.

*ALL
This rule applies to all object types that can be recorded.

*DTAARA
This rule applies to data areas.

*DTAQ
This rule applies to data queues.

*FILE
This rule applies to physical database files.

Operation
Specifies one or more operations defined by this rule.

*ALLOPR
This rule is valid for all objects created in the library, moved to the library or restored. This is a combination of the *CREATE, *MOVE and *RESTORE values. For more information see the corresponding descriptions.
*CREATE

This rule is valid for all objects created in the library.

*MOVE
This rule applies to all objects that have been moved to the library, provided they have not yet been recorded.

*RESTORE
This rule is valid for all objects that have been restored to the library. When an object is restored over a currently existing object, the restored object retains the journal state and recording attributes of the previous object over which it was restored. If an object has never been recorded at the time it is saved, recording will start for the object when it is restored to the library. If, on the other hand, the object was recorded at the time it was saved, it will first attempt to record in the journal it was saved in and with the recording attributes it had at the time it was saved. If this journal does not exist, recording for the object is started in the same journal in which the library is recorded. Recording will use the recording attributes defined by this rule. A rule with the *RESTORE specification overwrites all previous rules of the same object type with the *RSTOVRJRN specification.

*RSTOVRJRN
This rule is valid for all objects that have been restored to the library. When an object is restored over a currently existing object, the restored object retains the journal state and recording attributes of the previous object over which it was restored. Otherwise, recording for the object is started in the same journal in which the library is recorded. Recording is done with the recording attributes defined by this rule. A rule with the *RSTOVRJRN specification overwrites all previous rules of the same object type with the *RESTORE specification.

Rule action
Specifies whether the objects matching the object type and operation in this rule are included in or excluded from the list of objects taking the library journal status.

Images
Specifies the type of images that are written to the journal receiver for changes to objects that take the library journal state.

Skip journal entry
Specifies the journal entries that are skipped for objects that take the library journal state.

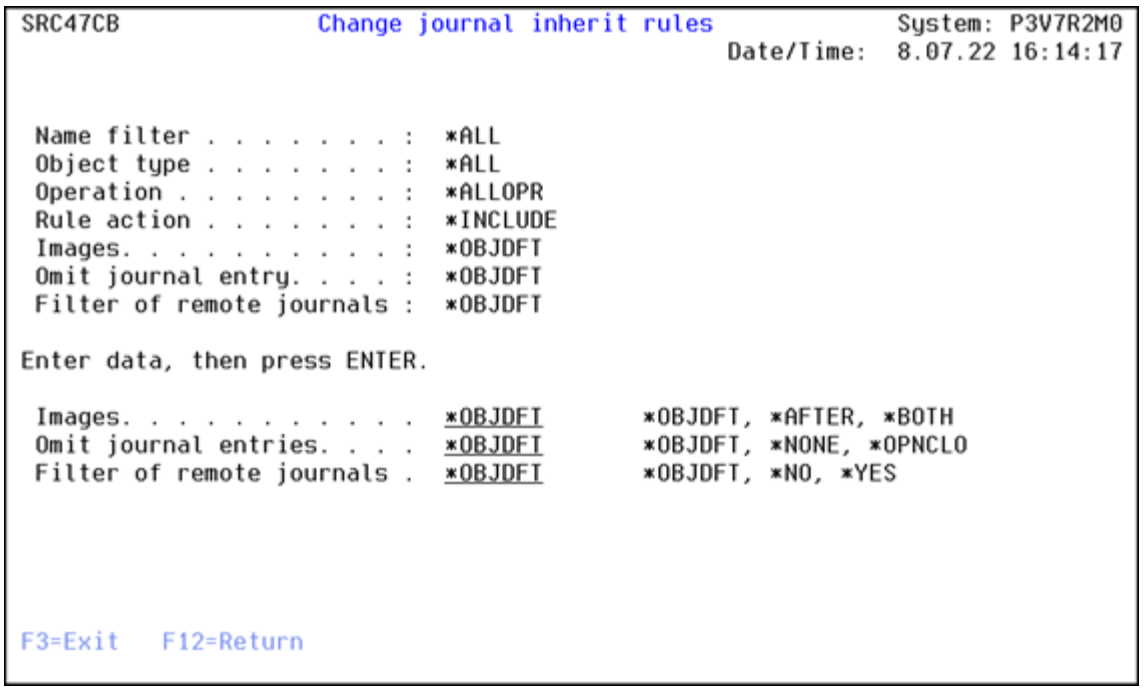
Filter of the distant journal
Specifies whether or not journal entries for objects that inherit the library's journal status should be selectable for remote journal filtering by object.

The following command keys are valid on the current mask:

F3=End
This command key will exit the program.

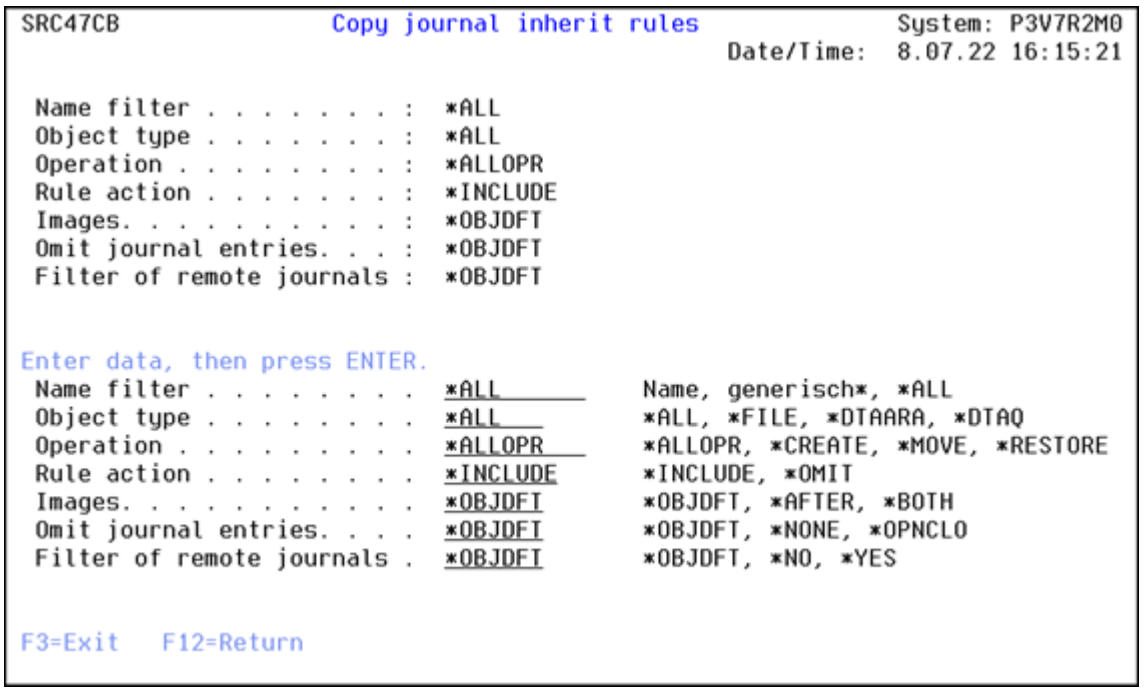
F12=Back
This function key is used to return to the previous screen.

2.12.8.2 Selection 2 - Change inherit rule



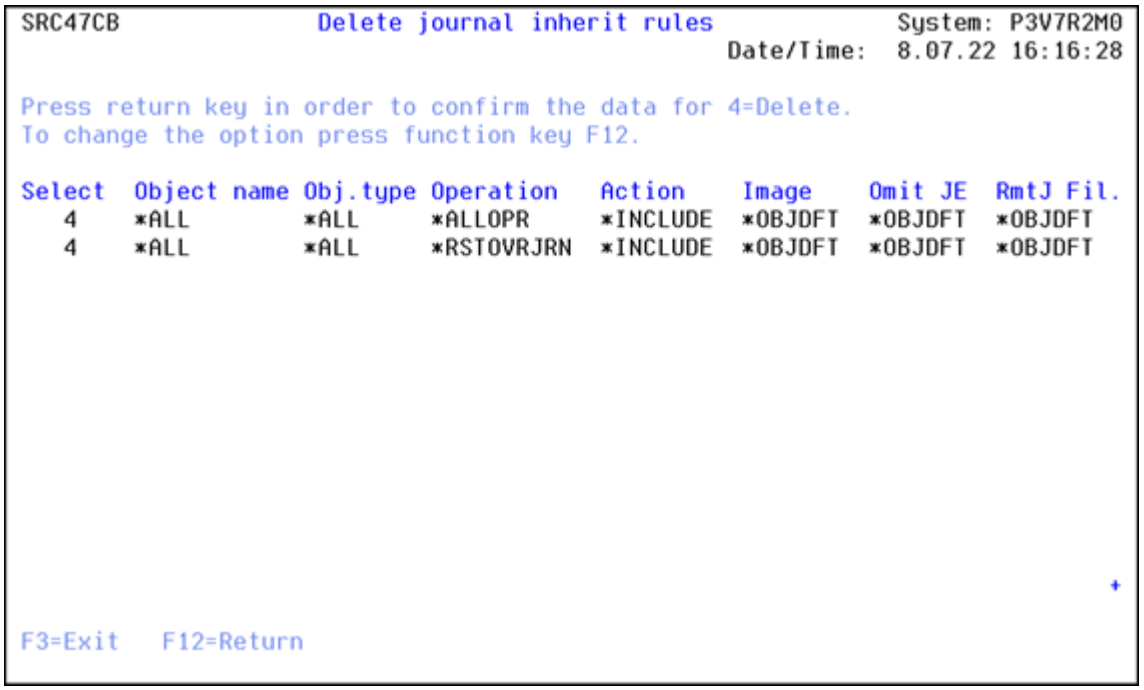
With the selection option 2 in the administration list of the transfer rules, the user has the possibility to change certain parameters. The parameters are described in more detail in the "Add transfer rules" section.

2.12.8.3 Selection 3 - Copy inherit rule



With the selection option 3 in the administration list of transfer rules, the user has the possibility to copy transfer rules. The parameters are described in more detail in the section "Adding takeover rules".

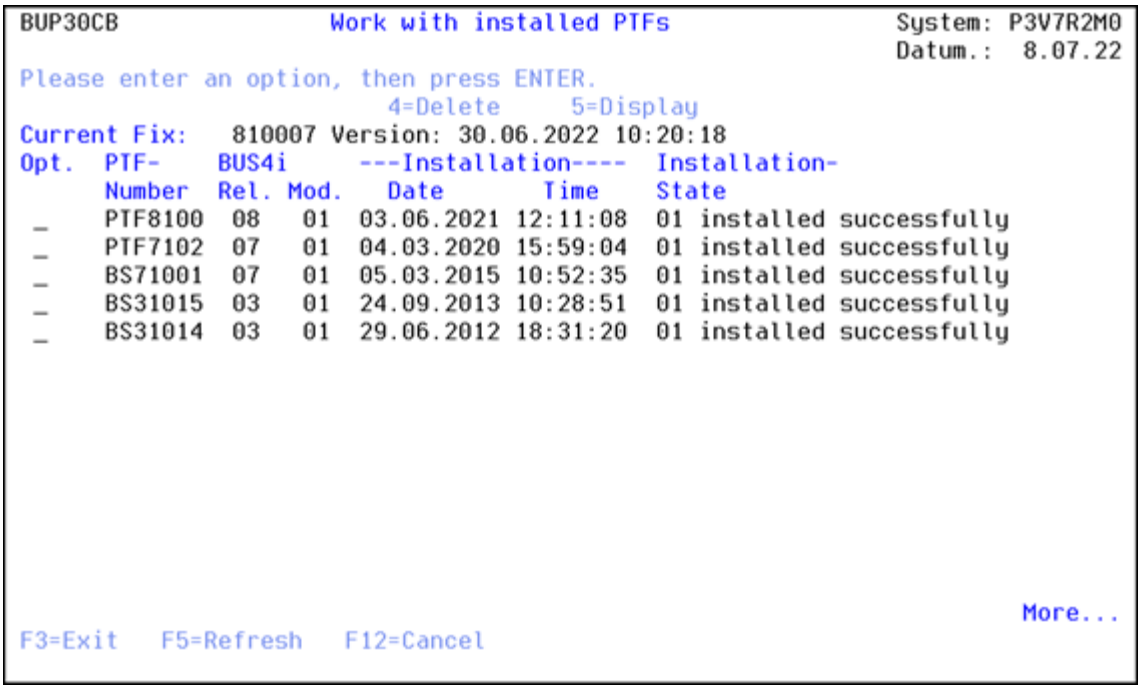
2.12.8.4 Selection 4 - Delete inherit rule



By selecting 4 in the administration list of transfer rules, one or more transfer rules can be deleted from the BUS4i HA system.

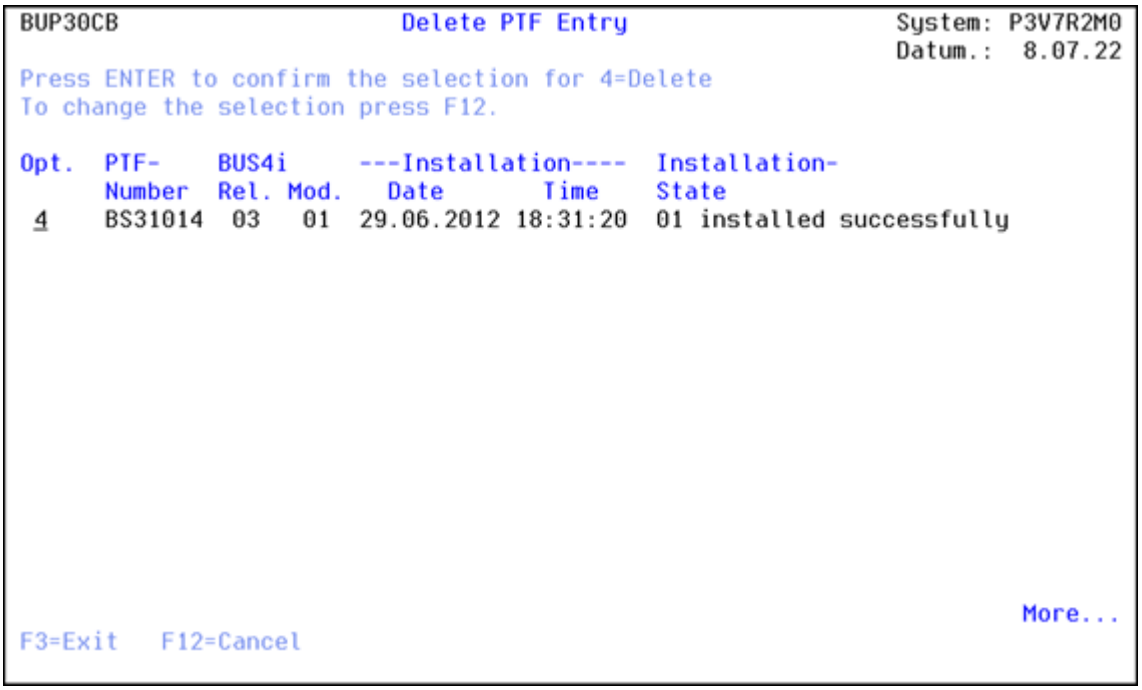
After confirming with the Enter key, the transfer rules are deleted.

2.12.9 Menu item 10 - Display current BUS4i software status



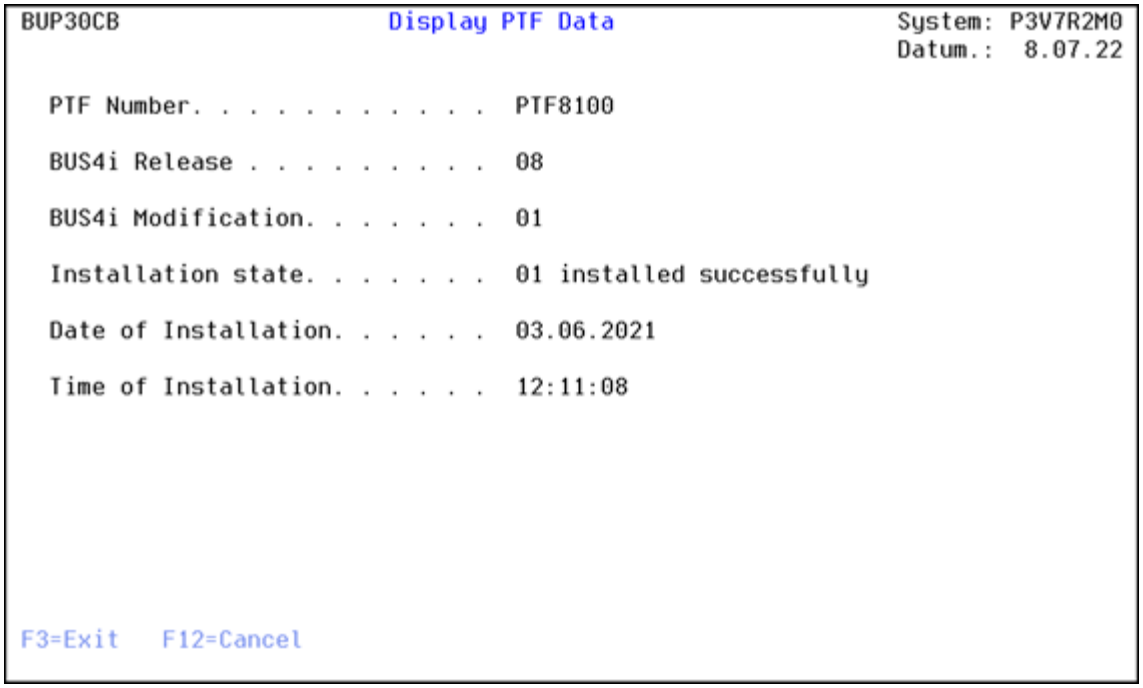
Here you get a list of all PTF installations and hotfixes of the HA system BUS4i. You can display the PTFs or delete installed PTFs.

2.12.9.1 Selection 4 - Delete PTF entry



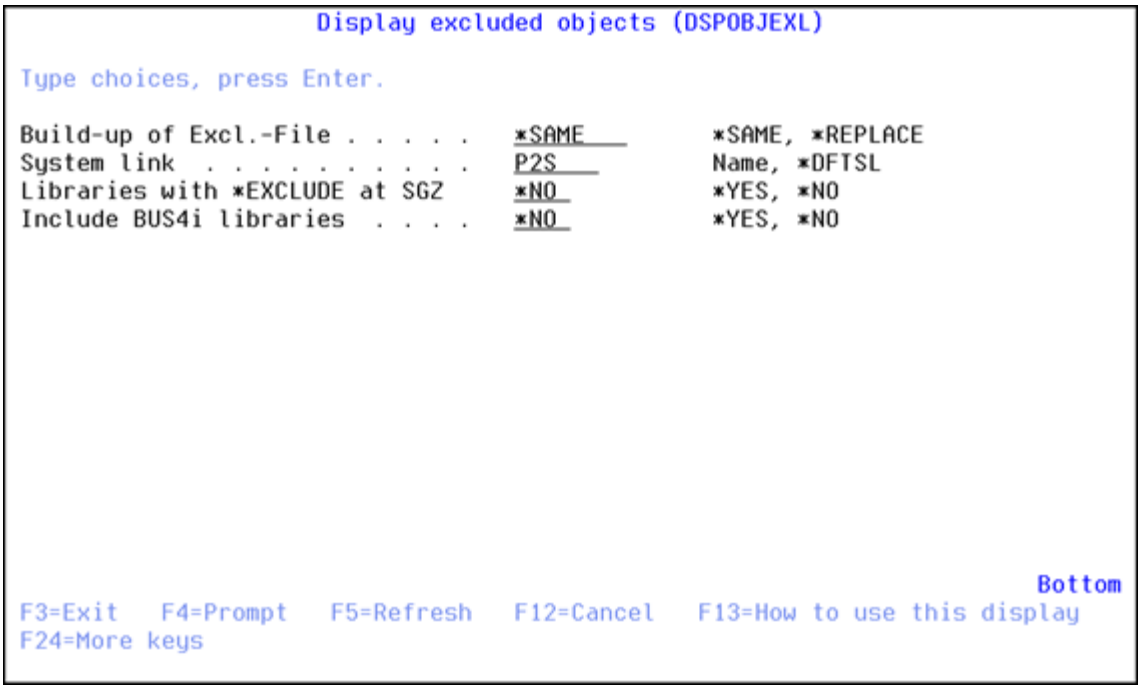
The selected PTF entries are deleted from the database, this must be confirmed beforehand by pressing the Enter key. With the function key F12 the deletion operation can be canceled.

2.12.9.2 Selection 5 - Display PTF data



With the selection additional details about the selected PTF can be displayed. Among others, the date and time of installation.

2.12.10 Menu item 20 - Display excluded objects



This menu item allows the user to display and print the objects excluded from the mirroring.

For the command parameters, the user has the following input options:

Build-up of the Excl. file
Indication of whether the previously determined exclusions should remain.

Valid values for the parameter **Structure of assignment** are:

***SAME**
The exclusions present on the system are not redetermined.

***REPLACE**
The exclusions are redetermined. This redetermination is started as a batch job. You have to wait until the job is finished to display the results.

System link
Name of the system link for which the command is executed.

Valid values for the **System link** parameter are:

Name
Name of the system link

***DFTSL**
The system link, which is set as default, is used.

Bibl. with *EXCLUDE in SGZ (mirror group assignment)
Specify whether libraries marked with *EXCLUDE in the mirror group assignment are also displayed.

Valid values for the parameter are:

***YES=Yes**
Libraries that are marked with *EXCLUDE in the mirror group assignment are also displayed.

***NO=No**
Libraries marked with *EXCLUDE in the mirror group assignment are not displayed. *NO=No is the default value.

BUS4i Include Bibl.
Specifies whether the libraries belonging to the BUS4i configuration are also displayed.

Valid values for the parameter are:

***YES=Yes**
BUS4i libraries are displayed with.

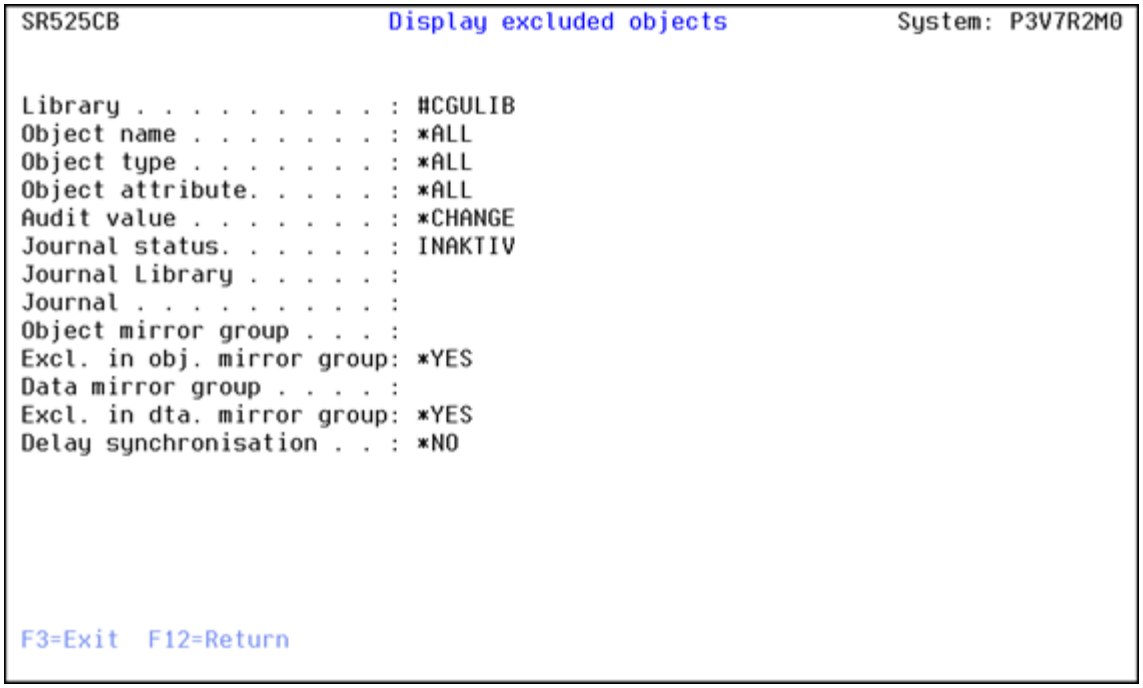
***NO=No**
BUS4i libraries are not displayed. *NO=No is the default value.

The following mask is then displayed:

```
SR525CB                      Excluded objects                    System: P3V7R2M0

Selected system link. . . . . . . . . : P2S
Libraries with *EXCLUDE at SGZ. . . . : *NO
Included BUS4i libraries. . . . . . . : *NO

Please enter an option, then press ENTER.
 5=Display
AW  Library     Name        Type      Attribute   Obj.    Data    Delay
                                                  excl.   excl.   sync.
_   $JRNLIB     *ALL        *ALL      *ALL        *YES    *YES    *NO
_   #CGULIB     *ALL        *ALL      *ALL        *YES    *YES    *NO
_   #COBLIB     *ALL        *ALL      *ALL        *YES    *YES    *NO
_   #DFULIB     *ALL        *ALL      *ALL        *YES    *YES    *NO
_   #DSULIB     *ALL        *ALL      *ALL        *YES    *YES    *NO
_   #LIBRARY    *ALL        *ALL      *ALL        *YES    *YES    *NO
_   #RPGLIB     *ALL        *ALL      *ALL        *YES    *YES    *NO
_   #SDALIB     *ALL        *ALL      *ALL        *YES    *YES    *NO
_   #SEULIB     *ALL        *ALL      *ALL        *YES    *YES    *NO
_   ASN         *ALL        *ALL      *ALL        *YES    *YES    *NO
                                                                  More...

F3=Exit  F7=List from  F9=Print  F10=Alternative view  F12=Return
```

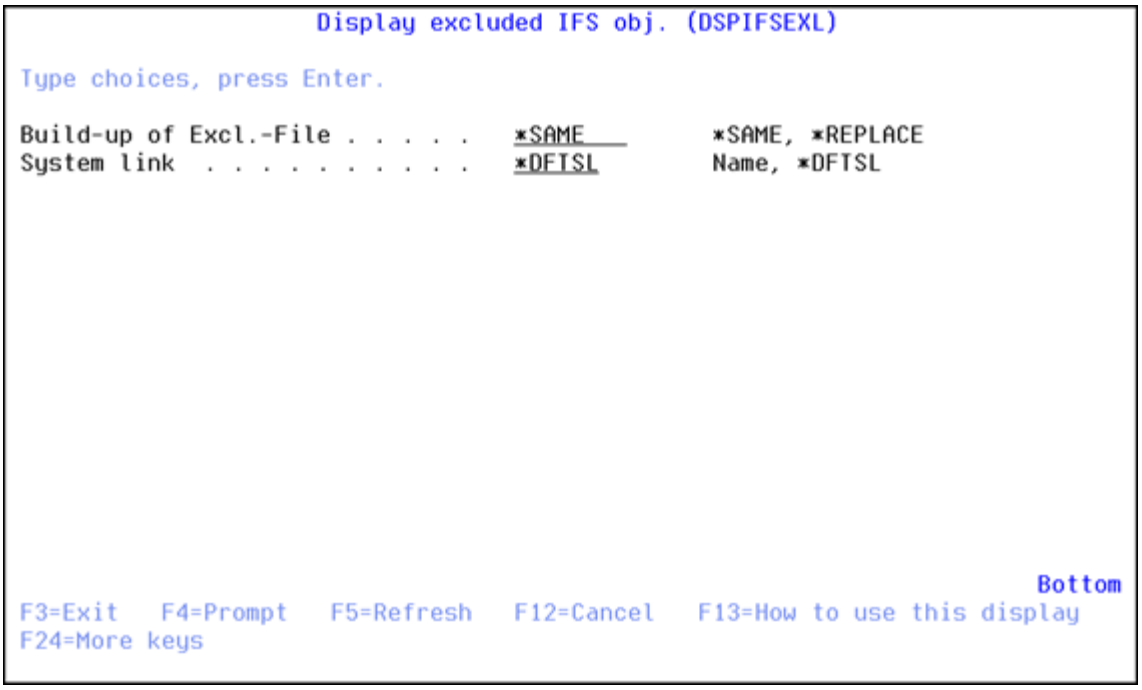
Here you can get a list of all excluded objects in the corresponding system link. You can view the details.

2.12.10.1 Selection 5 - Display excluded objects



Additional details can be displayed with the selection. Among others, the journal status and the logging value.

2.12.11 Menu item 21 - Display excluded IFS objects



This menu item allows the user to display and print the objects excluded from the mirroring.

For the command parameters, the user has the following input options:

Structure of the Excl. file
Indication of whether the previously determined exclusions should remain.

Valid values for the parameter **Structure of assignment** are:

***SAME**
The exclusions present on the system are not redetermined.

***REPLACE**
The exclusions are redetermined. This redetermination is started as a batch job. You have to wait until the job is finished to display the results.

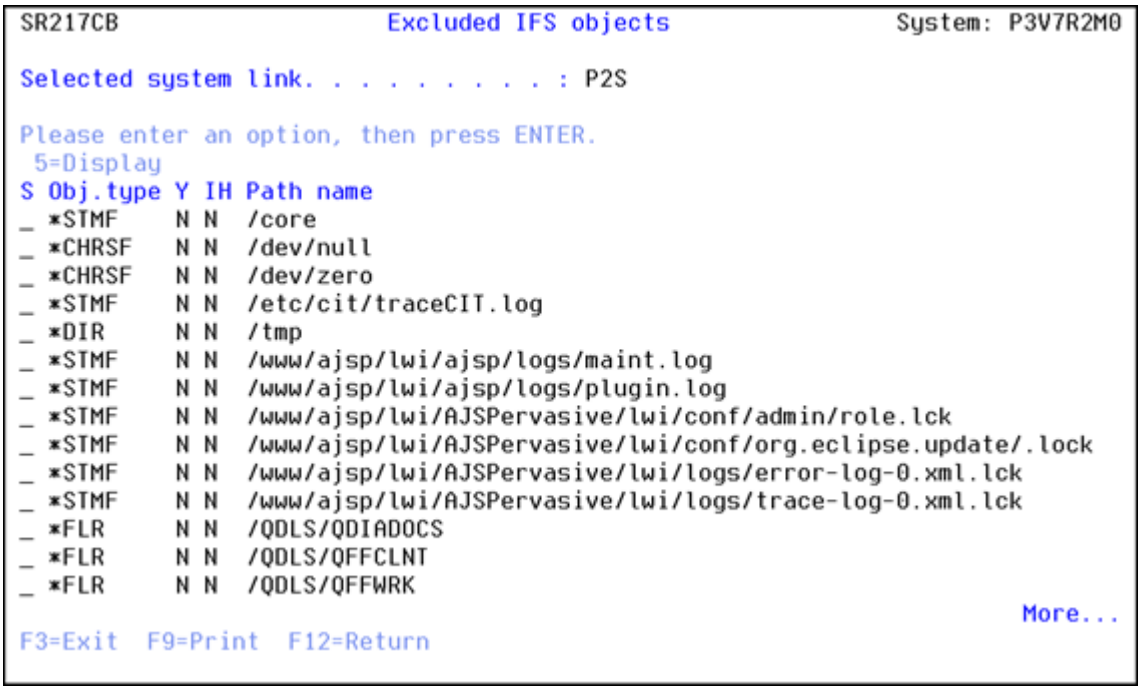
System link
Name of the system link for which the command is executed.

Valid values for the **System link** parameter are:

Name
Name of the system link

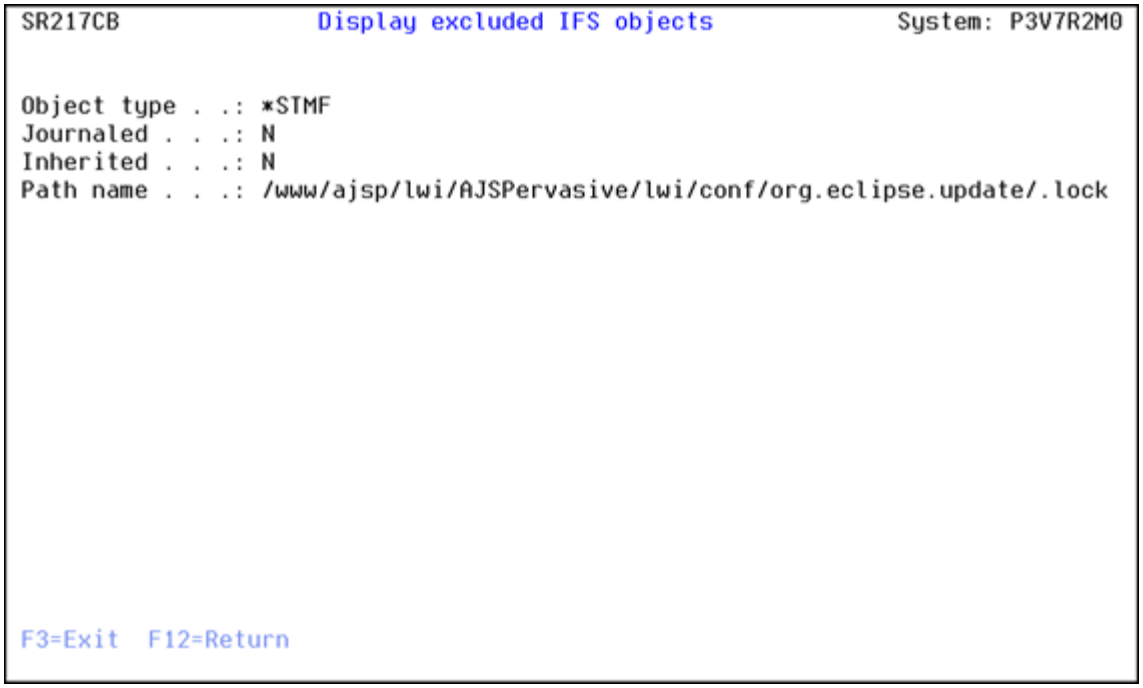
***DFTSL**
The system link, which is set as default, is used.

The following mask is then displayed:



Here you can get a list of all excluded IFS objects in the corresponding system link. You can view the details.

2.12.11.1 Selection 5 - Display excluded IFS objects



With the selection additional details can be displayed. Among others, the journal status and the Inherit value.

2.12.12 Selection 22 - Display BUS4i configuration changes

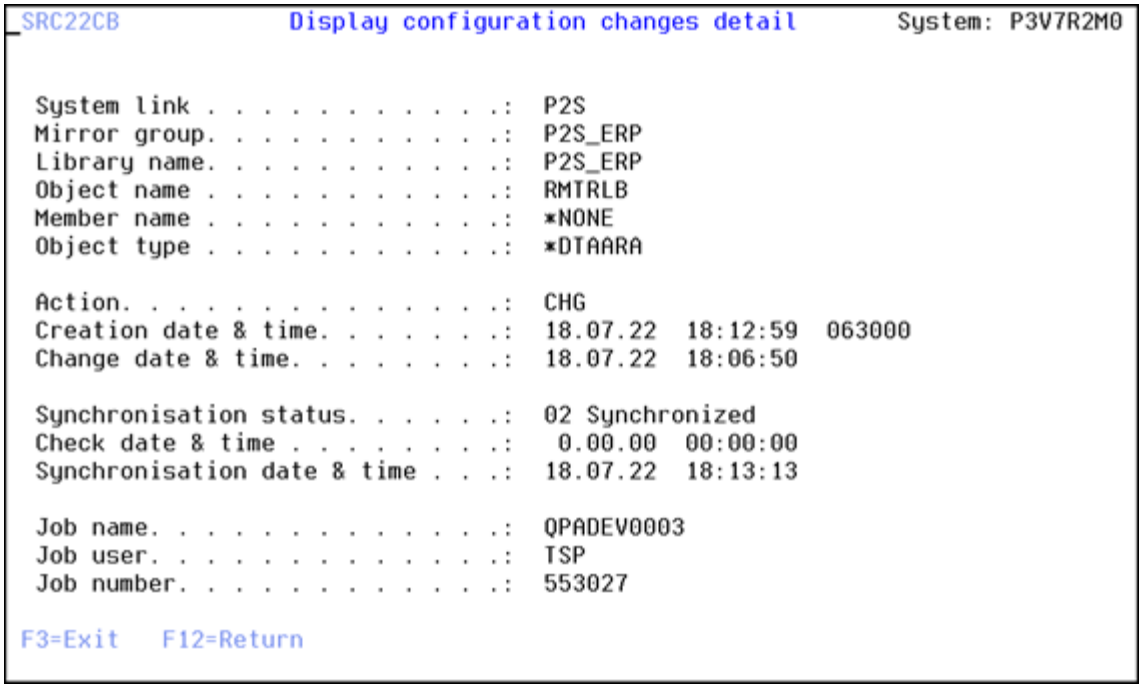
```
SRC22CB                Configuration changes selection          System: P3V7R2M0

Enter selection, then press ENTER.

 System link . . . . . .   *ANY          Name, generic*, *ANY, *NONE

 Mirror group. . . . . .   *ALL          Name, generic*, *ALL, *NONE

 Creation date (to). . . .  20.07.22     DDMMYY, DD.MM.YY

 Creation time (to). . . .  235959       HHMMSS

F3=Exit    F12=Return
```

```
SRC22CB                Display configuration changes            System: P3V7R2M0

Please enter selection, then press ENTER.
 5=Display

S Sys-  Mirror
l Link  group      Library    Object     Obj.Type  Create date/time  Act. Sts
_ *NONE *NONE      SRCSYS     SR280P     *FILE     19.07.22 15:59:43 CHG  00
_ *NONE *NONE      SRCSYS     SR180P     *FILE     19.07.22 15:26:53 CHG  00
_ P2S   P2S_#OBJ1  P2S_#OBJ1  AUDRCVJOB  *DTAARA   19.07.22 10:33:29 CHG  00
_ P2S   P2S_#OBJ1  SRCSYS     SRC11P     *FILE     19.07.22 10:33:16 CRT  00
_ P2S   P2S_ERP    P2S_ERP    RMTRLB     *DTAARA   18.07.22 18:12:59 CHG  02
_ P2S   P2S_ERP    P2S_ERP    RMTJLB     *DTAARA   18.07.22 18:12:59 CHG  02
_ P2S   P2S_ERP    P2S_ERP    RMTJNM     *DTAARA   18.07.22 18:12:58 CHG  02
_ P2S   P2S_ERP    P2S_ERP    RMTRLB     *DTAARA   18.07.22 18:06:50 CRT  02
_ P2S   P2S_ERP    P2S_ERP    RMTJLB     *DTAARA   18.07.22 18:06:50 CRT  02
_ P2S   P2S_ERP    P2S_ERP    RMTJNM     *DTAARA   18.07.22 18:06:50 CRT  02
_ P2S   P2S_ERP    P2S_ERP    RMTJRN     *DTAARA   18.07.22 18:06:03 CHG  02
_ P2S   P2S_#OBJ1  SRCSYS     SRC11P     *FILE     18.07.22 18:04:00 DLT  02
_ P2S   P2S_#OBJ1  P2S_#OBJ1  AUDRCVJOB  *DTAARA   18.07.22 17:58:50 CHG  02
_ P2S   P2S_#OBJ1  SRCSYS     SRC11P     *FILE     18.07.22 17:58:18 CRT  02
                                                                   More...
F3=Exit    F5=Refresh    F7=Liste ab.                  F12=Return
```

The BUS4i configuration changes are logged in a file. These changes can be displayed.

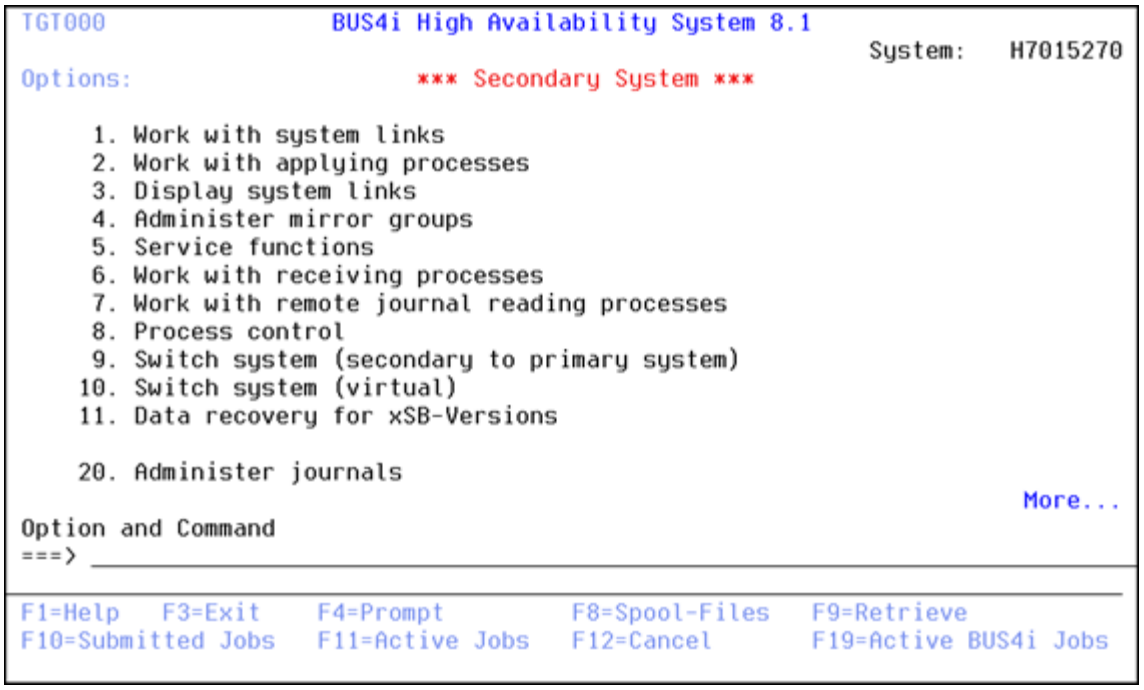
The description of the valid command keys can be found in the overview.

2.12.12.1 Selection 5 - Display configuration change details



With the selection additional details can be displayed. Among them the creation and modification date, the synchronization status and the job that made this change.

3 Secondary system main menu



The following menu items can be selected on the current screen:

Menu item 1: Work with system links
This menu item can be called up to start, end or cancel system links. Furthermore, the user can inform himself about the current status of all **system links of** the **HA system BUS4i** or monitor them.

Menu item 2: Work with applying processes
This menu item can be called to start, stop or cancel processing operations. Furthermore, the user can get information about the current status of all **mirror groups of** the secondary system or monitor them.

Menu item 3: Display system links
This menu item can be used to add, delete, copy, rename system links or change or display their control parameters.

Menu item 4: Administer mirror groups
With this menu item mirror groups can be added, deleted, copied, renamed or their control parameters can be changed or displayed. Furthermore, the file processing programs can be managed per **mirror group.**

Menu item 5: Service functions
This menu item can be used to call the journal maintenance or, in problem cases, the RESTART functions for each **mirror group.** Furthermore, an overview of the status of the comparisons can be displayed.

Menu item 6: Work with receiving processes
This menu item can be called to start, stop or cancel receive processes. Furthermore, the user can inform himself about the current status of all **mirror groups of** the secondary system or monitor them.

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Menu item 7: Work with remote Journal read processes
This menu item can be used to control and monitor the reading processes for a mirror group with Remote Journal.

Menu item 8: Process control
This menu item is used to manage the process monitoring parameters. Process monitoring checks whether all processes to be controlled are active.

Menu item 9: Switch system (secondary to primary system)
Support of the system change from the secondary to the primary system. The commands required for the system change can be entered. The already entered commands can be used as a template. A distinction is made between commands for switching from primary to secondary system (PRI) and commands for switching from secondary to primary system (SEC).

Menu item 10: Switch system (virtual)
Support of virtual system change from secondary to primary system(virtual) and primary system(virtual) to secondary system. The commands that are needed for the system change can be captured. The already entered commands can be used as a template. A distinction is made between commands for switching from secondary to primary system (virtual) (S2VP) and commands for switching from primary system (virtual) to secondary system (VP2S).

Menu item 11: Data recovery for xSB versions
This menu item can be called to define, start, end or cancel a data recovery for xSB versions. Furthermore, the user can inform himself about the current status of a data recovery of the secondary system or monitor it.

Menu item 20: Administer journals
With this menu item the journal manager can be started and stopped. The journal manager data and the journals can be displayed.

Menu item 21: Maintenance and analyses
This menu item displays the "Maintenance and evaluation" menu. There you can display the BUS4i license code and enter a new one. The configuration, parameters and mirror group assignment can be printed. You can enter the assignments of libraries to mirror groups and display the assignments of objects to mirror groups.

Menu item 90: Logout
With this menu item the application can be terminated.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

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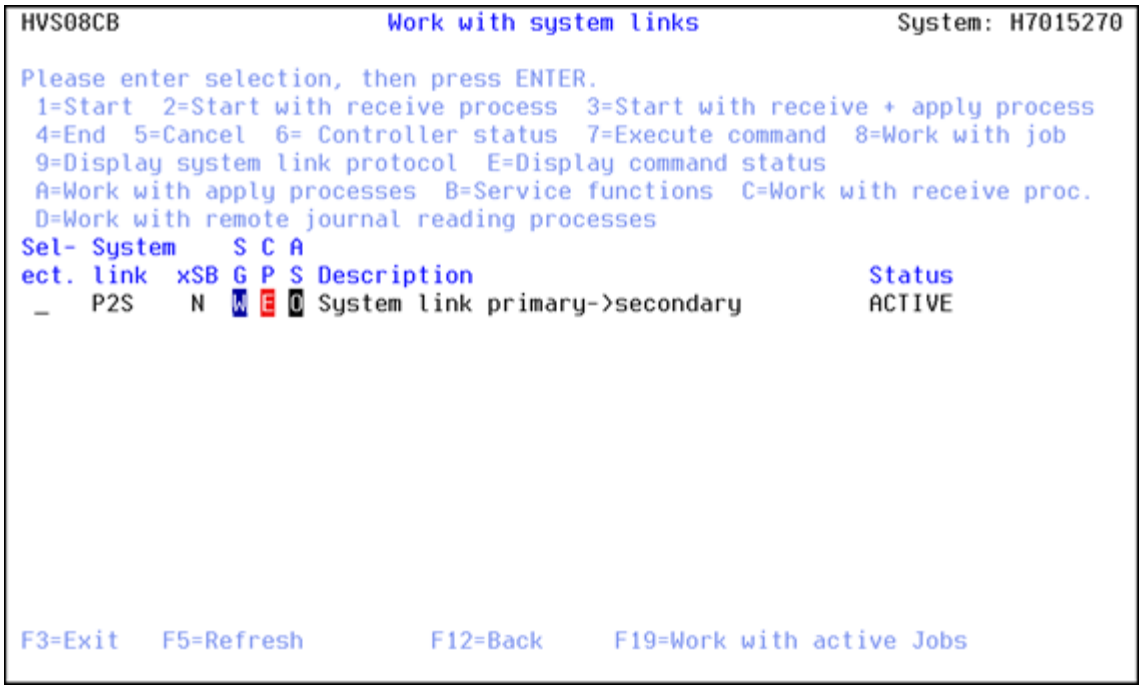
3.1 Main menu selection 1 – Work with system links



This selection list offers the user the possibility to start and stop system links. Furthermore, the user can inform himself about the current status of his **HA system BUS4i** with all assigned **system links** or monitor the HA system.

Displayed:
- System Link Name
- Is the system link ISB/OSB version
- S G=Status of the mirror groups (O=Ok, W=Warning, E=Error)
- C P=Status of the comparison runs (O=Ok, W=Warning, E=Error)
- A S=Status of plate occupancy (O=Ok, W=Warning, E=Error)
- Description of the system link
- Status of the system link

The following options are possible for controlling the system links:

Selection

In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

Selection 1 - Start system link

This selection option starts the system link on the primary system and the corresponding system link on the secondary system. The system link process pending configuration changes and commands that have been recorded with selection 7.

Selection 2 - Start with receive processes

This selection option starts both the system link and all associated receive processes on the secondary system.

Selection 3 - Start with reception + processing

This selection option starts both the system link and all associated receiving processes as well as the processing processes on the secondary system.

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Selection 4 - Exit
This selection option terminates both the system link on the primary system and the system link on the secondary system.

Selection 5 - Cancel
With this selection option, the system link on the primary system is abnormally terminated via the ENDJOB *IMMED command.

Selection 6 - Controller status
This option allows viewing the status of the line controllers specified in the control parameters.

Selection 7 - Transmit command
This selection option can be used to enter commands on the primary system to be executed on the secondary system.

Selection 8 - Work with Job
With this selection option it is possible to work with an active job.

Selection 9 - Display system link log
The entries of the LOG file are displayed via this menu selection. All messages that occur during processing are logged in the LOG file with time and date.

Selection E - Show command status
This function allows you to view the status of the commands to be processed by the system link.

Selection A - Control processing
This function allows you to start and stop processing operations. Furthermore the user can inform himself about the current state of his **HA system BUS4i** with all assigned **mirror groups** or monitor the HA system.

Selection B - Service functions
With this function it is possible to call up administration menus for the restart functions and special displays for each mirror group.

Selection C - Control receiving processes
This selection can be called to start, stop or cancel receive processes. Furthermore, the user can get information about the current state of all **mirror groups of** the secondary system or monitor them.

Selection D - Control remote journal reading processes
With this selection, the reading processes can be controlled and monitored for a mirror group with Remote Journal.

The following command keys are valid on the current mask:

F5=Update
This command key is used for updating the selection lists. All options currently entered on the screen are deleted. The display list is rebuilt so that any list entries added or modified or deleted by other users are also displayed or removed.

F19=Work with active jobs
With this selection option, all jobs active in the system are displayed. This corresponds to the command "WRKACTJOB".

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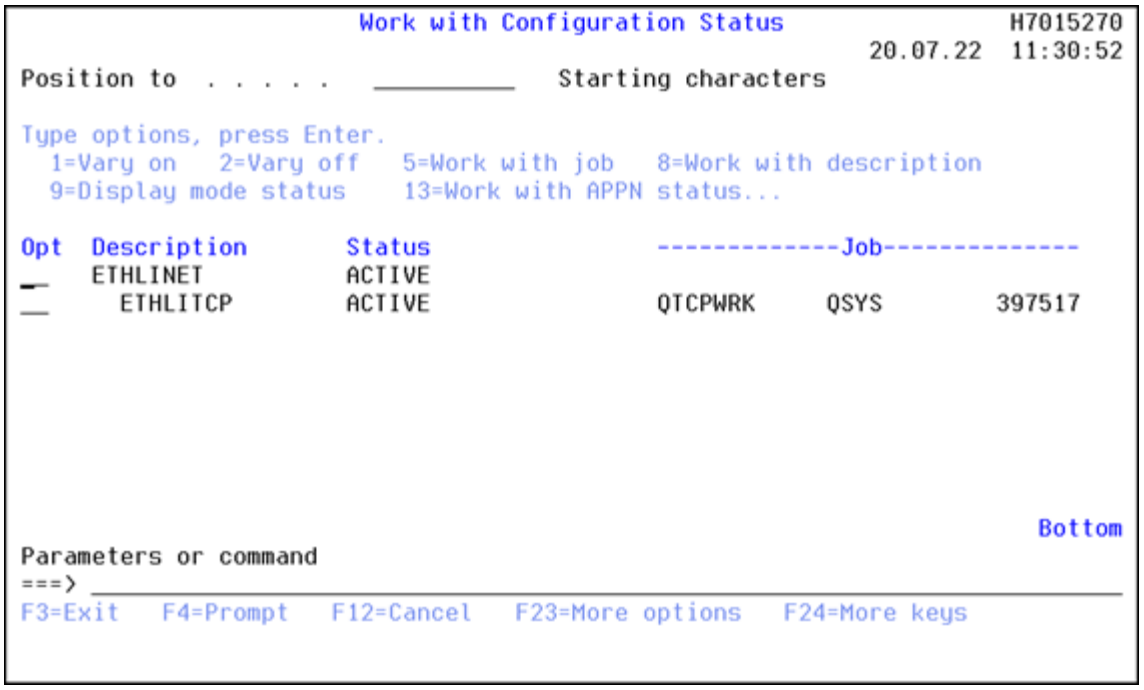
3.1.1 Selection 6 - Controller status



This display list shows status information for lines, control units, and APPC units. It also shows job tag information for the active units. For each selected line and control unit description, all associated control unit and unit descriptions are displayed. Also shown are associated mode descriptions for active APPC units.
The configuration descriptions are indented below the corresponding object.

To ensure proper operation, the line and the control unit must be attached.

The selection option is entered before the respective description name and the Enter key is pressed. Several, also different, selection options can be entered, whose functions are executed one after the other.

If the keywords for the parameters are known, the values can be specified on the command line for Selection 1 (Append), Selection 2 (Append), Selection 3 (Stop Unit), Selection 9 (Show Mode Status), or for a command. The specified values appear in the operator guidance displays.

Commands can be entered in the command input line. To get information about the command, enter the command and press the help key.
The user gets assistance in entering the command by typing the command and pressing the command key F4.

If "More ..." appears appears at the bottom right of the display, further information is available. Press the "Page forward" key (or "Page up") to page forward. Press the "Scroll back" key (or "Page down") to scroll back. If "End" appears instead of "More ... appears instead of "End", the end of the list has been reached.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

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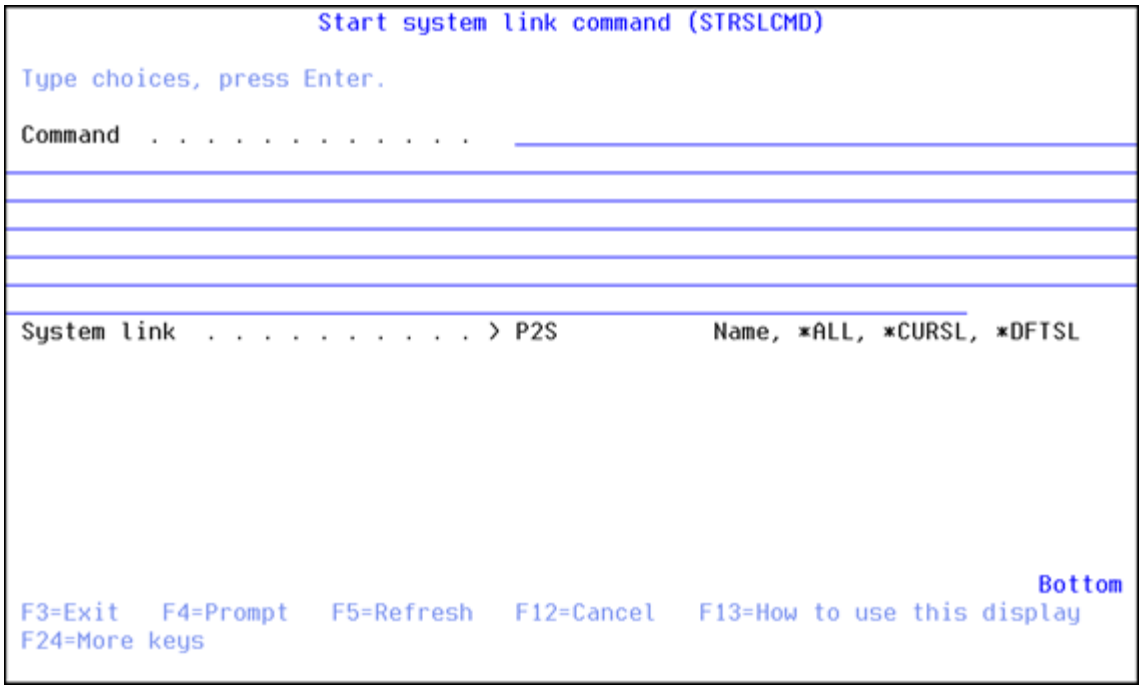
3.1.2 Selection 7 - Execute command



To create a valid command entry, the following input fields are available to the user:

Command
On the command input line, the user has the possibility to transfer any CL control command entered on the primary system to the secondary system and have it executed there. If for some reason execution on the secondary system is not possible, this is recorded in the error log file.

System link
Name of the system link for which the called command should be executed.

Valid values for the **System link** parameter are:

Name
Name of the system link for which the command is to be executed.

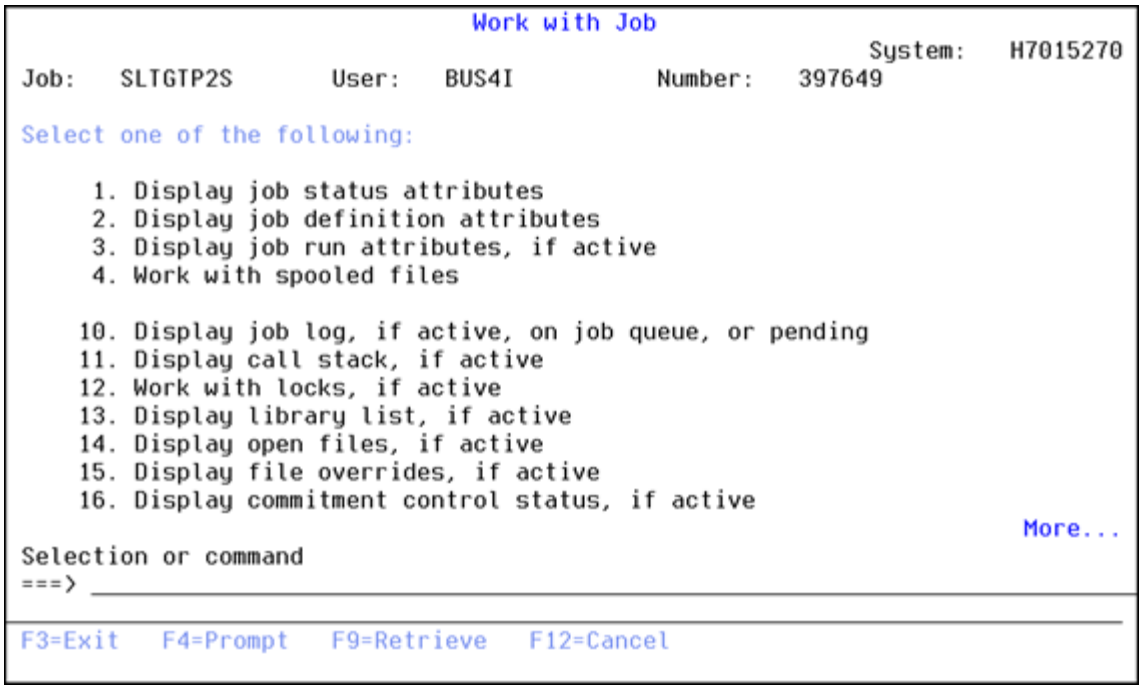
***ALL**
The command is executed on all system links.

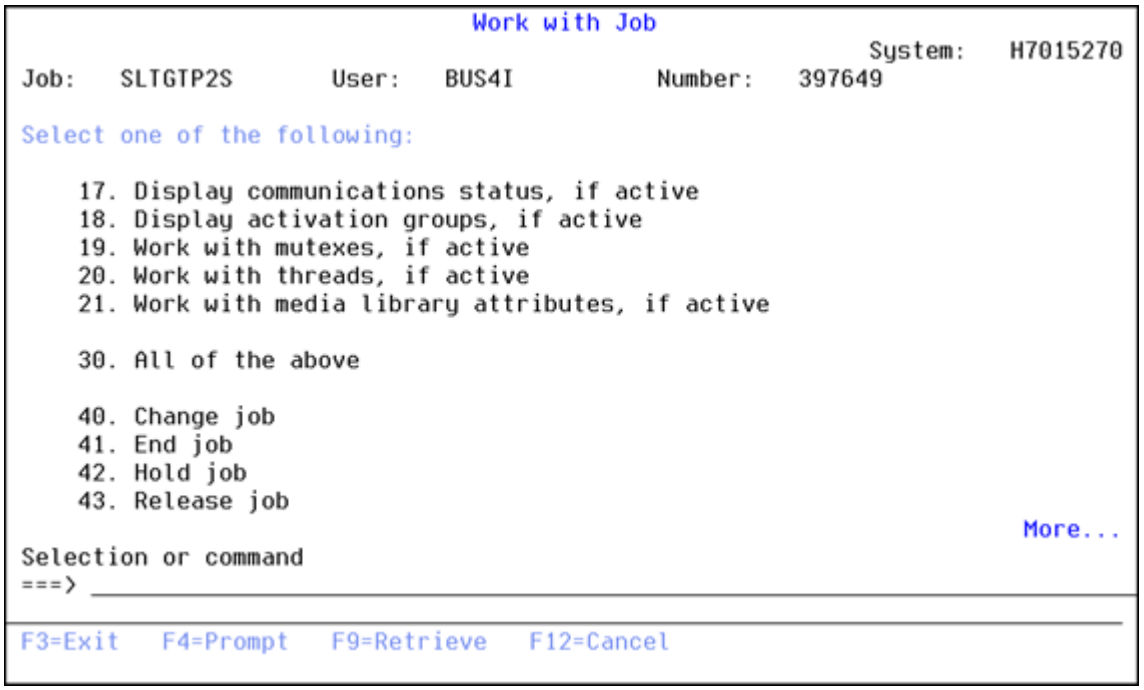
***CURSL**
The link activated as the "current" system link is used for command execution.

***DFTSL**
The link enabled as the default system link is used for command execution.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

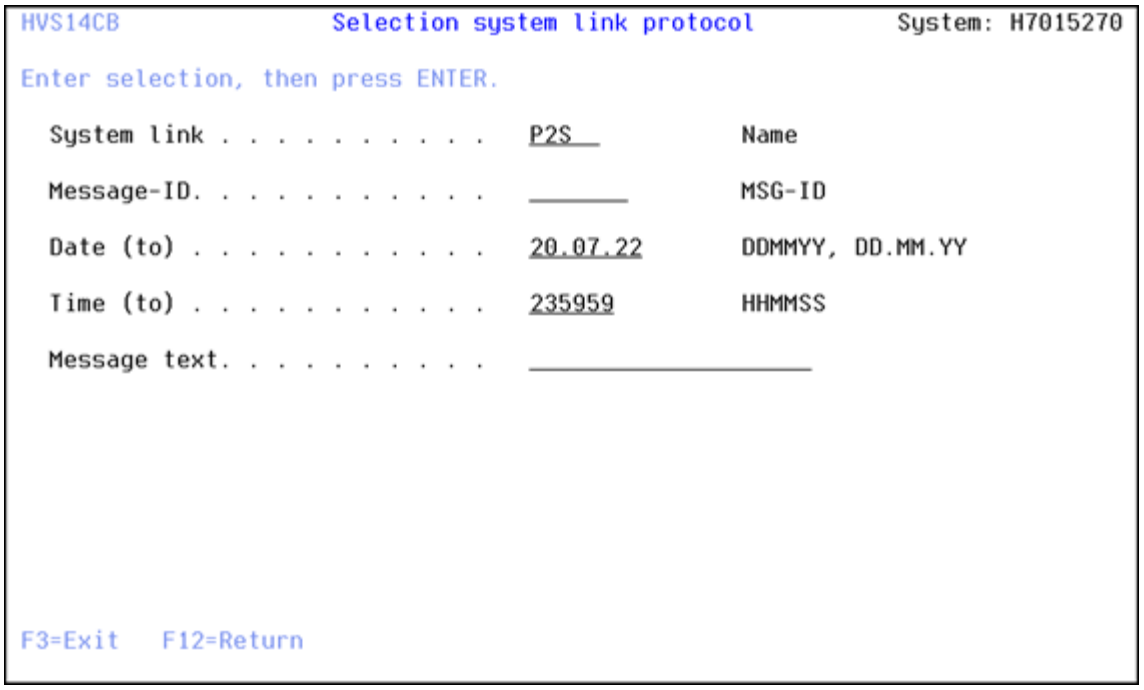
3.1.3 Selection 8 - Work with Job

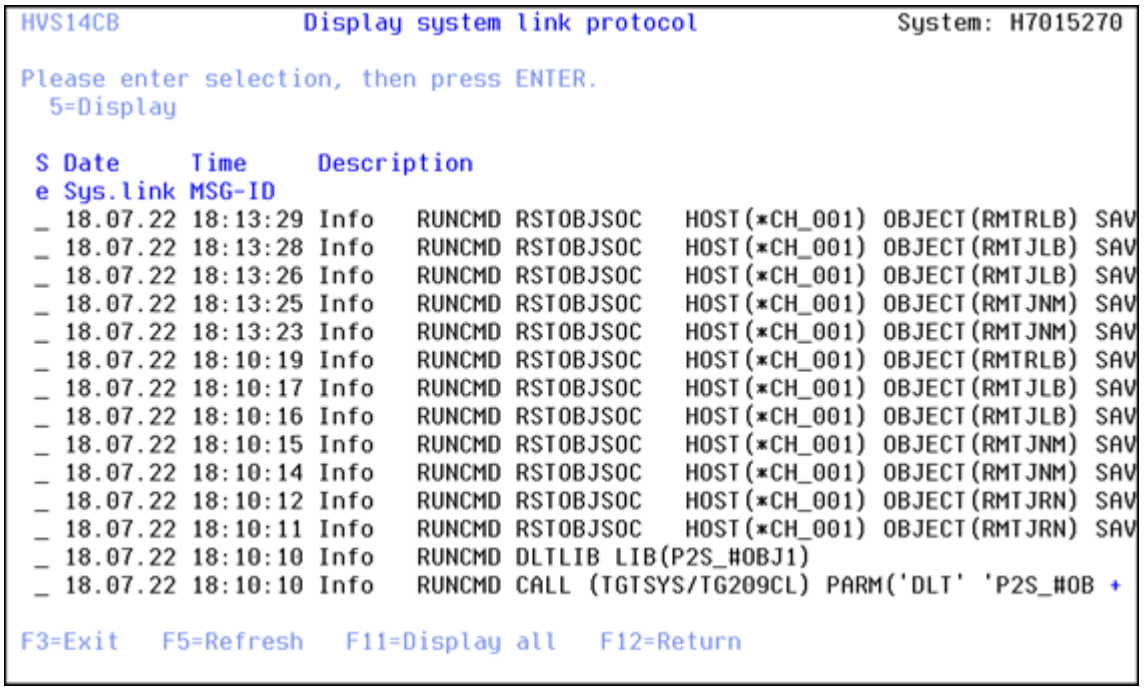




The WRKJOB system command for the selected user job is called. Information such as job log, job status attributes, open files, spool file information for the user job can be called.

3.1.4 Selection 9 - Display system link protocol





The errors that occurred on the secondary system within the system link are logged in a file. These errors can be displayed.

The description of the valid command keys can be found in the overview.

3.1.5 Selection E - Display system link command status

```
HVS15CB                      Command status selection          System: H7015270

Enter selection, then press ENTER.

  System link . . . . . :   P2S__        Name

  Status. . . . . :   __                 Status - 00, 90-91, 97-99

  Date (to) . . . . . :   20.07.22       DDMMYY, DD.MM.YY

  Time (to) . . . . . :   235959         HHMMSS

  Command text. . . . . :   ____________________________________________________


F3=Exit    F12=Return
```

```
HVS15CB                        Display command status          System: P3V7R2M0

Please enter selection, then pressENTER.
  5=Display

 S Sts Date     Time     Command
 l Sys-Link
 _ 90  18.07.22 18:13:13 RSTOBJSOC   HOST(*CH_001) OBJECT(RMTRLB) SAVLIB(P2S_ER
 _ 90  18.07.22 18:13:12 *SAVOBJSOC  HOST(*CH_001) OBJECT(RMTJLB) LIB(P2S_ERP)
 _ 90  18.07.22 18:13:12 RSTOBJSOC   HOST(*CH_001) OBJECT(RMTJLB) SAVLIB(P2S_ER
 _ 90  18.07.22 18:13:12 *SAVOBJSOC  HOST(*CH_001) OBJECT(RMTJLB) LIB(P2S_ERP)
 _ 90  18.07.22 18:13:12 RSTOBJSOC   HOST(*CH_001) OBJECT(RMTJLB) SAVLIB(P2S_ER
 _ 90  18.07.22 18:13:12 *SAVOBJSOC  HOST(*CH_001) OBJECT(RMTJNM) LIB(P2S_ERP)
 _ 90  18.07.22 18:13:12 RSTOBJSOC   HOST(*CH_001) OBJECT(RMTJNM) SAVLIB(P2S_ER
 _ 90  18.07.22 18:13:12 *SAVOBJSOC  HOST(*CH_001) OBJECT(RMTJNM) LIB(P2S_ERP)
 _ 90  18.07.22 18:13:12 RSTOBJSOC   HOST(*CH_001) OBJECT(RMTJNM) SAVLIB(P2S_ER
 _ 90  18.07.22 18:09:56 *SAVOBJSOC  HOST(*CH_001) OBJECT(RMTRLB) LIB(P2S_ERP)
 _ 90  18.07.22 18:09:56 RSTOBJSOC   HOST(*CH_001) OBJECT(RMTRLB) SAVLIB(P2S_ER
 _ 90  18.07.22 18:09:56 *SAVOBJSOC  HOST(*CH_001) OBJECT(RMTJLB) LIB(P2S_ERP)
 _ 90  18.07.22 18:09:56 RSTOBJSOC   HOST(*CH_001) OBJECT(RMTJLB) SAVLIB(P2S_ER
 _ 90  18.07.22 18:09:56 *SAVOBJSOC  HOST(*CH_001) OBJECT(RMTJLB) LIB(P2S_ERP)
                                                                        More...
F3=Exit    F5=Refresh         F11=Display all      F12=Return
```

The system link commands created on the primary system are displayed and can have the following statuses:

- 00 = created
- 90 = successful
- 91 = incorrectly terminated
- 99 = Command executed from wrong system link

With selection 5 further information can be displayed.

The description of the valid command keys can be found in the overview.

3.1.6 Selection A - Control processing

The same program is called which is indicated in the main menu under position 2. With the exception that only the mirror groups are displayed which are assigned to the corresponding system link.

3.1.7 Selection B - Service functions

The same program is called which is indicated in the main menu under position 5.
With the exception that only the mirror groups that are assigned to the corresponding system link are displayed.

3.1.8 Selection C - Control receiving processes

The same program is called which is indicated in the main menu under position 6.
With the exception that only the mirror groups that are assigned to the corresponding system link are displayed.

3.1.9 Selection D - Control remote journal reading processes

The same program is called which is indicated in the main menu under position 7.
With the exception that only the mirror groups that are assigned to the corresponding system link are displayed.

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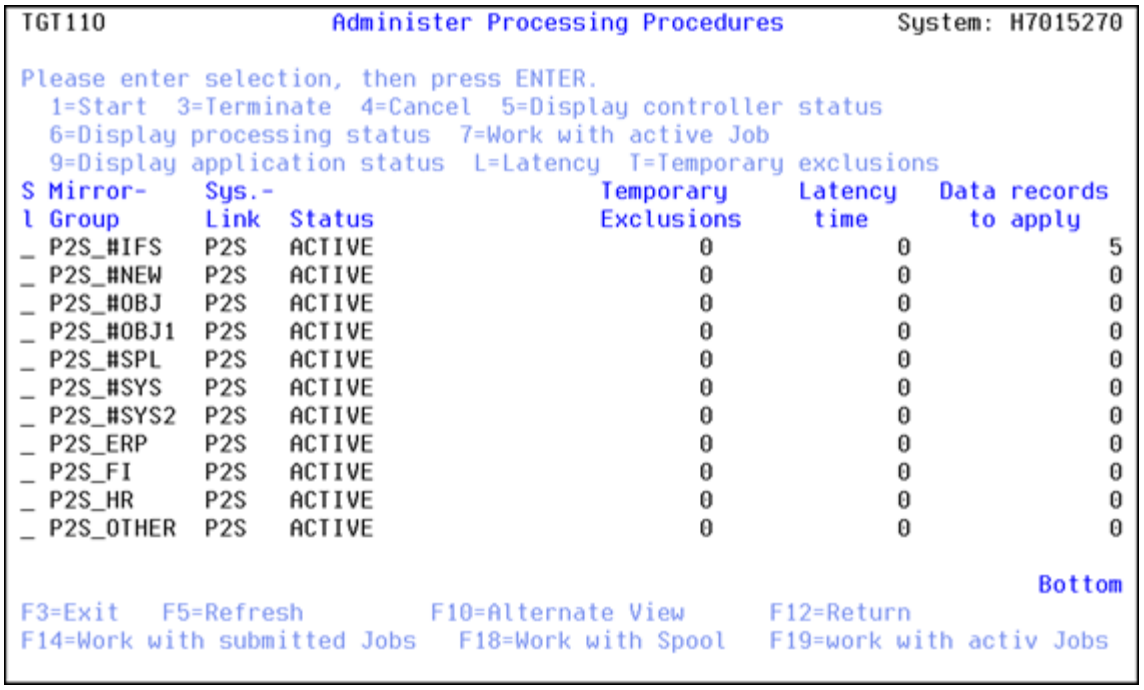
3.2 Main menu selection 2 – Work with applying processes



This management list offers the user the possibility to start or stop processing operations. Furthermore, the user can inform himself about the current status of his **HA system BUS4i**, as well as the processing processes, or monitor them.

The following valid input fields are available to the user:

Selection

The Selection data field is used to enter the options displayed on the current screen.
The choices can be combined depending on the type of work to be performed.
The options are performed in the order in which the selected items are in the list.
If you enter an option that is not allowed, an error message will appear on the screen.

The following options are available for managing the processing operations:

Selection 1 - Start processing

This selection option starts the processing on the secondary system.
It is started via the TGTSYS job queue, which is assigned to the BUS4i subsystem by default.
This subsystem must have been started before with the STRSBS command.

Selection 3 - End processing

This selection option terminates the processing process on the secondary system, regardless of whether the send process on the primary system has been terminated.
Normally, the completion of the sending process on the primary system automatically terminates the processing process on the secondary system and reorganizes the workspaces.

Selection 4 - Cancel processing

With this selection option, the processing process on the secondary system is abnormally aborted via the ENDJOB *IMMED command.
This selection should only be used in exceptional situations.

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Selection 5 - Display controller status
With this selection option the status of the data transmission line of the control units and APPC units can be displayed, as well as the description of these units can be changed. Furthermore, this selection can be used to connect or disconnect the above mentioned units.

Selection 6 - Display processing status
This selection option displays the status of the processing process, as well as the number of records received, the number of records already processed, and the number of records still to be processed.

Selection 7 - Work with active job
For the selected user job, information such as job log can be retrieved.

Selection 9 - Overall status
With this function you have the possibility to display the overall status of the mirroring (primary and secondary system) from one system (will be displayed with the basic control parameters activated).

Selection L - Latency
This function measures the latency times of the data journal and audit journal between the last journal entry sent and the last journal entry in the journal. This is displayed in a separate list.

Selection T - Temporary exclusions
With this function you can display the temporary exclusions of the mirror group. The temporary exclusions are divided into IFS, spool and object/file. They are displayed in a separate list.

Valid command keys of the current mask:

F3=End
Exit the current application function.

F5=Update
This command key is used for updating the selection lists. All options currently entered on the screen are deleted. The display list is rebuilt so that any list entries added, modified or deleted by other users are also displayed or removed.

F12=Back
Back to the previous mask, all entered values of this mask will not be saved.

F14=Work with transferred jobs
Displays information about jobs placed in the job queue for batch processing during the work session. Values entered on the screen are not taken into account when this command key is pressed.

F18=Work with output
Displays a list of spool files in the output queue. Values entered on the screen are not taken into account when this command key is pressed.

F19=Work with active jobs
With this selection option all jobs active in the system are displayed. This corresponds to the WRKACTJOB command.

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3.2.1 Selection 1 - Start processing

If the processing process was not started automatically with the sending process, the processing process can be started on the secondary system manually with the STRVABP command, or with selection 1 in the management list for the processing programs.

It is started via the TGTSYS job queue in the TGTSYS library. This job queue is assigned to the BUS4i subsystem by default. The subsystem must have been started beforehand by the STRSBS command. The processing process reads
z. e.g. the received database changes and passes them to the corresponding file processing program.

The processing process on the secondary system is started only if a processing process is not already active for the specified application.

3.2.2 Selection 3 - End processing

Ending the sending process on the primary system automatically ends the processing process on the secondary system.

Via the ENDVABP command with ENDOPT = *CNTLD, or via selection 3 in the management list of the processing programs, the processing process can be terminated independently of the send process and thus the internal memory space can be released. To terminate, an END control record is copied into the control file, thus causing the reorganization and closing of the individual application files. The processing process should then be restarted.

3.2.3 Selection 4 - Cancel processing

In exceptional situations the processing process can be abnormally aborted. This is done either via selection 4 in the management list of the processing programs or optionally via the ENDVABP command. It should be noted that the abort may cause database changes to be lost which have not yet been physically written to the magnetic disk have been written.

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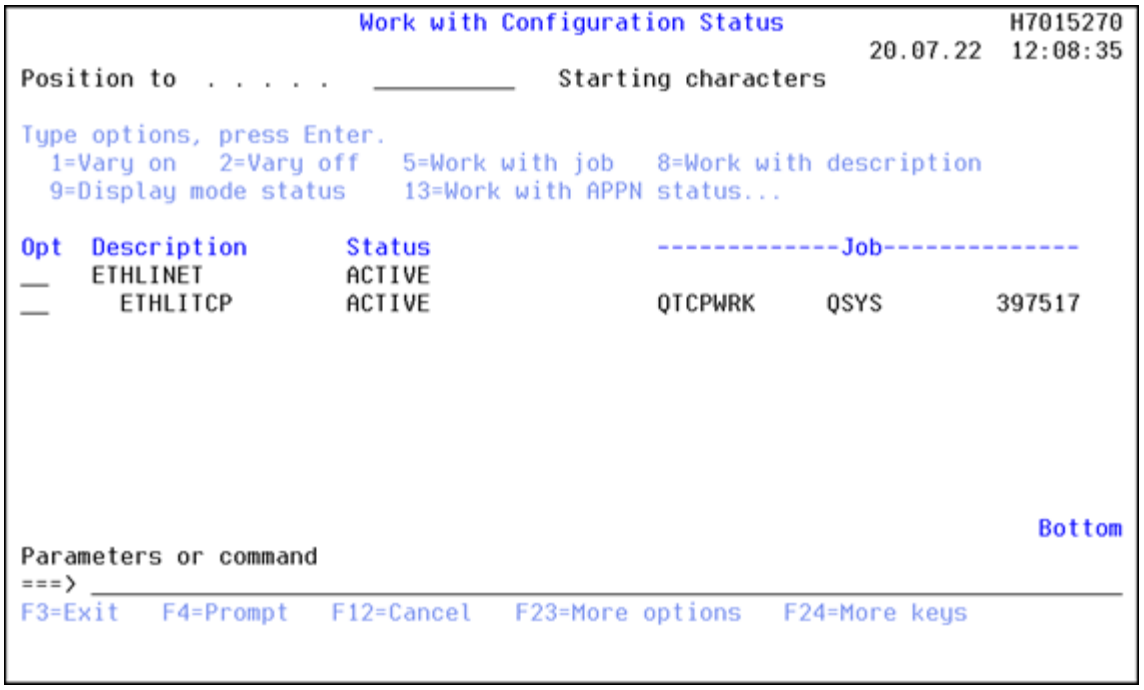
3.2.4 Selection 5 - Display controller status



Via selection 5 in the selection list of the send process management you get the display "Work with configuration status".
This display list shows status information for lines, control units, and APPC units. It also shows job tag information for the active units. For each selected line and control unit description, all associated control unit and unit descriptions are displayed. Also shown are associated mode descriptions for active APPC units.
The configuration descriptions are indented below the corresponding object.

To ensure proper operation, the line and the control unit must be attached.

The selection option is entered before the respective description name and the Enter key is pressed. Several, also different, selection options can be entered, whose functions are executed one after the other.

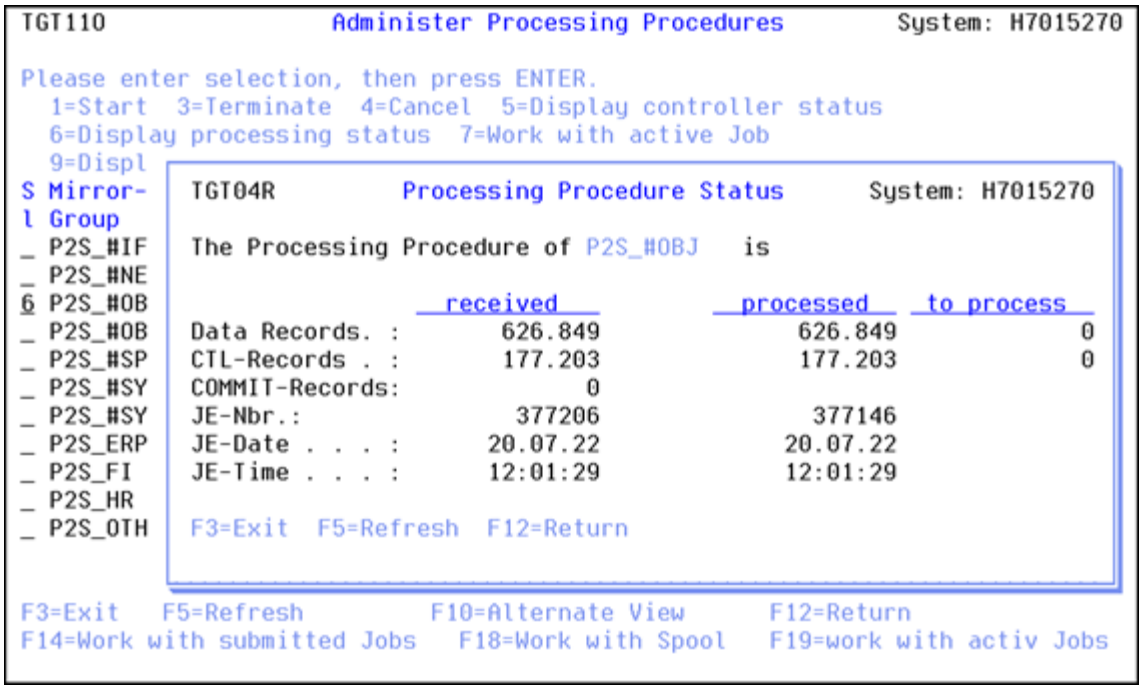
If the keywords for the parameters are known, the values can be specified on the command line for Selection 1 (Append), Selection 2 (Append), Selection 3 (Stop Unit), Selection 9 (Show Mode Status), or for a command. The specified values appear in the operator guidance displays.

Commands can be entered in the command input line. To get information about the command, enter the command and press the help key.
The user gets assistance in entering the command by typing the command and pressing the command key F4.

If "More ..." appears appears at the bottom right of the display, further information is available. Press the "Page forward" key (or "Page up") to page forward. Press the "Scroll back" key (or "Page down") to scroll back. If "End" appears instead of "More ... appears instead of "End", the end of the list has been reached.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

3.2.5 Selection 6 - Display processing status



This display is a display format and is only used for information. Here information about the current processing process for the secondary system is output. The information is to be interpreted as follows:

Data sets:
Database records which have been processed on the primary system and which are to be processed on the secondary system.

- Received:
  Number of records transferred from the primary system since the start of communication.
- Already processed:
  Number of receiving records which are already processed by the secondary system.
- Open - to be processed:
  Number of received records which are still to be processed by the secondary system.

Command and control sets:
Command sets which have been captured by means of the CRTCMDE user interface on the primary system and are to be executed on the secondary system.

Control records, which are required for internal processing.

- Received:
  Number of command or control records transmitted from the primary system since the start of communication.
- Already processed:
  Number of receiving command or control records which are already processed by the secondary system.

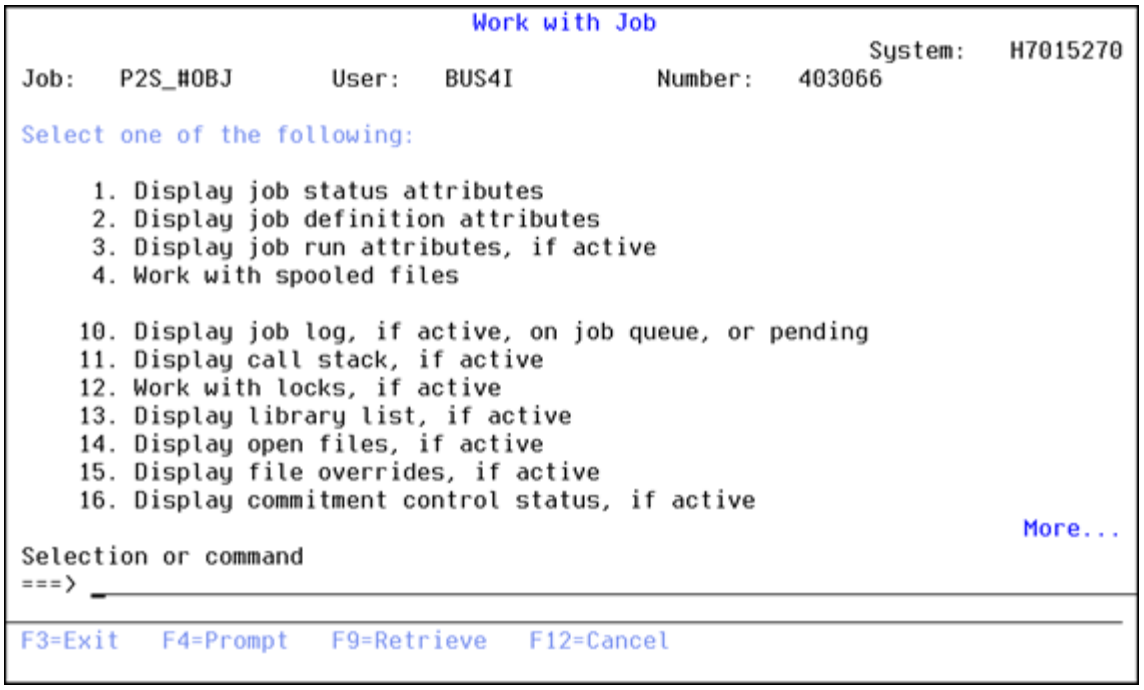
- Open - to be processed:
  Number of received command or control records which are still to be processed by the secondary system.

COMMIT control sets

Transferred COMMIT control records if the application being transferred to the secondary system has COMMIT control. COMMIT records are, for example, COMMIT and ROLLBACK.

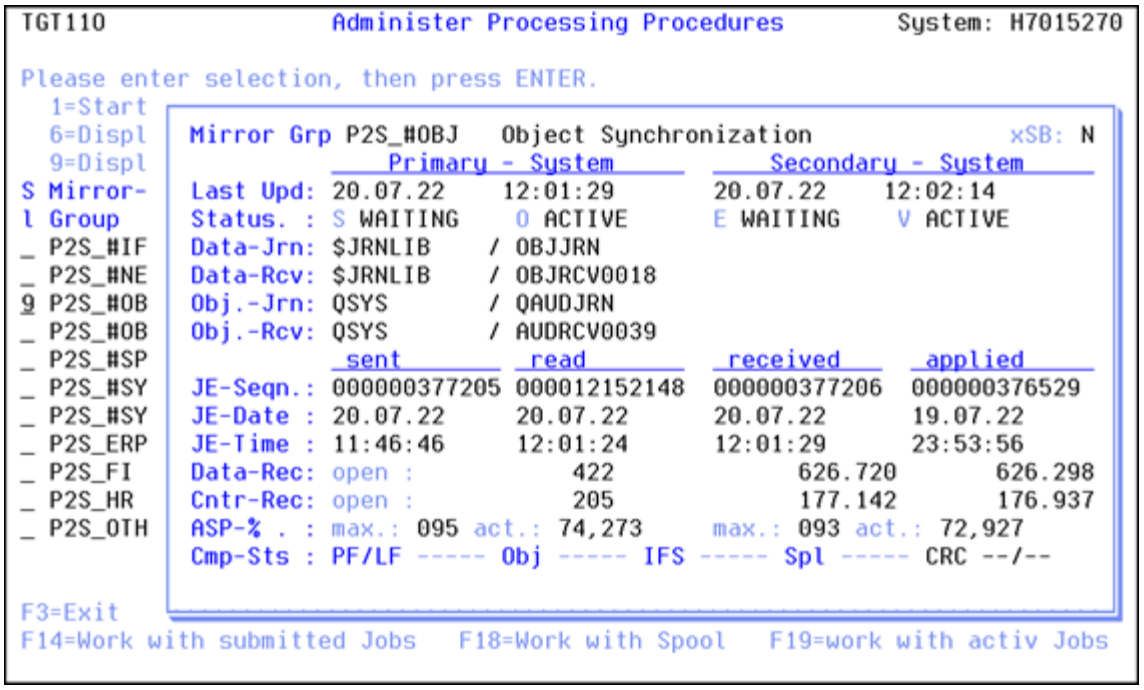
- Received:
  Number of database records transferred from the primary system since the start of communication.

3.2.6 Selection 7 - Work with active job



The WRKJOB system command for the selected user job is called. Information such as job log, job status attributes, open files, spool file information for the user job can be called.

3.2.7 Selection 9 - Display overall status



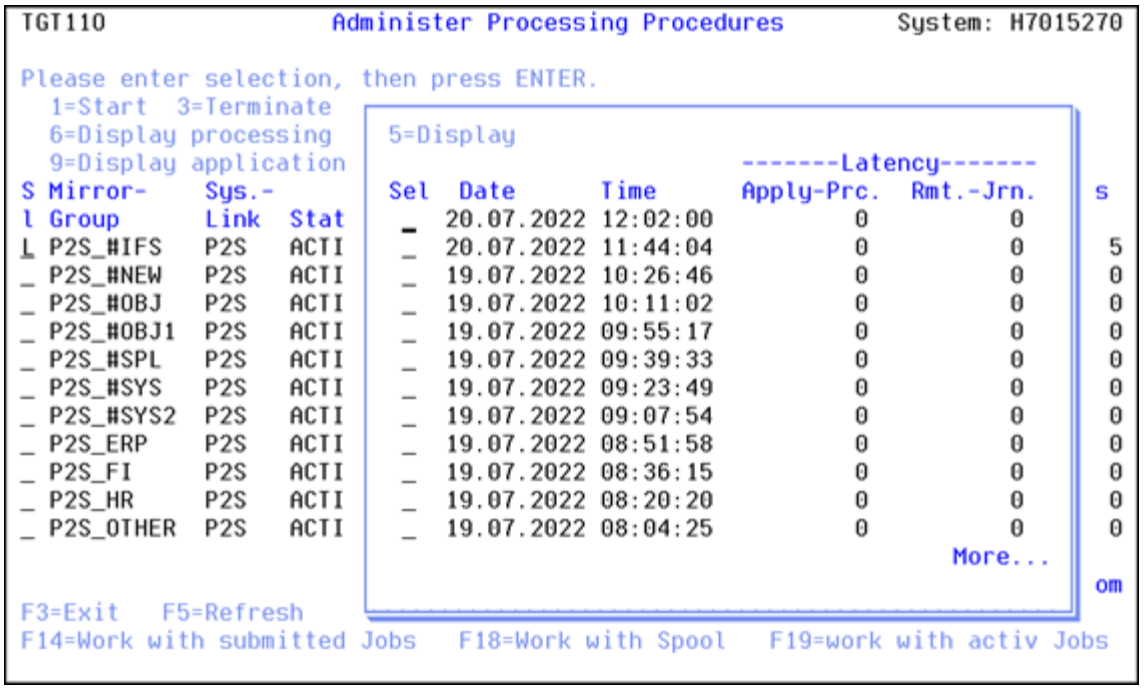
In "Control processing" as well as in "Manage mirror groups", the overall status of a mirror group can be displayed on both the primary and the secondary system via selection 9. Among other things, the journal and the journal receiver for the mirror group are displayed, taking into account the number of records processed. In addition, the ASP occupancy can be checked.

The bottom line displays the status of deviations between production and backup system. This display informs about errors, warnings, OK's for part files (PF/LF), objects (Obj), IFS objects(IFS) and spool files (Spool).

Detailed information can be displayed on the secondary system by selecting 5=Service functions.

The display "-----" means that no information is available in this mirror group for the respective object type.

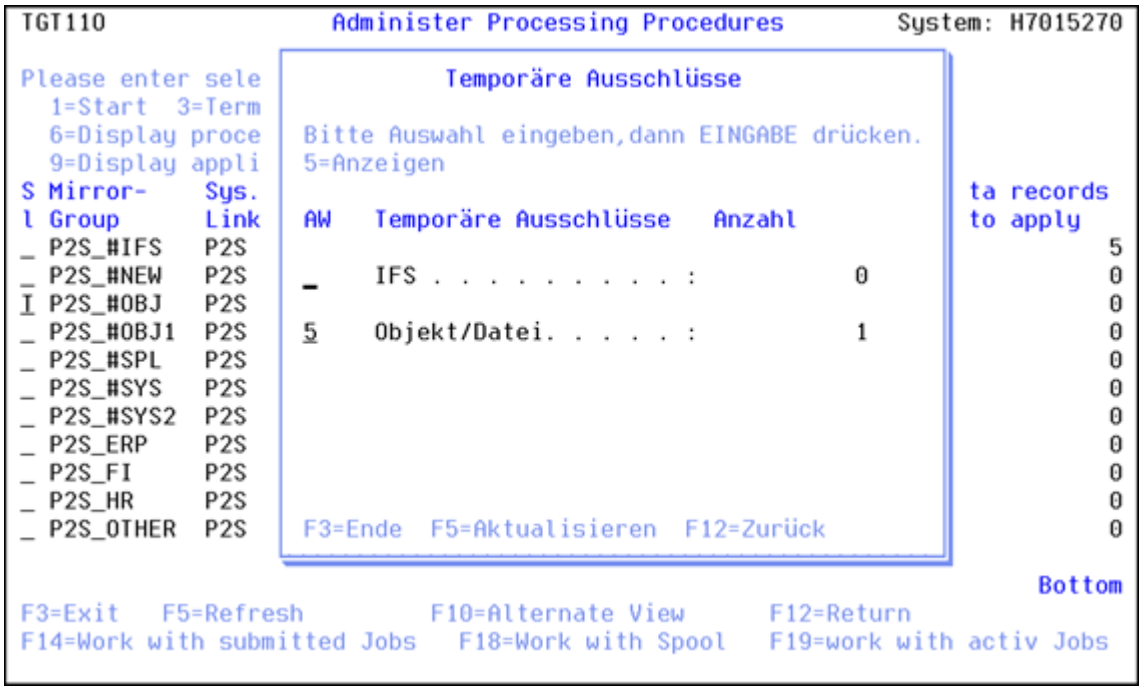
3.2.8 Selection L - Latency



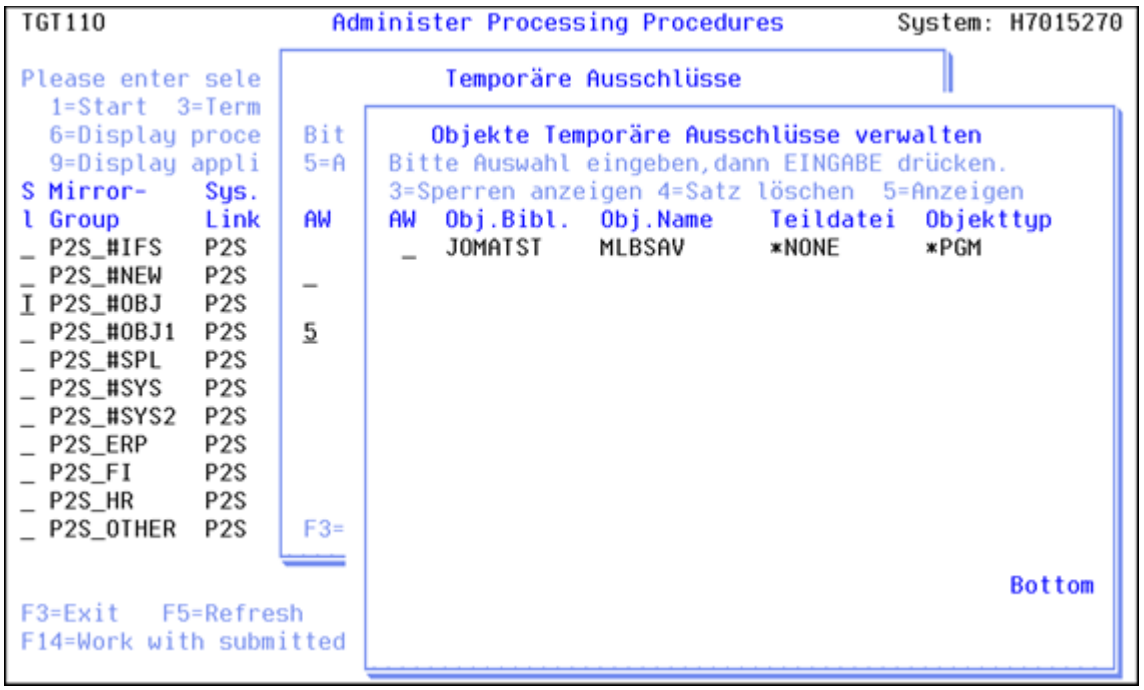
In this view, the latency times of the processing process and the remote journal reading process are logged. Logging is done in e.g. 30 minutes interval, depending on the monitoring interval of the process control.

With 5 = Display you can view the latency in more detail.

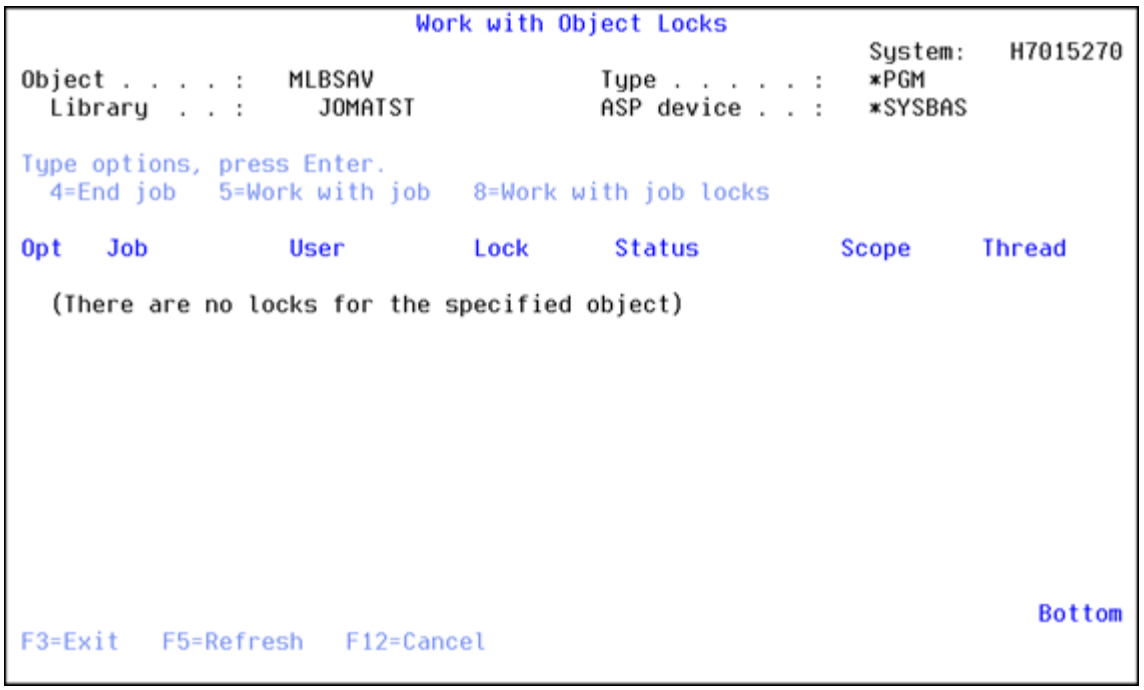
3.2.9 Selection T - Temporary exclusions



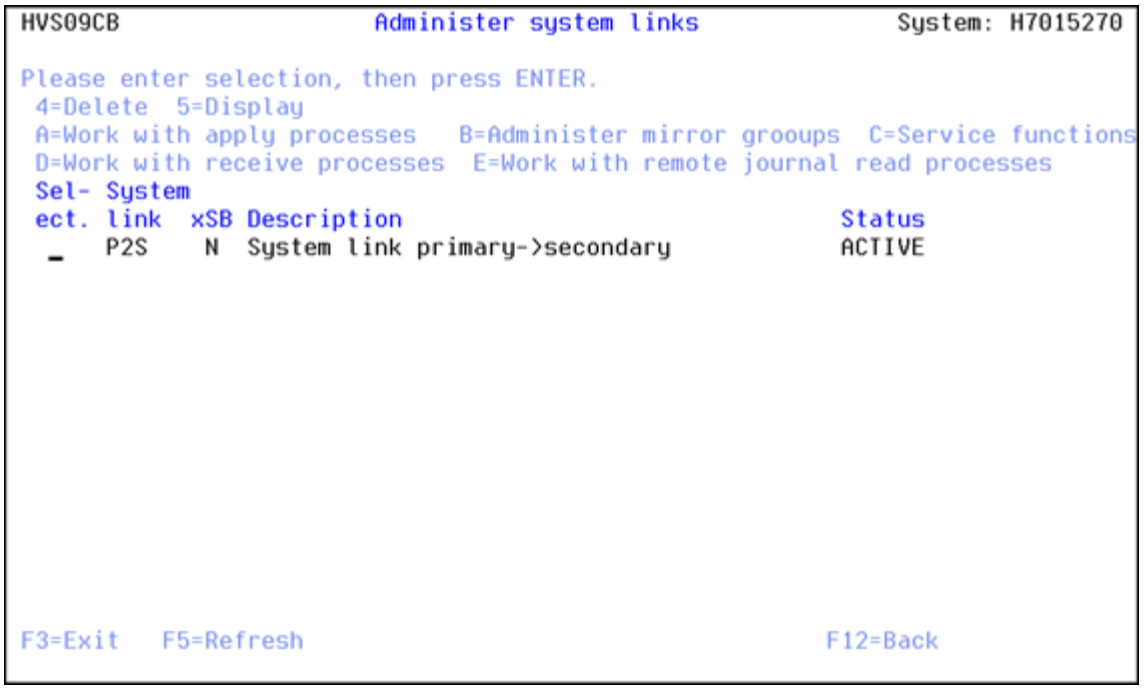
With this function you can display the temporary exclusions of the mirror group. The temporary exclusions are divided into IFS, spool and object/file. These are displayed in a separate list. With 5-displays you can display the individual exclusions in a list. There you get further information like the object type, the creation or check date/time and the check indicator.



"3=Show locks" to show the job locks on the object/file. And what kind of lock is on it.



3.3 Main menu selection 3 - Display system links



With this selection list the user can change, add, delete, copy or rename system links. Furthermore, the corresponding control parameters can be changed and the mirror groups can be controlled, managed and filters and rules for mirror groups can be managed.

The following options are possible for **managing the system links:**

Selection

In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

Selection 4 - Delete

With this selection option system links can be deleted.

Selection 5 - Display

This selection option can be used to display application-specific control parameters.

Selection A - Control processing

This function allows you to start and stop processing operations. Furthermore the user can inform himself about the current state of his **HA system BUS4i** with all assigned **mirror groups** or monitor the HA system.

Selection B - Service functions

With this function it is possible to call up administration menus for the restart functions and special displays for each mirror group.

Selection C - Control receiving processes

This selection can be called to start, stop or cancel receive processes. Furthermore, the user can get information about the current state of all **mirror groups of** the secondary system or monitor them.

Selection D - Control remote journal reading processes

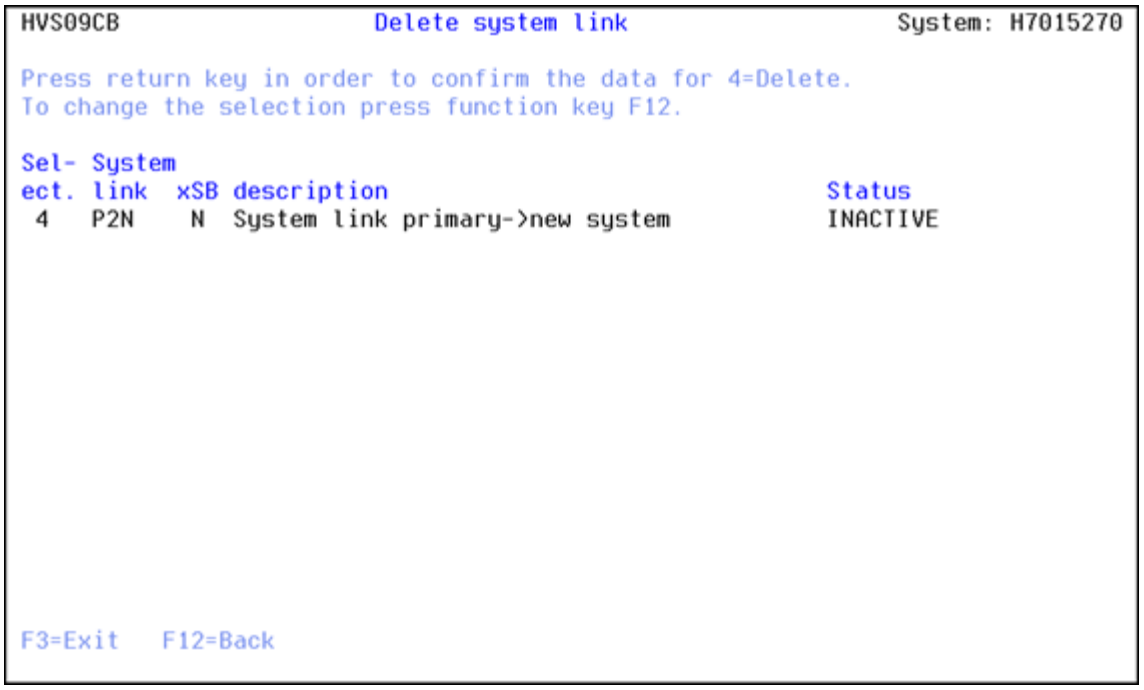
With this selection, the reading processes can be controlled and monitored for a mirror group with Remote Journal.

The following command keys are valid on the current mask:

F5=Update

This command key is used for updating the selection lists. All options currently entered on the screen are deleted. The display list is rebuilt so that any list entries added, modified or deleted by other users are also displayed or removed.

3.3.1 Selection 4 - Delete system link

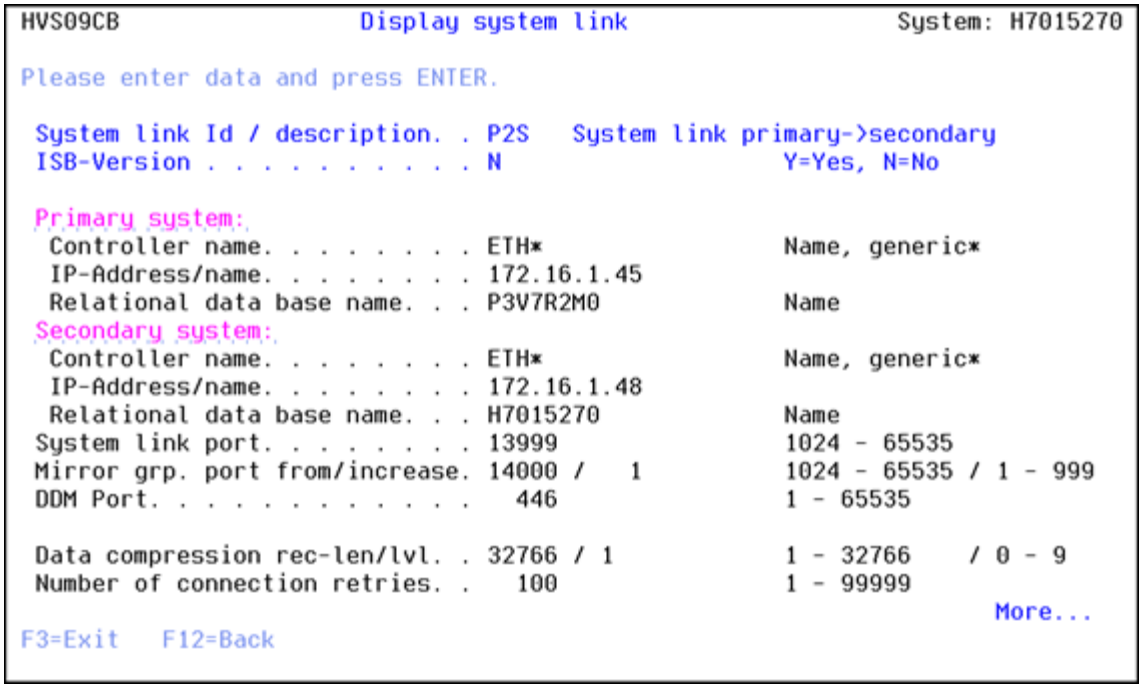


Via selection 4 in the management list of the system links, one or more system links can be deleted from the BUS4i HA system. The system links can only be removed if they are in the INACTIVE status and no mirror groups are assigned to the system link.

After confirming with the Enter key, the system link is deleted.

3.3.2 Selection 5 - Display system links

With selection 5 in the management list of the system links, the control parameters of a system link in each status can be displayed and controlled.



With the selection option 5 in the administration list of the system links, the user has the possibility to display application-specific control parameters. With the enter key further control parameters can be displayed. Which control parameters are to be displayed depends on whether it is an ISB version or not.

System Link Id
Name of the **system link for** which the invoked command is to be executed.

IPM version
It is displayed whether the current system link is an IPM version.

The following input fields are available to the user on the current screen:

Designation
The system link can be specified by an additional descriptive text for better identification.

Primary system: controller name
The controller name specifies the unit description used to physically connect the primary and secondary systems. For the transfer process from the production system to the secondary system, the controller must be attached.

Primary system: IP address/name
IP address or name of the primary system over which the systems communicate.

Primary system: Relational database name
Name of the relational database of the primary system.

Secondary system: controller name
The controller name specifies the unit description used to physically connect the primary and secondary systems. For the transfer process from the production system to the secondary system, the controller must be attached.

Secondary system: IP address/name
IP address or name of the secondary system over which the systems communicate.

Secondary system: Relational database name
Name of the relational database of the secondary system.

System link port
Port over which the communication of the system links between primary and secondary system takes place. Valid values are from 1024-65535.

Mirror groups Port from/Elevation
Ports over which the communication of the mirror groups between primary and secondary system takes place. The ports of the mirror groups are assigned automatically. They start from the specified from port and are assigned consecutively according to the increment. Valid values are from 1024-65535 and 1-999.

DDM Port
Port over which the DDM communication between primary and secondary system takes place. Valid values are from 1-65535.

Data compression Rec length/Lvl
This parameter controls from which data set length the built-in compression is switched on. This reduces the volume to be transferred. Savefiles are not taken into account if the record length exceeds 528.

The data compression level specifies how strongly the data to be transmitted is compressed before it is sent to the secondary system. The level can be selected between 0=no compression to 9 strong compression. The higher the compression level is set, the longer it takes, but this can have a positive effect on the transmission if the network line is slow and the system is fast. The default value is 1.

Number of connection attempts
Here you can specify how often an attempt should be made to establish a connection between the primary and secondary systems.

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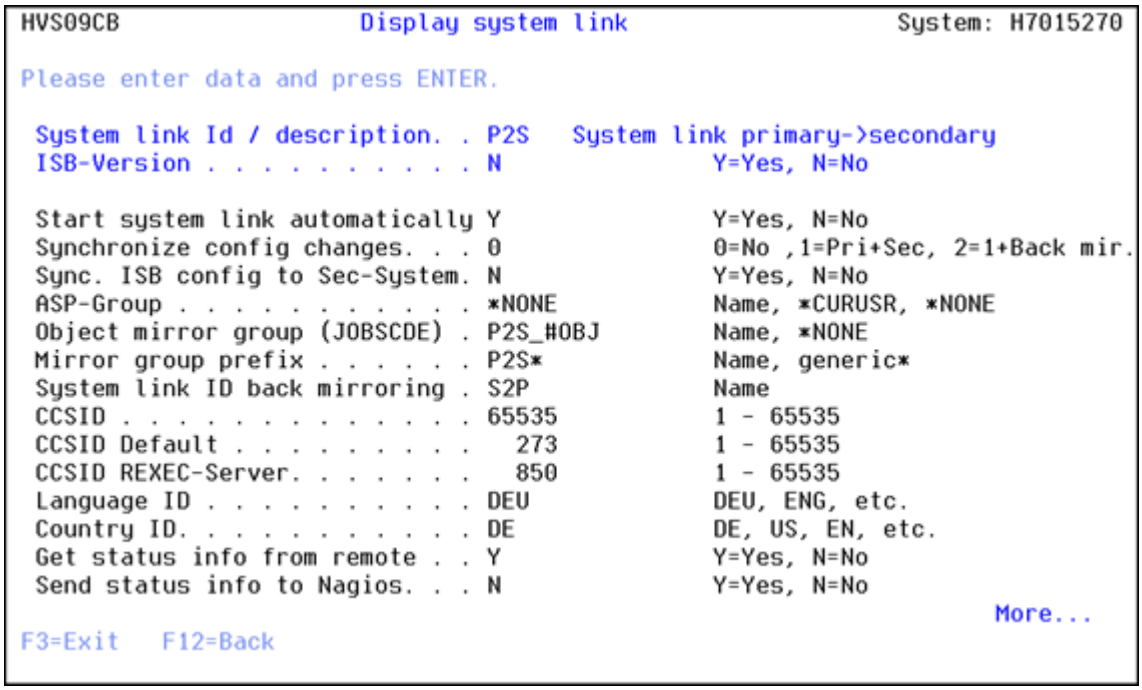


The following displays are available to the user on the current screen:

System Link Id

Name of the **system link for** which the invoked command is to be executed.

IPM version

It is displayed whether the current system link is an IPM version.

Designation

The system link can be specified by an additional descriptive text for better identification.

Start system link automatically

Here you can define whether the system link should be started automatically by the process monitoring.

Valid values for the input parameter are:

Y=Yes

After the monitoring interval has elapsed, a check is made to see whether the system link is active. If not, the system link is started

N=No

The system link is not started automatically.

Synchronize configuration automatically

Here you can define whether configuration changes should be synchronized automatically by BUS4i.

Valid values for the input parameter are:

0=No

Configuration changes are not synchronized.

1=Pri+Sec
Configuration changes are automatically synchronized between the primary and secondary systems, but not the mirroring back. This setting should be selected if the IP addresses are not swapped on a switch-over, or there is no need for back-mirroring on a new system.

2=1+reverse
Configuration changes are automatically synchronized between the primary and secondary systems and likewise the rear-view mirroring.

ISB config. synch. to sec. sys.
Here you can define whether an ISB configuration is to be synchronized to a secondary system.

Valid values for the input parameter are:

Y=Yes
An IPM configuration is synchronized to the secondary system of this system link.
N=No
An ISB configuration is not synchronized.

ASP Group
Specifies the name of the ASP (auxiliary storage pool) group for the current thread. The ASP group name is the name of the primary ASP unit within the ASP group.
The libraries of all ASPs in this ASP group are included in the library namespace.

Object mirror group (JOBSCDE)
Here the mirror group is to be specified, over which the job scheduler is sealed.
If he job scheduler is not mirrored, any object mirror group or *NONE can be specified.
However, it should be noted that some commands use this mirror group as default value.

Mirror group prefix primary
Here the prefix of all mirror groups of this system link is to be defined.

System Link ID Rear View Mirror
The system link ID of the rear view mirror must be defined here.

CCSID
The CCSID used by the system link must be defined here.

CCSID Default
The CCSID default value used by the system link is to be defined here.

CCSID REXEC server
The CCSID used by the REXEC server must be defined here.

Language ID
Here you have to define the language ID used by the system link.

Country ID
Here you have to define the country ID used by the system link.

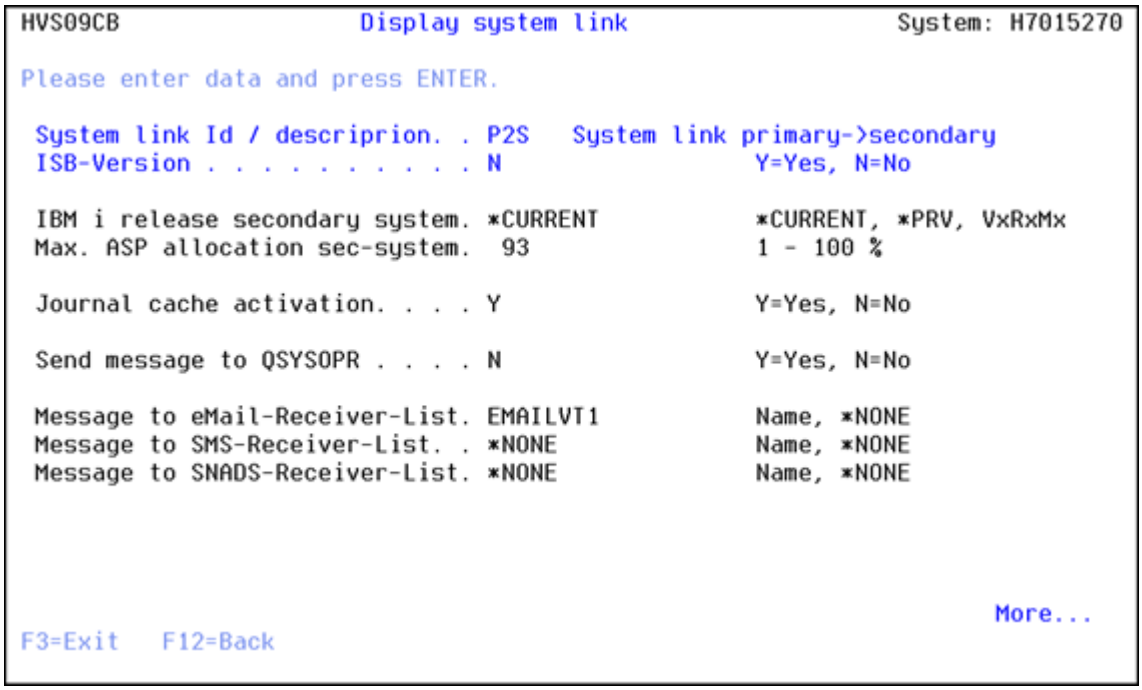
Get status info from remote
Valid values are "Y"= Yes and "N"= No. If "Y" is set, status information is periodically sent from the
remote system, which can be selected via selection 9 in the "Manage send processes" program.
can be displayed.

Send status info to Nagios
Here you can define if BUS4i status messages should be sent to the defined Nagios server.

Valid values for the input parameter are:

Y=Yes
If "Y" is selected, a message with the respective status of the mirror groups is sent to the Nagios server after the monitoring interval has expired.

N=No
No BUS4i status messages are sent to the defined Nagios server.



The following displays are available to the user on the current screen:

System Link Id
Name of the **system link for** which the invoked command is to be executed.

IPM version
It is displayed whether the current system link is an IPM version.

Designation
The system link can be specified by an additional descriptive text for better identification.

IBM i Release Secondary System
The operating system version of the secondary system must be specified here.

Max. ASP occupancy sec system
If the threshold value specified here for the ASP occupancy of the secondary system is exceeded, the send process on the primary system is stopped.

Enable journal cache
Here you can define whether the cache of the journals of this system link should be activated.

Valid values for the input parameter are:

Y=Yes
When a new journal is created, the cache is automatically activated.

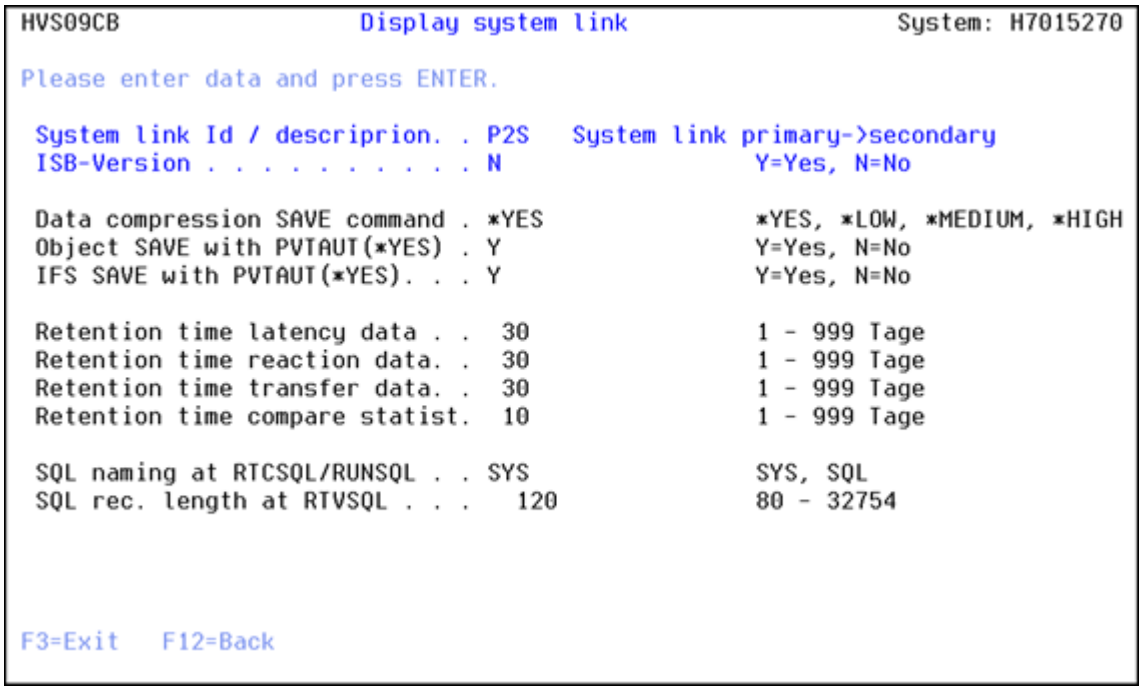
N=No
The cache of the journal is not activated.

Send message to QSYSOPR
If "Y"=Yes is entered, the BUS4i status messages are sent to the QSYSOPR after the test interval has elapsed.

Message to eMail distribution list ID
Specification of the unique name ID for the distribution list. An error message is sent to this distribution list in case of an error.

Message to SMS distribution ID
Specification of the unique name ID for the distribution list. An error message is sent to this distribution list in case of an error.

Message to SNADS distributor ID
Specification of the unique name ID for the distribution list. An error message is sent to this distribution list in case of an error.



The following displays are available to the user on the current screen:

System Link Id
Name of the **system link for** which the invoked command is to be executed.

IPM version
It is displayed whether the current system link is an IPM version.

Designation
The system link can be specified by an additional descriptive text for better identification.

Data aggregation at SAVE
Specifies whether data compaction is being performed. If the backup is performed while other jobs are active in the system, using compaction via software, the overall performance of the system may be affected.

Obj. SAVE with PVTAUT(*YES)
Specifies whether to back up personal permissions with the objects being backed up. Backing up personal permissions increases the time required to back up the objects, but simplifies restoring an object or group of objects.

IFS SAVE with PVTAUT(*YES)
Specifies whether to back up personal permissions with the objects being backed up. Backing up personal permissions increases the time required to back up the objects, but simplifies restoring an object or group of objects.

Dwell time Latency times
Specifies how long the data should be kept (in days) before it is deleted and reorganized.

Dwell time Response times
Specifies how long the data should be kept (in days) before it is deleted and reorganized.

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Dwell time Transfer statistics
Specifies how long the data should be kept (in days) before it is deleted and reorganized.

Dwell time Compare statistics
Specifies how long the data should be kept (in days) before it is deleted and reorganized.

SQL Naming with RTVSQL/RUNSGQ
Specifies the naming convention used to name objects in SQL statements.

SQL Rec length for RTVSQL
Specifies the record length of the created part file used with RTVSQL.

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3.3.3 Selection A - Control processing

The same program is called which is indicated in the main menu under position 2. With the exception that only the mirror groups are displayed which are assigned to the corresponding system link.

3.3.4 Selection B - Service functions

The same program is called which is indicated in the main menu under position 5.
With the exception that only the mirror groups that are assigned to the corresponding system link are displayed.

3.3.5 Selection C - Control receiving processes

The same program is called which is indicated in the main menu under position 6.
With the exception that only the mirror groups that are assigned to the corresponding system link are displayed.

3.3.6 Selection D - Control remote journal reading processes

The same program is called which is indicated in the main menu under position 7.
With the exception that only the mirror groups that are assigned to the corresponding system link are displayed.

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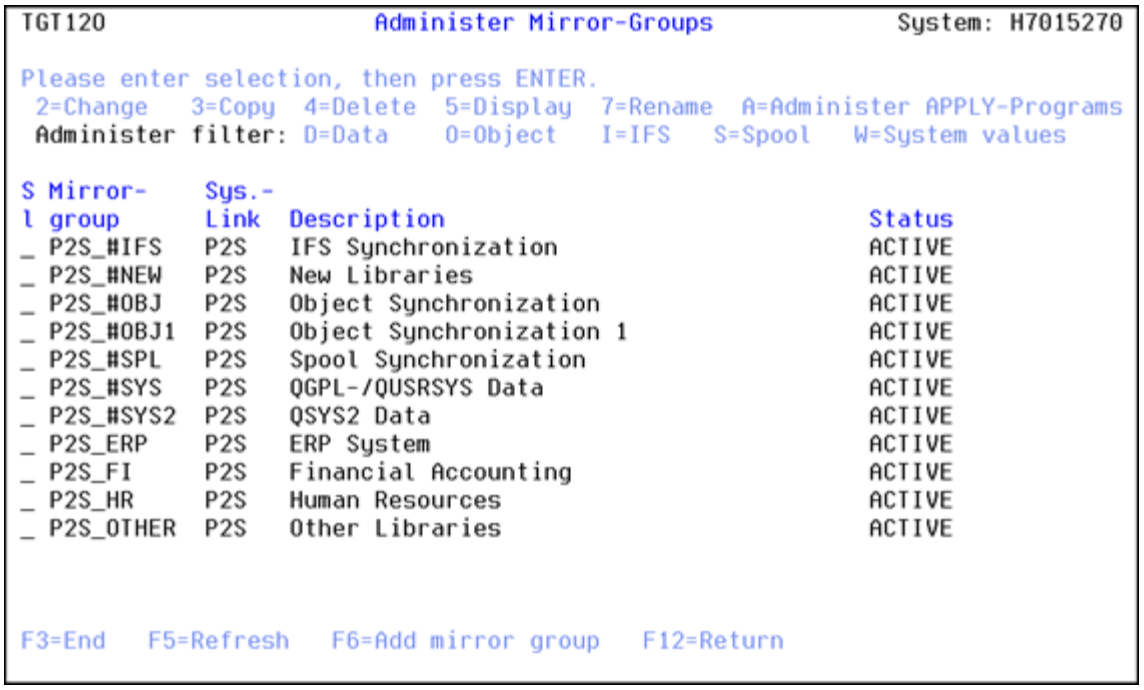
3.4 Main menu selection 4 - Administer mirror groups



With this selection list the user can add, delete, copy or rename **mirror groups.** Furthermore, the corresponding control parameters can be changed and the filters for files, objects, spool files, IFS files and system values of a **mirror group can be** managed.
A separate library is created for each **mirror group**, which contains all objects that cannot be used across applications.

The following valid input fields are available to the user:

Selection

The Selection data field is used to enter the options displayed on the current screen.
The choices can be combined depending on the type of work to be performed.
The options are performed in the order in which the selected items are in the list. When entering an option that is not allowed, an error message appears on the screen.

The following options are available for **mirror group** management:

Selection 2 - Change

This selection option can be used to change application-specific control parameters.

Selection 3 - Copy

This selection option allows **mirror groups** to be copied to a new application.

Selection 4 - Delete

This selection option can be used to delete **mirror groups.**

Selection 5 - Display

This selection option can be used to display application-specific control parameters.

Selection 7 - Rename

With this selection option the name and description of a **mirror group** can be changed.

Selection A - Manage processing programs

With this selection list the user can add, delete, copy or rename processing programs.

Selection D - Manage data filters

This selection option can be used to manage data filters for data to be restored. This option is only possible for an xSB version. The description of the individual masks see description in the primary system, chapter 1.1.4.10.

Selection O - Manage object filters

With this selection option, object filters for objects to be restored can be managed This function is only possible for an xSB version. The description of the individual masks see description in the primary system, chapter 1.1.4.11.

Selection S - Manage spool filters

This selection can be used to manage spool filters for spool files that are to be reflected back. This function is only possible for an xSB version. The description of the individual masks see description in the primary system, chapter 1.1.4.12.

Selection I - Manage IFS filters

With this selection IFS filters can be managed for the IFS files that are to be mirrored back. This function is only possible for an xSB version. The description of the individual masks see description in the primary system, chapter 1.1.4.14.

Selection W - Manage system filters

This selection can be used to manage system value filters for system values that are to be restored. This function is only possible for an xSB version. For the description of the individual masks see chapter 1.1.4.14.

The following command keys are valid on the current mask:

F3=End

Exit the current application function.

F5=Update

This command key is used for updating the selection lists. All options currently entered on the screen are deleted. The display list is rebuilt so that any list entries added, modified or deleted by other users are also displayed or removed.

F6=Add mirror group

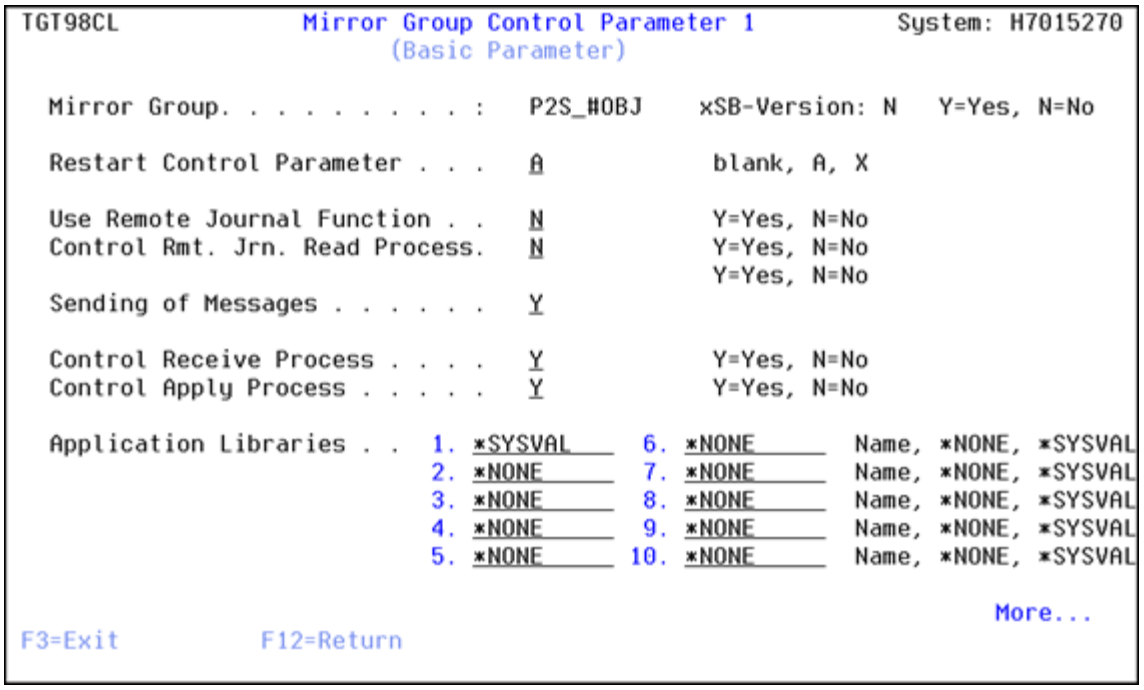
This function key is used to add a new mirror group to the **BACKUP SYSTEM.** Here, a library with the name of the respective **mirror group is** created and the application-specific objects are duplicated from the original TGTSYS library. Once the library with the corresponding objects has been created, the control parameters must be entered and the files to be mirrored must be managed.

F12=Back

Back to the previous mask, all entered values of this mask will not be saved.

In this case, the user returns to the main menu of the **HA system BUS4i as** when pressing the command key F3=End.

3.4.1 Selection 2 - Change control parameters of the mirror group



With the selection option 2 in the management list of the mirror groups, the user has the possibility to change application-specific control parameters. With the Enter key, further control parameters can be displayed. Which control parameters are to be displayed depends on the parameter activated on this screen, e.g. object synchronization. By selecting option 5 of the management list, the user gets the same display. However, the control parameters are only displayed and cannot be changed.

The current **mirror group** is displayed on each mask with control parameters.

Mirror group

Name of the **mirror group for** which the called command is to be executed.

xSB version

It is displayed whether the current application is an xSB application.

The following input fields are available to the user on the current screen:

Restart control parameters

The Restart control parameter specifies the power description used to physically connect the secondary and primary systems. For the one from the primary to the secondary system, the line does not need to be attached.

The parameter can contain the following values:

blank:

The processing process was finished normally. If the processing is started with this value, adding a new record to a file - if this record already exists - is reported as an error.

'A':

The processing process has ended abnormally or is currently active. This value is therefore set when starting a processing process to mark the abnormal end in case of a crash.

This value indicates the following error situation:

- Termination of the processing process by ENDJOB, ENDSBS or PWRDWNSYS.
- Database is asynchronous to the primary system, i.e. when adding a record the relative record number is not equal to the production system or when changing the record was not found

If the processing is started with this value, when a record is added to a file, it is first checked whether this record already exists. Adding is ignored if the record is found.

'X':
The processing has terminated because one of the following errors has been detected:

- The file was not found or opened in a different library than on the primary system.
- The partial file name is different from the primary system.
- The record length between production and secondary system is different.
- A record could not be edited because it was either locked or a duplicate key was detected when it was added.

'U':
The processing was terminated because a difference in the record content before the change was detected in a file defined as "global".

If the processing process is started with this value, it terminates ad hoc. The value must be reset manually to blank or 'A'.

Using Remote Journal
Enables synchronous data transfer. On the primary system, the data is not saved and the transaction is not completed until the secondary system has logged and confirmed the change in the remote journal.

Rmt. Jrn. Monitor reading
There are two possible entries here: "Y"=Yes or "N"=No. If a "Y" is entered at this point, a message is output that the reading process is inactive after the reading process has been completed and after the time interval defined in the process monitoring (default 20 minutes) has elapsed.

Send messages
In case of a processing error of the received changes, messages are sent. The distribution lists are specified in the control parameter 2.

Monitor receiving processes
When activated with Y, the process is checked whether it is in INACTIVE status. In case of an error, a message is sent to the distribution lists.

Monitor processing operations
When activated with J, the process is checked whether it is in INACTIVE status. In case of an error, a message is sent to the distribution lists.

Application libraries
Up to 10 application libraries can be defined to be included in the library list of the processing process. This may be necessary if triggers or certain objects require from these libraries.

Valid values for the Application libraries parameter are:

Name
Specify the name of the application library.

***NONE**
No application library is entered.

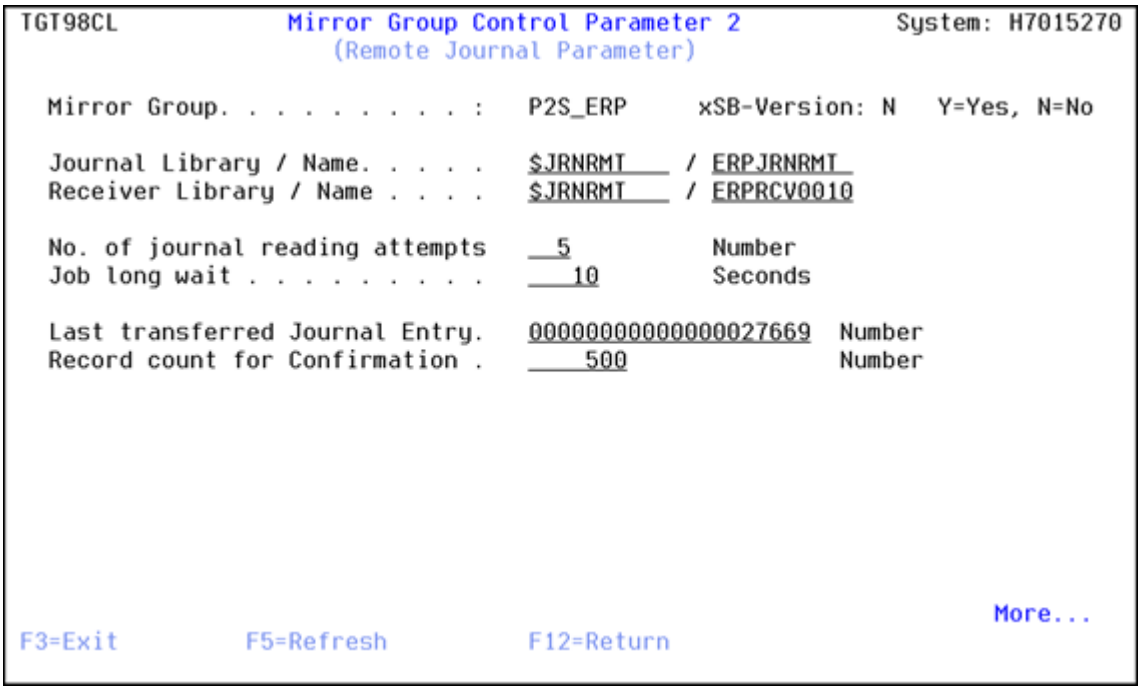
***SYSVAL**
The libraries of the system value QUSRLIBL are stored at the specified location.

Valid command keys of the mask:

F3=End
Exit the current application function.

F12=Previous display
Back to the previous mask, all entered values of this mask are not saved. The user returns to the management list of mirror groups.

If "Use Remote Journal" was specified with 'Y' in the basic parameters, the following mask appears:



Mirror group
Name of the **mirror group for** which the called command is to be executed.

xSB version
It is displayed whether the current application is an xSB application.

The following input fields are available to the user on the current screen:

Remote Journal Library
Name of the library that contains the journal on the remote system.

Remote Journal Name
Name of the journal via which the entries are placed on the remote system.

Remote Receiver Library
If a "Y" was entered for "Use of remote journal" in the base parameter, the name of the library in which the remote journal used is located is listed here.

Remote Receiver Name
If a "Y" is entered in the "Use remote journal" field of the basic parameter, the name of the remote journal recipient is displayed here.

Number of journal read attempts
This specifies the maximum number of attempts that the send process should make in succession before entering the job wait state.
The duration for which the send process should be in wait status is specified in the "Job wait time" parameter.

Job waiting time
Waiting time in seconds that the send process waits until it checks again whether journal entries to be sent exist in the journal receiver.

Last number transmitted

Number of the last properly transferred journal entry. This is confirmed by the BACKUP SYSTEM and the data area is updated.

Record interval for confirmation

The record interval for acknowledgement specifies the maximum number of records after which an acknowledgement is requested by the receiving process. The receiving process compares the number of sent records with the number of received records and confirms positively if they match. In case of positive confirmation, the "Last transmitted number" data area is updated. All unconfirmed records are sent again to the secondary system.

Valid command keys of the mask:

F3=End

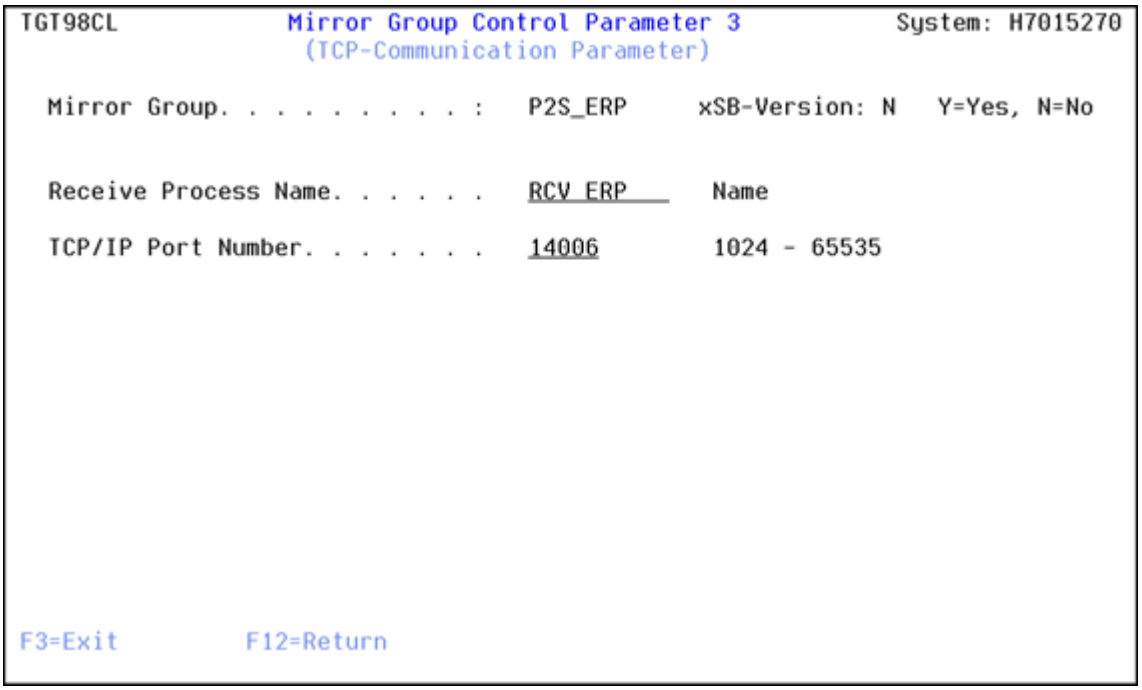
Exit the current application function.

F5=Update

Pressing this function key F5 displays the current values that may occur after manual changes or changes made by the program.

F12=Previous display

Back to the previous mask, all entered values of this mask are not saved. The user returns to the management list of **mirror groups.**



The current **mirror group** is displayed on each mask with control parameters.

Mirror group
Name of the **mirror group for** which the called command is to be executed.

xSB version
It is displayed whether the current application is an xSB application.

The following input fields are available to the user on the current screen:

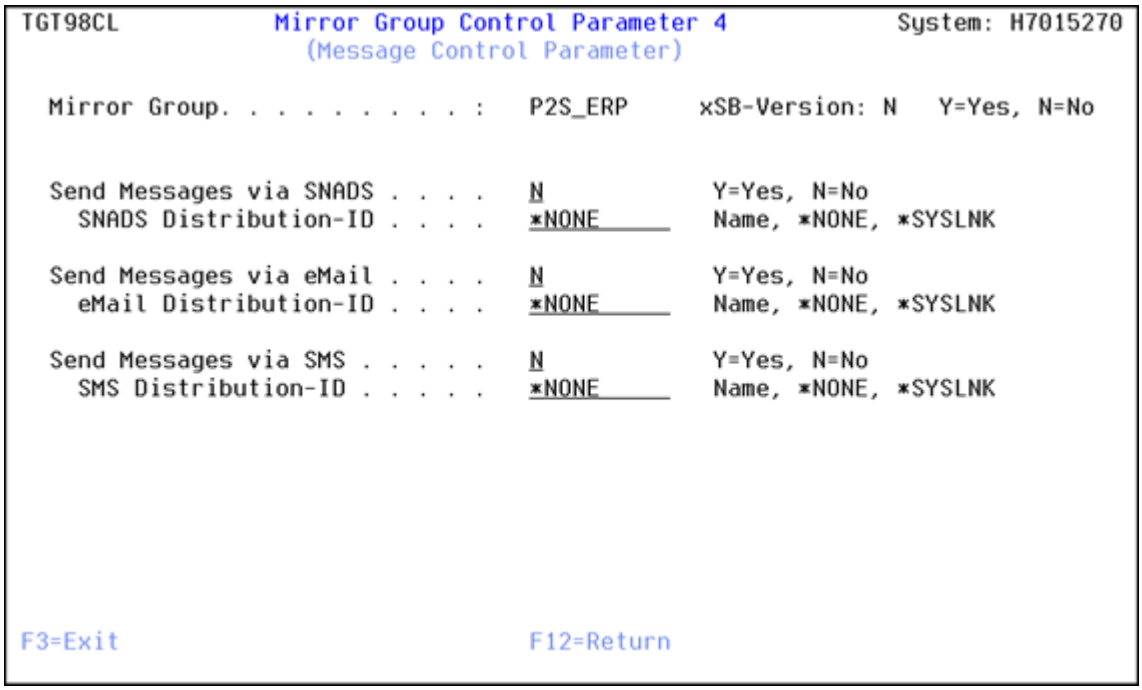
Name receiving process
Name of the process that receives the data sent by the primary system.

TCP/IP port number
Port over which the communication between primary and secondary system takes place. Valid values are from 1024 to 65535.

Valid command keys of the mask:

F3=End
Exit the current application function

F12=Previous display
Back to the previous mask, all entered values of this mask are not saved. The user returns to the management list of mirror groups.



Here you can define how messages are to be sent in the event of an error.

The current **mirror group** is displayed on each mask with control parameters.

Mirror group
Name of the **mirror group for** which the called command is to be executed.

xSB version
It is displayed whether the current application is an xSB application.

The following input fields are available to the user on the current screen:

Send messages via SNADS
Send messages via SNADS contains the parameter that specifies whether messages should be sent via SNADS. SNADS is a distribution service that can be used to store distribution information for immediate and delayed delivery. SNADS is an OS/400 application that allows communication via APPN (Advanced Program to-Program Communication) on a SNADS network. Subsystem QSNADS does not have to be active when sending.

The following values are valid:
Y = Yes: The messages are to be sent via SNADS.
N = No: The messages should not be sent via SNADS.

SNADS Distributor ID
Unique distributor ID. Is defined in the Process monitoring menu.

Send messages via eMail
Here you can specify whether messages are to be sent via e-mail. For this, an email server must be stored in the process monitoring and an email distribution list must be created, to which emails the messages are sent.

eMail distribution list ID
Unique distributor ID. Is defined in the Process monitoring menu.

Send messages via SMS
If this option is activated, messages can be sent via SMS. For this purpose, the provider must be informed and the phone number must be stored in the SMS distribution list.

SMS Distribution ID
Unique distributor ID. Is defined in the Process monitoring menu.

Valid command keys of the mask:

F3=Leave
Exit the current application

F12=Previous display
Back to the previous mask, all entered values of this mask will not be saved.

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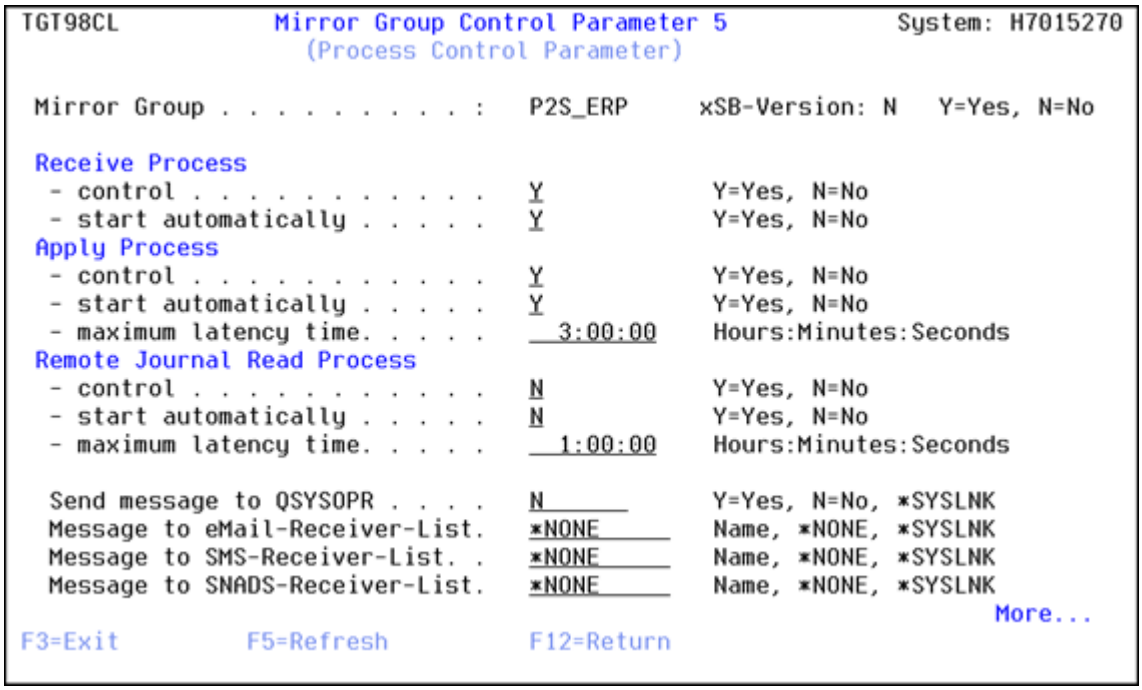


The current **mirror group** is displayed on each mask with control parameters.

Mirror group
Name of the **mirror group for** which the called command is to be executed.

xSB version
It is displayed whether the current application is an xSB application.

The following input fields are available to the user on the current screen:

Monitor receiving process
When activated with 'Y', the receiving process is checked whether it is in INACTIVE status. In case of an error, a message is sent to the distribution lists.

Start receiving process automatically
When activated with 'Y', an 'INACTIVE' receive process is automatically restarted after a specified time interval.

Monitor processing process
When activated with Y, the process is checked whether it is in INACTIVE status. In case of an error, a message is sent to the distribution lists.

Start processing automatically
When activated with 'Y', an 'INACTIVE' processing process is automatically restarted after a time interval.

Maximum latency
The latency of the processing process is the time difference between the last data record received and the data record currently being processed. If this time difference exceeds the defined maximum latency, a message is sent to the subscribers of the distribution lists defined below.

Rmt. Jrn. Monitor reading
There are two possible entries here: "Y"=Yes or "N"=No. If a "Y" is entered at this point, a message is output that the reading process is inactive after the reading process has been

completed and after the time interval defined in the process monitoring (default 20 minutes) has elapsed.

Rmt. Jrn. Start reading
If you enter an "N" at this point, the read process remains inactive after completion. The read process must then be started manually. (see menu item 6: Manage remote journal read processes). If a "Y" is entered, the read process is started automatically after the time interval in the process monitoring has elapsed.

Maximum latency
The latency of the remote journal read process is the time difference between the last journal entry and the journal entry just read. If this time difference exceeds the defined maximum latency, a message is sent to the subscribers of the distribution lists defined below.

Send message to QSYSOPR
If a "Y" is entered here, status messages are sent from the BUS4i to the QSYSOPR after the test interval has elapsed.

Message to eMail distribution list ID
Specification of the unique name ID for the distribution list. An error message is sent to this distribution list in case of an error.

Message to SMS distribution ID
Specification of the unique name ID for the distribution list. An error message is sent to this distribution list in case of an error.

Message to SNADS distributor ID
Specification of the unique name ID for the distribution list. An error message is sent to this distribution list in case of an error.

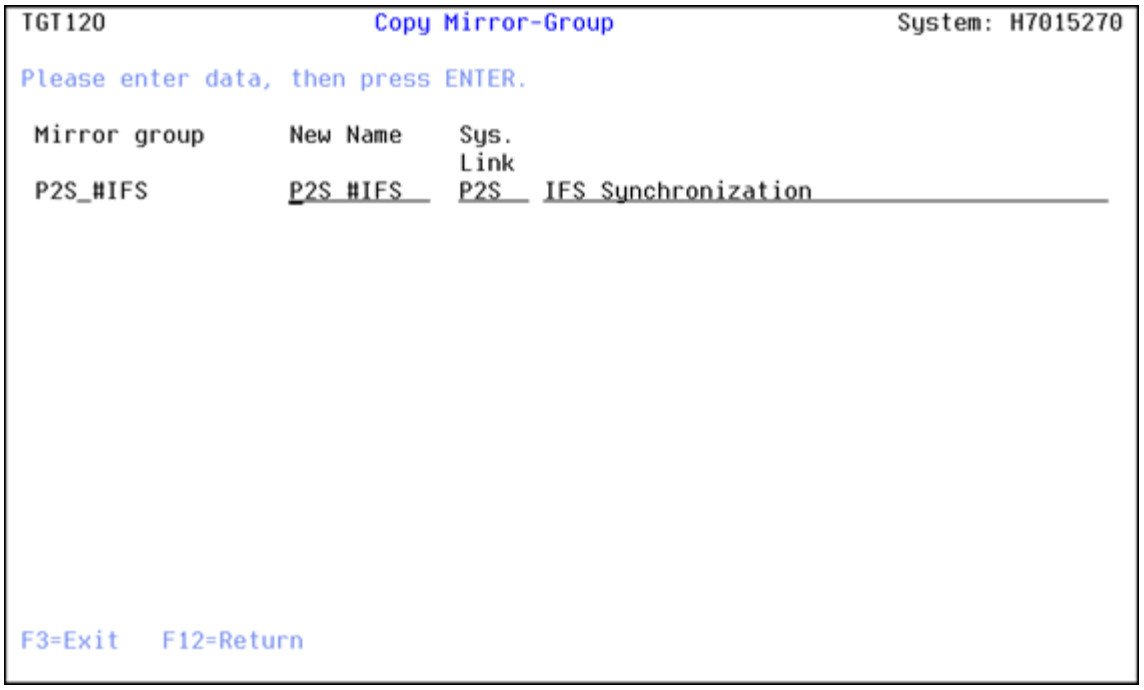
Valid command keys of the mask:

F3=End
Exit the current application function.

F5=Update
Pressing this function key F5 displays the current values that may occur after manual changes or changes made by the program.

F12=Previous display
Back to the previous mask, all entered values of this mask are not saved. The user returns to the management list of **mirror groups.**

3.4.2 Selection 3 - Copy mirror groups



With this selection, existing **mirror groups** can be copied to facilitate the inclusion of a new **mirror group in** the BUS4i HA system. In this case, the control parameters are adopted.

The following input fields are available to the user:

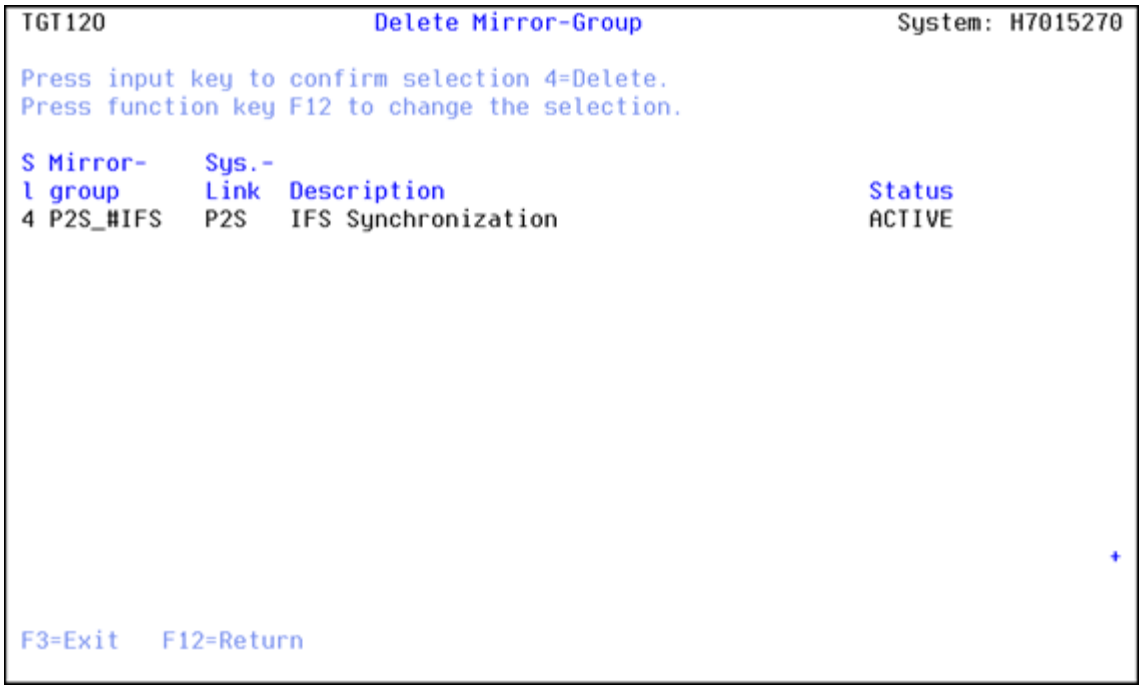
New name
To be able to copy or rename existing **mirror groups**, a new mirror group name must be specified to uniquely identify the application. The default is the old application name, which then only needs to be changed.

The program checks whether the specified new name already exists as an application name or not. In case of an error, a message appears on the screen and the application is neither copied nor renamed.

Sys-Link
This assigns the mirror group to a system link. The preassignment is made with the old system link, which can then be changed.

New description
With the copy function, a descriptive text can additionally be specified for better identification of the mirror group name. The default setting is the old description, which can then be changed.

3.4.3 Selection 4 - Delete mirror groups



By selecting 4 in the **mirror groups** management list, one or more mirror groups can be removed from the BUS4i HA system. The mirror groups can only be removed if they are in the INACTIVE status.

After confirming with the Enter key, the selected mirror group is deleted.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

3.4.4 Selection 5 - Display control parameters of the mirror groups

With the selection 5 of the management list the user gets the display of the control parameters. Nothing can be changed.

```
TGT98CL              Mirror Group Control Parameter 1          System: H7015270
                           (Basic Parameter)

  Mirror Group. . . . . . . . . :   P2S_ERP     xSB-Version: N   Y=Yes, N=No

  Restart Control Parameter . . .   A             blank, A, X

  Use Remote Journal Function . .   Y             Y=Yes, N=No
  Control Rmt. Jrn. Read Process.   N             Y=Yes, N=No
                                                  Y=Yes, N=No
  Sending of Messages . . . . . .   Y

  Control Receive Process . . . .   Y             Y=Yes, N=No
  Control Apply Process . . . . .   Y             Y=Yes, N=No

  Application Libraries . .  1. *SYSVAL___  6. *NONE_____  Name, *NONE, *SYSVAL
                             2. *NONE_____  7. *NONE_____  Name, *NONE, *SYSVAL
                             3. *NONE_____  8. *NONE_____  Name, *NONE, *SYSVAL
                             4. *NONE_____  9. *NONE_____  Name, *NONE, *SYSVAL
                             5. *NONE_____ 10. *NONE_____  Name, *NONE, *SYSVAL

                                                                      More...
F3=Exit          F12=Return
```

```
TGT98CL              Mirror Group Control Parameter 2          System: H7015270
                           (Remote Journal Parameter)

  Mirror Group. . . . . . . . . :   P2S_ERP     xSB-Version: N   Y=Yes, N=No

  Journal Library / Name. . . . .   $JRNRMT___ / ERPJRNRMT_
  Receiver Library / Name . . . .   $JRNRMT___ / ERPRCV0010

  No. of journal reading attempts   __5          Number
  Job long wait . . . . . . . . .   ___10        Seconds

  Last transferred Journal Entry.   00000000000000027678  Number
  Record count for Confirmation .   ____500               Number

                                                                      More...
F3=Exit          F5=Refresh       F12=Return
```

```
TGT98CL            Mirror Group Control Parameter 3            System: H7015270
                     (TCP-Communication Parameter)

  Mirror Group. . . . . . . . . :   P2S_ERP     xSB-Version: N   Y=Yes, N=No


  Receive Process Name. . . . . .   RCV_ERP___    Name

  TCP/IP Port Number. . . . . . .   14006        1024 - 65535









F3=Exit          F12=Return
```

```
TGT98CL            Mirror Group Control Parameter 4            System: H7015270
                     (Message Control Parameter)

  Mirror Group. . . . . . . . . :   P2S_ERP     xSB-Version: N   Y=Yes, N=No


  Send Messages via SNADS . . . .   N            Y=Yes, N=No
    SNADS Distribution-ID . . . .   *NONE_____   Name, *NONE, *SYSLNK

  Send Messages via eMail . . . .   N            Y=Yes, N=No
    eMail Distribution-ID . . . .   *NONE_____   Name, *NONE, *SYSLNK

  Send Messages via SMS . . . . .   N            Y=Yes, N=No
    SMS Distribution-ID . . . . .   *NONE_____   Name, *NONE, *SYSLNK









F3=Exit                          F12=Return
```

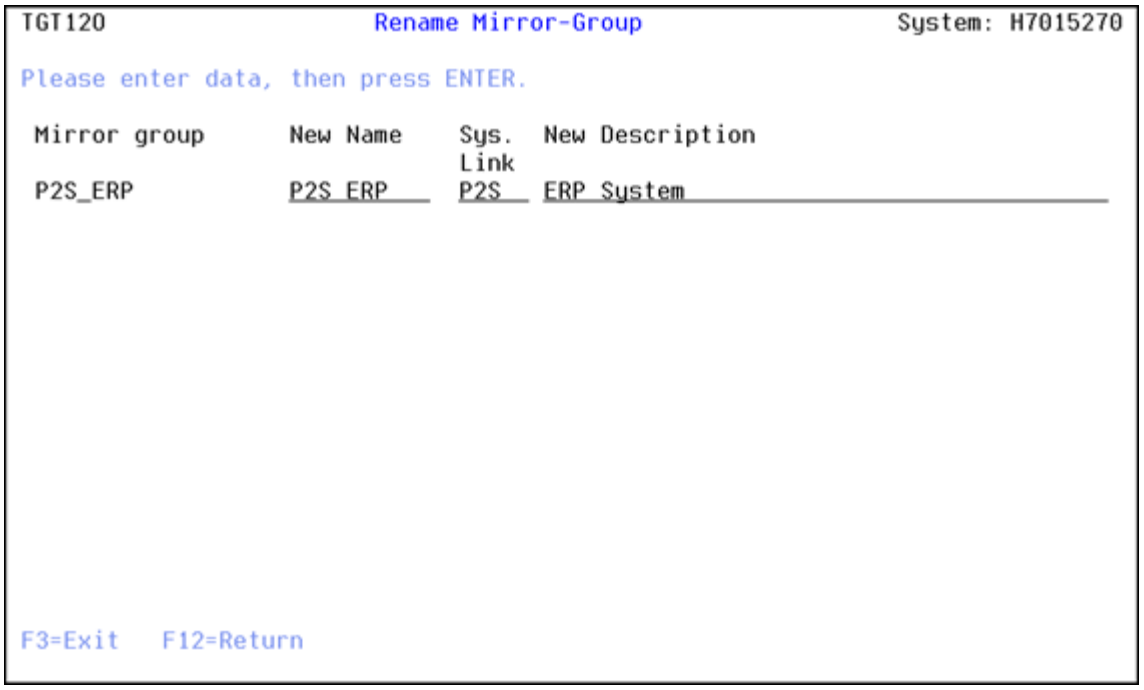
```
TGT98CL          Mirror Group Control Parameter 5          System: H7015270
                   (Process Control Parameter)

 Mirror Group . . . . . :   P2S_ERP     xSB-Version: N   Y=Yes, N=No

 Receive Process
  - control . . . . . .   Y             Y=Yes, N=No
  - start automatically   Y             Y=Yes, N=No
 Apply Process
  - control . . . . . .   Y             Y=Yes, N=No
  - start automatically   Y             Y=Yes, N=No
  - maximum latency time.   3:00:00    Hours:Minutes:Seconds
 Remote Journal Read Process
  - control . . . . . .   N             Y=Yes, N=No
  - start automatically   N             Y=Yes, N=No
  - maximum latency time.   1:00:00    Hours:Minutes:Seconds

  Send message to QSYSOPR . . . .   N       Y=Yes, N=No, *SYSLNK
  Message to eMail-Receiver-List.   *NONE     Name, *NONE, *SYSLNK
  Message to SMS-Receiver-List. .   *NONE     Name, *NONE, *SYSLNK
  Message to SNADS-Receiver-List.   *NONE     Name, *NONE, *SYSLNK
                                                              More...
F3=Exit          F5=Refresh          F12=Return
```

3.4.5 Selection 7 - Rename mirror group



This selection allows the user to rename existing **mirror groups.**

The following input fields are available to the user:

New name
To rename existing **mirror groups**, a new mirror group name must be specified to uniquely identify the application. The default is the old application name, which then only needs to be changed.

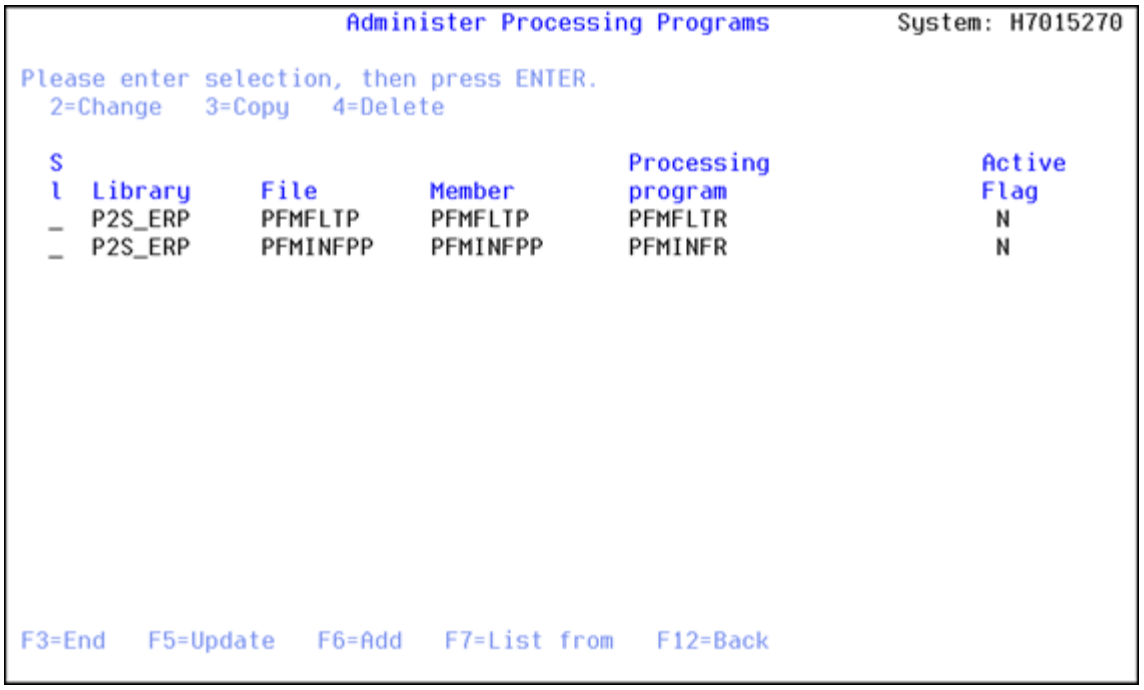
The program checks whether the specified new name already exists as an application name or not. In case of an error, a message appears on the screen and the application is neither copied nor renamed.

Sys-Link
This assigns the mirror group to a system link. The preassignment is made with the old system link, which can then be changed.

New description
In the rename function, a descriptive text can be additionally specified for better identification of the mirror group name.
The default setting is the old description, which then only needs to be changed.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

3.4.6 Selection A - Administer processing programs



With this selection list the user can add, delete, copy or rename processing programs. A specific program can be specified for each file. If no program is specified here, the programs to be traced are managed themselves. If, however, a different processing is to be carried out for a file, the source can be modified in the library TGTSYS, file QRPGSRC, member APPLYR.

The following valid input fields are available to the user:

Selection
The Selection data field is used to enter the options displayed on the current screen.
The choices can be combined depending on the type of work to be performed.
The options are performed in the order in which the selected items are in the list.
If you enter an option that is not allowed, an error message will appear on the screen.

The following options are possible for the management of the processing programs:

Selection 2 - Change
With this selection option, processing programs can be changed.

Selection 3 - Copy
With this selection option, processing programs can be copied.

Selection 4 - Delete
With this selection option, processing programs can be deleted.

The following command keys are valid on the current mask:

F3=End
Exit the current application function.

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F5=Update
This command key is used for updating the selection lists. All options currently entered on the screen are deleted. The display list is rebuilt so that any list entries added, modified or deleted by other users are also displayed or removed.

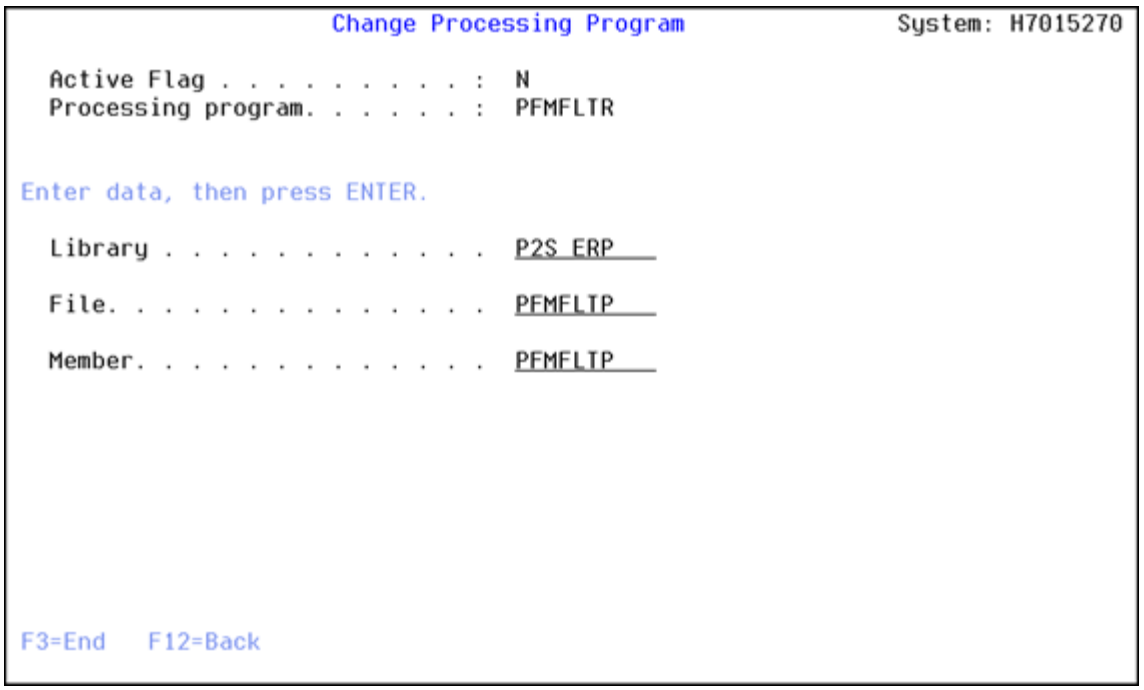
F6=Add processing program
With this function key a new processing program is added. Here the specification is made for which file the processing program applies.

F7=List from...
This selection option can be used to start from a certain point when displaying all processing programs. This enables the management of more than 9999 processing programs.

F12=Back
Back to the previous mask, all entered values of this mask will not be saved.

In this case, the user returns to the main menu of the HA system BUS4i as when pressing the command key F3=End.

3.4.6.1 Selection 2 - Change processing program



This input mask can be used to specify one or all processing programs of a **mirror group.**

The following input fields are available to the user:

Library

Valid input values for the **Library** parameter:

Name
Name of the library that contains the file to be traced.

File
Specify filename of the mirror group file to be mirrored.

Valid input values for the **File** parameter is:

Name
Name of the file contained in a specified library.

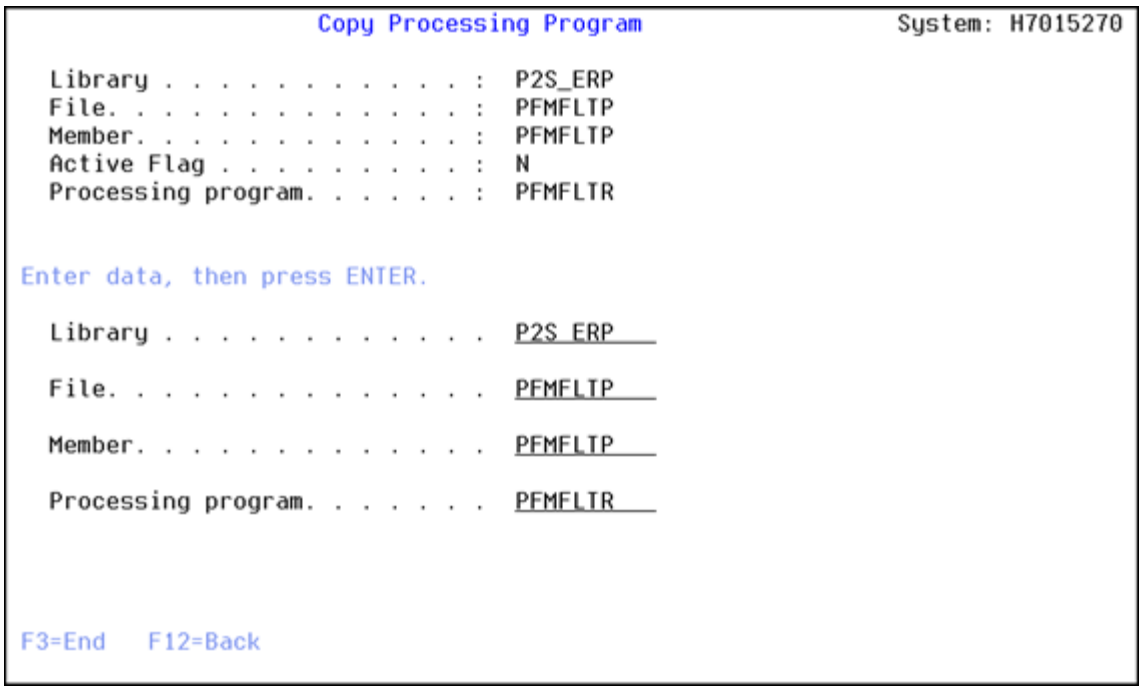
Part file
Names of the partial files contained by the specified file.

Valid input value for the parameter **Part file** is:

Name
Name of the part file to be traced by the specified file.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

3.4.6.2 Selection 3 - Copy processing program



This input mask can be used to copy list entries for processing programs. The same rules for creating entries apply here as for the Add and Change functions.

The following input fields are available to the user

Library

Valid input value for the parameter **Library**:

Name
Name of the library that contains the files to be traced.

File
Specify filename of the mirror group file to be mirrored.

Valid input value for the **File** parameter is:

Name
Name of the file contained in a specified library.

Part file
Names of the partial files contained by the specified file.

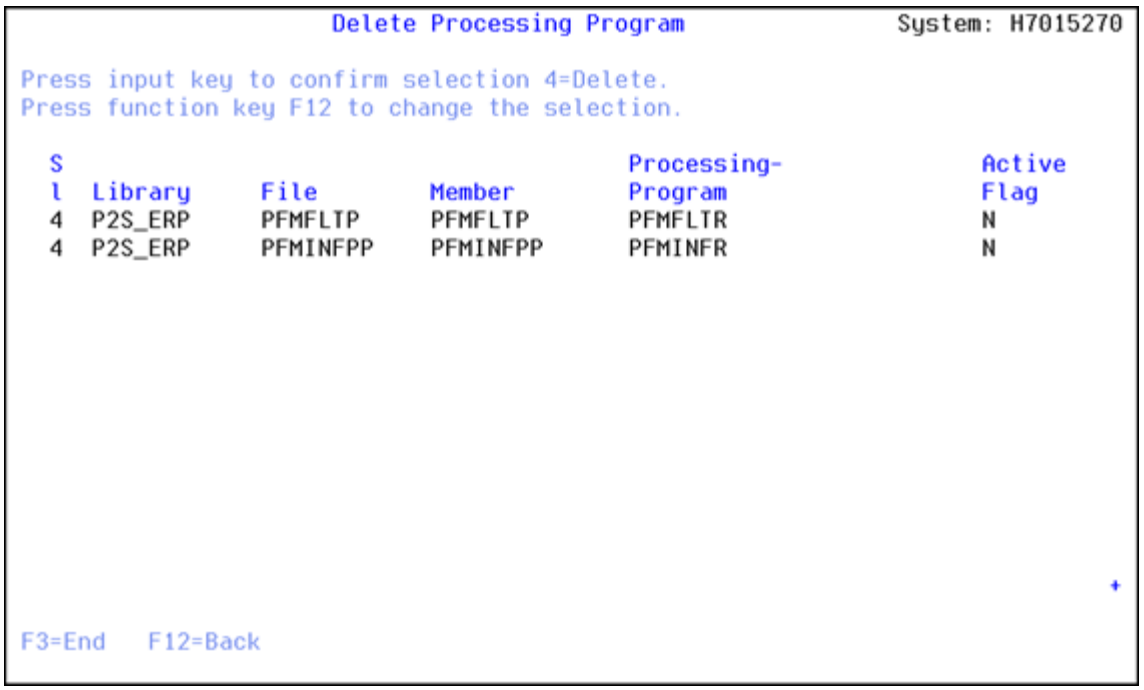
Valid input value for the parameter **Part file** is:

Name
Name of the part file traced by the specified file.
should be.

Processing program
All journal entries received for this file will be processed by this program.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

3.4.6.3 Selection 4 - Delete processing program

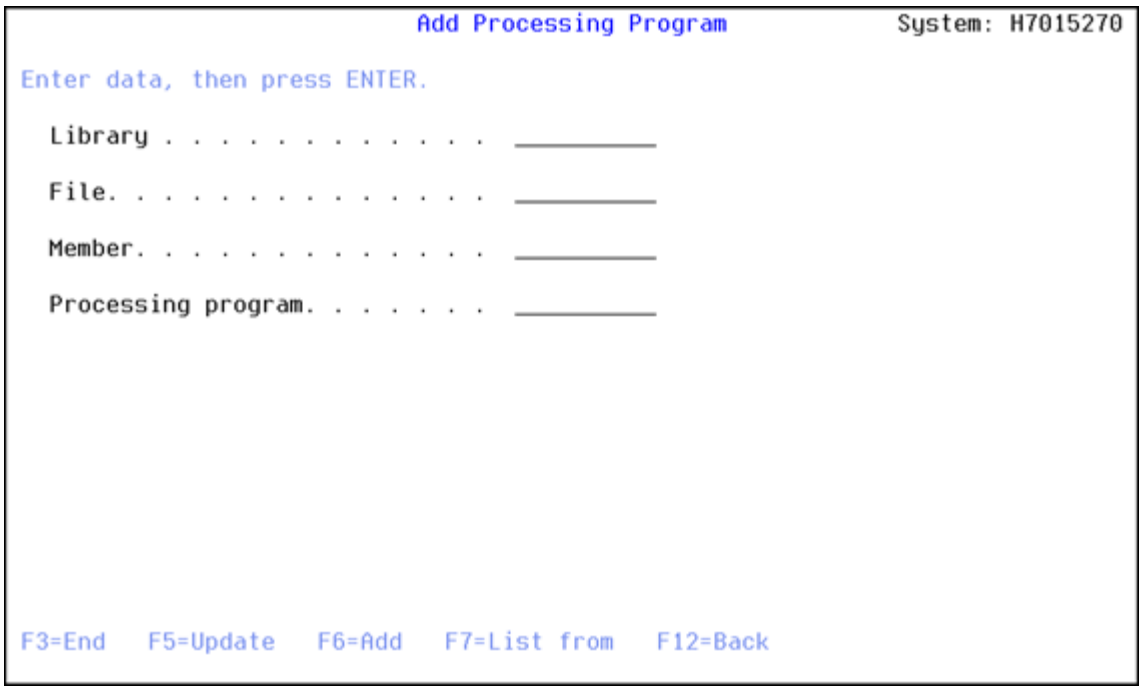


In the administration list of processing programs, one or more list entries can be removed via selection option 4.

After confirming with the Enter key, the selected mirror group is deleted.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview

3.4.6.4 Command key F6 - Add processing program



Via this input mask the user has the possibility to add processing programs.

The following input fields are available to the user:

Library

Valid input values for the **Library** parameter:

Name
Name of the library that contains the file to be traced.

File
Specify filename of the mirror group file to be mirrored.

Valid input values for the **File** parameter are

Name
Name of the file contained in a specified library.

Part file
Names of the partial files contained by the specified file.

Valid input value for the parameter **Part file** is:

Name
Name of the part file to be traced by the specified file.

Processing program
All journal entries received for this file are processed by this program.

The following command keys are valid on the current mask:

F3=End
Exit the current application function.

F5=Update
This command key is used for updating the selection lists. All options currently entered on the screen are deleted. The display list is rebuilt so that any list entries added, modified or deleted by other users are also displayed or removed.

F6=Add processing program
With this function key a new processing program is added. Here the specification is made for which file the processing program applies.

F12=Back
Back to the previous mask, all entered values of this mask will not be saved.

In this case, the user returns to the main menu of the HA system BUS4I as when pressing the command key F3=End.

3.4.7 Selection D - Manage data filters (only for xSB versions)

This selection option can be used to manage data filters for data to be restored. This option is only possible for an xSB version. The description of the individual masks see description in the primary system, chapter 1.1.4.10.Selection D - Manage data filters (only for xSB versions).

3.4.8 Selection O - Manage object filters (only for xSB versions)

With this selection option, object filters for objects to be restored can be managed This function is only possible for an xSB version. The description of the individual masks see description in the primary system, chapter 1.1.4.11.

3.4.9 Selection S - Manage spool filters (xSB versions only)

This selection can be used to manage spool filters for spool files that are to be reflected back. This function is only possible for an xSB version. The description of the individual masks see description in the primary system, chapter 1.1.4.12.

3.4.10 Selection I - Manage IFS filters (xSB versions only)

With this selection IFS filters can be managed for the IFS files that are to be mirrored back. This function is only possible for an xSB version. The description of the individual masks see description in the primary system, chapter 1.1.4.14.

3.4.11 Selection W - Manage system value filter (only for xSB versions)

This selection can be used to manage system value filters for system values that are to be restored. This function is only possible for an xSB version. For the description of the individual masks see chapter 1.1.4.14.

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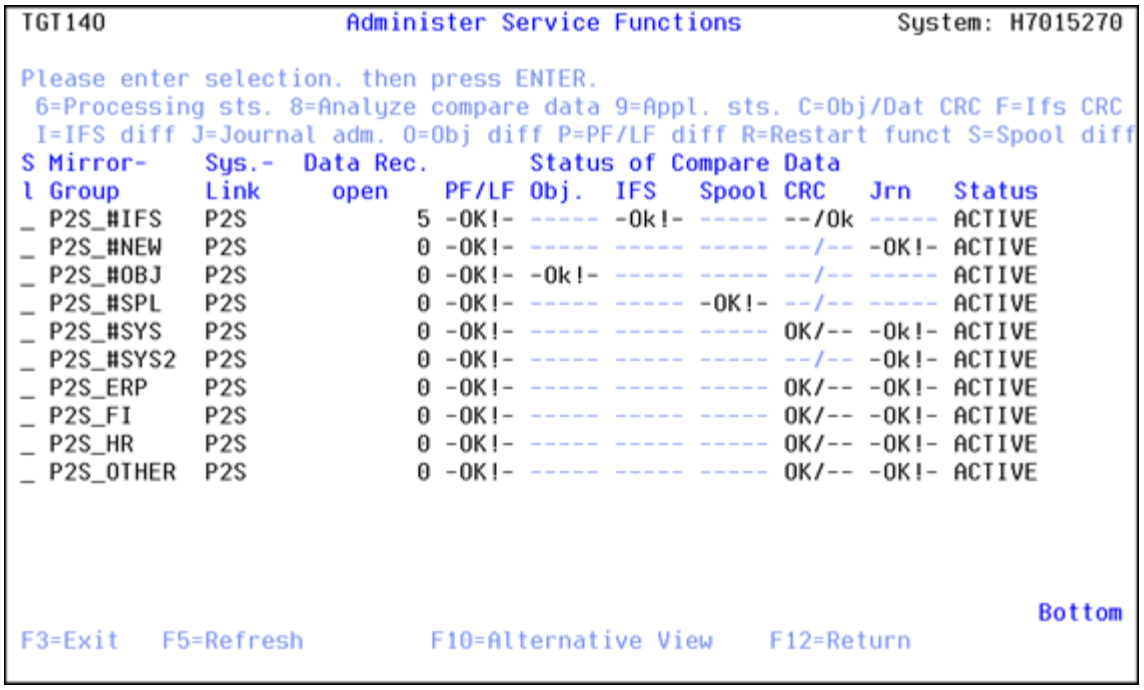
3.5 Main menu selection 5 - Service functions



With this selection list the user can manage the service functions.

Displayed:
- Mirror group
- System Link Name
- Records open (records still to be processed)
- PF/LF= Status of comparison data for physical and logical part files.
- Obj. = Status of comparison data for objects
- IFS = Status of the comparison data for IFS objects
- Spool= status of comparison data for spool files
- CRC= Status of CRC check data Objects/IFS
- JRN= Journal log data status
- following status is possible:
  - OK ! - = everything in order
    - Ok! - = everything in order, but deviations were ignored
    ERROR = Error-
    WARNG = Warning
    - ??? - = comparison data too old
    -- ? = Too large difference in the number of comparison data
    -- !!! -- = Comparison data not available, although they should be there
    -- ! = Comparison data is being created
    ----- = no comparative data available
- Status of the mirror group processing process

The following input fields are available to the user:

Selection 6 - Status processing process

This selection menu allows the user to display the status of the processing operation. This display is for information purposes only.

Selection 8 - Analyze comparison data

A check is made to see whether deviations of this type still exist in the mirror group. If this is not the case, an "OK" is entered.

Selection 9 - Display status
This function allows you to view the overall status of the backup application. (primary and secondary system) from one system (will be displayed with the basic control parameters activated).

Selection C - object/data CRC deviations
With this selection the object and data deviations from the CRC check are called directly - corresponds to the call "R=Restart functions" and then menu item 26.

Selection F - IFS CRC Deviations
With this selection the IFS object deviations from the CRC check are called directly - corresponds to the call "R=Restart functions" and then menu item 27.

Selection J - Journal management
From this selection menu, by selecting "J", the user can access a management menu that allows the user to manage the journal and the associated recipients specified in the control parameters. This function is valid only when remote Journal is used.

Selection I - IFS deviations
With this selection the "IFS deviations" are called directly - corresponds to the call "R=Restart functions" and then menu item 24.

Selection O - Object deviations
With this selection the "OBJ deviations" are displayed - corresponds to the call "R=Restart functions" and menu item 23.

Selection P - Part file deviations
With this selection the "Part file deviations" are displayed - corresponds to the call "R=Restart functions" and then menu item 22.

Selection R - Restart functions
This selection menu allows the user to select commands for the restart functions. Here commands for restart routines with COMMIT control, status of user profiles, batch control information and much more can be called.

Selection S - Spool deviations
It displays the spool deviations - corresponds to the call "R=Restart functions" and then menu item 25.

Valid command keys are:

F3=End
Exit the current application function.

F5=Update
This command key is used for updating the selection lists. All options currently entered on the screen are deleted. The display list is rebuilt so that any list entries added, modified or deleted by other users are also displayed or removed.

F12=Back
Back to the previous mask, all entered values of this mask will not be saved.

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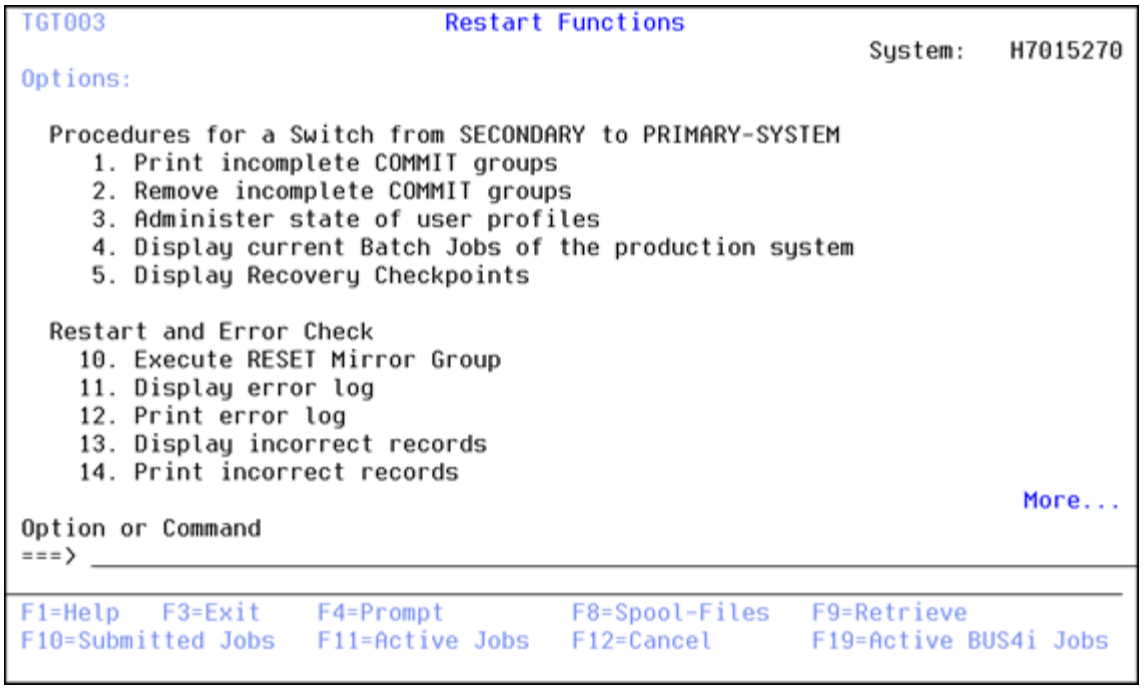
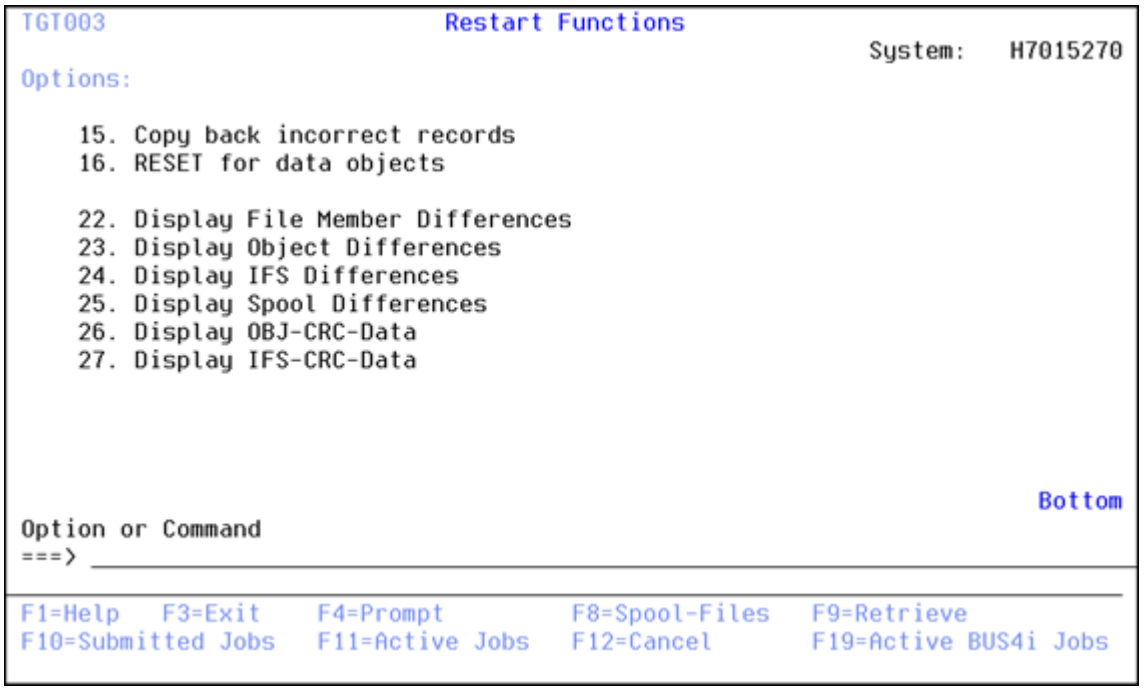
3.5.1 Selection R - Restart functions





Via this selection menu the user can select commands for the restart functions. A distinction is made between restart routines with and without COMMIT control.

The following fields can be entered on the current screen:

Selection
In the command input line, the user enters the desired menu selection number whose function is to be performed. If an invalid selection is entered, an error message appears on the screen.

The following menu selection items are valid on the current screen:

Menu item 1 - Print incomplete commit groups
This menu selection is used to check whether the send process was completed properly under COMMIT control. Hereby a check protocol is printed. The selection can be performed when the secondary system becomes the primary system.

Menu item 2 - Remove incomplete COMMIT groups
This menu selection is used to check whether the send process has been properly completed under COMMIT control. This selection must be performed when the secondary system becomes the primary system. Here the incomplete COMMIT groups are reset up to the last transaction limit.

Menu item 3 - Manage status user profiles
This menu selection allows the user to check the status of user profiles when the "User profiles remote disabled" function is enabled.

Menu item 4 - Show current batch jobs from production system
Displays the unfinished or scheduled batch jobs from the primary system. This selection must be made when the secondary system becomes the primary system.
By selection, the corresponding batch job can be started on the new primary system.

Menu item 5 - Display fuse checkpoints
A list of backup checkpoints is displayed. Using these backup checkpoints, all objects, data and spool files can be restored in the case of an xSB version.

Menu item 10 - RESET of the mirror group
The user can perform a RESET of the mirror group via this menu selection. The contents of the files belonging to the mirror group are deleted. This function is used when a mirror group is set up again.

Menu item 11 - Display error log
The entries of the LOG file are displayed via this menu selection. All messages that occur during the processing procedure are logged in the LOG file.

Menu item 12 - Print error log
This menu selection is used to print the entries of the LOG file.

Menu item 13 - Display incorrect records
Via this menu selection the entries of the file TGT04P are displayed. For all data sets recognized as asynchronous, a corresponding data set is stored in this file.

Menu item 14 - Print incorrect blocks
This menu selection is used to print the entries of the TGT04P file.

Menu item 15 - Copy back incorrect blocks
This menu selection can be used to copy the analyzed and corrected records from the TGT04P file back to the TGT01P file for further processing.
By starting the processing process, these records are
processed again. This selection is only useful if the error had been related either to a record length difference or to a missing file.

Menu item 16 - RESET procedure for a data object
With this menu selection it is possible to synchronize individual data objects within a mirror group. This type of synchronization is described in more detail in section 2.5.

Menu item 22 - Display part file deviations

Display of deviations of partial files.

Menu item 23 - Display object deviations
Display of the deviations of objects.

Menu item 24 - Display IFS deviations
Display of deviations from the IFS file system.

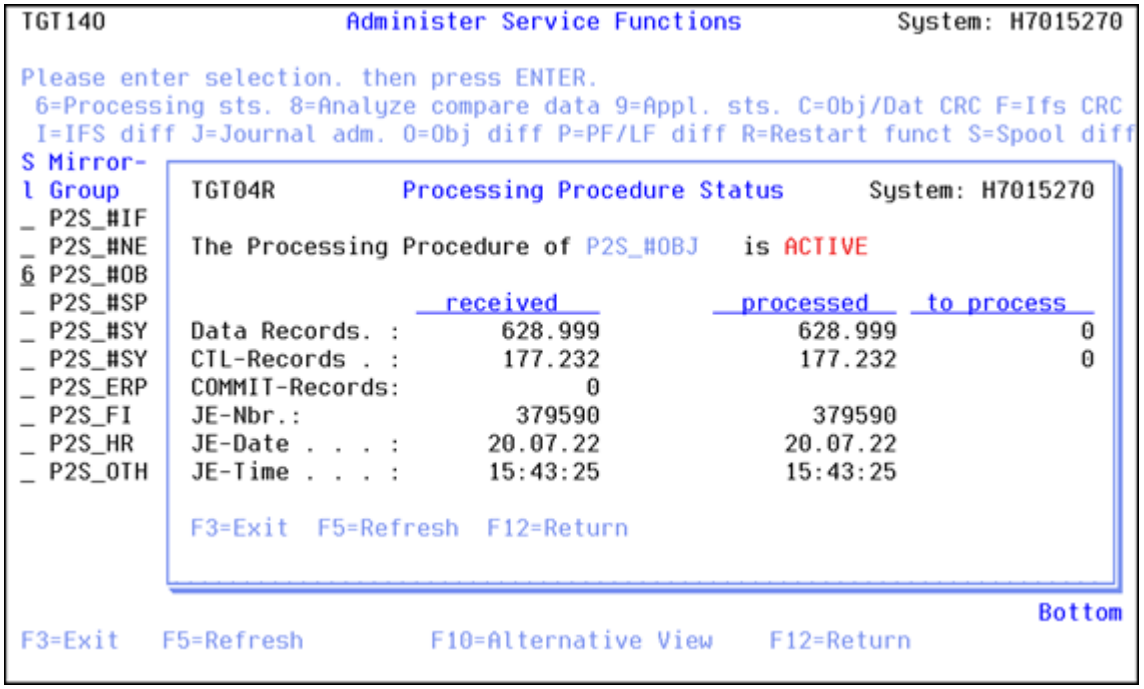
Menu item 25 - Display spool deviations
The differences for the spool files between the primary and secondary systems are displayed.

Menu item 26 - Display OBJ CRC deviations
The objects and files where CRC errors were detected are displayed.

Menu item 27 - Display IFS CRC deviations
The IFS objects for which CRC errors were detected are displayed.

The valid command keys of the current menu are described in the system operator help.

3.5.2 Selection 6 - Display processing status



This display is a display format and is only used for information. Here information about the current processing process for the secondary system is output. The information is to be interpreted as follows:

Records:
Data records which have been processed on the primary system and which are to be processed on the secondary system.

- Received:
  Number of records transferred from the primary system since the start of communication.

- Already processed:
  Number of receiving records which are already processed by the secondary system.

- Still to be processed:
  Number of received records which are still to be processed by the secondary system.

Command and control sets:

Command sets which have been captured by means of the CRTCMDE user interface on the primary system and are to be executed on the secondary system.

Control records, which are required for internal processing.

- Received:
  Number of command or control records
  transmitted from the primary system
  since the start of communication.

- Already processed:
  Number of receiving command or control sets that have already been processed by the secondary system.

- Still to be processed:
  Number of received command or control sets which are still to be processed by the secondary system.

COMMIT control sets:

Transferred COMMIT control records if the application being transferred to the secondary system has COMMIT control. COMMIT records are, for example, COMMIT and ROLLBACK.

- Received :
  Number of database records transferred from the primary system since the start of communication.

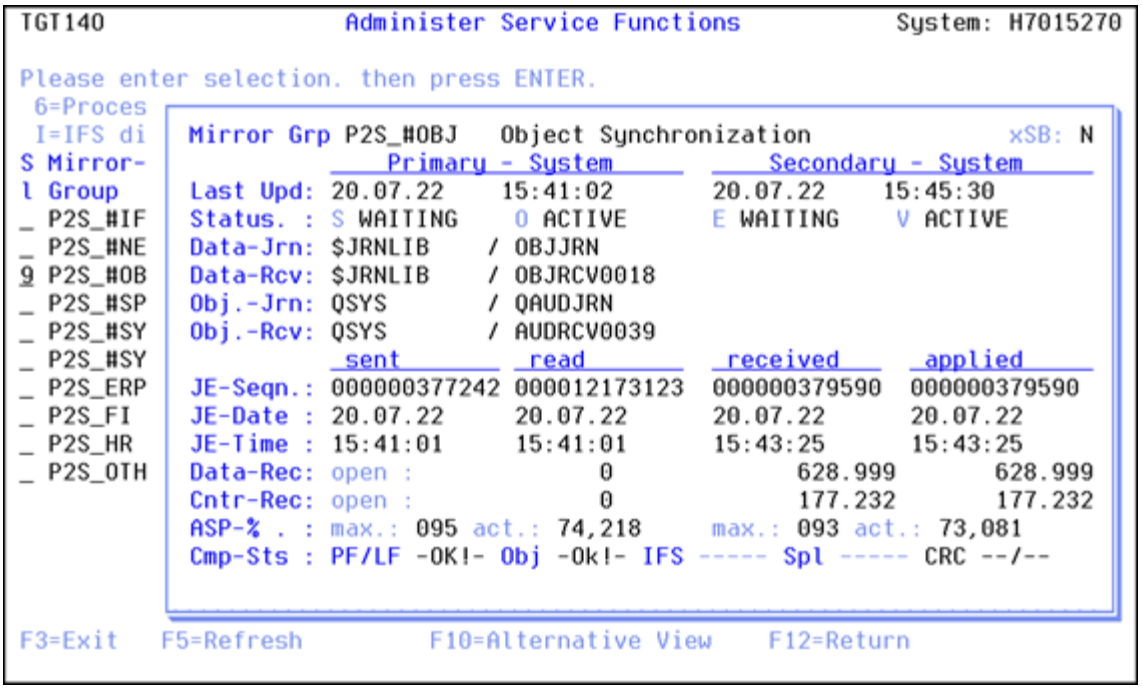
Valid command keys are:

F3=End
Exit the current application function.

F5=Update
This command key is used for updating the selection lists. All options currently entered on the screen are deleted. The display list is rebuilt so that any list entries added, modified or deleted by other users are also displayed or removed.

F12=Back
Back to the previous mask, all entered values of this mask will not be saved.

3.5.3 Selection 9 - Display status



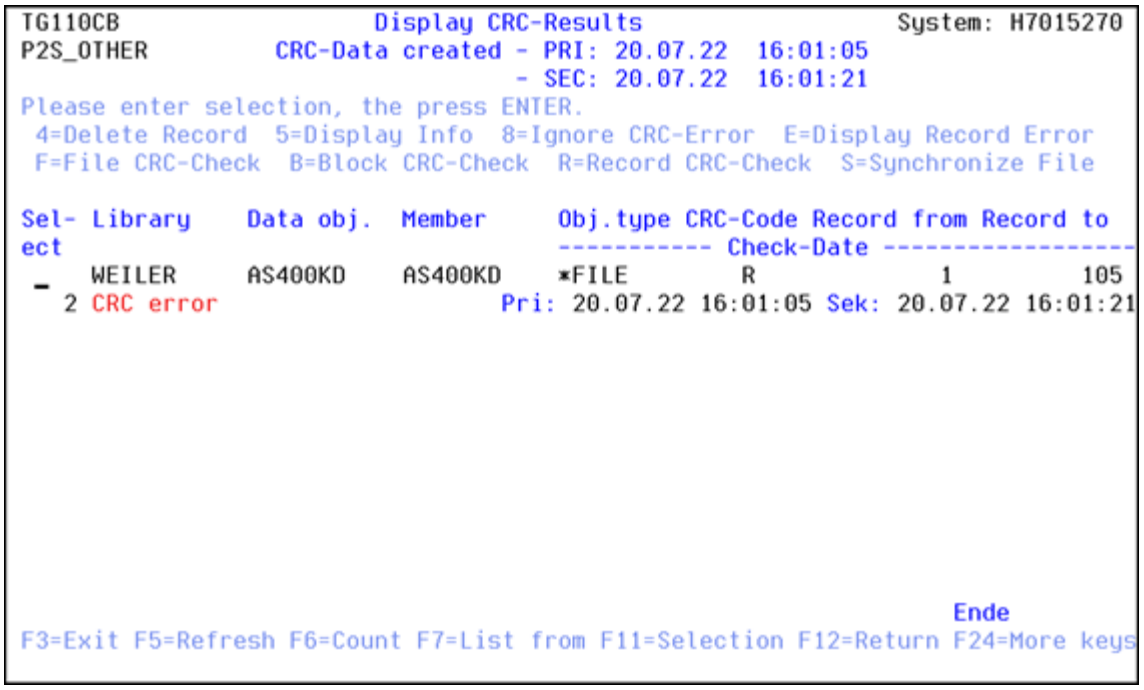
In "Control processing" as well as in "Manage mirror groups", the overall status of a mirror group can be displayed on both the primary and the secondary system via selection 9. Among other things, the journal and the journal receiver for the mirror group are displayed, taking into account the number of records processed. In addition, the ASP occupancy can be checked.

The bottom line displays the status of deviations between production and backup system. This display informs about errors, warnings, OK's for part files (PF/LF), objects (Obj), IFS objects(IFS) and spool files (Spool).

Detailed information can be displayed on the secondary system by selecting 5=Service functions.

The display "-----" means that no information is available in this mirror group for the respective object type.

3.5.4 Selection C - OBJ/DAT - CRC check deviations



The results of the CRC check are displayed on this screen:

CRC code F in this display means that the file-level CRC check (selecting F for CRCCD in the STRCRCCHK command on the primary side) has been performed.

Accordingly, B for block check and R for set check.

If errors are reported, the CRC check can be refined: from F=Check file via B=Check block to R=Check record. - Not vice versa!

Selection 4 - Delete set
The selected entry will be deleted from the verification file.

Selection 5 - Show info
The result of the CRC check can be displayed via this selection for a file.

Selection 8 - Ignore error
Errors can be ignored. These are then no longer displayed. This can be useful, for example, if you know that certain files are always accessed during the check.

Selection E= Display error
The result of the CRC check on record level (CRC code R) can be displayed for a file with this selection. If a record is surplus on the secondary system (corresponding error message is displayed), this can be deleted in the file via **selection '4=Delete record in file'.**

Selection F= File CRC Check
A file CRC check is performed again for the entire file to verify that it is now in sync.

Selection B= Block CRC check
A block CRC check is performed for the entire file to verify which block (2000 records) is in error.

Selection R= set CRC check

A record CRC check is performed for a block or the entire file to check which record is in error.

Selection S= Synchronize file

The file can be completely synchronized via this selection if too many errors have been detected.

The following command keys are valid on the current mask:

F5=Update

This command key is used for updating the selection lists. All options currently entered on the screen are deleted. The display list is rebuilt so that any list entries added, modified or deleted by other users are also displayed or removed.

F6=number

Per comparison date and time, the current number of outstanding deviations is displayed.

F7=List from...

Set up the display starting from a certain object.

F11=selection

Possibility to enter different selection criteria.

The valid command keys of the current menu are described in the system operator help.

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3.5.5 Selection F - IFS - CRC Check Deviations

The results of the CRC check are displayed on this screen:

Selection 4 - Delete set
The selected entry will be deleted from the verification file.

Selection 5 - Show info
The result of the CRC check can be displayed via this selection for a file.

Selection 8 - Ignore error
Errors can be ignored. These are then no longer displayed. This can be useful, for example, if you know that certain files are always accessed during the check.

Selection I - IFS CRC Check
A CRC check is performed again for the entire file to verify that it is now in sync.

Selection S= Synchronize file
The file can be completely synchronized via this selection.

The following command keys are valid on the current mask:

F5=Update
This command key is used for updating the selection lists. All options currently entered on the screen are deleted. The display list is rebuilt so that any list entries added, modified or deleted by other users are also displayed or removed.

F6=number
Per comparison date and time, the current number of outstanding deviations is displayed.

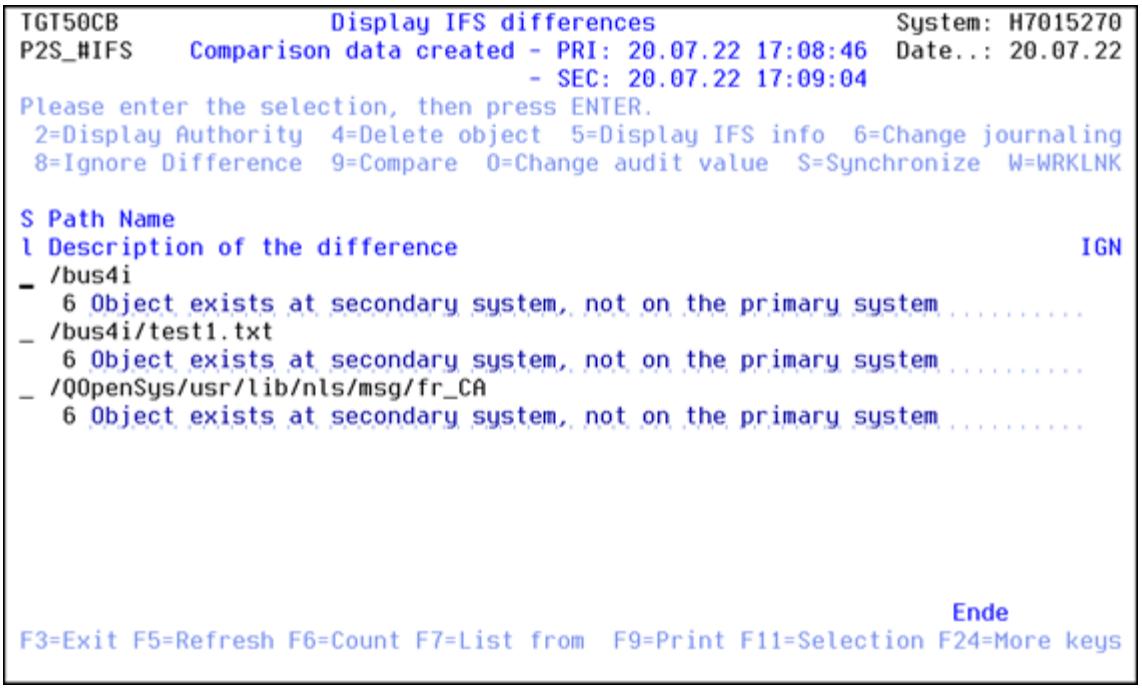
F7=List from
Set up the display starting from a certain object.

F11=selection

Possibility to enter different selection criteria.

The valid command keys of the current menu are described in the system operator help.

3.5.6 Selection I - IFS Deviations



With this selection list the user can manage IFS deviations. Furthermore, the permissions of the IFS objects can be displayed, the logging value and the journaling can be changed.

The following options are possible for the **Display IFS deviations:**

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

Selection 2 - Show permissions
This selection option can be used to control permissions of the IFS object.

Selection 4 - Delete object
With this selection option IFS objects can be deleted.

Selection 5 - Show IFS info
With this selection option information of the IFS comparison can be displayed.

Selection 6 - Change journal
This function gives you the possibility to adjust deviations in journal parameters between primary and secondary system.

Selection 8 - Ignore deviations
With this function you have the possibility to deliberately ignore deviations that have occurred intentionally or are caused by different release states. However, you should not use this function to ignore surplus objects, because these could be synchronized automatically at the next switch.

Selection 9 - Compare
This selection can be called to perform the comparison again for this object.

Selection O - Change audit value
This function gives you the possibility to adjust deviations in logging value between primary and secondary system.

Selection S - Synchronize
This function gives you the possibility to resynchronize the complete object.

Selection W - WRKLNK
This function is called by the system command WRKLNK for the corresponding object. This gives you the possibility to control the attributes of the object.

The following command keys are valid on the current mask:

F5=Update
This command key is used for updating the selection lists. All options currently entered on the screen are deleted. The display list is rebuilt so that any list entries added, modified or deleted by other users are also displayed or removed.

F6=number
Per comparison date and time, the current number of outstanding deviations is displayed.

F7=List from
Set up the display starting from a certain object.

F11=selection
Possibility to enter different selection criteria.

The valid command keys of the current menu are described in the system operator help.

3.5.7 Selection J - Remote Journal Management

This drop-down menu allows the user to select commands for managing journal recipients and journal contents.

The following menu items can be selected on the current screen:

Menu item 1: Work with journal attributes
This menu selection can be used to edit existing journal attributes. Editing includes the functions Delete, Display Attributes and Change Description.

Menu item 2: Work with journal receivers
Existing journal receivers can be edited via this menu item.
When processing this journal entry, a new journal receiver will be created.

Menu item 3: Work with journals
This menu item can be used to display all (blank or *ALL entries in both selection fields) or individual journals defined on the system. Via options, changes can be made to the journals as well as the journal recipients. The journals and attributes are displayed.

Menu item 4: Display journal entries
This menu selection shows the user all journal entries that have not yet been transferred.

Menu item 5: Display journal entries of backups
Journal entries of backups can be displayed via this menu selection.

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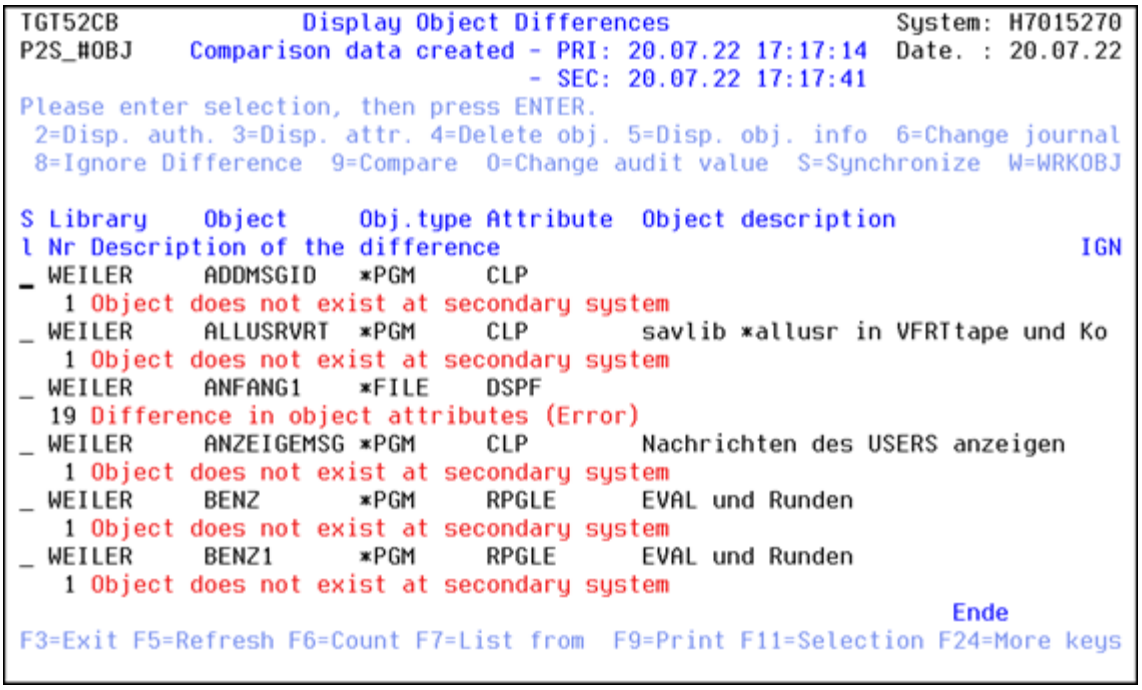
3.5.8 Selection O - Object deviations



With this selection list the user can manage object deviations. Furthermore, the permissions of the objects can be displayed, the logging value and the journaling can be changed.

The following options are possible for the **Display object deviations:**

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

Selection 2 - Show permissions
With this selection option permissions of the object can be controlled.

Selection 3 - Display attributes
This selection option can be used to display the attributes for certain object types such as user profiles, OUTQs or printer files.

Selection 4 - Delete object
With this selection option objects can be deleted.

Selection 5 - Show object info
With this selection option information of the object comparison can be displayed.

Selection 6 - Change journal
This function gives you the possibility to adjust deviations in journal parameters between primary and secondary system.

Selection 8 - Ignore deviations

With this function you have the possibility to deliberately ignore deviations that have occurred intentionally or are caused by different release states. However, you should not use this function to ignore surplus objects, because these could be synchronized automatically at the next switch.

Selection 9 - Compare

This selection can be called to perform the comparison again for this object.

Selection O - Change audit value

This function gives you the possibility to adjust deviations in logging value between primary and secondary system.

Selection S - Synchronize

This function gives you the possibility to resynchronize the complete object.

Selection W - WRKOBJ

This function is called by the system command WRKOBJ for the corresponding object. This gives the possibility to control the attributes of the object.

The following command keys are valid on the current mask:

F5=Update

This command key is used for updating the selection lists. All options currently entered on the screen are deleted. The display list is rebuilt so that any list entries added, modified or deleted by other users are also displayed or removed.

F6=number

Per comparison date and time, the current number of outstanding deviations is displayed.

F7=List from

Set up the display starting from a certain object.

F11=selection

Possibility to enter different selection criteria.

The valid command keys of the current menu are described in the system operator help.

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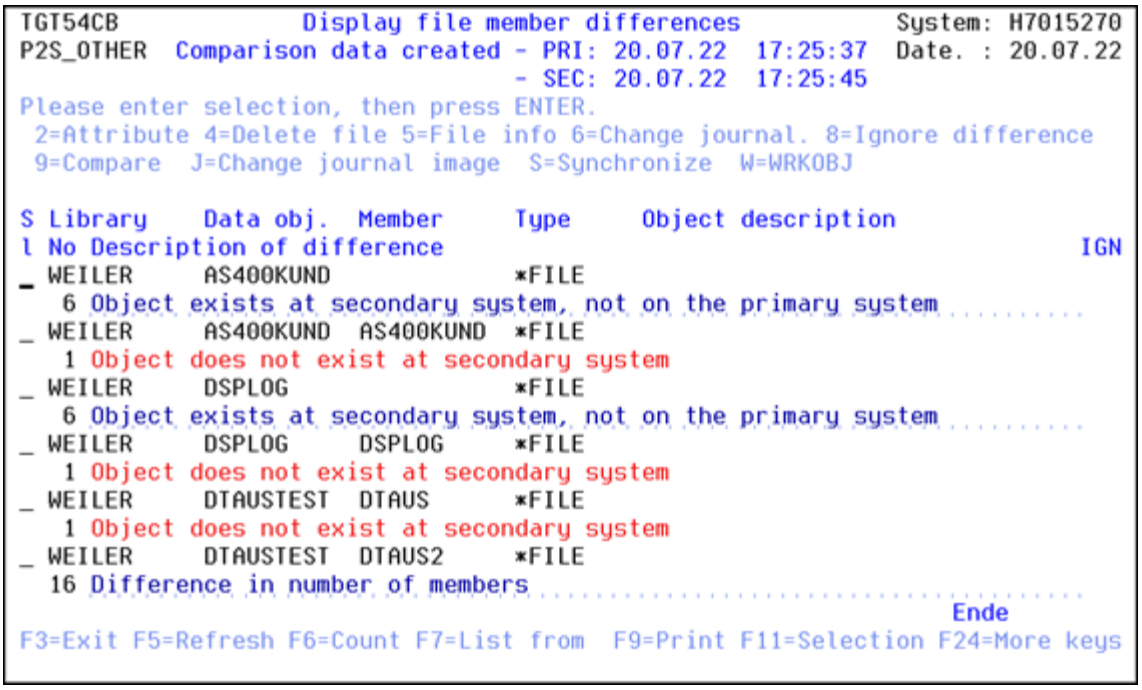
3.5.9 Selection P – File Member Deviations



With this selection list the user can manage object deviations. Furthermore, the permissions of the objects can be displayed, the logging value and the journaling can be changed.

The following options are possible for the **Display part file deviations:**

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

Selection 2 - Display attributes
With this selection option the attributes of the part file can be displayed.

Selection 4 - Delete object
With this selection option partial files can be deleted.

Selection 5 - Show file info
With this selection option information of the part file comparison can be displayed.

Selection 6 - Change journal
This function gives you the possibility to adjust deviations in journal parameters between primary and secondary system.

Selection 8 - Ignore deviations
With this function you have the possibility to deliberately ignore deviations that have occurred intentionally or are caused by different release states. However, you should not use this function to ignore surplus objects, because these could be synchronized automatically at the next switch.

Selection 9 - Compare
This selection can be called to perform the comparison again for this part file.

Selection J - Change journal image
This function gives you the possibility to adjust deviations in the journal image between primary and secondary system.

Selection S - Synchronize
This function gives you the possibility to resynchronize the part file.

Selection W - WRKOBJ
This function is called by the system command WRKOBJ for the corresponding object. This gives the possibility to control the attributes of the object.

The following command keys are valid on the current mask:

F5=Update
This command key is used for updating the selection lists. All options currently entered on the screen are deleted. The display list is rebuilt so that any list entries added, modified or deleted by other users are also displayed or removed.

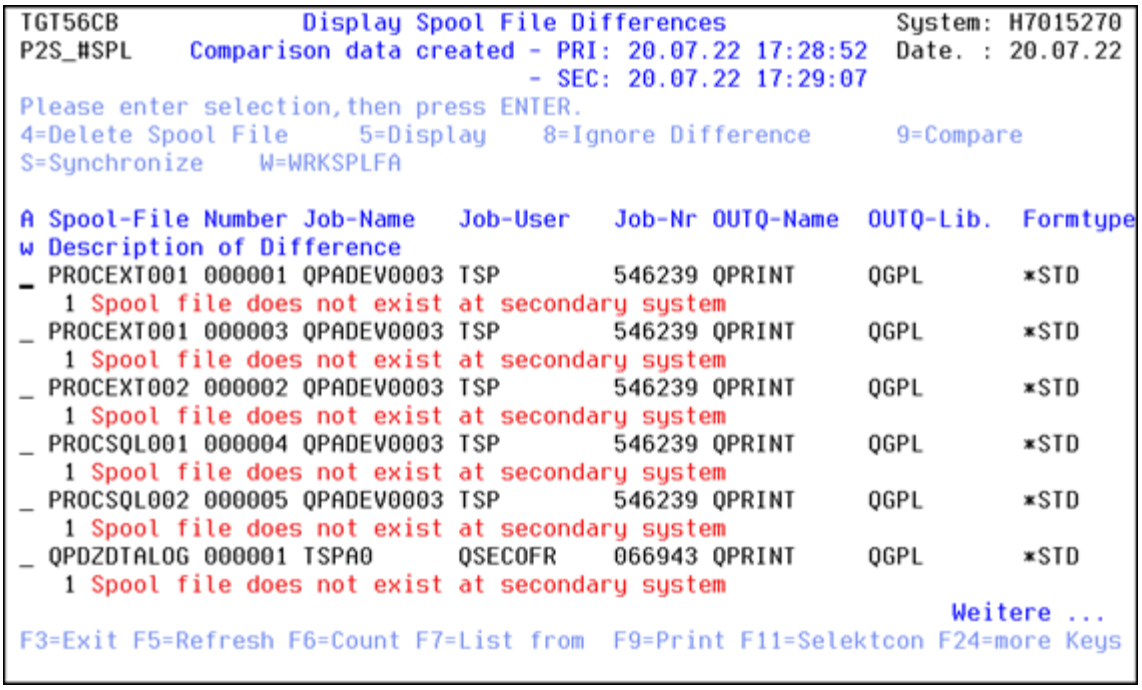
F6=number
Per comparison date and time, the current number of outstanding deviations is displayed.

F7=List from
Set up display starting from a certain part file.

F11=selection
Possibility to enter different selection criteria.

The valid command keys of the current menu are described in the system operator help.

3.5.10 Selection S - Spool file deviations



With this selection list the user can manage object deviations. Furthermore, the permissions of the objects can be displayed, the logging value and the journaling can be changed.

The following options are possible for the **Display part file deviations:**

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

Selection 4 - Delete spool file
With this selection option spool files can be deleted.

Selection 5 - Display
With this selection option information of the spool file comparison can be displayed.

Selection 8 - Ignore deviations
With this function you have the possibility to deliberately ignore deviations that have occurred intentionally or are caused by different release states. However, you should not use this function to ignore surplus spool files, because these could be synchronized automatically at the next switchover.

Selection 9 - Compare
This selection can be called to perform the comparison again for this spool file.

Selection S - Synchronize
This function gives you the possibility to resynchronize the spool file.

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Selection W - WRKSPLFA

This function is called by the system command WRKSPLFA for the corresponding spool file. With this one has the possibility to control the attributes of the spool file.

The following command keys are valid on the current mask:

F5=Update

This command key is used for updating the selection lists. All options currently entered on the screen are deleted. The display list is rebuilt so that any list entries added, modified or deleted by other users are also displayed or removed.

F7=List from

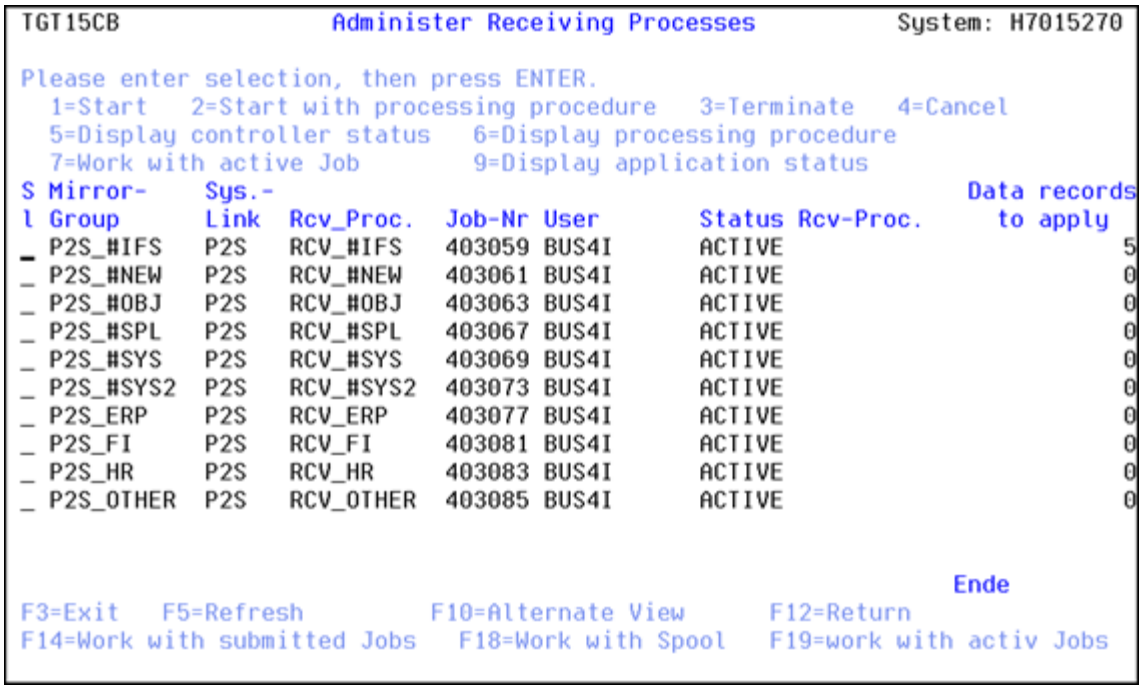
Set up display starting from a certain part file.

F11=selection

Possibility to enter different selection criteria.

The valid command keys of the current menu are described in the system operator help.

3.6 Main menu selection 6 – Work with receiving processes



This management list offers the user the possibility to start or stop receiving processes. Furthermore, the user can inform himself about the current status of his **HA system BUS4i**, as well as the processing processes, or monitor them.

The following valid input fields are available to the user:

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

The following options are available for managing the processing operations:

Selection 1 - Start receiving process

This selection option starts the receiving process on the secondary system.
It is started via the TGTSYS job queue, which is assigned to the BUS4i subsystem by default. This subsystem must have been started before with the STRSBS command.
If the receiving process was not started automatically with the sending process, the STRVABP command can be used to start the receiving process on the secondary system manually, or with selection 1 in the receiving programs management list.
For example, the receive process reads the received database changes and passes them to the corresponding
File processing program. The receive process on the secondary system is started only if a receive process is not already active for the specified application.

Selection 2 - Start with processing

This selection option starts the receiving process using the processing process.

Selection 3 - End receiving process

This selection option terminates the receive process on the secondary system, regardless of whether the send process on the primary system has been terminated.
Normally, ending the sending process on the primary system automatically ends the receiving process on the secondary system and reorganizes the workspaces. Ending the sending process on the primary system automatically ends the receiving process on the secondary system.

Via the ENDVABP command, or via selection 3 in the management list of the receiving programs, the receiving process can be terminated independently of the sending process and thus the internal memory space can be released. To terminate, an END control record is copied into the control file and this initiates the reorganization and closing of the individual application files.
The receiving process should be restarted afterwards

Selection 4 - Cancel receiving process

With this selection option the receiving process on the secondary system is abnormally aborted via the ENDJOB *IMMED command. This selection should only be used in exceptional situations. In exceptional situations, the receiving process can be abnormally aborted. This is done either via selection 4 in the management list of the receive programs or optionally via the ENDVABP command. It should be noted that by aborting database changes
can be lost that have not yet been physically written to the magnetic disk.

Selection 5 - Display controller status

With this selection option it is possible to display the status of the data transmission, line of the control units and the APPC units, as well as to change the description of these units.
Furthermore, this selection can be used to connect or disconnect the above mentioned units.

Selection 6 - Display processing status

This selection option displays the status of the processing process, as well as the number of records received, the number of records already processed, and the number of records still to be processed.

Selection 7 - Work with active job

For the selected user job, information such as job log can be retrieved.

Selection 9 - Display status

This function allows you to view the overall status of the mirror group.
(primary and secondary system) to be displayed from one system (is activated in the system link control parameters)

Valid command keys of the current mask:

F3=End
Exit the current application function.

F5=Update
This command key is used for updating the selection lists. All options currently entered on the screen are deleted. The display list is rebuilt so that any list entries added, modified or deleted by other users are also displayed or removed.

F12=Back
Back to the previous mask, all entered values of this mask will not be saved.

F14=Work with transferred jobs
Displays information about jobs placed in the job queue for batch processing during the work session. Values entered on the screen are not taken into account when this command key is pressed.

F18=Work with output
Displays a list of spool files in the output queue. Values entered on the screen are not taken into account when this command key is pressed.

F19=Work with active jobs
With this selection option all jobs active in the system are displayed. This corresponds to the WRKACTJOB command.

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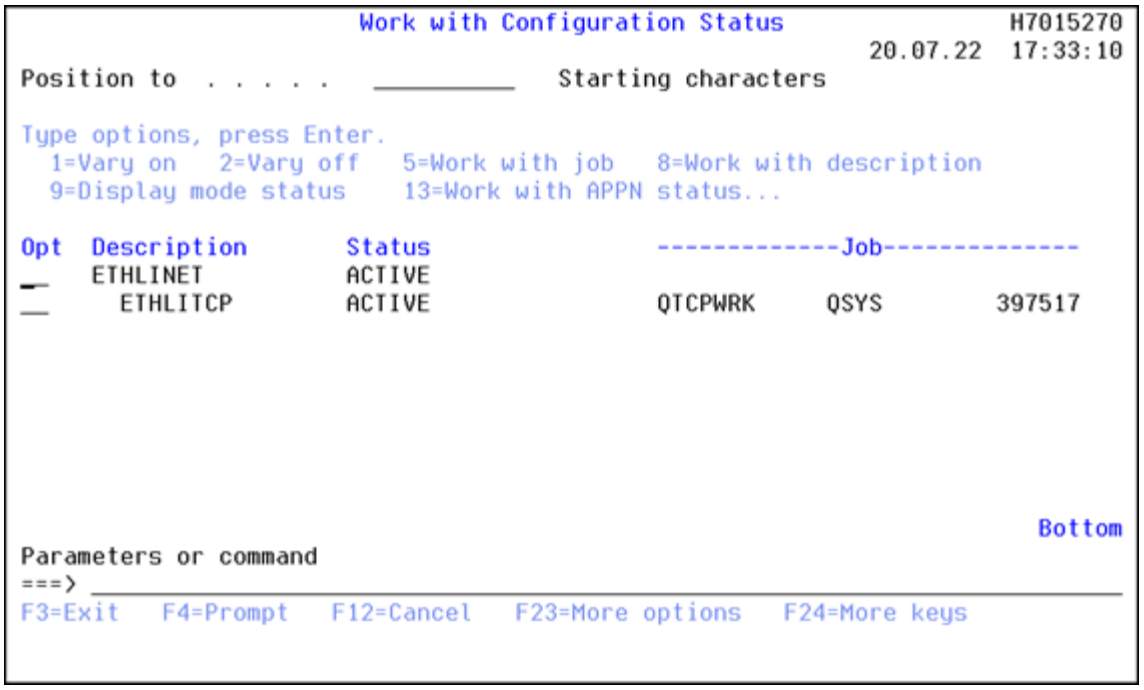
3.6.1 Selection 5 - Display controller status



Via option 5 in the selection list of the send process management you get the display "Work with configuration status". This display list shows status information for lines, control units and APPC units. It also shows job tag information for the active units. For each selected line and control unit description, all associated control units and unit descriptions are displayed. Also shown are associated mode descriptions for active APPC units. The configuration descriptions are indented below the associated object. To ensure proper operation, the line and control unit must be attached.

The selection option is entered before the respective description name and the Enter key is pressed. Several, also different selection options can be entered, whose functions are executed one after the other.

If the keywords for the parameters are known, the values can be specified on the command line for Selection 1 (Append), Selection 2 (Append), Selection 5 (Work with Job), Selection 8 (Work with Description), Selection 9 (Show Mode Status), Selection 13 (Work with APPN Status), or for a command. The specified values appear in the operator guidance displays.

Commands can be entered in the command input line. To get information about the command, enter the command and press the help key. For assistance in entering the command, the user enters the command and presses the F4 command key.

If "More ..." appears appears at the bottom right of the display, further information is available. Press the Page forward (or Page up) key to scroll forward. Press the Page backward key (or Press the "Page down" key to scroll back. If "End" appears instead of "More ... appears instead of "End", the end of the list has been reached.

The valid command keys are described in detail in the system operator guidance of the current command.

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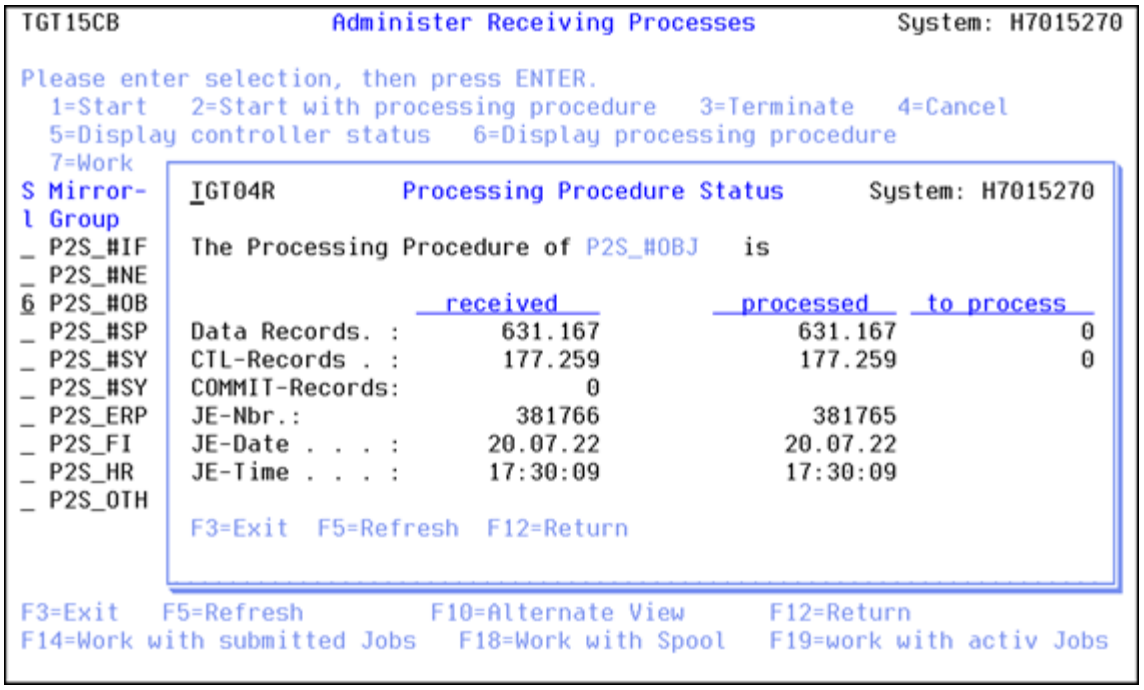
3.6.2 Selection 6 - Display processing status



This display is a display format and serves only for information. Here information about the current processing process is
issued for the secondary system. The data are to be interpreted as follows:

Records:

Data records which have been processed on the primary system and which are to be processed on the secondary system.

- Received:
  Number of records transferred from the primary system since the start of communication.

- Already processed:
  Number of receiving records which are already processed by the secondary system.

- Still to be processed:
  Number of received records which are still to be processed by the secondary system.

Command and control sets:

Command sets, which are generated by means of the user interface CRTCMDE
were recorded on the primary system and on the secondary system.
system are to be executed.

Control records, which are required for internal processing.

- Received:
  Number of command or control records
  transmitted from the primary system
  since the start of communication.

- Already processed:
  Number of receiving command or control sets that have already been processed by the secondary system.

- Still to be processed:
  Number of received command or control sets which are still to be processed by the secondary system.

COMMIT control sets:

Transferred COMMIT control records if the application being transferred to the secondary system has COMMIT control. COMMIT records are, for example, COMMIT and ROLLBACK.

- Received:
  Number of database records transferred from the primary system since the start of communication.

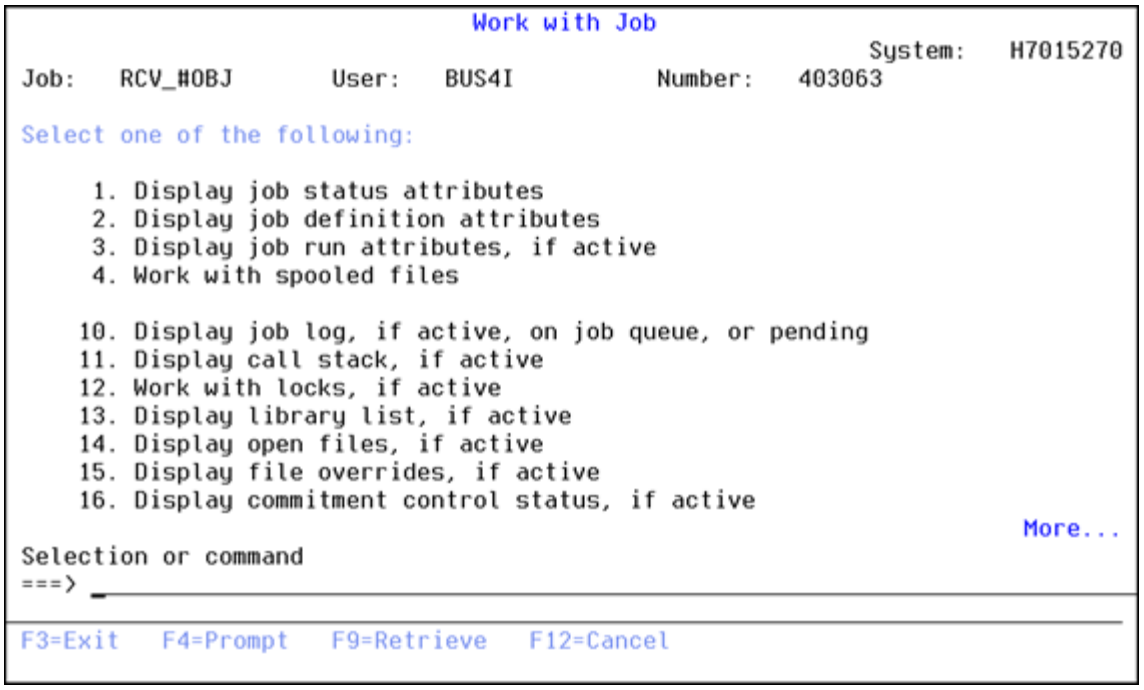
Valid command keys are:

F3=End
Exit the current application function.

F5=Update
This command key is used for updating the selection lists. All options currently entered on the screen are deleted. The display list is rebuilt so that any list entries added, modified or deleted by other users are also displayed or removed.

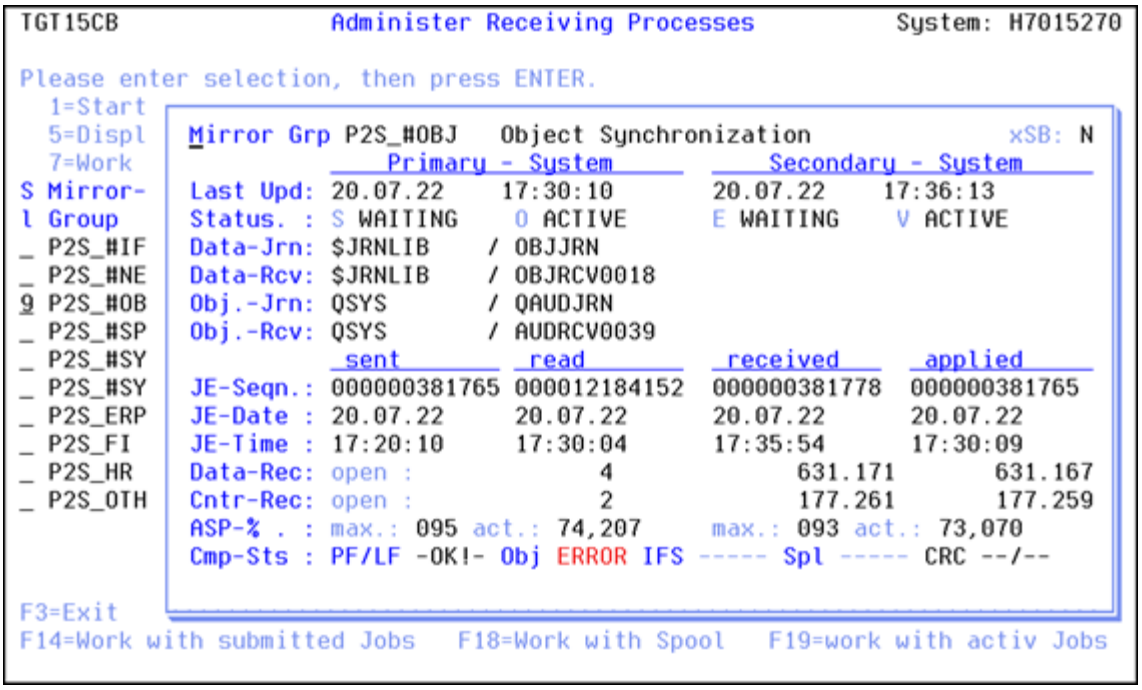
F12=Back
Back to the previous mask, all entered values of this mask will not be saved.

3.6.3 Selection 7 - Work with active job



The WRKJOB system command for the selected user job is called. Information such as job log, job status attributes, open files, spool file information for the user job can be called.

3.6.4 Selection 9 - Display overall status



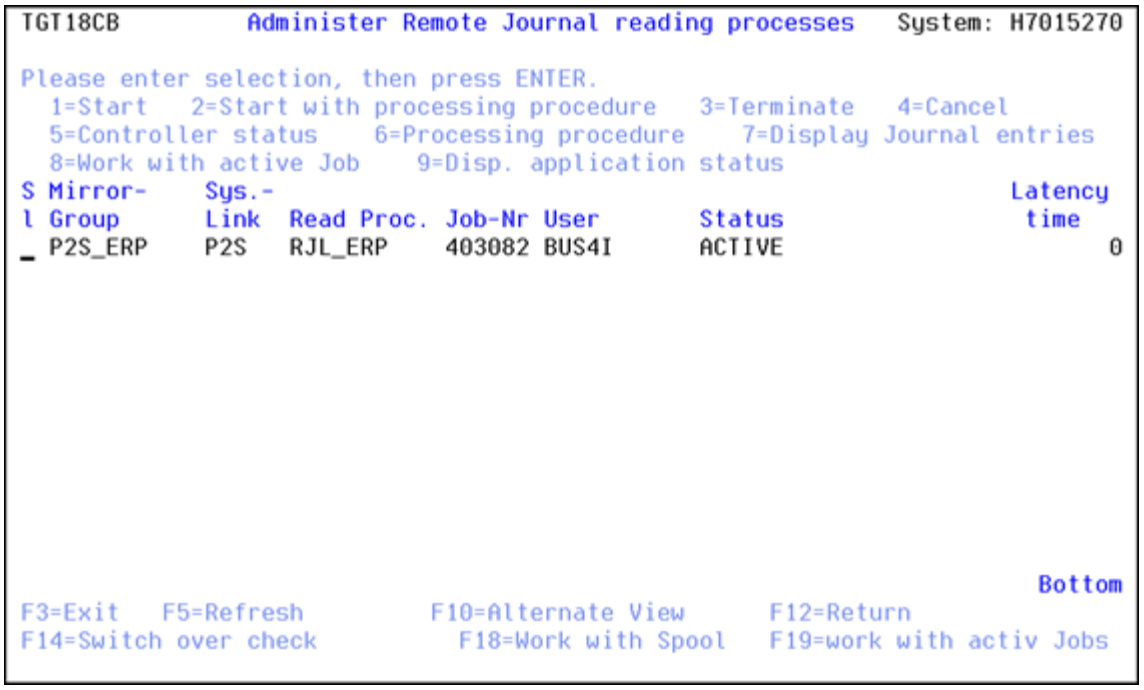
In "Control processing" as well as in "Manage mirror groups", the overall status of a mirror group can be displayed on both the primary and the secondary system via selection 9. Among other things, the journal and the journal receiver for the mirror group are displayed, taking into account the number of records processed. In addition, the ASP occupancy can be checked.

The bottom line displays the status of deviations between production and backup system. This display informs about errors, warnings, OK's for part files (PF/LF), objects (Obj), IFS objects(IFS) and spool files (Spool).

Detailed information can be displayed on the secondary system by selecting 5=Service functions.

The display "-----" means that no information is available in this mirror group for the respective object type.

3.7 Main menu selection 7 - Remote Journal read processes control



This management list offers the user the possibility to start or stop receiving processes. Furthermore, the user can inform himself about the current status of his **HA system BUS4i**, as well as the processing processes, or monitor them.

The following valid input fields are available to the user:

Selection

The Selection data field is used to enter the options displayed on the current screen.
The choices can be combined depending on the type of work to be performed.
The options are performed in the order in which the selected items are in the list.
If you enter an option that is not allowed, an error message will appear on the screen.

The following options are available for managing the processing operations possible:

Selection 1 - Start Remote Journal reading process

This selection option starts the remote journal reading process on the secondary system. It is started via the TGTSYS job queue, which is assigned to the BUS4i subsystem by default. This subsystem must have been started beforehand with the STRSBS command.
If the remote journal reading process was not started automatically with the sending process, it can be started manually with the STRRJLP command, or with selection 1 in the remote journal reading process management list on the secondary system.
The remote journal read process reads the assigned remote journal and writes the intermediate data files. The remote journal read process on the secondary system is started only if a read process is not already active for the specified application.

Selection 2 - Start with processing

This selection option starts the processing using the remote journal reading process.

Selection 3 - Exit

This selection option ends the remote Journal read process on the secondary system, regardless of whether the send process on the primary system has ended.
Normally, the remote journal reading process on the secondary system is automatically terminated by the completion of the sending process on the primary system and the workspaces are reorganized.
Via the ENDRJLP command, or via selection 3 in the management list of the remote journal read processes, the read process can be terminated independently of the send process, thereby releasing the internal memory space. To terminate, an END control record is copied to the control file, causing the reorganization and closing of the individual application files.

Selection 4 - Cancel

This selection option aborts the remote journal read process on the secondary system via the ENDJOB *IMMED abnormal command. This selection should only be used in exceptional situations. This is done either via selection 4 in the remote journal read process management list or optionally via the ENDRJLP command. It should be noted that database changes which have not yet been physically written to the ASP may be lost as a result of the abort.

Selection 5 - Display controller status

With this selection option it is possible to display the status of the data transmission, line of the control units and the APPC units, as well as to change the description of these units. Furthermore, this selection can be used to connect or disconnect the above mentioned units.

Selection 6 - Display processing status

This selection option displays the status of the processing process, as well as the number of records received, the number of records already processed, and the number of records still to be processed.

Selection 7 - Journal entries

With this selection option you can view journal entries that are yet to be read.

Selection 8 - Work with active job

For the selected user job, information such as job log can be retrieved.

Selection 9 - Display status

This function allows you to view the overall status of the mirror group.
(primary and secondary system) to be displayed from one system (is activated in the system link control parameters)

Valid command keys of the current mask:

F3=End

Exit the current application function.

F5=Update

This command key is used for updating the selection lists. All options currently entered on the screen are deleted. The display list is rebuilt so that any list entries added, modified or deleted by other users are also displayed or removed.

F12=Back

Back to the previous mask, all entered values of this mask will not be saved.

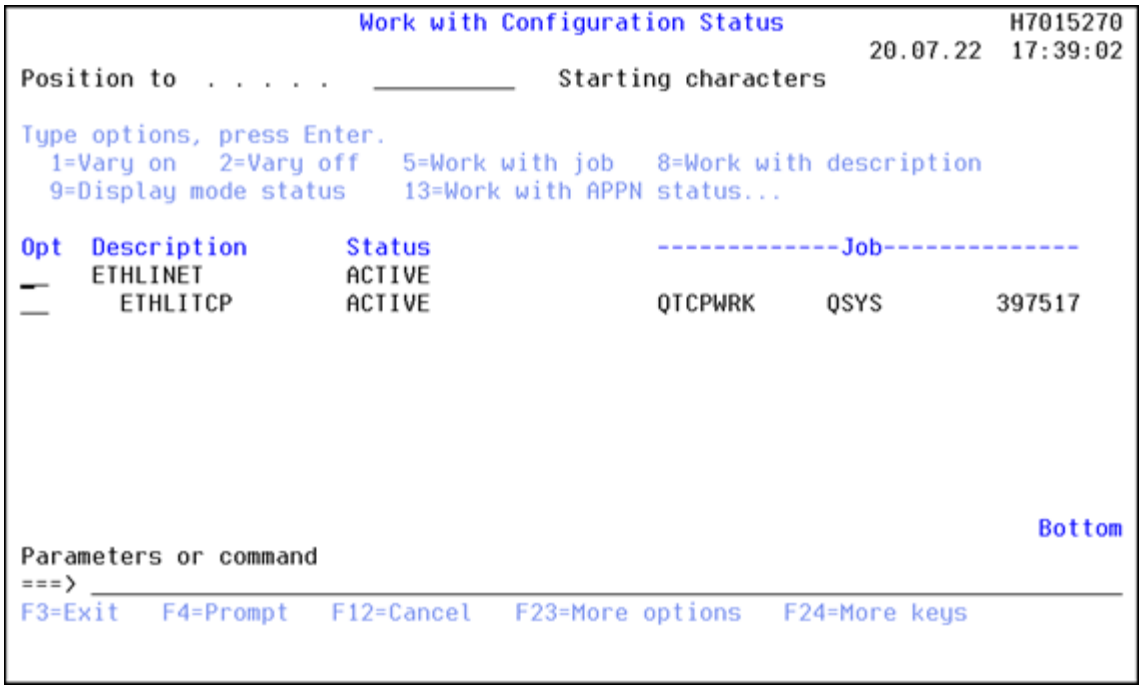
F14=Work with transferred jobs

Displays information about jobs placed in the job queue for batch processing during the work session. Values entered on the screen are not taken into account when this command key is pressed.

F18=Work with output
Displays a list of spool files in the output queue. Values entered on the screen are not taken into account when this command key is pressed.

F19=Work with active jobs
With this selection option all jobs active in the system are displayed. This corresponds to the WRKACTJOB command.

3.7.1 Selection 5 - Display controller status



Via option 5 in the selection list of the send process management you get the display "Work with configuration status". This display list shows status information for lines, control units and APPC units. It also shows job tag information for the active units. For each selected line and control unit description, all associated control units and unit descriptions are displayed. Also shown are associated mode descriptions for active APPC units. The configuration descriptions are indented below the associated object. To ensure proper operation, the line and control unit must be attached.

The selection option is entered before the respective description name and the Enter key is pressed. Several, also different selection options can be entered, whose functions are executed one after the other.

If the keywords for the parameters are known, the values can be specified on the command line for Selection 1 (Append), Selection 2 (Append), Selection 5 (Work with Job), Selection 8 (Work with Description), Selection 9 (Show Mode Status), Selection 13 (Work with APPN Status), or for a command. The specified values appear in the operator guidance displays.

Commands can be entered in the command input line. To get information about the command, enter the command and press the help key. For assistance in entering the command, the user enters the command and presses the F4 command key.

If "More ..." appears appears at the bottom right of the display, further information is available. Press the Page forward (or Page up) key to scroll forward. Press the Page backward key (or Press the "Page down" key to scroll back. If "End" appears instead of "More ... appears instead of "End", the end of the list has been reached.

The valid command keys are described in detail in the system operator guidance of the current command.

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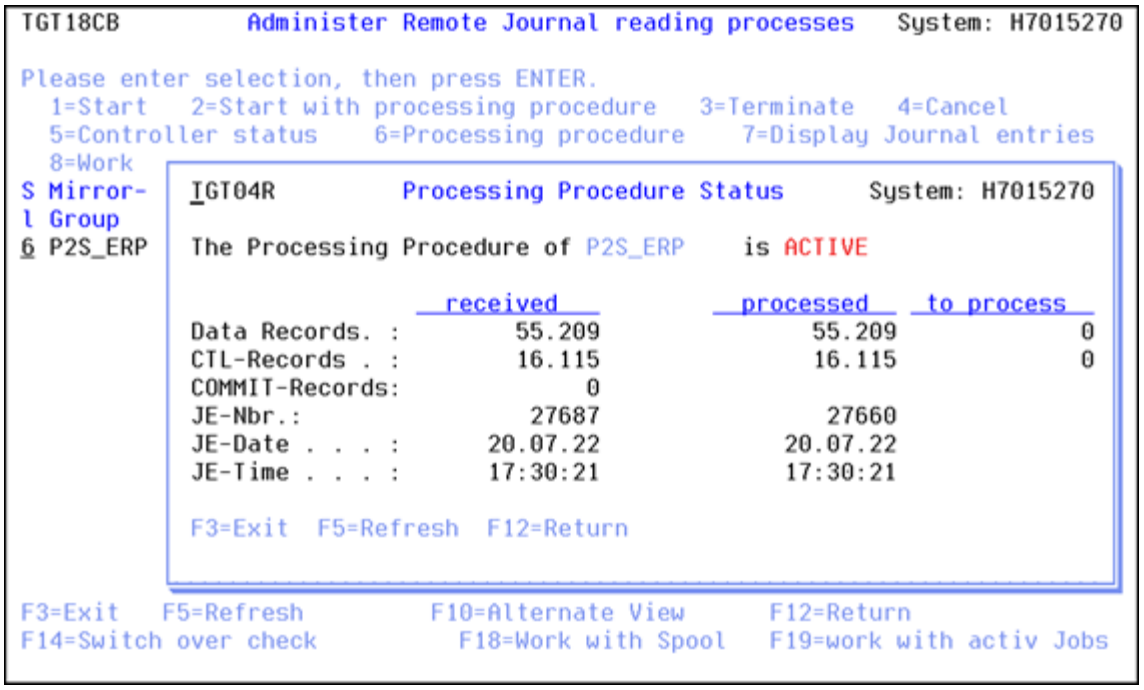
3.7.2 Selection 6 - Display processing status



This display is a display format and serves only for information. Here information about the current processing process is
issued for the secondary system. The data are to be interpreted as follows:

Records:

Data records which have been processed on the primary system and which are to be processed on the secondary system.

- Received:
  Number of records transferred from the primary system since the start of communication.

- Already processed:
  Number of receiving records which are already processed by the secondary system.

- Still to be processed:
  Number of received records which are still to be processed by the secondary system.

Command and control sets:

Command sets, which are generated by means of the user interface CRTCMDE
were recorded on the primary system and on the secondary system.
system are to be executed.

Control records, which are required for internal processing.

- Received:
  Number of command or control records
  transmitted from the primary system
  since the start of communication.

- Already processed:
  Number of receiving command or control sets that have already been processed by the secondary system.

- Still to be processed:
  Number of received command or control sets which are still to be processed by the secondary system.

COMMIT control sets:

Transferred COMMIT control records if the application being transferred to the secondary system has COMMIT control. COMMIT records are, for example, COMMIT and ROLLBACK.

- Received:
  Number of database records transferred from the primary system since the start of communication.

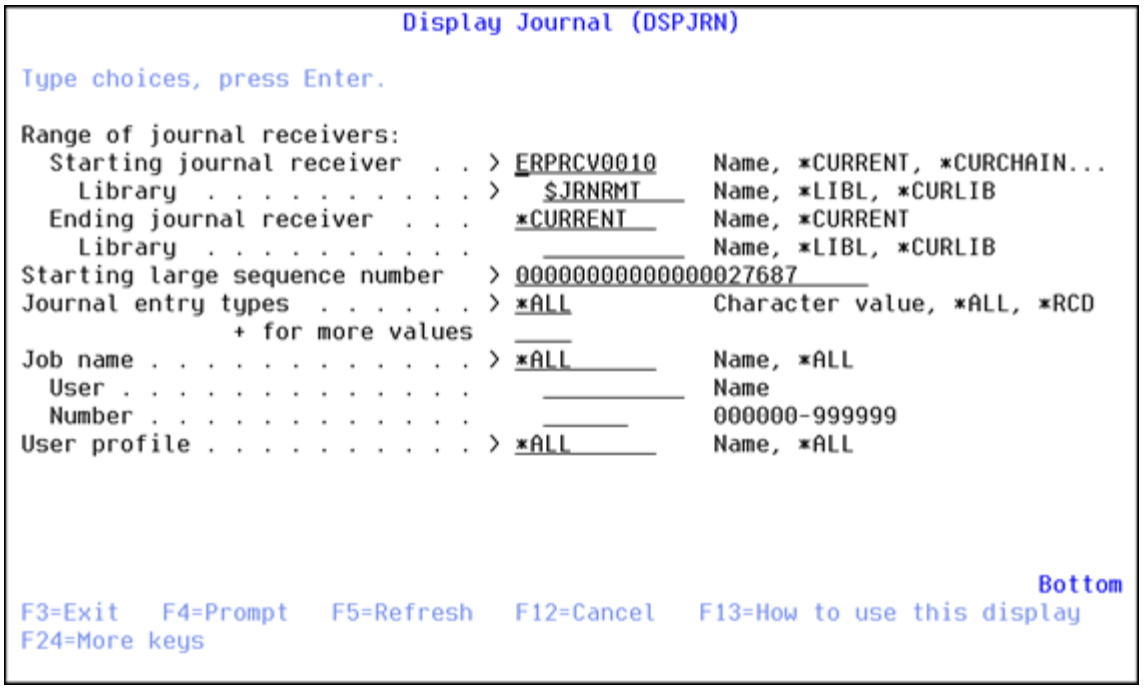
Valid command keys are:

F3=End
Exit the current application function.

F5=Update
This command key is used for updating the selection lists. All options currently entered on the screen are deleted. The display list is rebuilt so that any list entries added, modified or deleted by other users are also displayed or removed.

F12=Back
Back to the previous mask, all entered values of this mask will not be saved.

3.7.3 Selection 7 - Display journal entries



Specifies the first journal receiver (start) and the last journal receiver (end), i.e. the range of receivers containing journal entries to be converted for output. The system starts with the first journal receiver (specified by the first value) and works through the receiver chain until the last receiver (specified by the last value) is processed. If duplicate receivers are used, the first receiver is always used when changes are created. The WRKJRNA command (Work with journal attributes) can be used to display the sequence of recipients in the recipient chain. If an error is found in the receiver chain before the conversion (such as a damaged receiver or a receiver that cannot be found), the system tries to use the second of the duplicate receivers. If the second receiver is also damaged or not found, or the error is found only when the changes are created, the operation is terminated.

Annotation:
If the maximum number of recipients (2045) in the range is exceeded, an error occurs and no journal entries are converted.

Valid values for the **Start / End journal receiver** parameters are:

Name
Specify the name of the first journal recipient whose entries are to be converted for output.

***CURRENT**
The current recipient attached at the beginning of the journal entry conversion will be used.

***CURCHAIN**
The journal receiver chain to which the journal receiver attached at the beginning of the conversion of the journal entries belongs is used. This receiver chain does not bridge any break in the chain. If there is an interruption in the chain, the receiver range extends from the last interruption in the chain to the receiver attached at the start of the conversion of the journal entries.

Valid values for the **library** parameters are:

***LIBL**

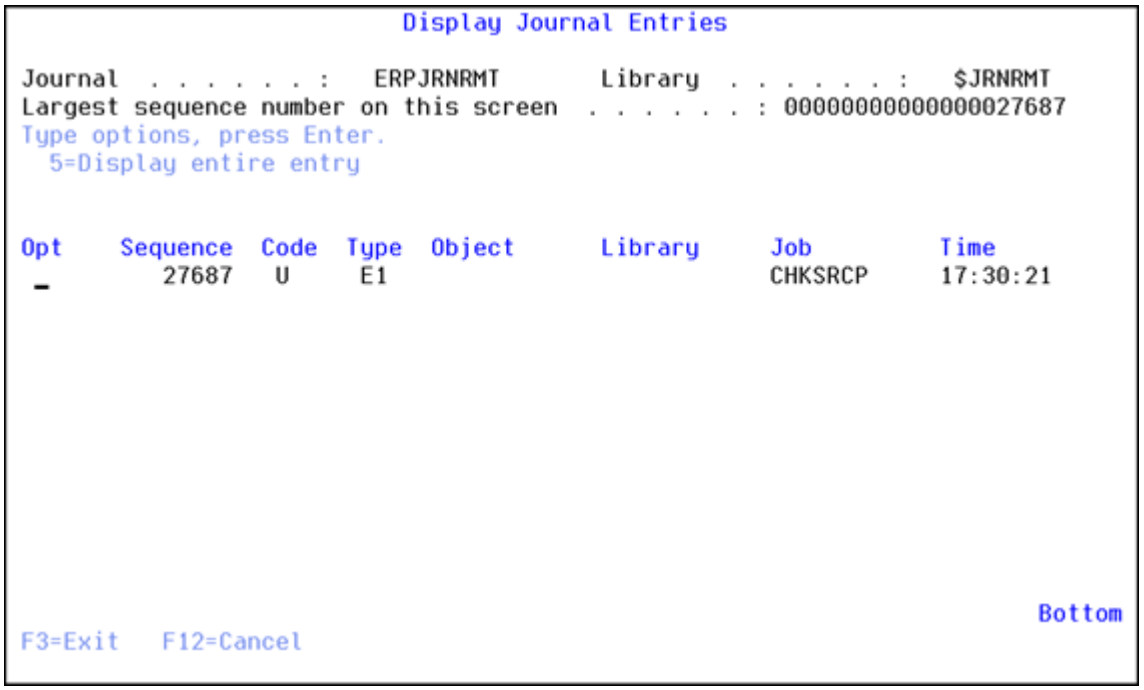
All libraries in the job's library list are searched until the first match is found.

***CURLIB**
The journal recipient is searched for in the current job library. If no current library is specified for the job, QGPL is used.

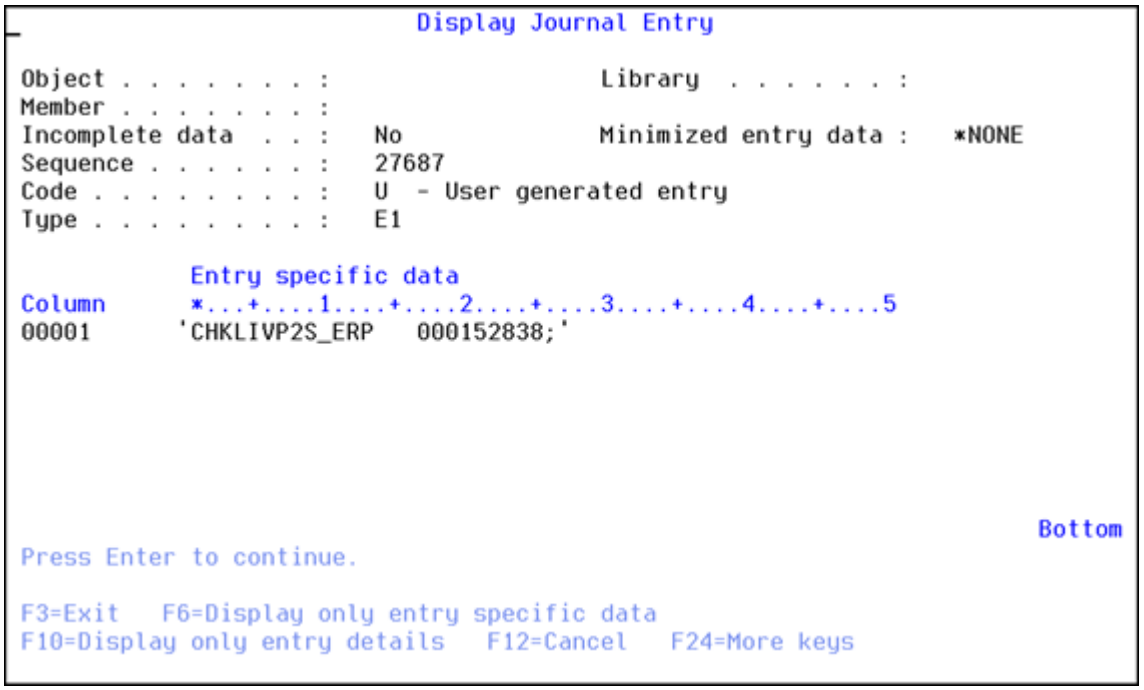
Name
Specify library where the journal recipient is located.

The Display Journal Entries display shows a requested list of journal entries. This display contains only basic information about the journal entries. All information about a specific journal entry can be retrieved from this display. To display all information for a specific journal entry, enter 5 next to the corresponding journal entries and press Enter. If multiple selections are specified, they will be executed one after the other, starting with the first selection specified in the list.

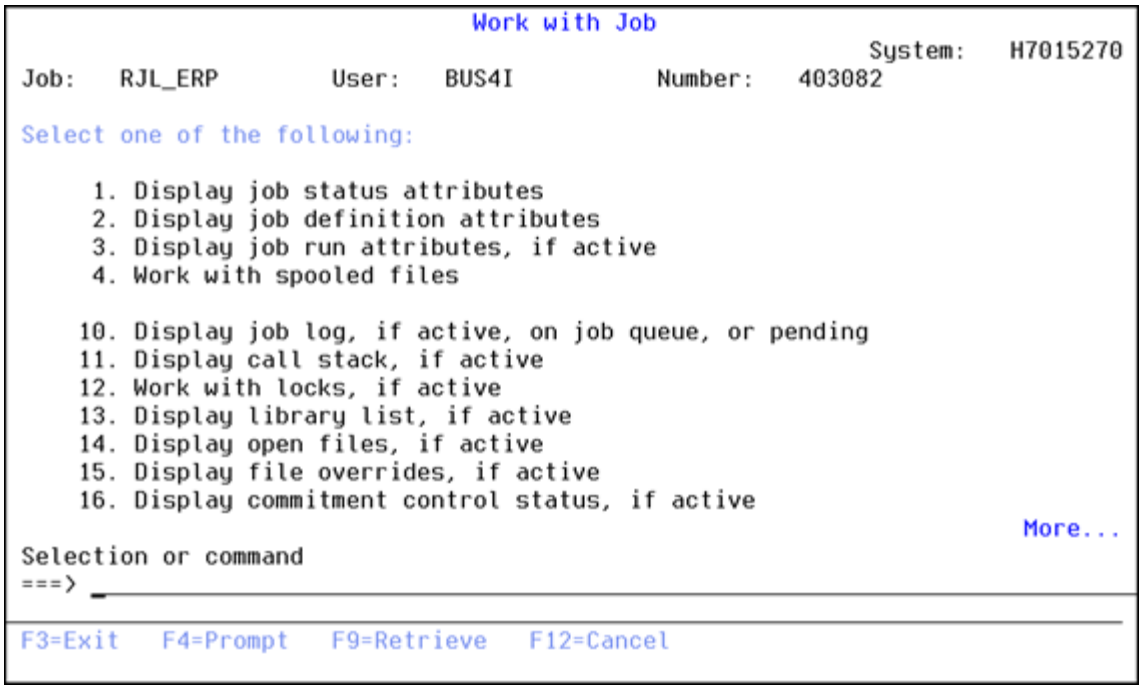
If "More..." appears at the bottom right of the display, further information is available. Press the Page down (Page forward) key to display the information.



The following mask shows the "Check-Live" as an example:

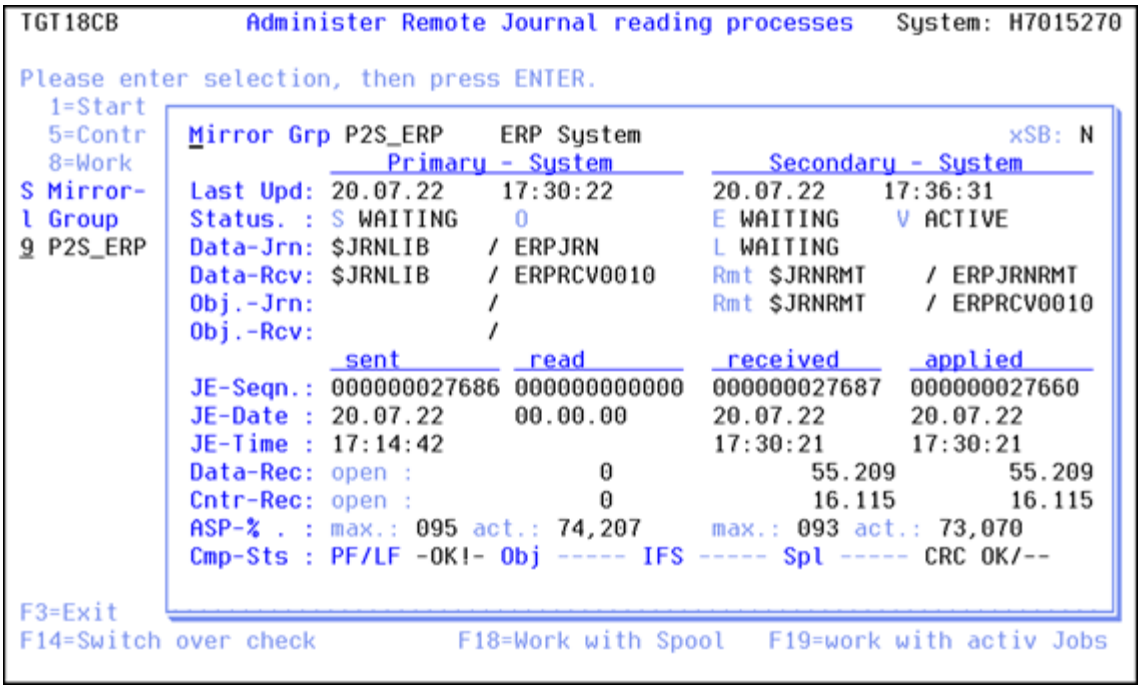

Display Journal Entry
Object . . . . . :
Library . . . . . :
Member . . . . . :
Incomplete data . . : No
Minimized entry data : *NONE
Sequence . . . . . : 27687
Code . . . . . : U - User generated entry
Type . . . . . : E1
Entry specific data
Column *...+....1....+....2....+....3....+....4....+....5
00001 'CHKLIVP2S_ERP 000152838;'
Bottom
Press Enter to continue.
F3=Exit F6=Display only entry specific data
F10=Display only entry details F12=Cancel F24=More keys

3.7.4 Selection 8 - Work with active job



The WRKJOB system command for the selected user job is called. Information such as job log, job status attributes, open files, spool file information for the user job can be called.

3.7.5 Selection 9 - Show overall status



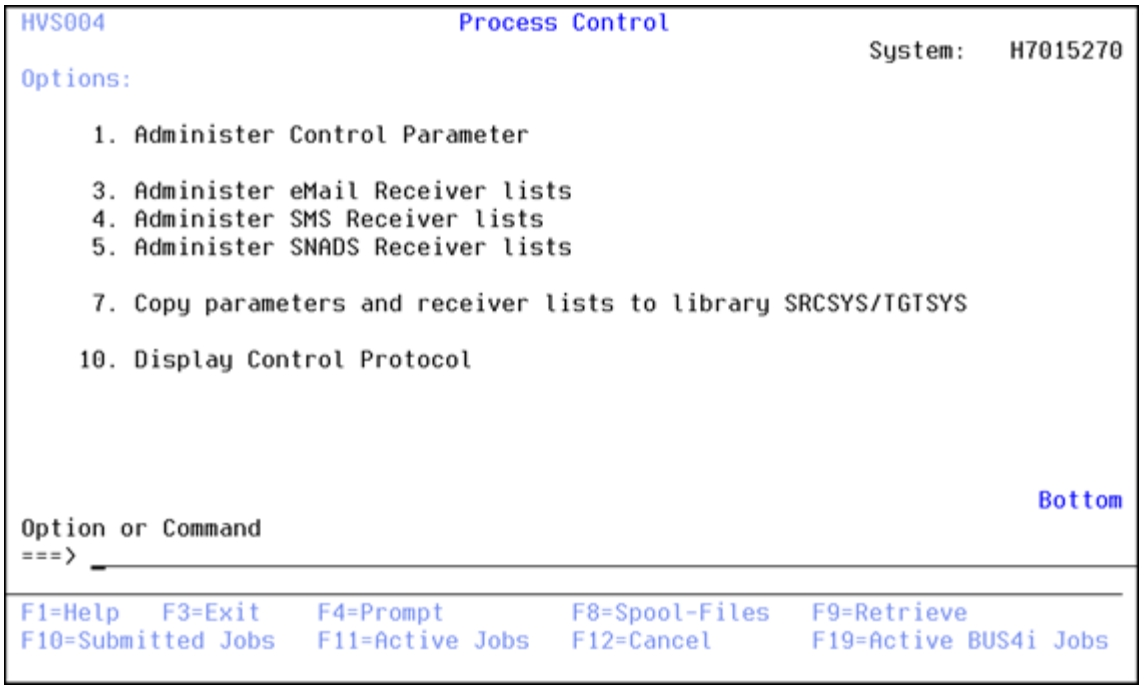
In "Control processing" as well as in "Manage mirror groups", the overall status of a mirror group can be displayed on both the primary and the secondary system via selection 9. Among other things, the journal and the journal receiver for the mirror group are displayed, taking into account the number of records processed. In addition, the ASP occupancy can be checked.

The bottom line displays the status of deviations between production and backup system. This display informs about errors, warnings, OK's for part files (PF/LF), objects (Obj), IFS objects(IFS) and spool files (Spool).

Detailed information can be displayed on the secondary system by selecting 5=Service functions.

The display "-----" means that no information is available in this mirror group for the respective object type.

3.8 Main menu selection 8 - Process control



This menu allows the user to set the parameters for monitoring the processes started in the backup system. With the process monitoring every single process (send, synchronization, receive and processing process) of every mirror group can be monitored. If processes are inactive or in MSGW, messages can be sent via SMS and/or eMail and/or SNADS to any number of employees. This is done via the SMS, eMail and SNADS distribution lists.

The following menu items are displayed on the current screen:

Menu item 1: Manage control parameters
Here, general settings of the process monitoring are configured, such as the address of the email server the monitoring period, etc.

Menu item 3: Manage eMail distribution list
An overview of the e-mail distribution lists and the assigned e-mail addresses.

Menu item 4: Manage SMS distribution list
An overview of the SMS distribution lists and the assigned SMS addresses.

Menu item 5: Manage SNADS distributor
An overview of the SNADS distributors and the assigned SNADS addresses.

Menu item 7: Copy parameters and manifolds to library SRCSYS/TGTSYS
Here the configuration of the process monitoring will be copied to TGTSYS or SRCSYS and to the remote system.

Menu item 10: Display monitoring log
The monitoring log lists the messages of the process monitoring.

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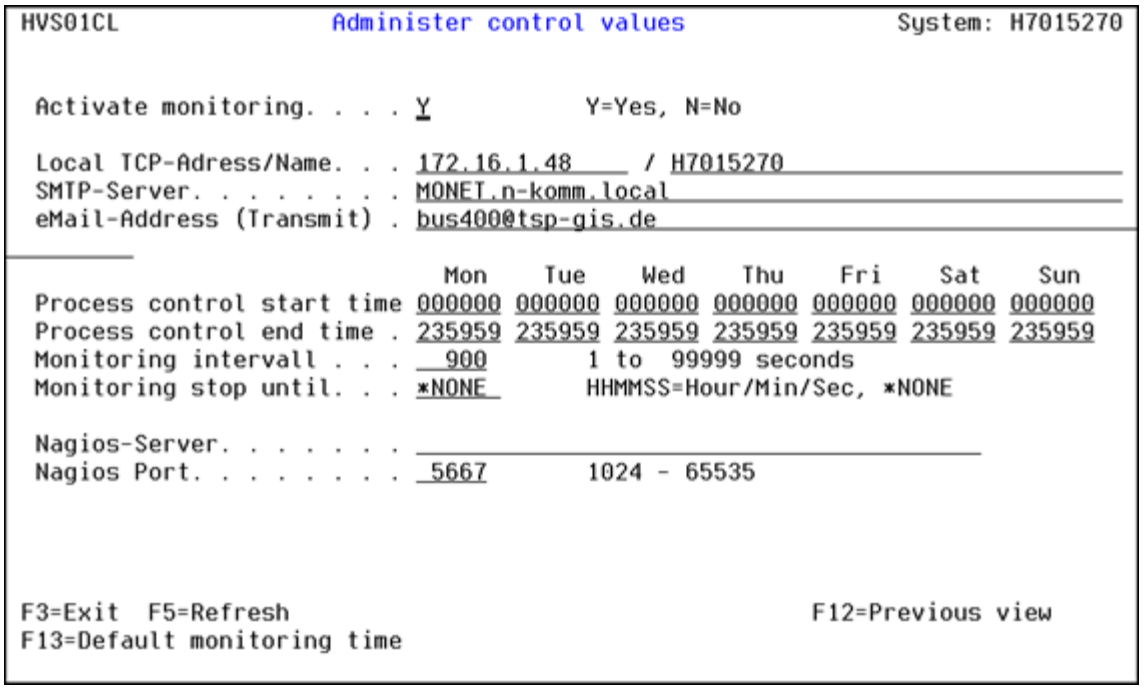
3.8.1 Menu item 1 - Administer control parameters



The user can manage the control parameters via this input mask.

The following valid input fields are available to the user:

Activate monitoring

Y=Yes
Monitoring is activated.

N=No
No monitoring of the control parameters.

Local TCP address/name
The local TCP/IP address of the system and the system name.

SMTP server
The IP address or DNS name of the email server.

eMail address sender
Enter the e-mail address of the sender.

Monitoring start time
Specify time when monitoring should be started.

Monitoring stop time
Specify time when the monitoring should end.

Monitoring interval
Specification in seconds in which the process monitoring job checks all existing mirror groups after the interval has expired.

Nagios Server

The IP address or DNS name of the Nagios server, this specification is only needed if a Nagios server is present in the network.

Nagios Port
The port on which the Nagios server can be reached.

Valid command keys of the current mask:

F3=Leave
Exit the current application function.

F5=Update
This command key is used for updating the selection lists

F12=Previous display
Back to the previous mask, all entered values of this mask will not be saved.

3.8.2 Menu item 3 - Administer eMail distribution list

The user can manage the e-mail distribution lists via this input mask.

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

Selection 2 - Change
With this selection option the selected eMail distribution list can be changed.

Selection 3 - Copy
With this selection option the selected eMail distribution list can be copied.

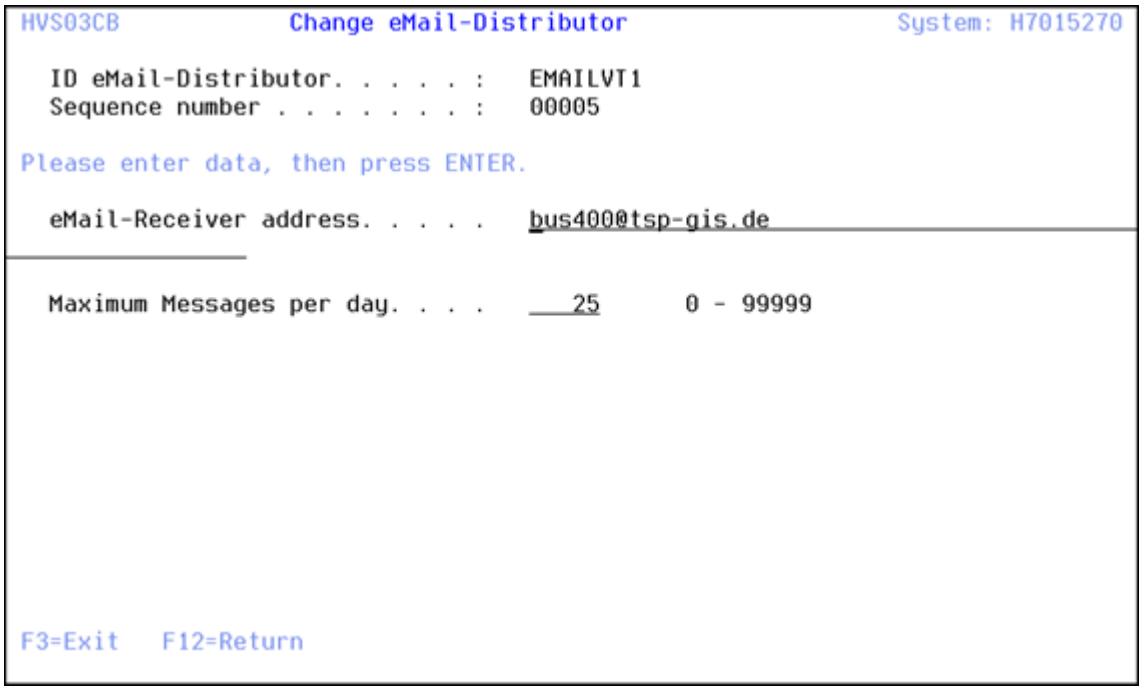
Selection 4 - Delete
With this selection option the selected eMail distribution list can be deleted.

Selection 5 - Display
With this selection option details of the selected eMail distribution list can be displayed.

Valid command keys of the current mask:

F6=Add
A new eMail distribution list can be added here.

3.8.2.1 Selection 2 - Change eMail distribution list



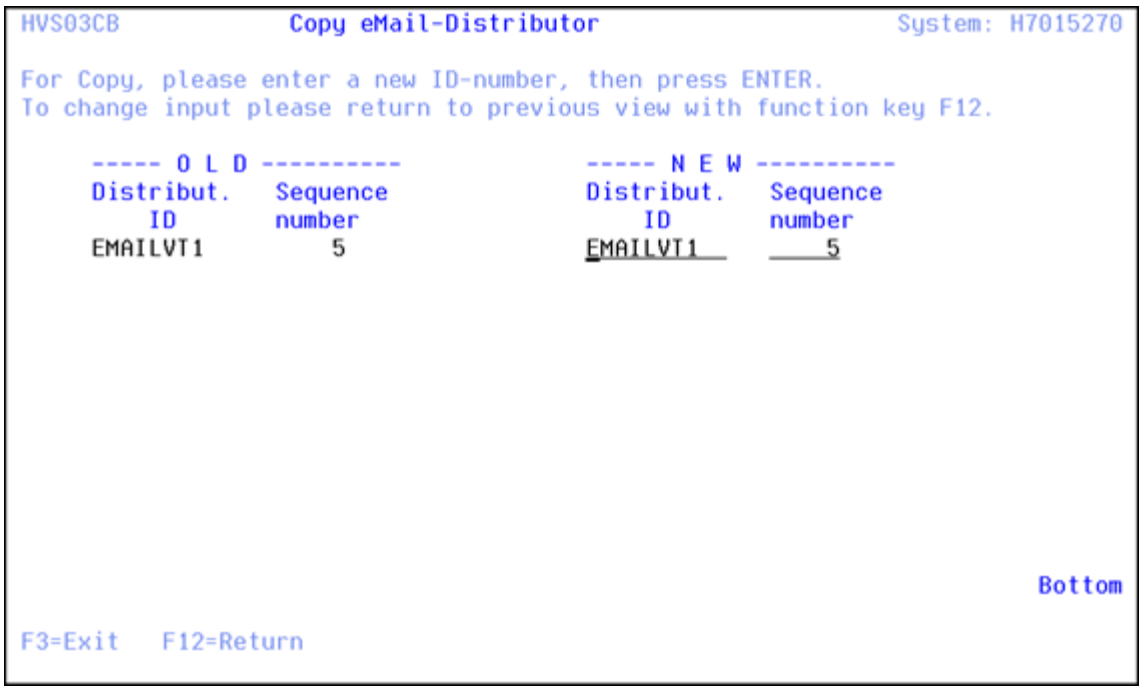
With this selection option the eMail address of the recipient as well as the maximum number of messages per day can be changed.

Valid command keys of the current mask:

F3=End
Exit the current application function.

F12=Previous display
Back to the previous mask, all entered values of this mask will not be saved.

3.8.2.2 Selection 3 - Copy eMail distribution list



With this selection option the selected eMail distribution list can be copied.

The following fields are available to the user:

Distributor ID
Enter the new ID designation here.

Sequence number
Enter the new sequence number here, it indicates the order in which the respective addresses are processed.

Valid command keys of the current mask:

F3=End
Exit the current application function.

F12=Previous display
Back to the previous mask, all entered values of this mask will not be saved.

3.8.2.3 Selection 4 - Delete eMail distribution list

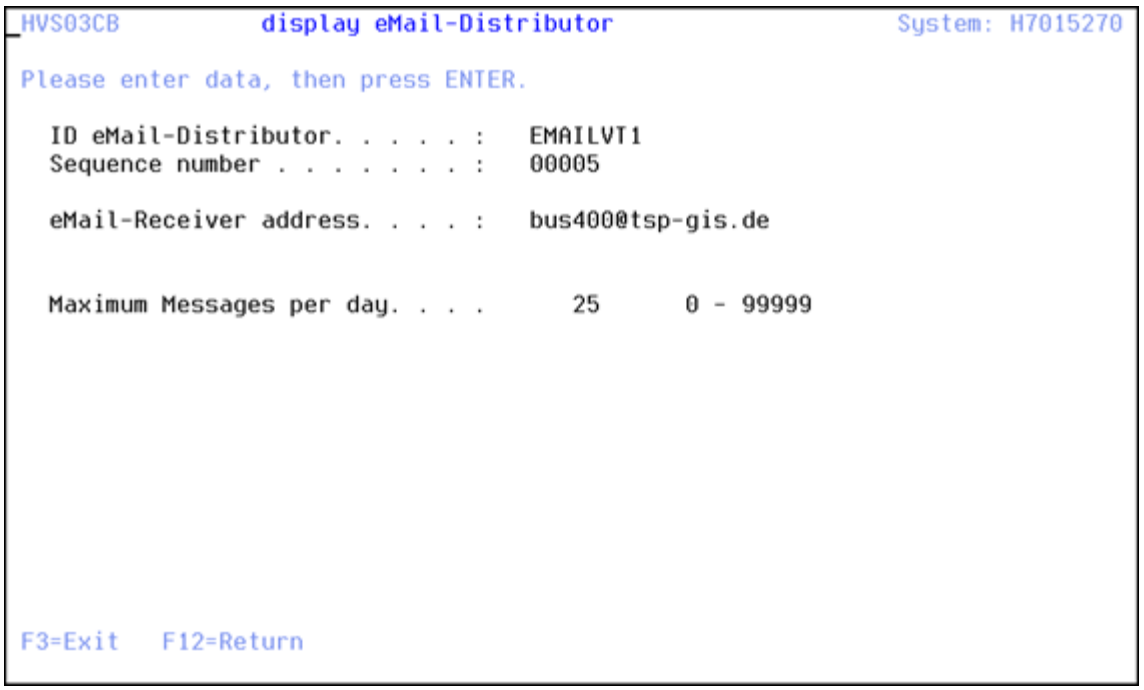
With selection 4 the selected eMail distribution list can be deleted.

After confirming with the Enter key, the eMail distribution list will be deleted.

Valid command keys of the current mask:

F12=Previous display
Back to the previous mask, all entered values of this mask will not be saved.

3.8.2.4 Selection 5 - Display eMail distribution list



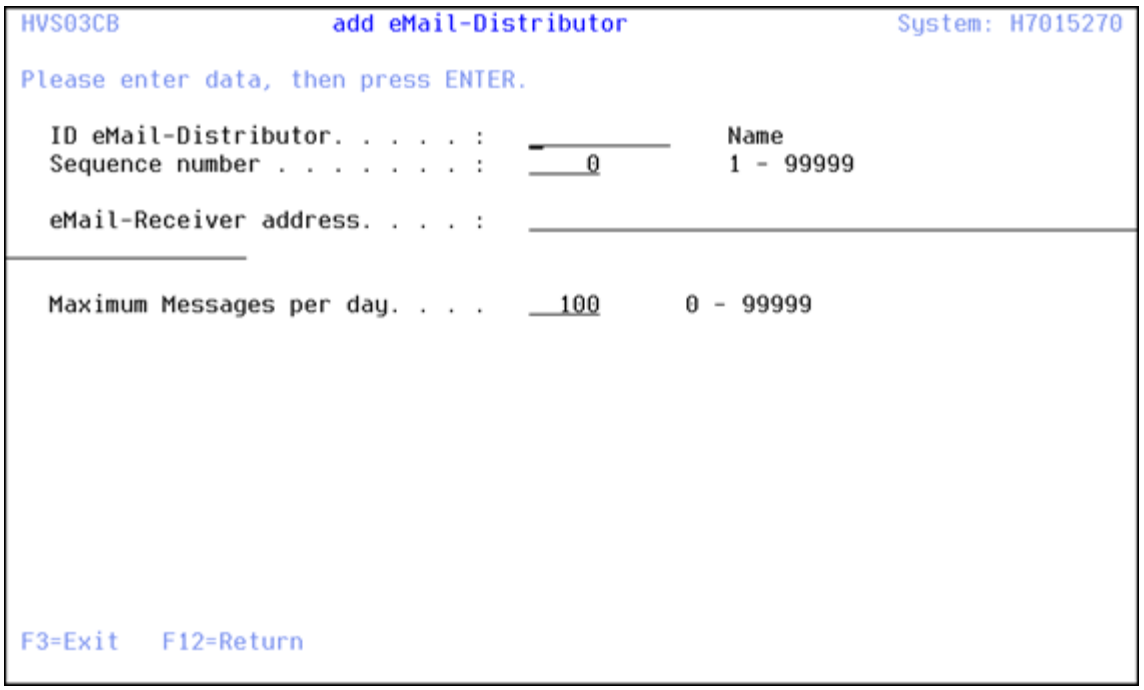
With this selection option details of the selected eMail distribution list can be displayed.
It is also possible to specify the maximum number of emails that can be sent per day.

Valid command keys of the current mask:

F3=End
Exit the current application function.

F12=Back
Back to the previous mask, all entered values of this mask will not be saved.

3.8.2.5 Command key F6 - Add eMail distribution list



With this function an eMail distribution list can be added.

The following input fields are available to the user:

ID e-mail distribution list
Here the ID for the eMail distribution list can be specified.

Sequence number
If more than one e-mail address is to be assigned to a user, the sequence number must be changed.

eMail address of the recipient
Here the eMail address of the recipient is entered.

Max. Number of messages per day
It is possible to specify the maximum number of emails that can be sent per day.

Valid command keys of the current mask:

F3=End
Exit the current application function.

F12=Back
Back to the previous mask, all entered values of this mask will not be saved.

3.8.3 Menu item 4 - Administer SMS distribution list

The user can manage the SMS distributors via this input mask. In order to receive monitoring messages, a special gateway must first be activated at the responsible network operator. To do this, an SMS with the following text must be sent to the short code that the responsible network operator has set up for this purpose:

Network operator	SMS text	Speed dial
D1 Telecom	OPEN	8000
D2 Vodafone	OPEN	3400
E-Plus	START	7676245
O2	START	6245

After activation you will receive an SMS address consisting of your complete mobile phone number and the name of the responsible server:

Network operator	SMS address
D1 Telecom	Mobilfunknummer@t-mobil.de
D2 Vodafone	Mobilfunknummer@d2-message.de
E-Plus	Mobilfunknummer@smsmail.e-plus.de
O2	Mobilfunknummer@my-genion.de

So, for example, your address might look like this: 01791234567@my-genion.de.

Selection

In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

Selection 2 - Change

Here you can change the SMS address of the selected SMS distribution list.

Selection 3 - Copy
With this menu item you can copy the selected SMS distribution list.

Selection 4 - Delete
Use this selection option to delete the selected SMS distribution list.

Selection 5 - Display
Via this selection you will see the details of the selected SMS distribution list.

Valid command keys of the current mask:

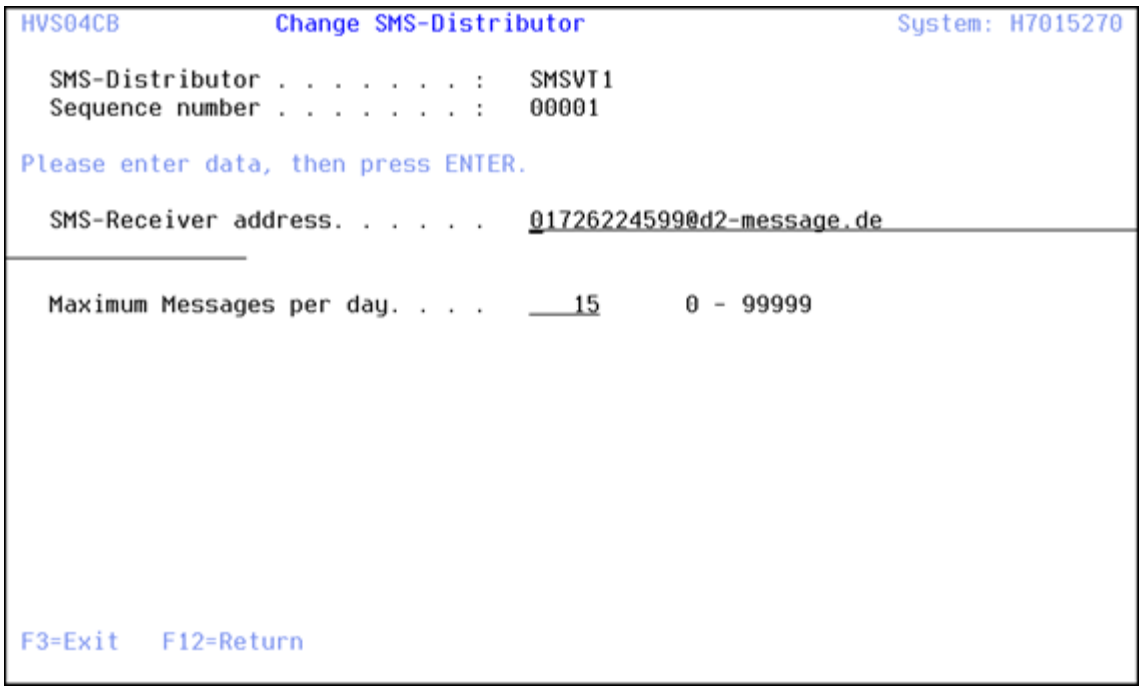
F3=End
Exit the current application function.

F5=Update
This command key is used for updating the selection lists. All options currently entered on the screen are deleted. The display list is rebuilt so that any list entries added or modified or deleted by other users are also displayed or removed.

F6=Add
A new SMS distribution list can be added here.

F12=Previous display
Back to the previous mask, all entered values of this mask will not be saved.

3.8.3.1 Selection 2 - Change SMS distribution list

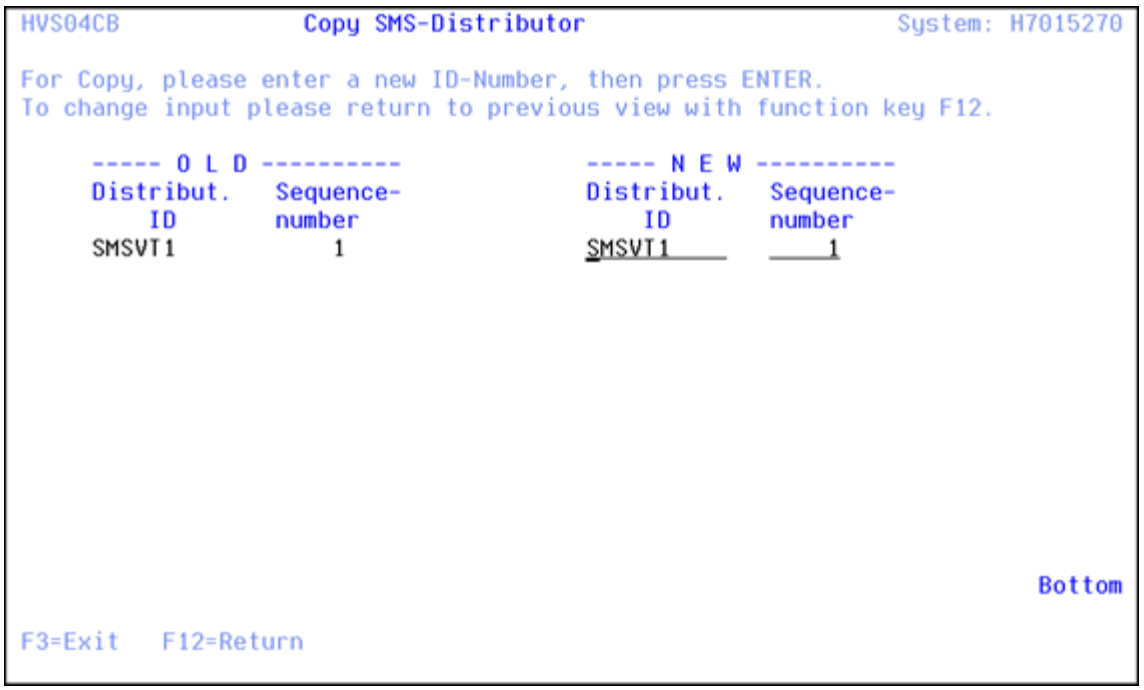


With this selection option the SMS address of the recipient can be changed.
It is also possible to specify the maximum number of messages that can be sent per day.

F3=End
Exit the current application function.

F12=Previous display
Back to the previous mask, all entered values of this mask will not be saved.

3.8.3.2 Selection 3 - Copy SMS distribution list



With this selection option the selected SMS distribution list can be copied.

The following fields are available to the user:

ID
Enter the new ID designation here.

Sequence number
Enter the new sequence number here, it indicates the order in which the respective addresses are processed.

Valid command keys of the current mask:

F3=End
Exit the current application function.

F12=Previous display
Back to the previous mask, all entered values of this mask will not be saved.

3.8.3.3 Selection 4 - Delete SMS distribution list

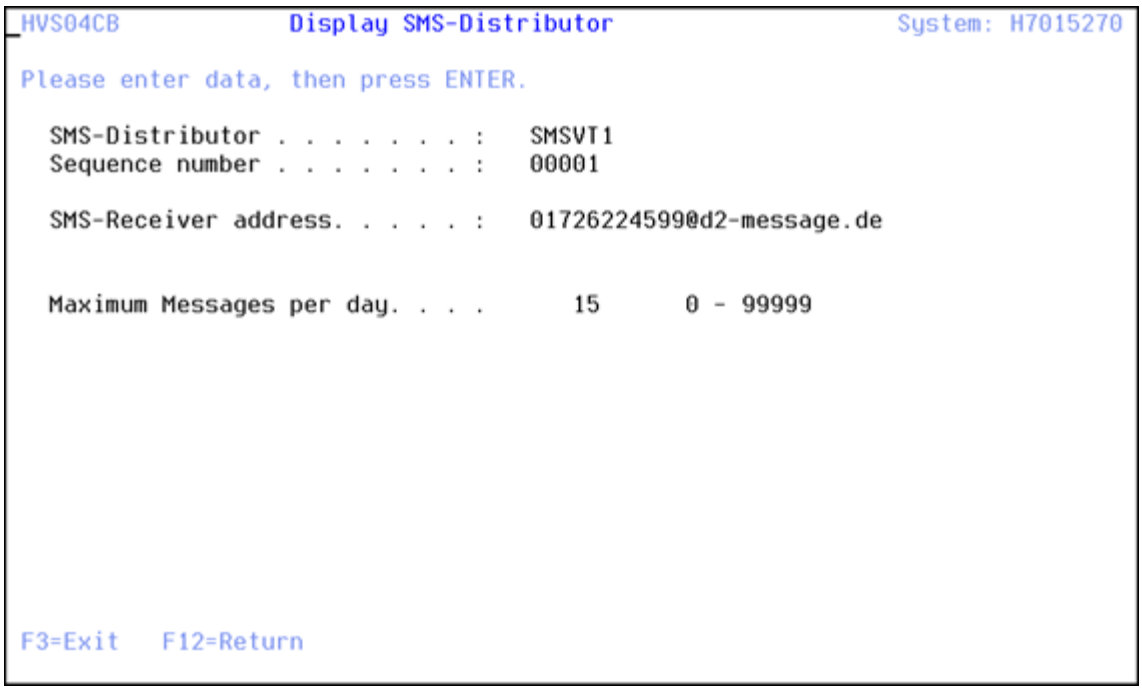
With this selection option the selected SMS distribution list can be deleted.

After confirming with the Enter key, the SMS distribution list is deleted.

Valid command keys of the current mask:

F12=Previous display
Back to the previous mask, all entered values of this mask will not be saved.

3.8.3.4 Selection 5 - Display SMS distribution list



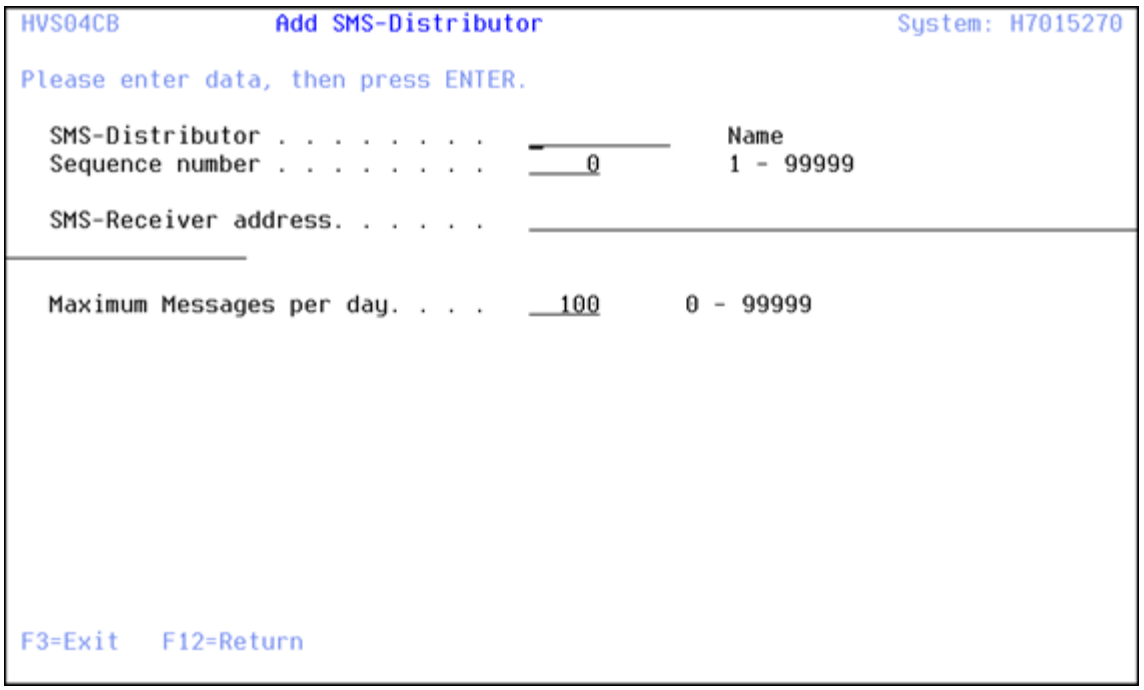
With this selection option, details of the selected SMS distribution list can be displayed.
It is also possible to specify the maximum number of emails that can be sent per day.

Valid command keys of the current mask:

F3=End
Exit the current application function.

F12=Back
Back to the previous mask, all entered values of this mask will not be saved.

3.8.3.5 Command key F6 - Add SMS distribution list



This function can be used to add an SMS distribution list.

The following input fields are available to the user:

SMS distribution list
A name for the SMS distribution list can be specified here.

Sequence number
If several SMS addresses are to be assigned to a user, the respective sequence number must be changed.

SMS address of the recipient
Here the SMS address of the recipient is entered, which was activated before:

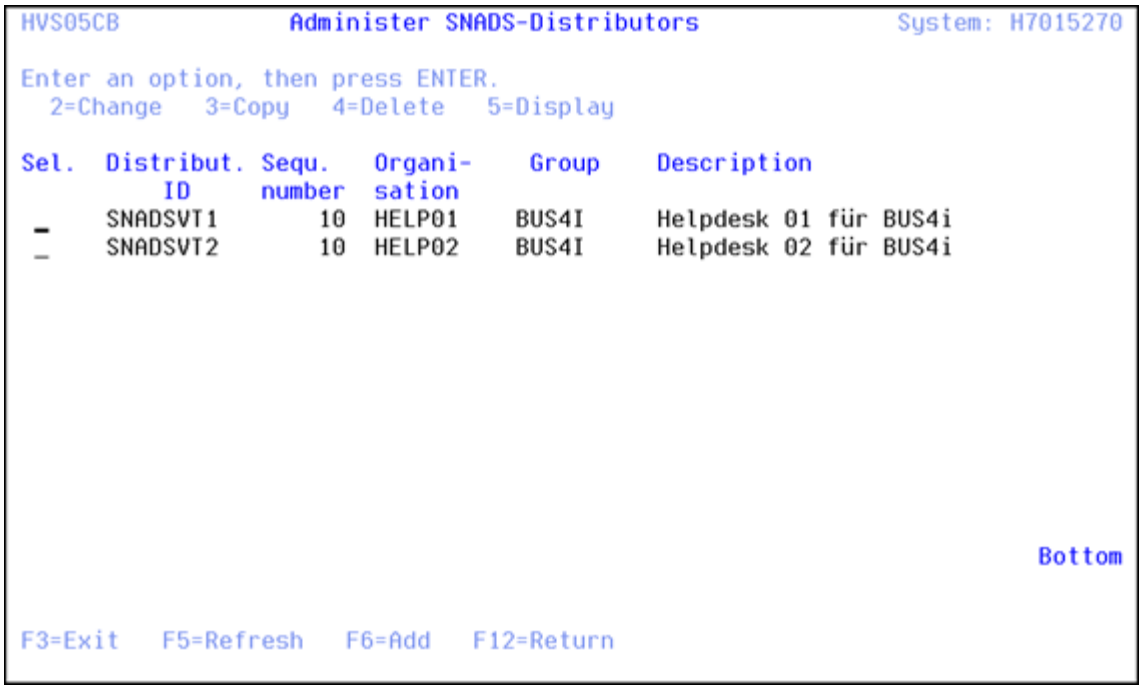
Network operator	SMS address
D1 Telecom	Mobilfunknummer@t-mobil.de
D2 Vodafone	Mobilfunknummer@d2-message.de
E-Plus	Mobilfunknummer@smsmail.e-plus.de
O2	Mobilfunknummer@my-genion.de

Valid command keys of the current mask:

F3=End
Exit the current application function.

F12=Back
Back to the previous mask, all entered values of this mask will not be saved.

3.8.4 Menu item 5 - Administer SNADS distribution lists



The user can manage the SNADS distributor via this input mask.

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

Selection 2 - Change
With this selection option the selected SNADS distributor can be changed.

Selection 3 - Copy
With this selection option the selected SNADS distributor can be copied.

Selection 4 - Delete
With this selection option the selected SNADS distributor can be deleted.

Selection 5 - Display
With this selection option, details of the selected SNADS distributor can be displayed.

Valid command keys of the current mask:

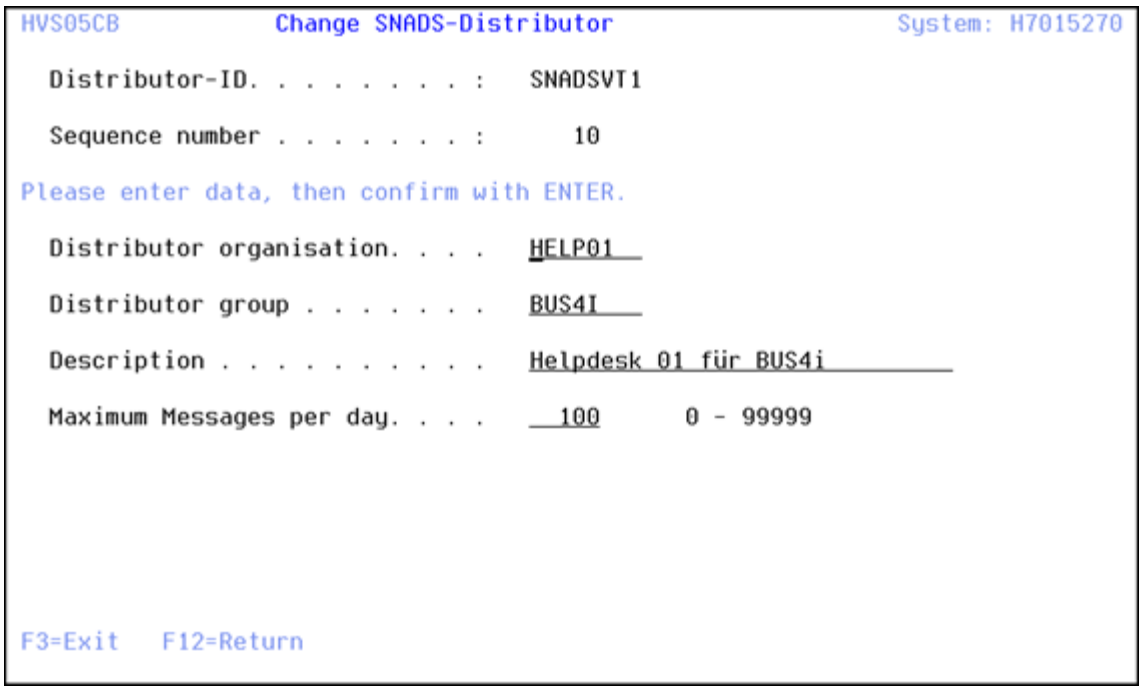
F3=End
Exit the current application function.

F5=Update
This command key is used for updating the selection lists. All options currently entered on the screen are deleted. The display list is rebuilt so that any list entries added or modified or deleted by other users are also displayed or removed.

F6=Add
A new eMail distribution list can be added here.

F12=Previous display
Back to the previous mask, all entered values of this mask will not be saved.

3.8.4.1 Selection 2 - Change SNADS distributor



With this selection option the selected SNADS distributor can be changed.
It is also possible to specify the maximum number of emails that can be sent per day.

The following fields are available to the user:

Distributor organization
Here you can change the name of the SNADS distribution list organizer.

Distribution group
Here you can change the name of the distribution group.

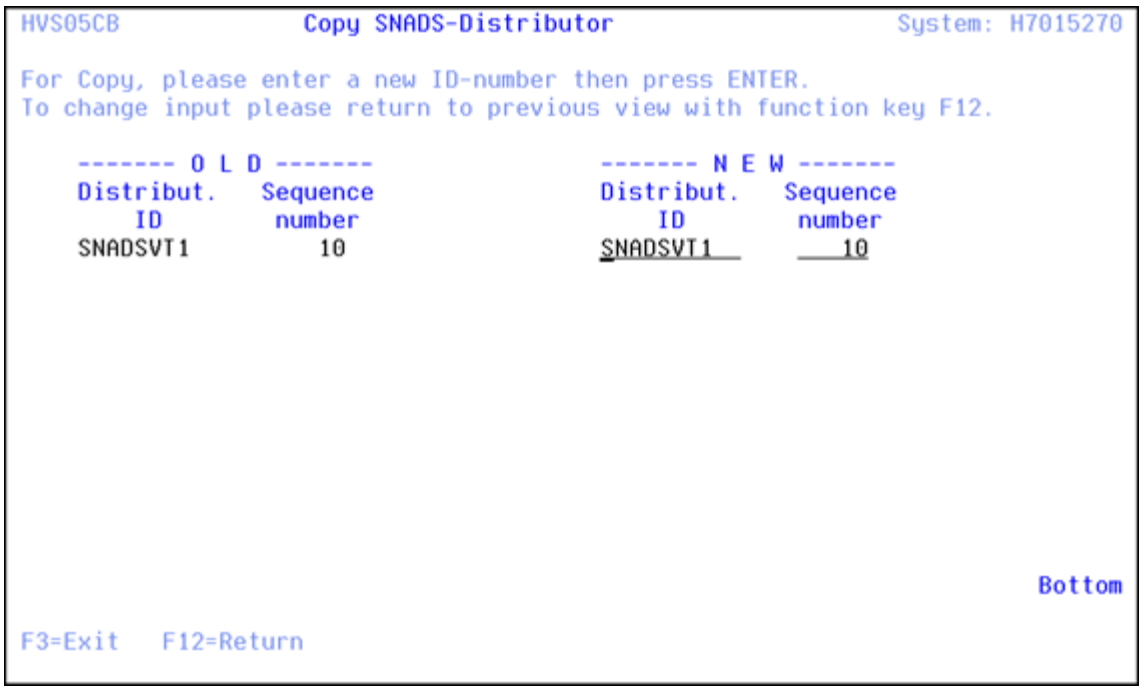
Designation
Here you have the possibility to change the name of the SNADS distributor. You have 30 characters at your disposal.

Valid command keys of the current mask:

F3=End
Exit the current application function.

F12=Previous display
Back to the previous mask, all entered values of this mask will not be saved.

3.8.4.2 Selection 3 - Copy SNADS distributor



With this selection option the selected SNADS distributor can be copied.

The following fields are available to the user:

Distributor ID
Enter the new ID designation here.

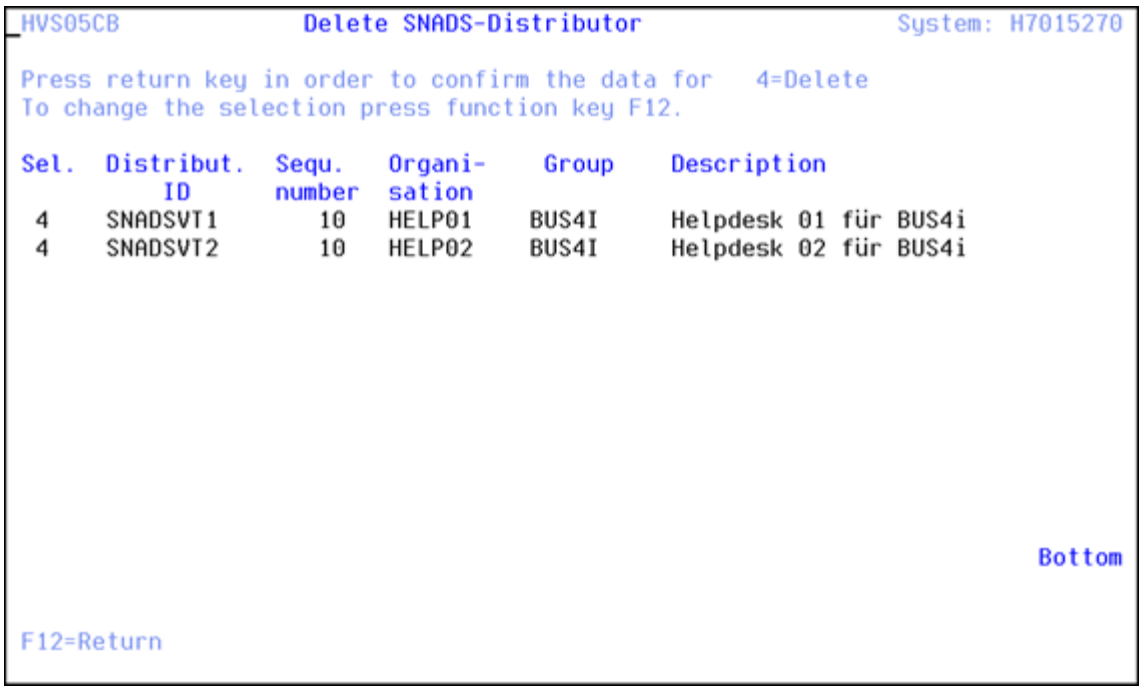
Sequence number
Enter the new sequence number here, it identifies the order in which the respective SNADS distributors are processed.

Valid command keys of the current mask:

F3=End
Exit the current application function.

F12=Previous display
Back to the previous mask, all entered values of this mask will not be saved.

3.8.4.3 Selection 4 - Delete SNADS distributor



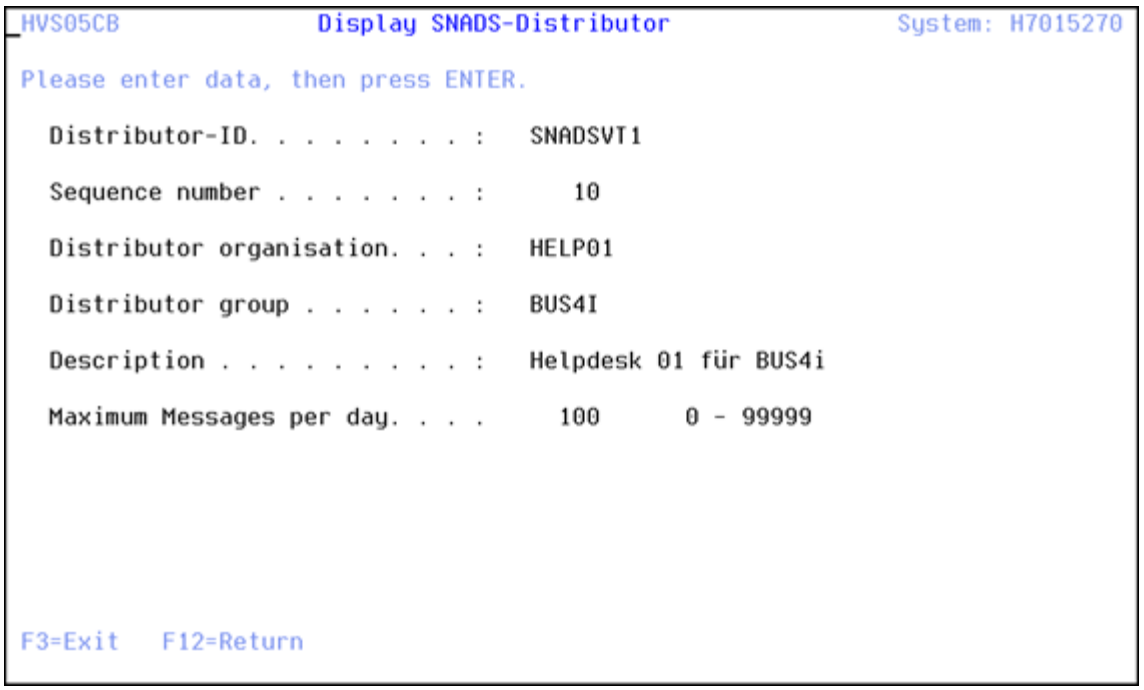
With this selection option the selected SNADS distributor can be deleted.

After confirming with the Enter key, the SNADS distribution list is deleted.

Valid command keys of the current mask:

F12=Previous display
Back to the previous mask, all entered values of this mask will not be saved.

3.8.4.4 Selection 5 - Display SNADS distributor



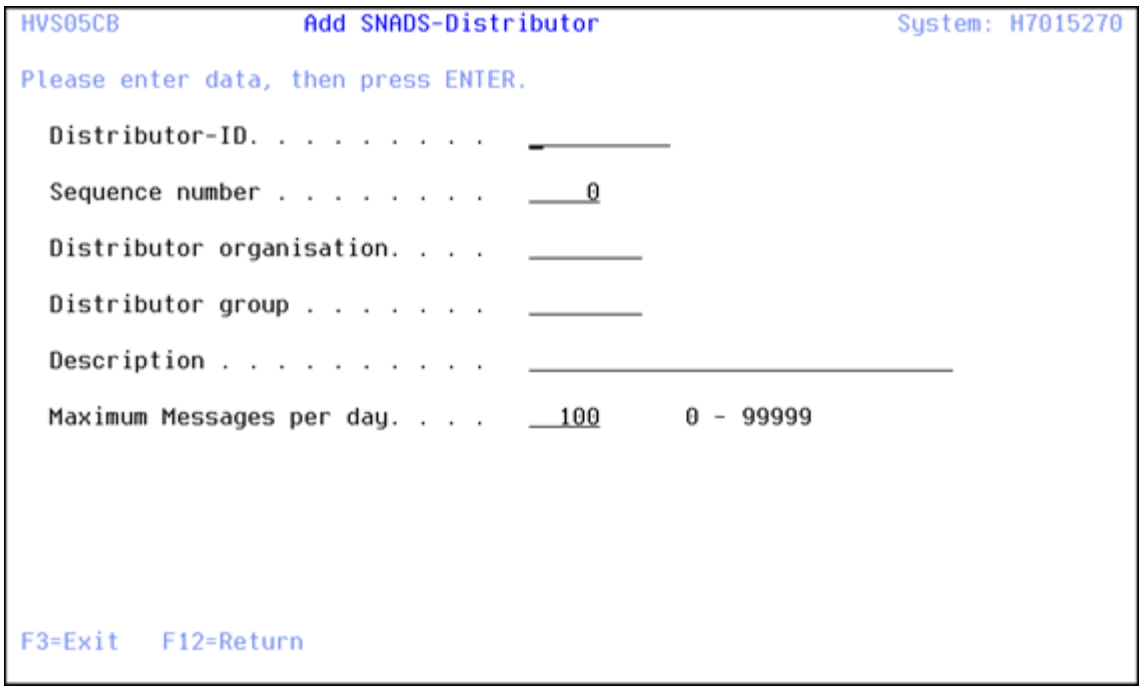
With this selection option, details of the selected SNADS distributor can be displayed.
It is also possible to specify the maximum number of messages that can be sent per day.

Valid command keys of the current mask:

F3=End
Exit the current application function.

F12=Back
Back to the previous mask, all entered values of this mask will not be saved.

3.8.4.5 Command key F6 - Add SNADS distributor



With this function a SNADS distributor can be added.

The following input fields are available to the user:

Distributor ID
Enter the ID of the SNADS distributor here.

Sequence number
If several addresses are to be assigned to one user, the sequence number must be changed.

Distributor organization
Here you can change the name of the SNADS distribution list organizer.

Distribution group
Here you can change the name of the distribution group.

Designation
Here you have the possibility to enter the name of the SNADS distributor. You have 30 characters at your disposal.

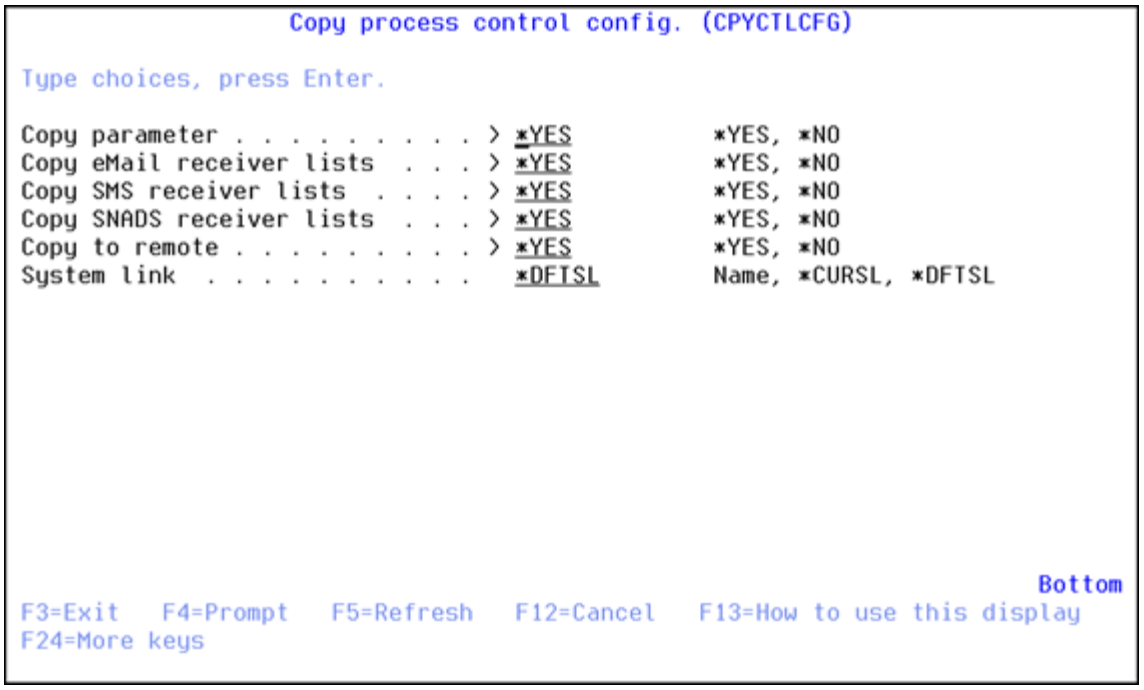
Max. Number of messages per day
It is possible to specify the maximum number of emails that can be sent per day.

Valid command keys of the current mask:

F3=End
Exit the current application function.

F12=Back
Back to the previous mask, all entered values of this mask will not be saved.

3.8.5 Menu item 7 - Copy parameters and receiver lists



This can be used to copy the configuration of the process monitoring to TGTSYS or SRCSYS and to the remote system.

The user has the following input options for the parameters:

Copy parameters
If the parameters are to be copied.

Valid values for the parameter **Copy parameter** are:

***YES**
The process monitoring parameters are copied. *YES is the default value.

***NO**
The process monitoring parameters are not copied.

Copy email distribution list
Should the email distribution lists be copied.

Valid values for the **Copy email distribution list** parameter are:

***YES**
The email distribution lists are copied. *YES is the default value.

***NO**
The email distribution lists are not copied.

Copy SMS distribution list
Should the SMS distribution lists be copied.

Valid values for the **Copy SMS distribution list** parameter are:

***YES**
The SMS distribution lists are copied. *YES is the default value.

***NO**
The SMS distribution lists are not copied.

Copy SNADS distributor
Should the SNADS distributors be copied.

Valid values for the **Copy SNADS distributor** parameter are:

***YES**
The SNADS distributors are copied. *YES is the default value.

***NO**
The SNADS distributors are not copied.

Copy to remote
If the configuration is to be copied to remote.

Valid values for the **Copy to remote** parameter are:

***YES**
The configuration is copied to the remote system.

***NO**
The configuration is not copied to the remote system. *NO is the default value.

System link
Name of the system link used to send the configuration to remote.

Valid values for the **System link** parameter are:

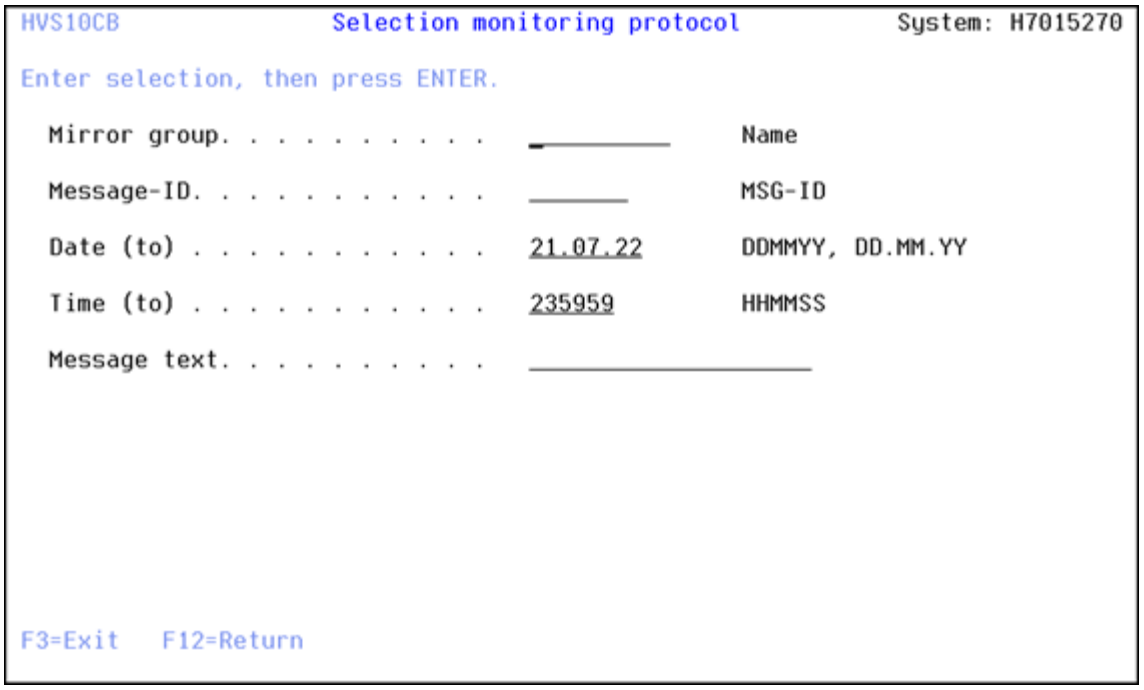
Name
Name of the system link that will be used.

***CURSL**
The current active system link is used.

***DFTSL**
The default system link is used.

The valid command keys are described in detail in the system operator guidance of the current command.

3.8.6 Menu item 10 - Display control protocol



This function can be used to display messages from the process monitoring file for a mirror group or all mirror groups.

The following input fields are available to the user:

Mirror group
Name of the **mirror group for** which the called command is to be executed.

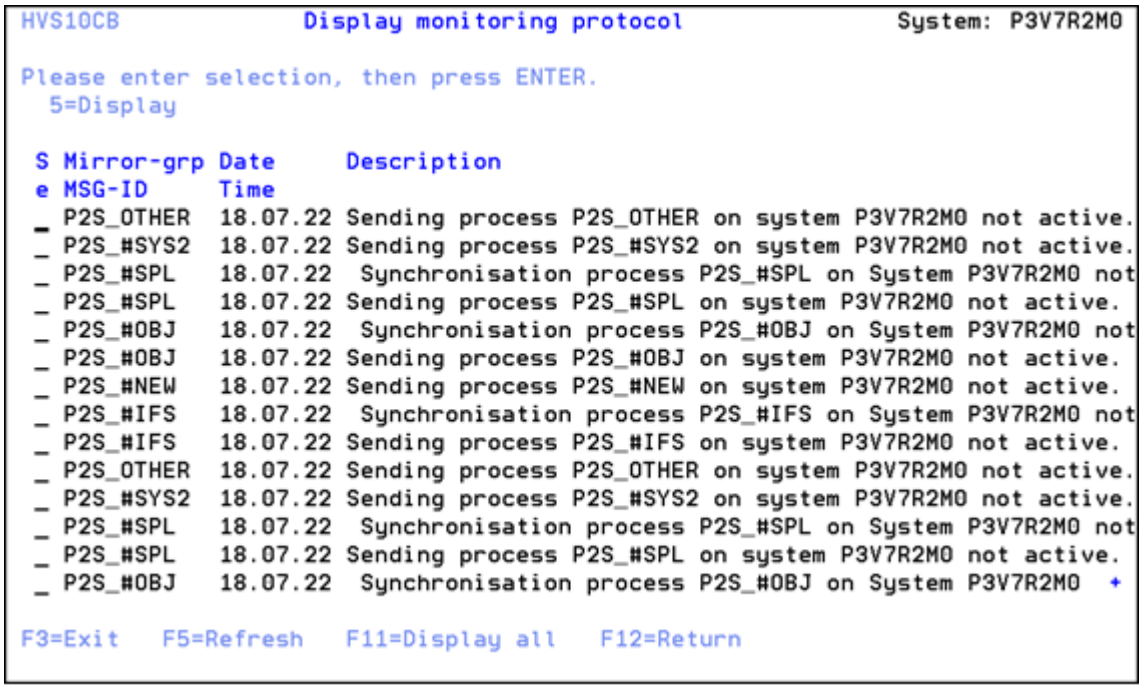
Message ID
Selection on the selected message ID. Only the messages with this message ID are then displayed.

Date (until)
Restriction from the selected date to the current date.

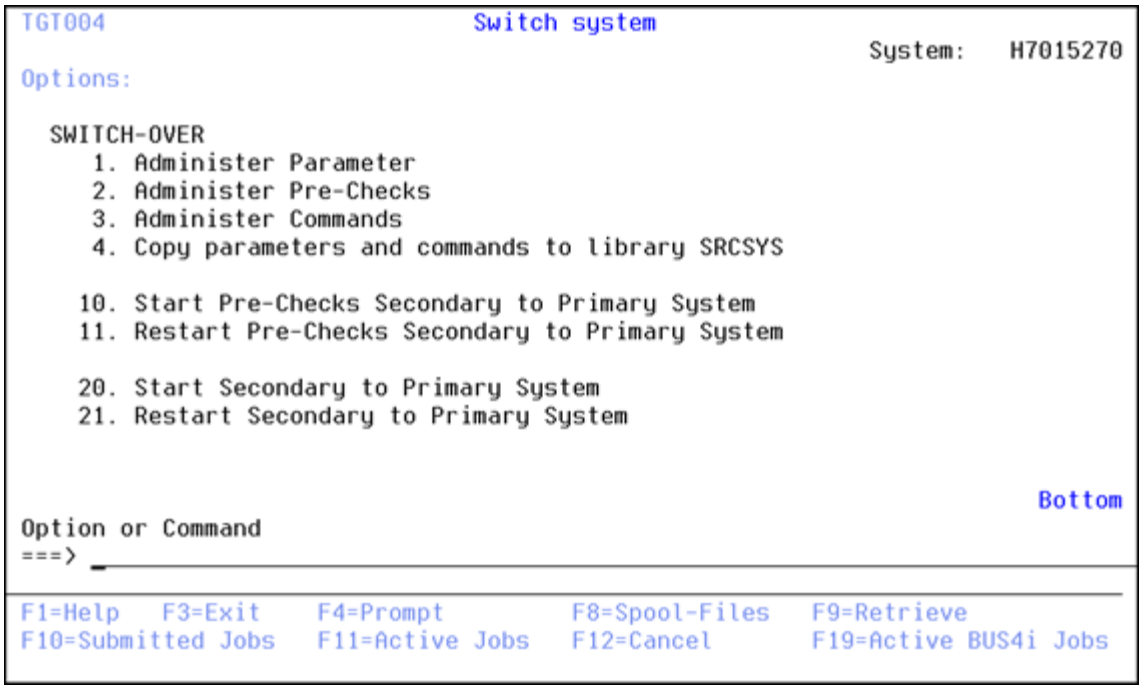
Time (until)
Restriction from the selected time until 23.59.59.

Message content
Selection on the selected message content.

The following mask is displayed.



3.9 Main menu selection 9 – Switch system (secondary to primary system)



Via this selection the user receives support for the change from the primary to the secondary system. He can define parameters and commands for the system change and execute the system change.

The following menu items can be selected on the screen:

Menu item 1: Manage parameters
The parameters for the system change are managed here.

Menu item 2: Manage preliminary checks
New tests can be added, existing ones changed, copied and deleted here.

Menu item 3: Manage commands
The commands that must be called for the system change can be managed here.

Menu item 4: Copy commands and parameters to library SRCSYS
The parameters are copied to the SRCSYS library when changing from primary to secondary system.

Menu item 10: Restart preliminary checks Secondary becomes primary system
Before switching over, the switchover settings (e.g. if the current system is the secondary system) and previously defined checks can be performed.

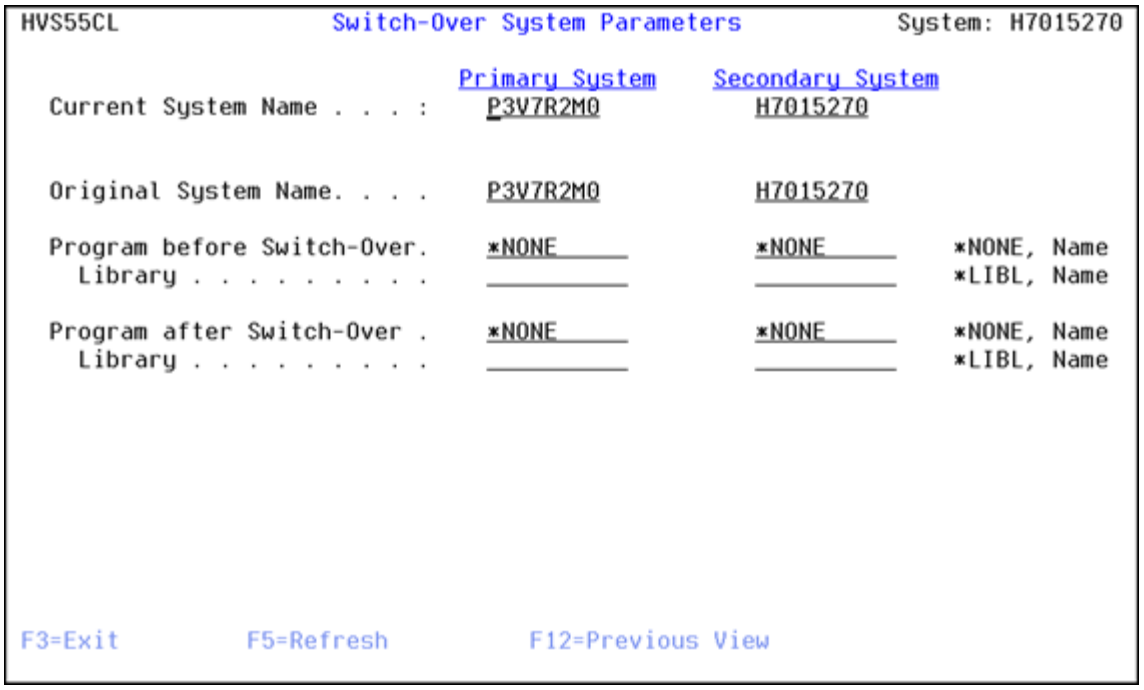
Menu item 11: Restart preliminary checks secondary becomes primary system
If the preliminary checks were canceled, a restart can be triggered via this item.

Menu item 20: Restart secondary becomes primary system
The switch from secondary to primary system is performed. The operator is guided through the switch-over process. Before the switch-over is carried out, a message is displayed which cancels the process with "N". When confirmed with "Y", the system switch-over is carried out.

Menu item 21: Restart secondary becomes primary system

An aborted switch-over process can be restarted via this menu item.

3.9.1 Menu item 1 – Administer parameters



The system parameters are defined via this input mask. The system names of the primary and secondary system are specified here. Thus BUS4i can determine whether it is on the primary or secondary system.

The following input fields are available to the user:

Current system name
The current names for the switch-over from the primary and secondary systems are defined here. If the current system on which the switch-over command is executed does not correspond to the current system entered here, an error message is displayed.

Original system name
The original system name contains the names of the systems (primary and secondary system) before the switch-over.

Program before switch-over
A program can be defined here that is to run before the switch-over. This can be defined for the primary and secondary system. With *NONE no program is to run.

Library
Here the name of the library can be specified in which the program to be executed is located. With *LIBL the current library list is searched for the program.

Program after switch over
A program can be defined here that is to run after the switch-over. This can be defined for the primary and secondary system. With *NONE no program is to run.

Library
Here the name of the library can be specified in which the program to be executed is located. With *LIBL the current library list is searched for the program.

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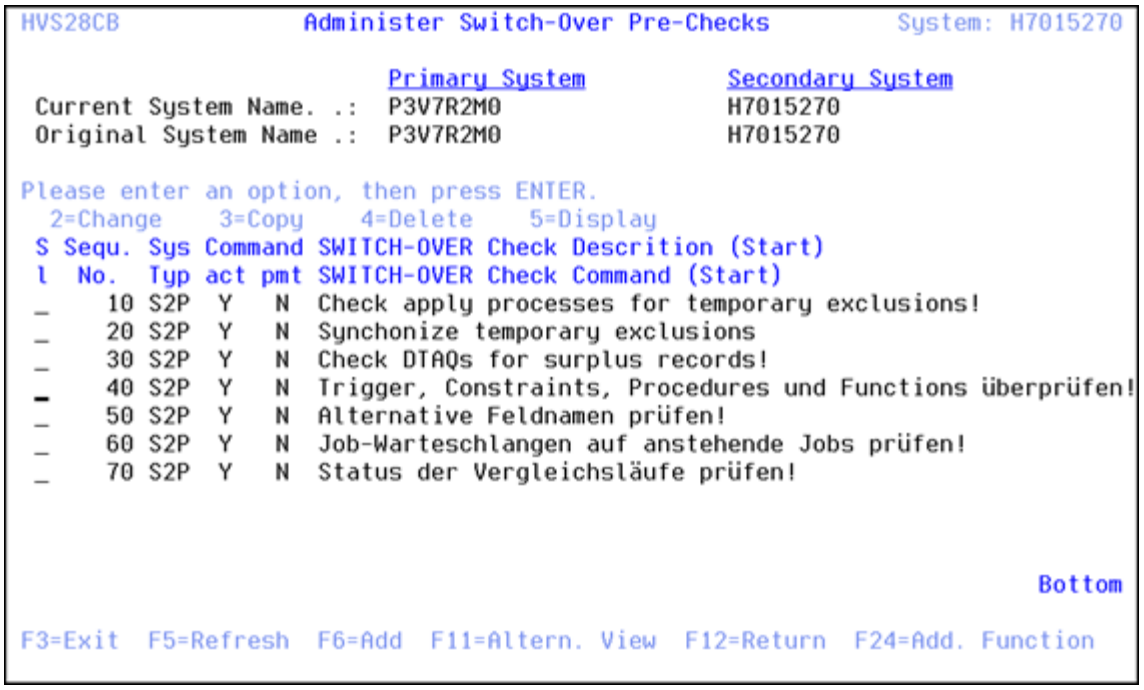
3.9.2 Menu item 2 – Administer switch over pre-checks



This input mask is used to record the preliminary checks that must be performed for the system change.

The following input field is available to the user:

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

The following options are possible:

Selection 2 - Change
A command that has already been entered can be changed.

Selection 3 - Copy
With this option a command can be copied. For example, a command that was entered for the primary system can be copied and changed for the secondary system.

Selection 4 - Delete
One or more commands can be deleted from the list.

Selection 5 - Display
The selected command can be displayed completely with this option.

Valid command key of the current mask:

F11=further data
More parts of the command are displayed in a continuation line.

F15=P2S commands only

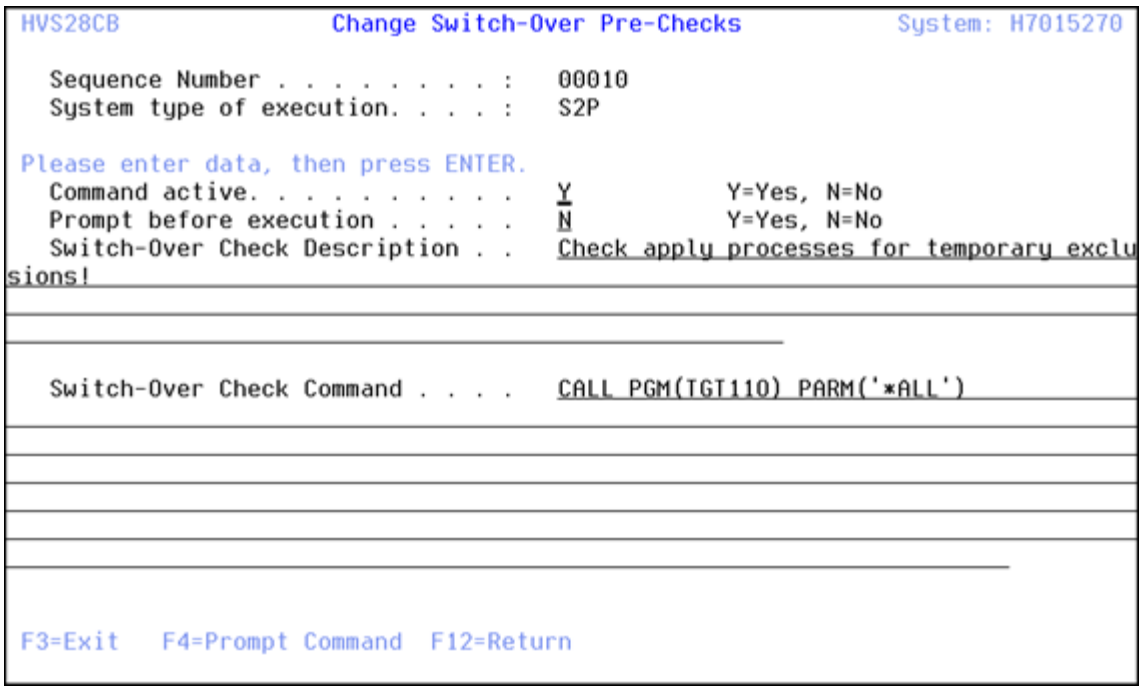
Only the commands for the switch-over from primary to secondary system are displayed.

F16=S2P commands only
Only the commands for the switch-over from secondary to primary system are displayed.

F17=All commands
The commands for switch-over from primary to secondary system and secondary to primary system are displayed.

F18=Reorganize
The commands are sorted according to the new sequence number. This option can be selected when new commands with intermediate numbers are entered.

3.9.2.1 Selection 2 - Change Switch-Over Pre-Checks



This mask is used to modify a pre-check command.

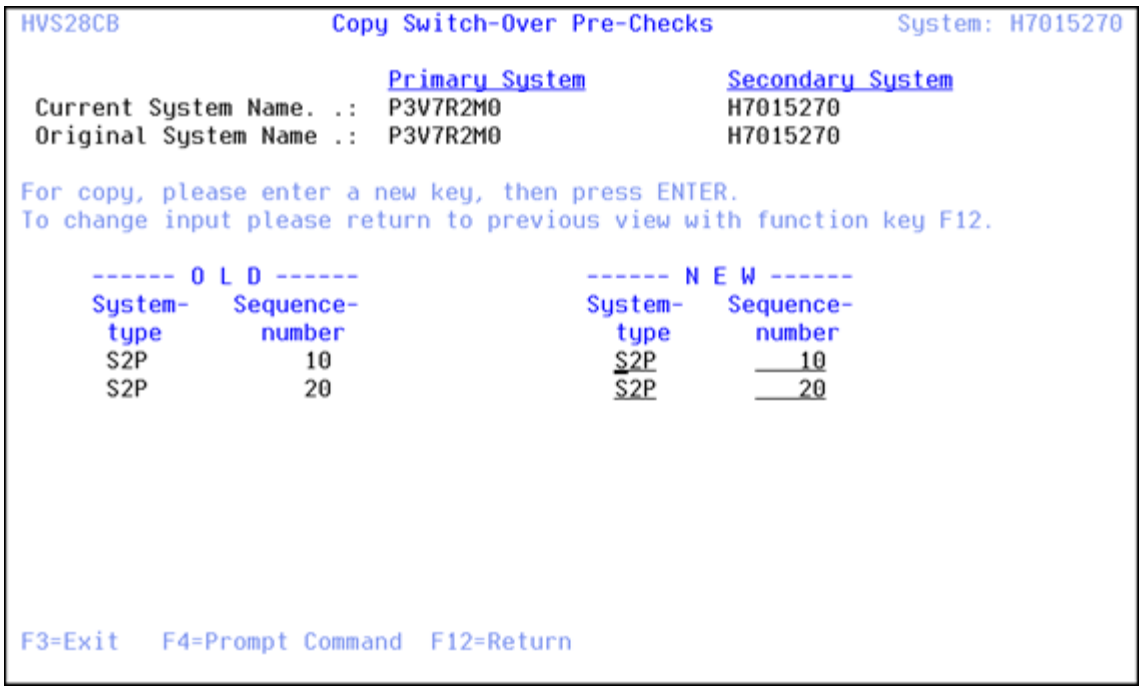
Testing active
Here you can specify whether the command should be executed ("Y") or not ("N").

Prompt command before execution
This indicator decides whether the command is prompted or not. If the command is prompted, it means that it is executed interactively.

Switch-Over Check Description
The text entered here can be used as a description for this command. This is displayed in the administration to have a short description of the command.

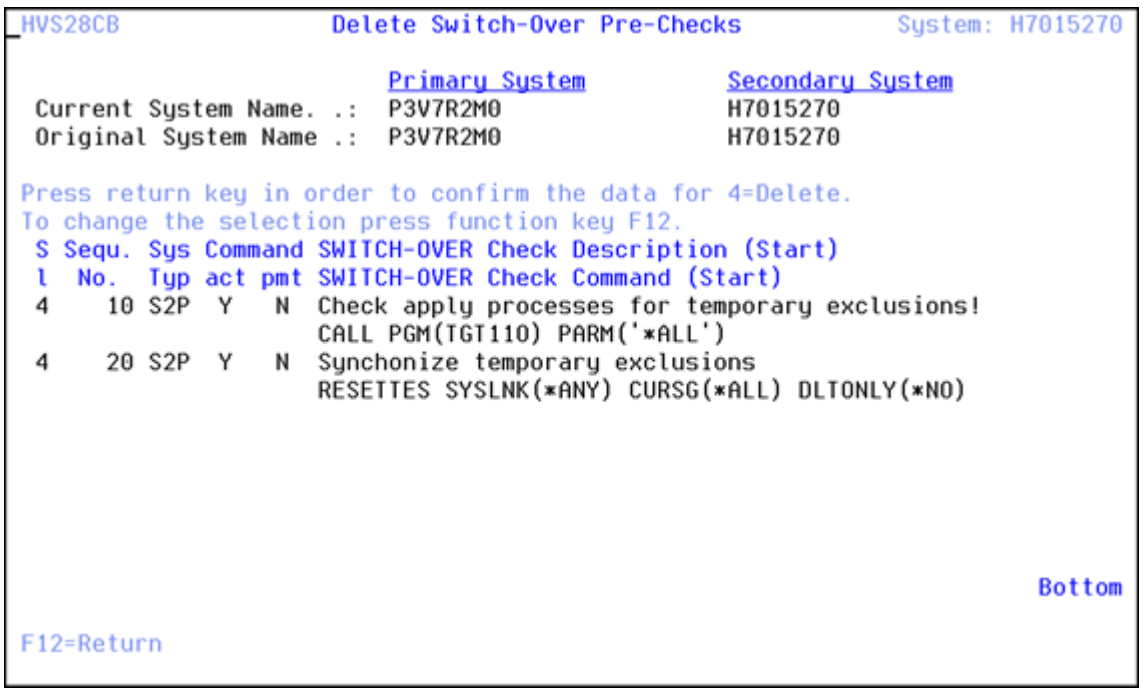
Switch-Over Check command
A valid command must be specified here, which is to be executed during the pre-check.

3.9.2.2 Selection 3 - Copy Switch-Over Pre-Checks



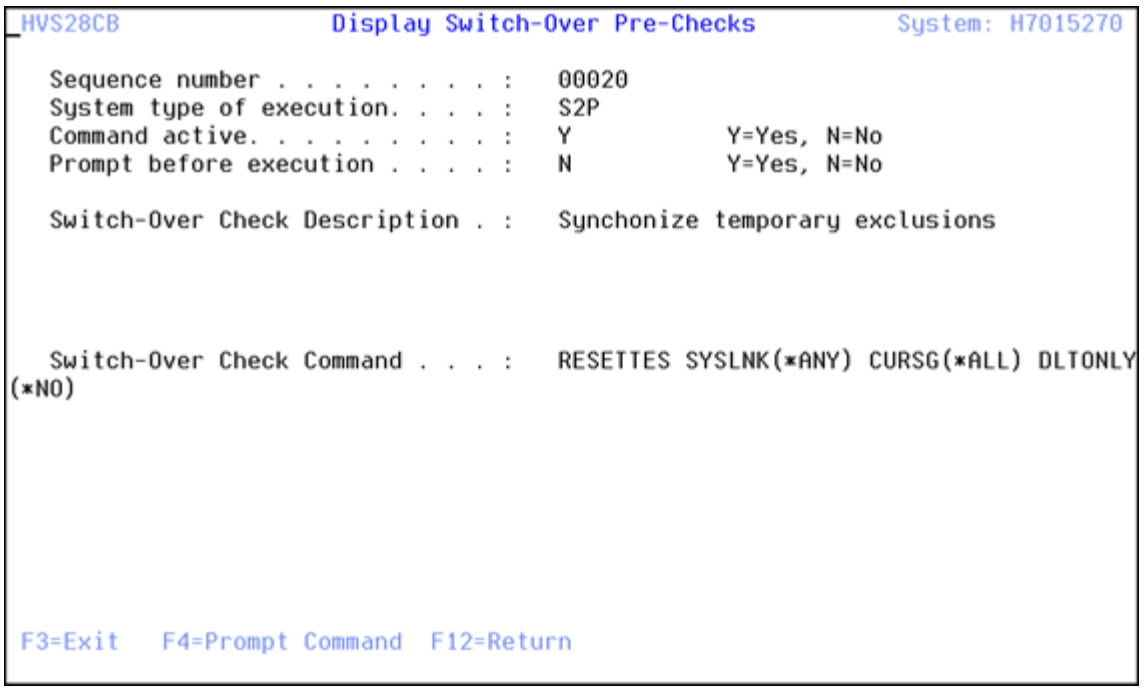
This mask is used to copy a preliminary test. Here you can enter a system type (P2S or S2P) and a new sequence number under which the copied pre-check will be stored. This entry can then be edited via 'Change'.

3.9.2.3 Selection 4 - Delete Switch-Over Pre-Checks



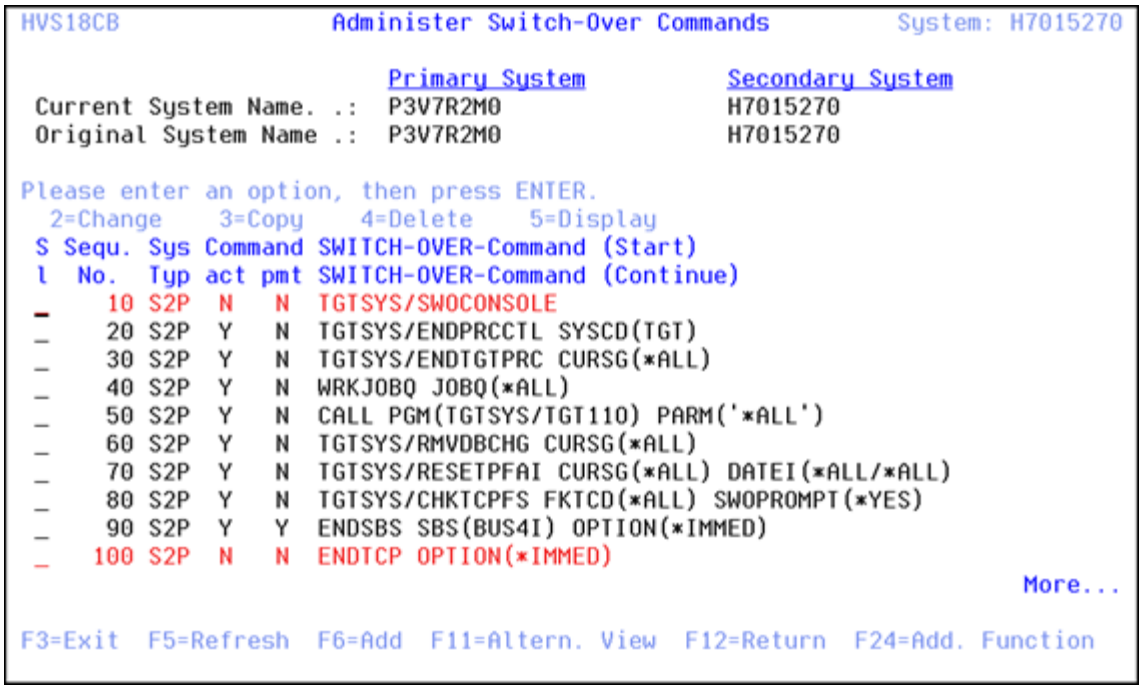
This mask is used to delete one or more pre-check commands from the list. The entries to be deleted are displayed once again and deleted by confirming with the Enter key.
The deletion process can be canceled with F12.

3.9.2.4 Selection 5 - Display Switch-Over Pre-Checks



This mask is used to display all parameters that belong to a pre-check command.

3.9.3 Menu item 3 - Administer commands



This input mask is used to enter the switching commands that must be executed for the system change.

The following input field is available to the user:

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

The following options are possible:

Selection 2 - Change
A command that has already been entered can be changed.

Selection 3 - Copy
With this option a command can be copied. For example, a command that was entered for the primary system can be copied and changed for the secondary system.

Selection 4 - Delete
One or more commands can be deleted from the list.

Selection 5 - Display
The selected command can be displayed completely with this option.

Valid command key of the current mask:

F11=further data
More parts of the command are displayed in a continuation line.

F15=P2S commands only

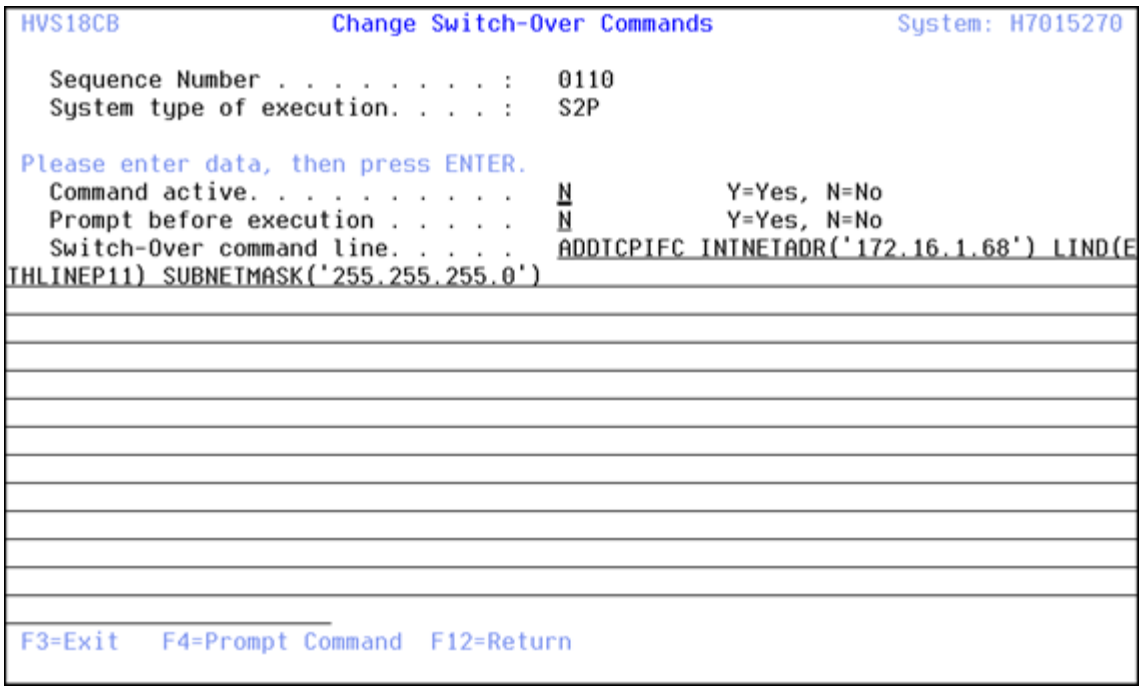
Only the commands for the switch-over from primary to secondary system are displayed.

F16=S2P commands only
Only the commands for the switch-over from secondary to primary system are displayed.

F17=All commands
The commands for switch-over from primary to secondary system and secondary to primary system are displayed.

F18=Reorganize
The commands are sorted according to the new sequence number. This option can be selected when new commands with intermediate numbers are entered.

3.9.3.1 Selection 2 - Change Switch-Over Commands



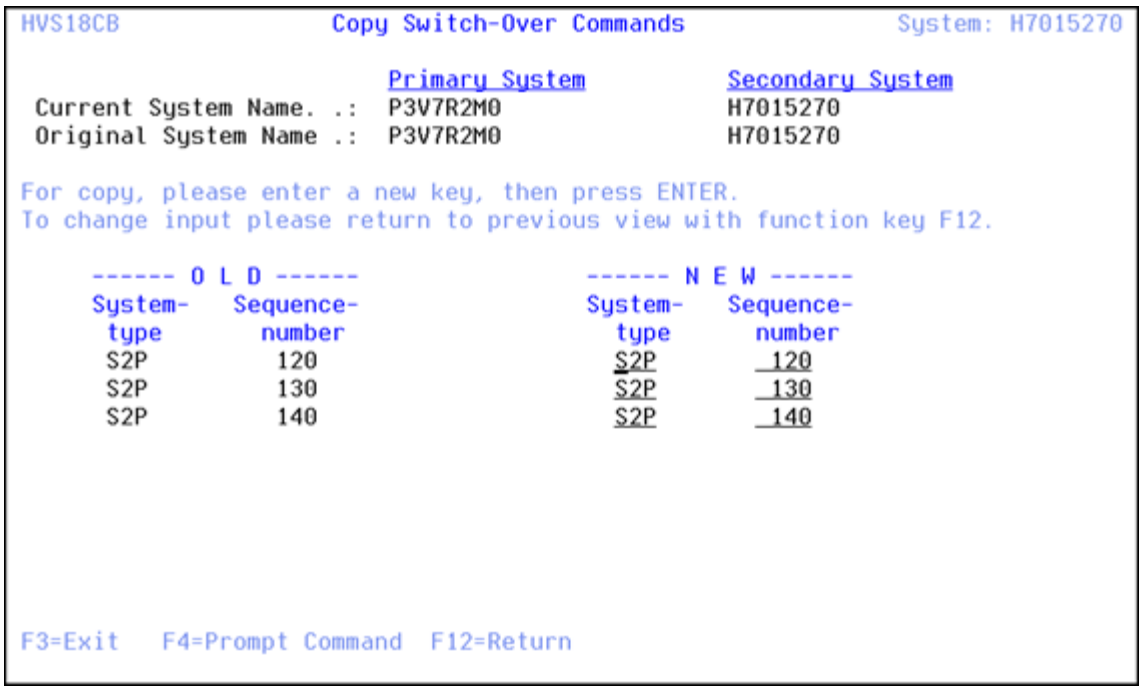
This mask is used to change a switch-over command.

Testing active
Here you can specify whether the command should be executed ("Y") or not ("N").

Prompt command before execution
This flag decides whether the command is prompted or not. If the command is prompted, it means that it is executed interactively.

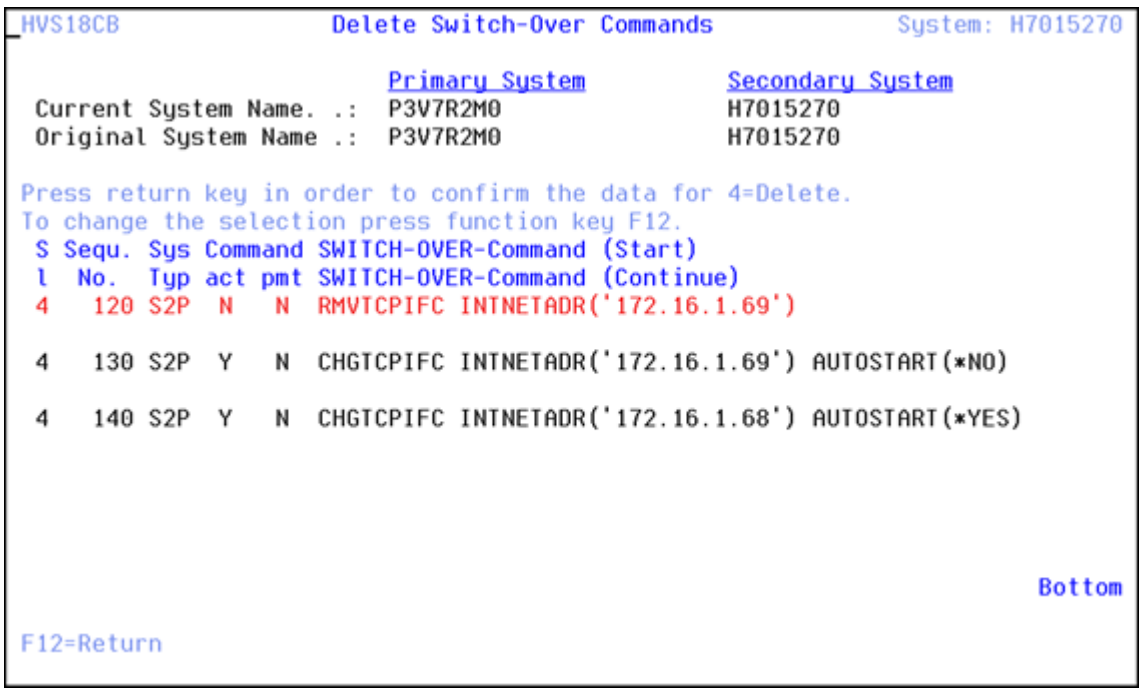
Switch-Over Command Line
A valid command must be specified here, which is to be executed during switch-over.

3.9.3.2 Selection 3 - Copy Switch-Over commands



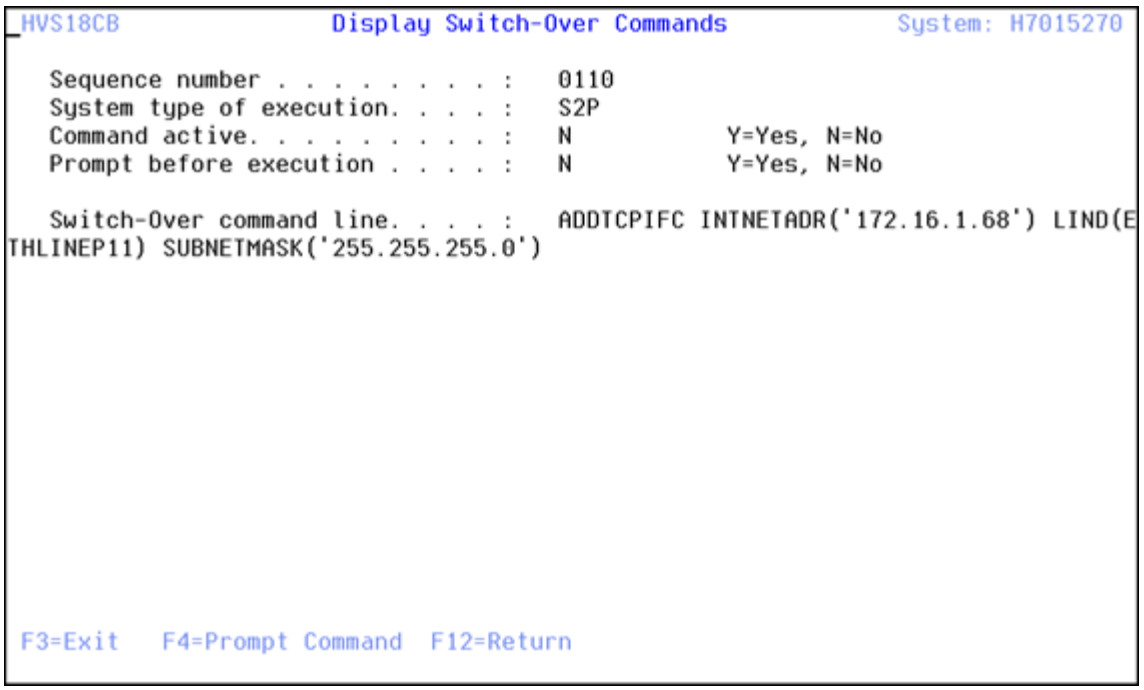
This mask is used to copy a switch-over command. Here you can enter a system type (P2S or S2P) and a new sequence number under which the copied switch-over command is stored. Via 'Modify' this entry can then be edited.

3.9.3.3 Selection 4 - Delete Switch-Over commands



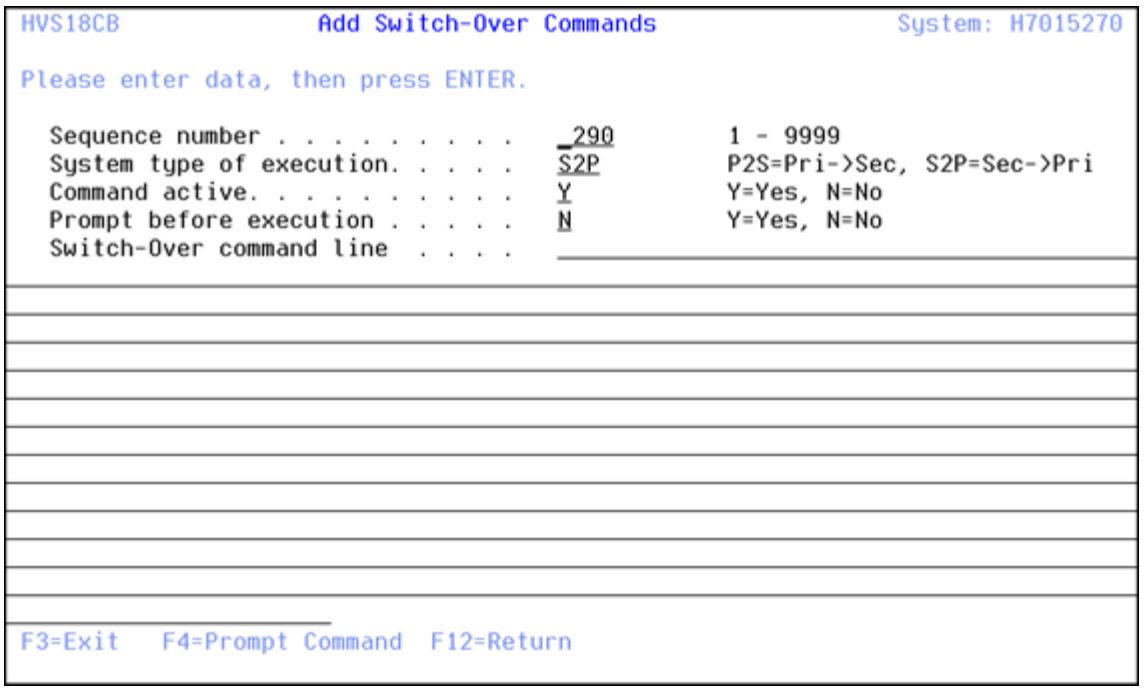
This mask is used to delete one or more switch-over commands from the list. The entries to be deleted are displayed once again and deleted by confirming with the Enter key.
The deletion process can be canceled with F12.

3.9.3.4 Selection 5 - Display Switch-Over commands



This mask is used to display all parameters belonging to a Switch-Over command.

3.9.3.5 Command key F6 - Add Switch-Over command



This mask is used to add a SWITCH-Over command.

Sequence number
Enter the new sequence number here. It identifies the sequence in which the respective switch-over commands are executed.

System type of execution
The system type can be specified here (P2S or S2P).

Command active
Here you can specify whether the command should be executed ("Y") or not ("N").

Prompt command before execution
This indicator decides whether the command is prompted or not. If the command is prompted, it means that it is executed interactively.

Switch-Over Command Line
A valid command must be specified here, which is to be executed during switch-over.

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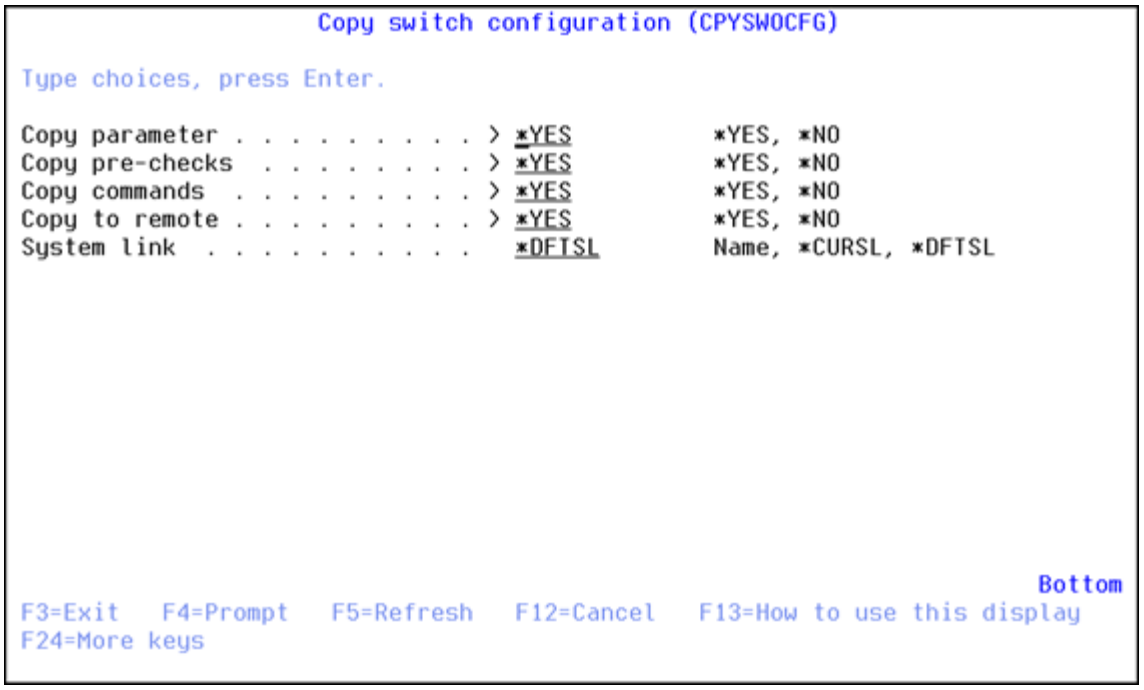
3.9.4 Menu item 4 - Copy commands and parameters to library SRCSYS



This menu item copies the configuration of the switch configuration to TGTSYS or SRCSYS and to the remote system.

The user has the following input options for the parameters:

Copy parameters
If the parameters are to be copied.

Valid values for the parameter **Copy parameter** are:

***YES**
The switch configuration parameters are copied. *YES is the default value.

***NO**
The switch configuration parameters are not copied.

Copy Preliminary Exams
Shall copy the preliminary exams.

Valid values for the **Copy preliminary checks** parameter are:

***YES**
The preliminary checks are copied. *YES is the default value.

***NO**
The preliminary examinations are not copied.

Copy commands
If the switch-over commands are to be copied.

Valid values for the **Copy commands** parameter are:

***YES**
The switch-over commands are copied. *YES is the default value.

***NO**
The switch-over commands are not copied.

Copy to remote
If the configuration is to be copied to remote.

Valid values for the **Copy to remote** parameter are:

***YES**
The configuration is copied to the remote system.

***NO**
The configuration is not copied to the remote system. *NO is the default value.

System link
Name of the system link used to send the configuration to remote.

Valid values for the **System link** parameter are:

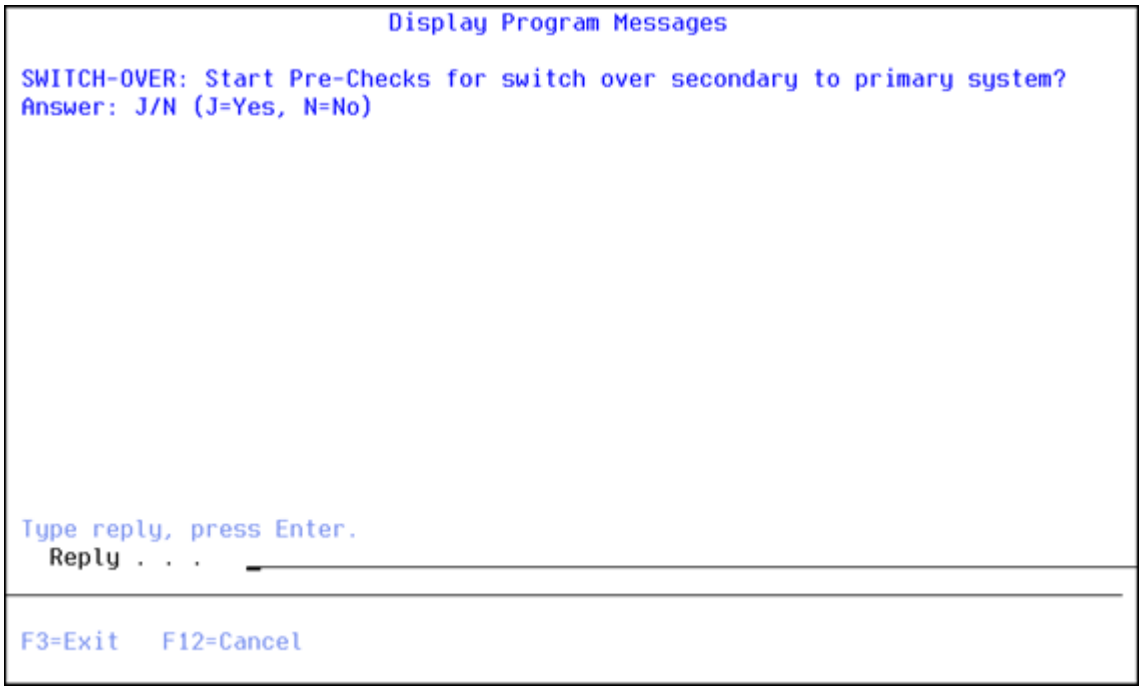
Name
Name of the system link that will be used.

***CURSL**
The current active system link is used.

***DFTSL**
The default system link is used.

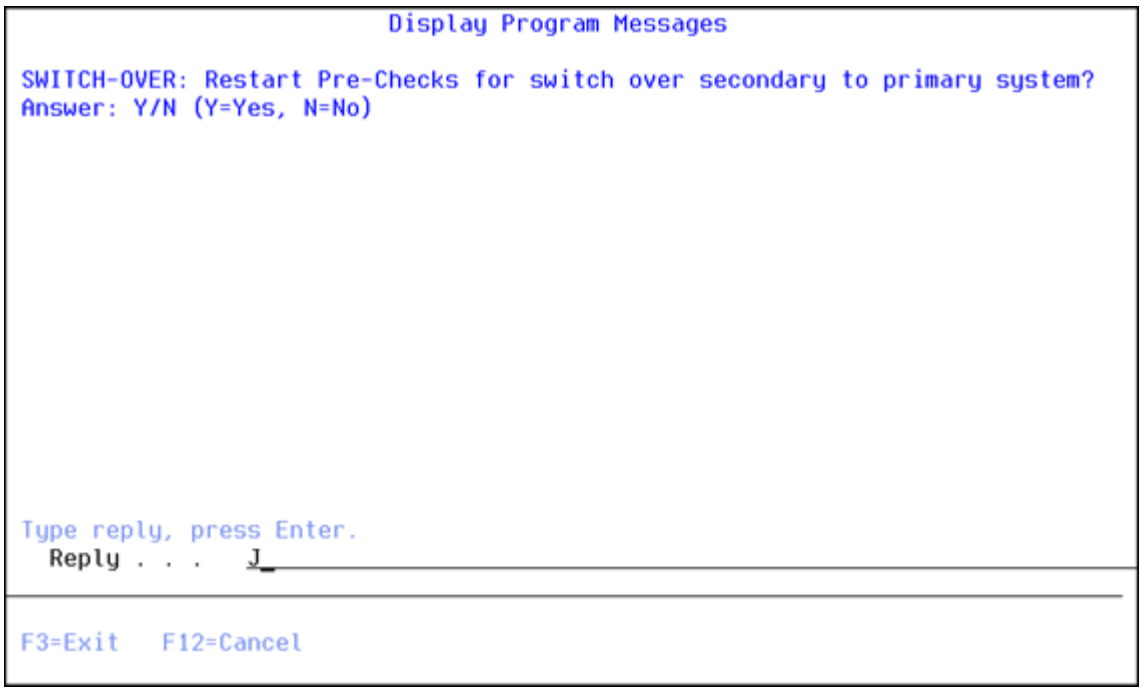
The valid command keys are described in detail in the system operator guidance of the current command.

3.9.5 Menu item 10 - Start pre-checks primary system becomes secondary system



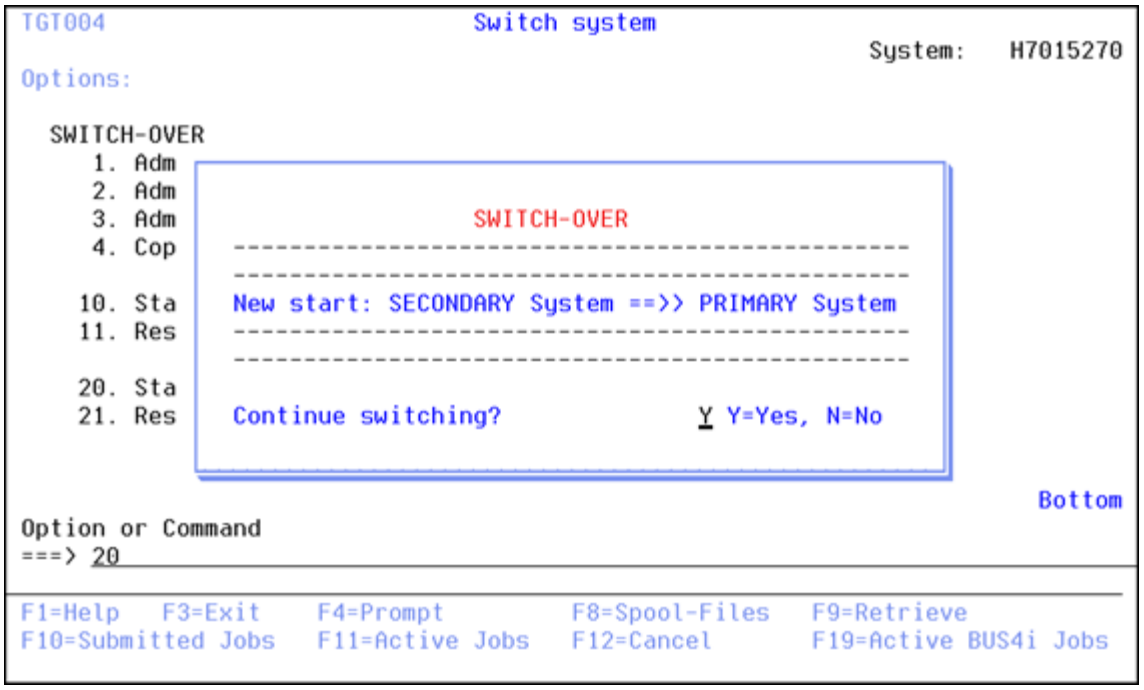
Executes all commands of the preliminary check (menu item 2). Before each command there is a query whether this command should be executed, then the next command is executed.

3.9.6 Menu item 11 - Restart pre-checks primary system becomes secondary system



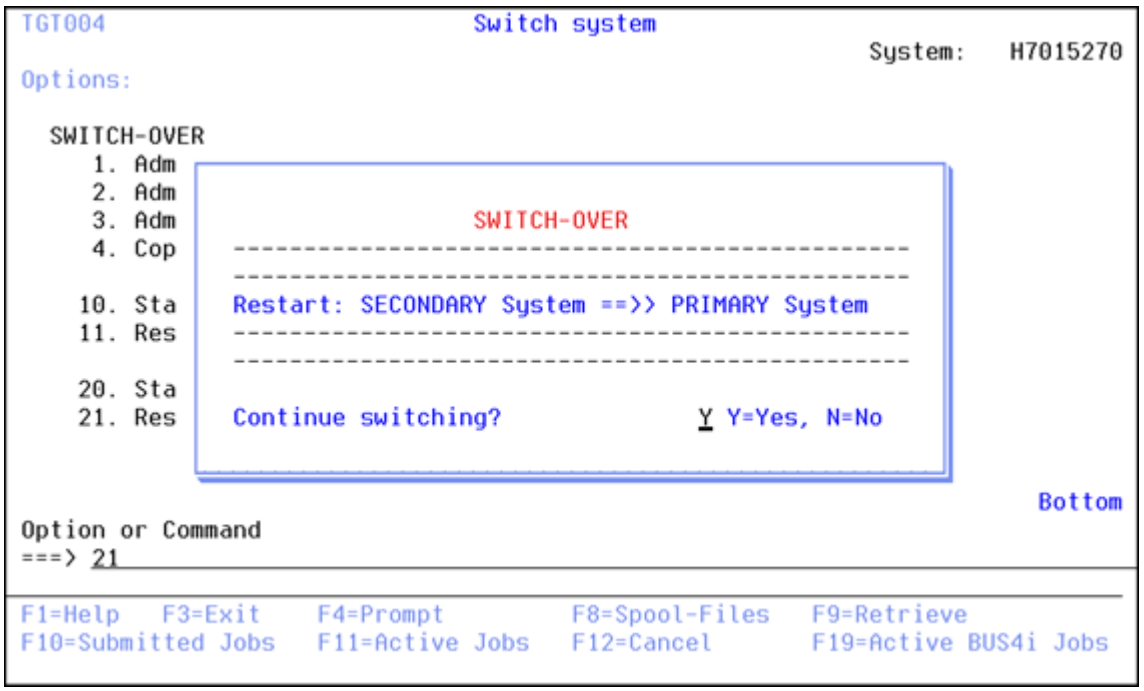
The preliminary check is continued after an abort at the aborted command. As in the case of the preliminary check, the query appears before each command and then the next command continues as normal.

3.9.7 Menu item 20 - Start primary becomes secondary system



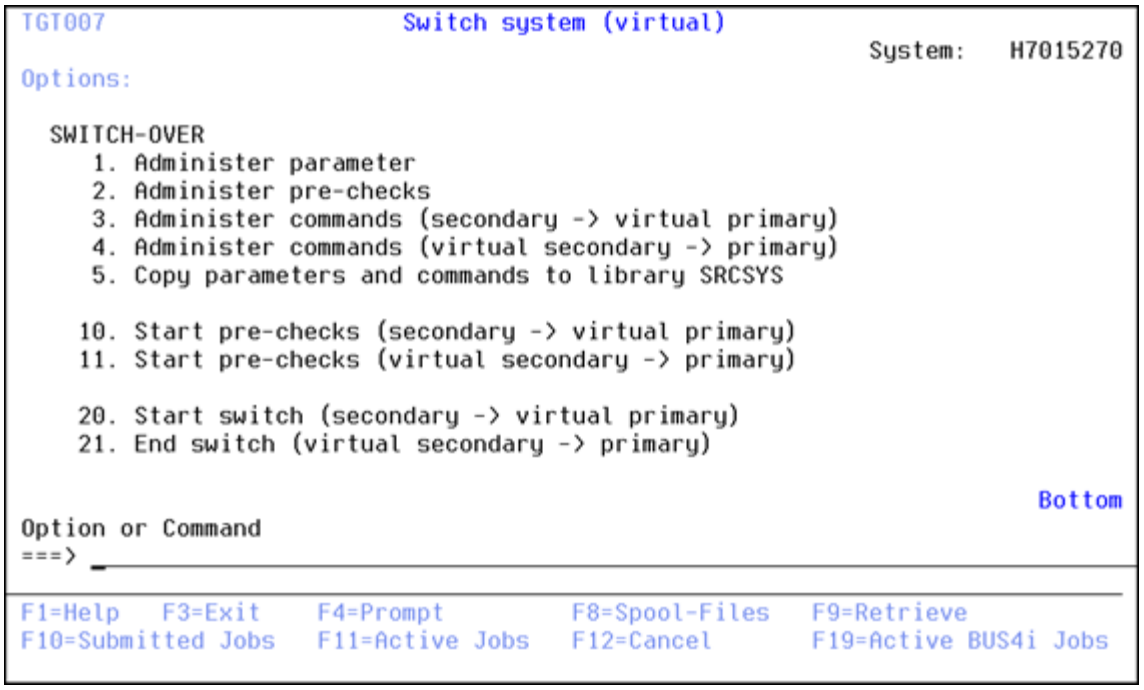
This menu item starts the switch-over from the primary system to the secondary system.
All active commands that were entered under menu item 3 are executed. Each successfully executed command gets a status.

3.9.8 Menu item 21 - Restart primary becomes secondary system



The system change is continued after an abort at the aborted command.
All active commands that have not yet been executed are executed. Each successfully executed command gets a new status.

3.10 Main menu selection 10 – Switch system (virtual)



Via this selection the user gets support for the virtual system change from the primary to the virtual secondary system. He can define parameters and commands for the system change and execute the system change.

The following menu items can be selected on the screen:

Menu item 1: Manage parameters
The parameters for the virtual system change are managed here.

Menu item 2: Manage preliminary checks
New tests can be added, existing ones changed, copied and deleted here.

Menu item 3: Manage commands (secondary -> virtual primary)
The commands that must be called for the virtual system change can be managed here.

Menu item 4: Manage commands (Virtual Secondary -> Primary)
The commands that must be called for the virtual system change can be managed here.

Menu item 5: Copy commands and parameters to library SRCSYS
The parameters for the virtual system change from primary to secondary system are copied to the SRCSYS library.

Menu item 10: Preliminary checks System change (secondary→ virtual primary)
Before switching over, the switchover settings and previously defined checks can be performed.

Menu item 11: Preliminary checks System change (Virtual Secondary→ Primary)
Before switching over, the switchover settings and previously defined checks can be performed.

Menu item 20: Start system change (secondary→ virtual primary)

The system switch from the secondary to the virtual primary system is performed. The operator is guided through the switch-over process. Before the switch-over is carried out, a message is displayed which cancels the process with "N". When confirmed with "Y", the system switch is carried out.

Menu item 21: End system change (Virtual Secondary→ Primary)

The system change from the virtual secondary to the primary system is finished.

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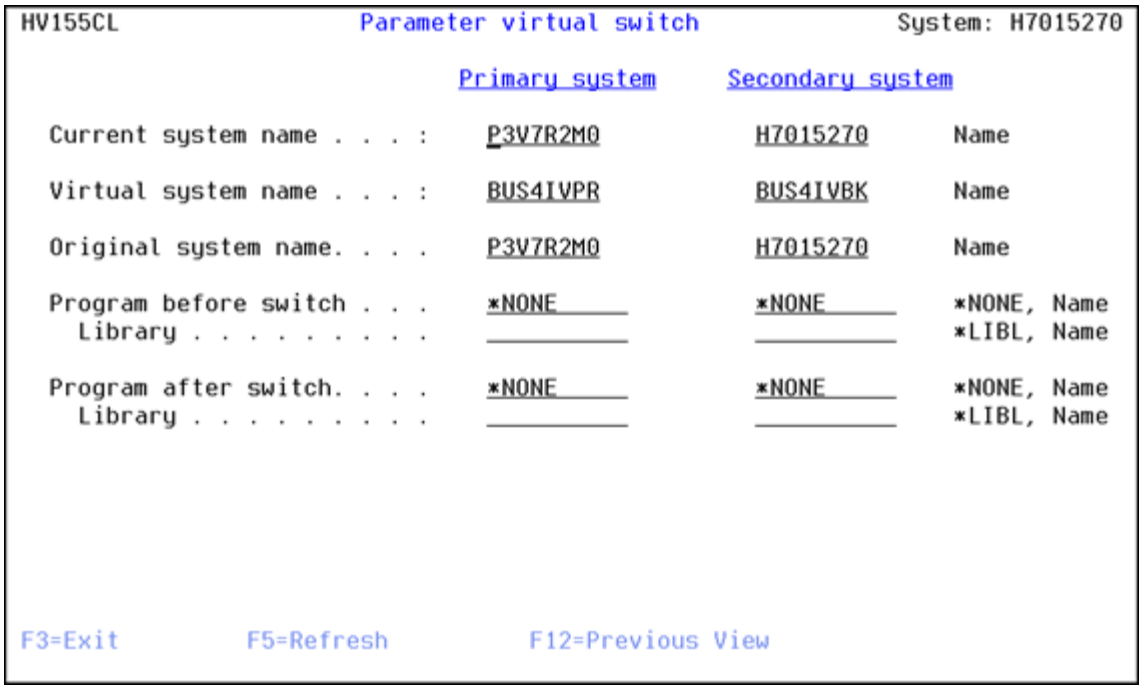
3.10.1 Menu item 1 - Administer parameters



The system parameters are defined via this input mask. The system names of the primary and secondary system and the virtual system names are specified here. Thus BUS4i can determine whether it is on the primary or secondary system or on a virtual system.

The following input fields are available to the user:

Current system name
The current names for the switch-over from the primary and secondary systems are defined here. If the current system on which the switch-over command is executed does not correspond to the current system entered here, an error message is displayed.

Virtual system name
Here the virtual names for the switch-over from the primary and and virtual secondary system are defined. If the current system on which the switch-over command is executed does not correspond to the current system entered here, an error message is displayed.

Original system name
The original system name contains the names of the systems (primary and secondary system) before the switch-over.

Program before switch-over
A program can be defined here that is to run before the switch-over. This can be defined for the primary and secondary system. With *NONE no program is to run.

Library
Here the name of the library can be specified in which the program to be executed is located. With *LIBL the current library list is searched for the program.

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Program after switch over
A program can be defined here that is to run after the switch-over. This can be defined for the primary and secondary system. With *NONE no program is to run.

Library
Here the name of the library can be specified in which the program to be executed is located. With *LIBL the current library list is searched for the program.

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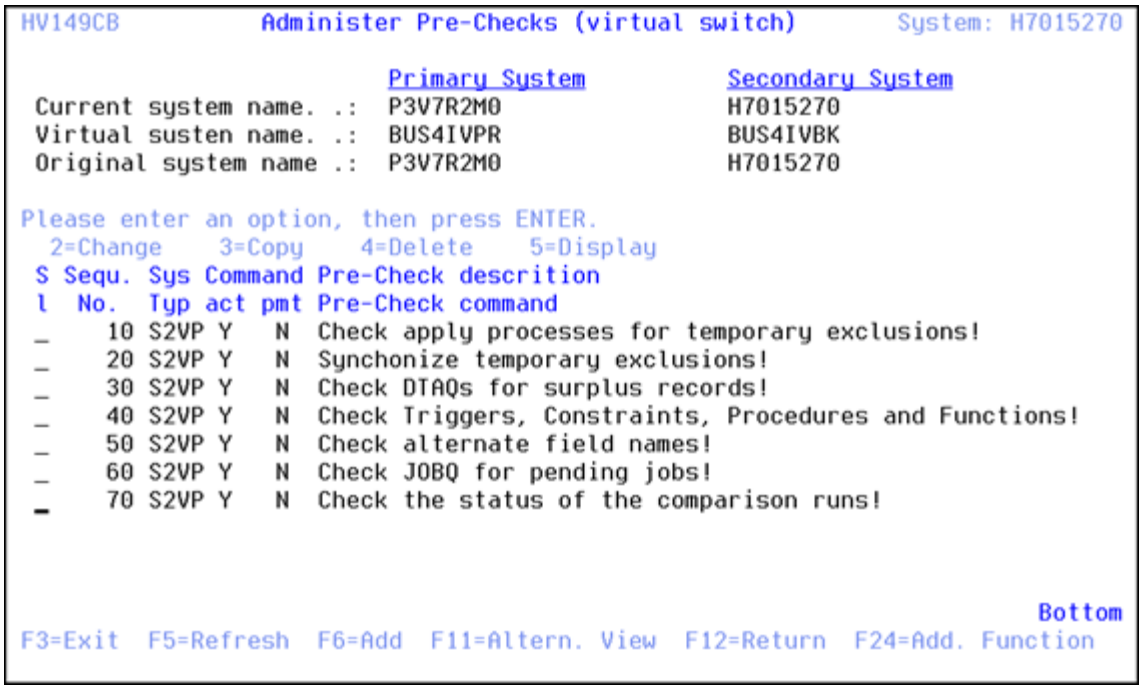
3.10.2 Menu item 2 - Administer pre-checks (virtual switch)



This input mask is used to record the preliminary checks that must be performed for the virtual system change.

The following input field is available to the user:

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

The following options are possible:

Selection 2 - Change
A command that has already been entered can be changed.

Selection 3 - Copy
With this option a command can be copied. For example, a command that was entered for the primary system can be copied and changed for the secondary system.

Selection 4 - Delete
One or more commands can be deleted from the list.

Selection 5 - Display
The selected command can be displayed completely with this option.

Valid command key of the current mask:

F11=further data
More parts of the command are displayed in a continuation line.

F13=P2VS commands only

Only the commands for switch-over from primary to virtual secondary system are displayed.

F14=VS2P commands only
Only the commands for switch-over from virtual secondary to primary system are displayed.

F15=S2VP commands only
Only the commands for switch-over from secondary to virtual primary system are displayed.

F16=Only VP2S commands
Only the commands for switch-over from virtual primary to secondary system are displayed.

F17=All commands
The commands for switch-over from primary to secondary system and secondary to primary system are displayed.

F18=Reorganize
The commands are sorted according to the new sequence number. This option can be selected when new commands with intermediate numbers are entered.

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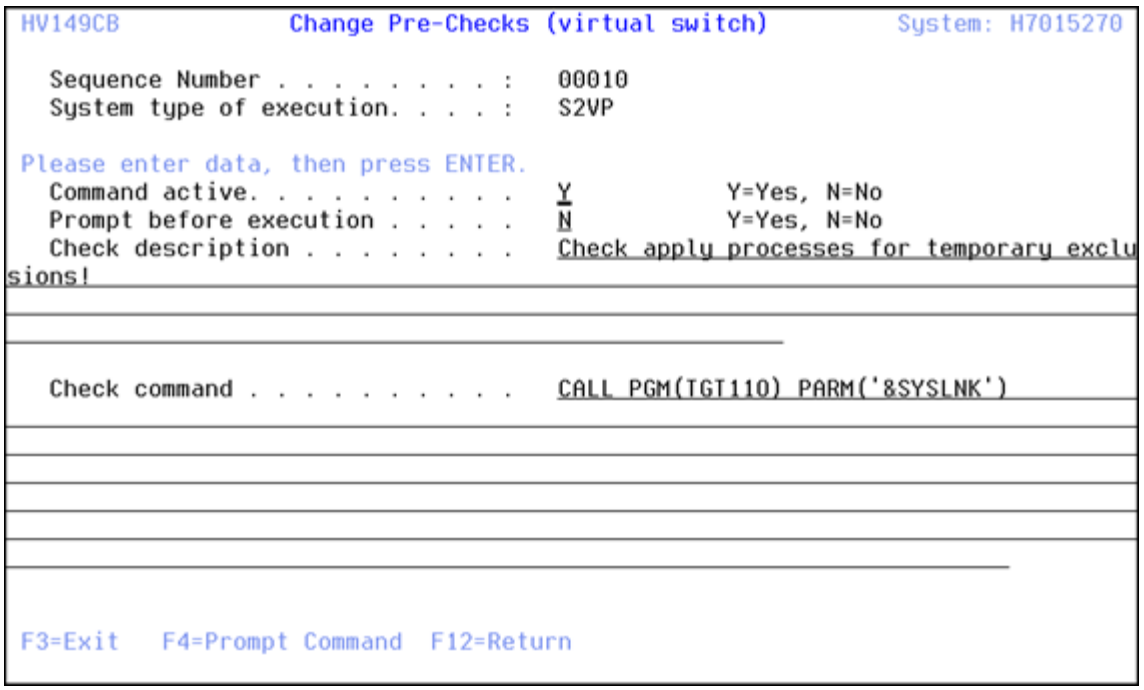
3.10.2.1 Selection 2 - Change pre-checks (virtual switch)



This mask is used to modify a pre-check command.

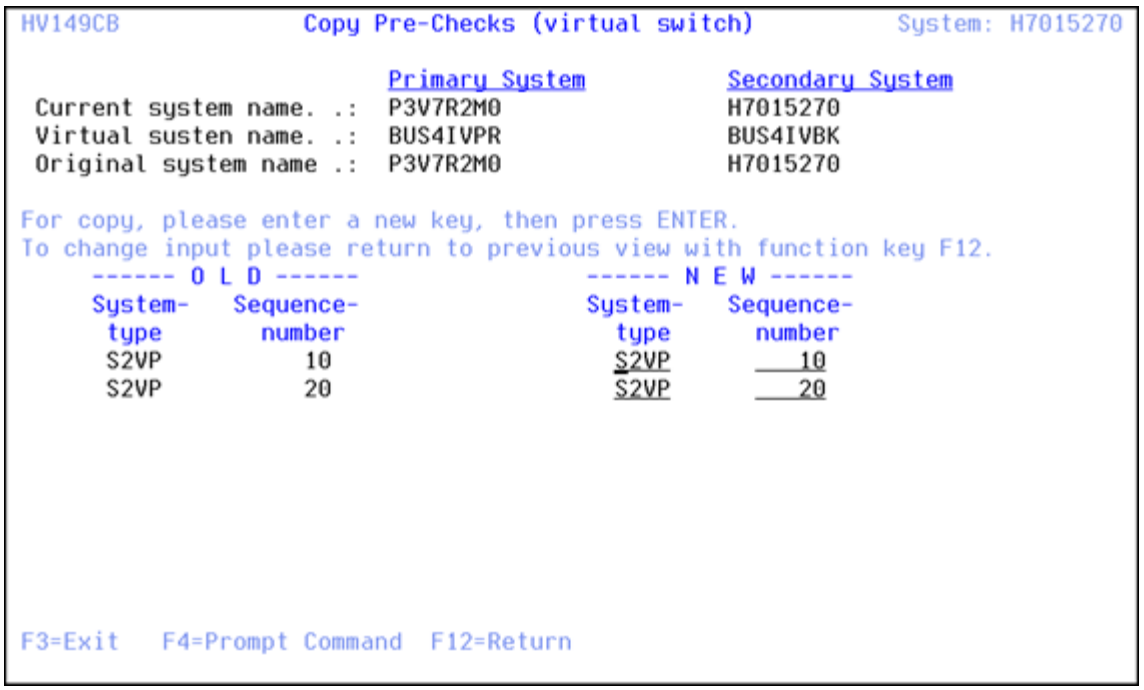
Testing active
Here you can specify whether the command should be executed ("Y") or not ("N").

Prompt command before execution
This indicator decides whether the command is prompted or not. If the command is prompted, it means that it is executed interactively.

Switch-Over Exam Text
The text entered here can be used as a description for this command. This is displayed in the administration to have a short description of the command.

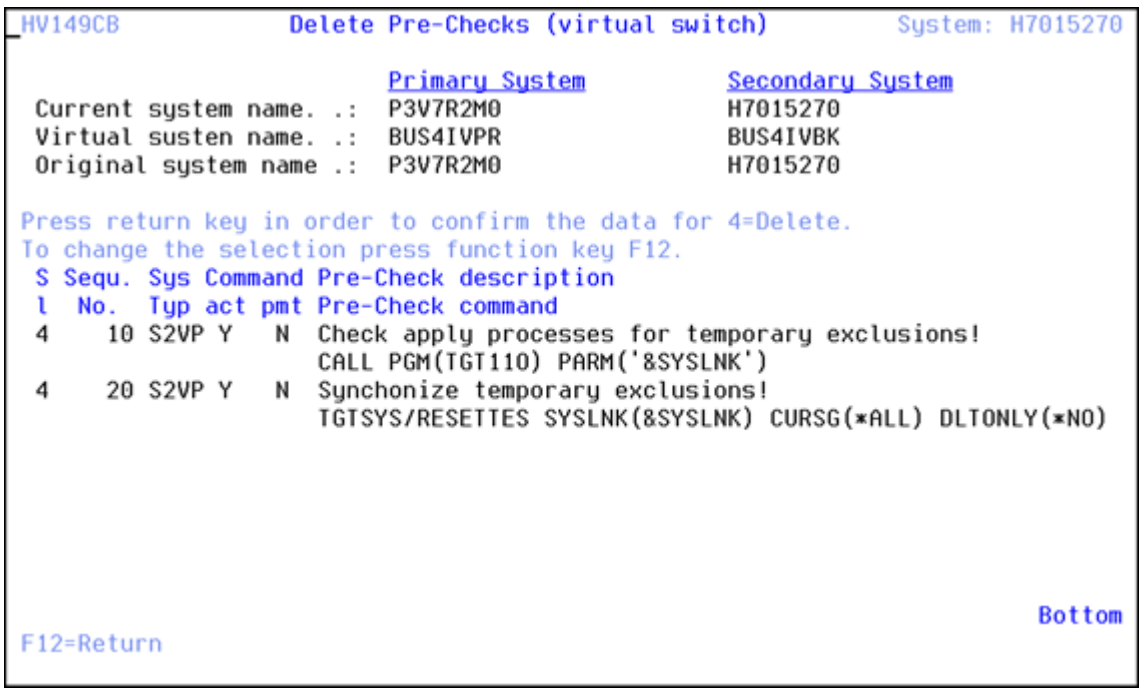
Switch-Over test command
A valid command must be specified here, which is to be executed during the pre-check.

3.10.2.2 Selection 3 - Copy pre-checks (Virtual Switch)



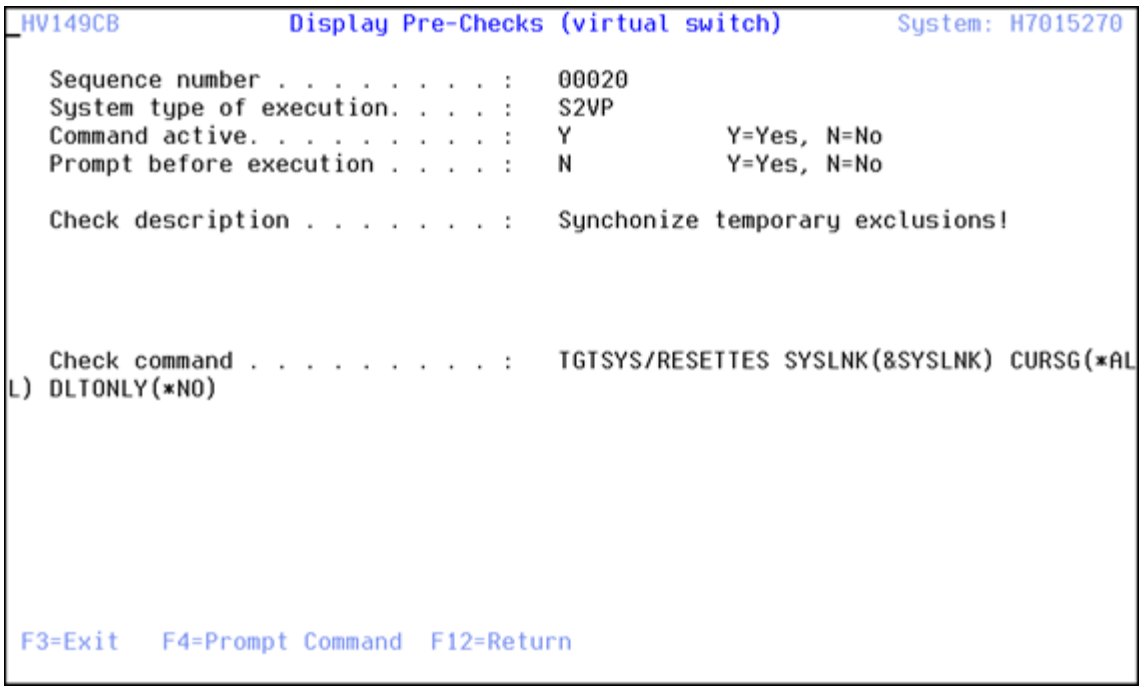
This mask is used to copy a preliminary test. Here you can enter a system type (P2VS, VP2S, S2VP or VP2S) and a new sequence number under which the copied pre-check will be stored. This entry can then be edited via 'Change'.

3.10.2.3 Selection 4 - Delete pre-checks (virtual switch)



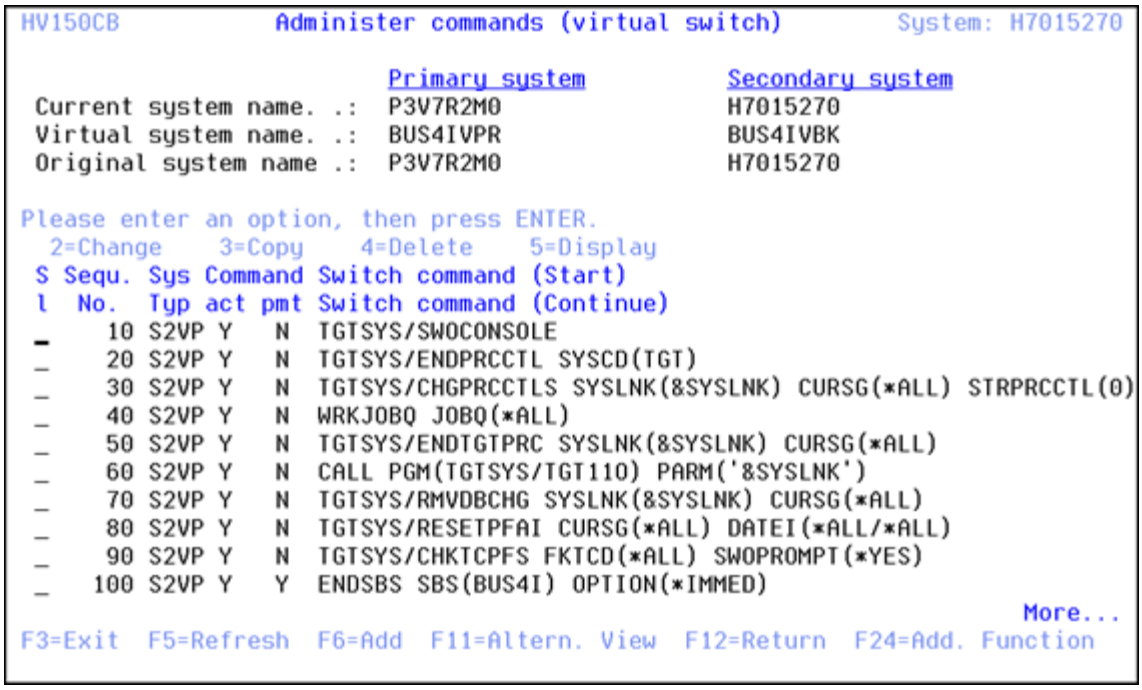
This mask is used to delete one or more pre-check commands from the list. The entries to be deleted are displayed once again and deleted by confirming with the Enter key.
The deletion process can be canceled with F12.

3.10.2.4 Selection 5 - Display pre-checks (virtual switch)



This mask is used to display all parameters that belong to a pre-check command.

3.10.3 Menu item 3 - Administer commands (secondary -> virtual primary)



This input mask is used to enter the switching commands that must be executed for the system change.

The following input field is available to the user:

Selection
In the Selection data field, the options displayed on the current screen are entered. The selection options can be combined depending on the type of work to be performed. The options are performed in the order in which the selected items appear in the list. If an invalid option is entered, an error message appears on the screen.

The following options are possible:

Selection 2 - Change
A command that has already been entered can be changed.

Selection 3 - Copy
With this option a command can be copied. For example, a command that was entered for the primary system can be copied and changed for the secondary system.

Selection 4 - Delete
One or more commands can be deleted from the list.

Selection 5 - Display
The selected command can be displayed completely with this option.

Valid command key of the current mask:

F11=further data
More parts of the command are displayed in a continuation line.

F13=P2VS commands only

Only the commands for switch-over from primary to virtual secondary system are displayed.

F14=VS2P commands only
Only the commands for switch-over from virtual secondary to primary system are displayed.

F15=S2VP commands only
Only the commands for switch-over from secondary to virtual primary system are displayed.

F16=Only VP2S commands
Only the commands for switch-over from virtual primary to secondary system are displayed.

F17=All commands
The commands for virtual switch-over from primary to secondary system and secondary to primary system are displayed.

F18=Reorganize
The commands are sorted according to the new sequence number. This option can be selected when new commands with intermediate numbers are entered.

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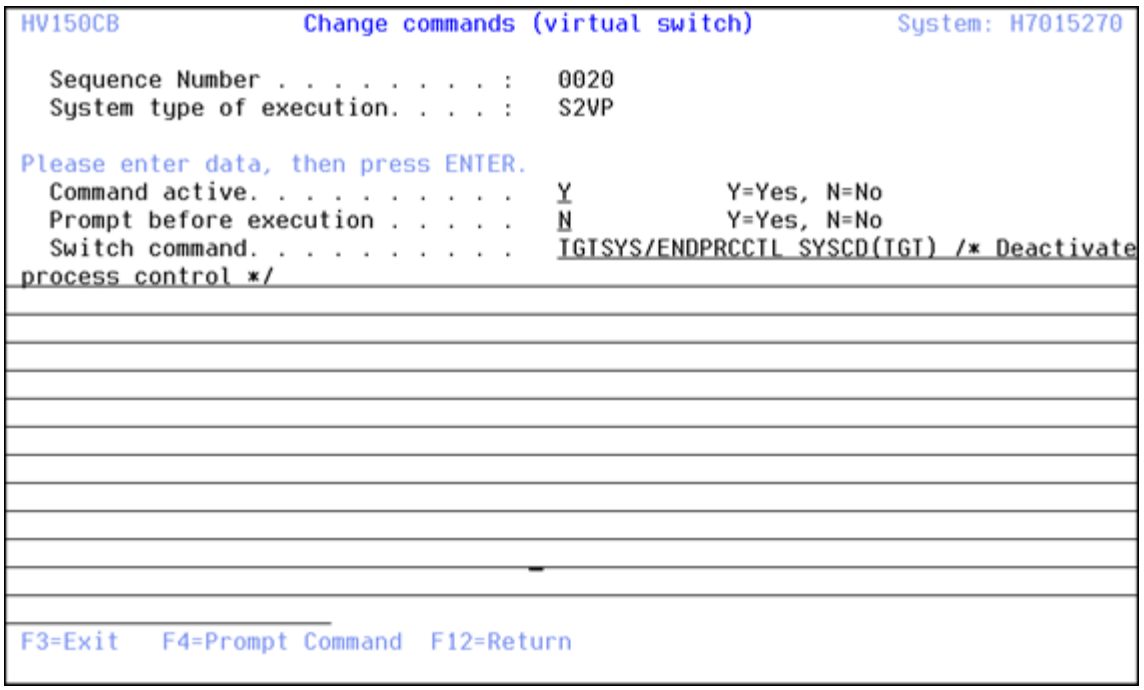
3.10.3.1 Selection 2 - Change commands (virtual switch)



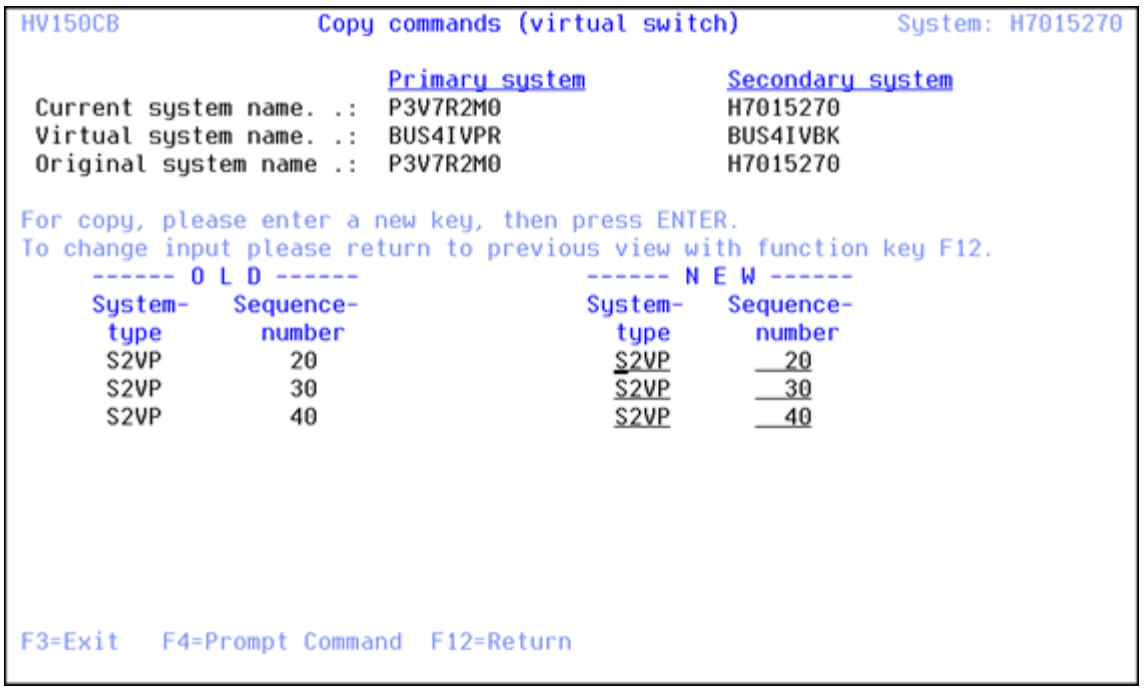
This mask is used to change a switch-over command.

Testing active
Here you can specify whether the command should be executed ("Y") or not ("N").

Prompt command before execution
This flag decides whether the command is prompted or not. If the command is prompted, it means that it is executed interactively.

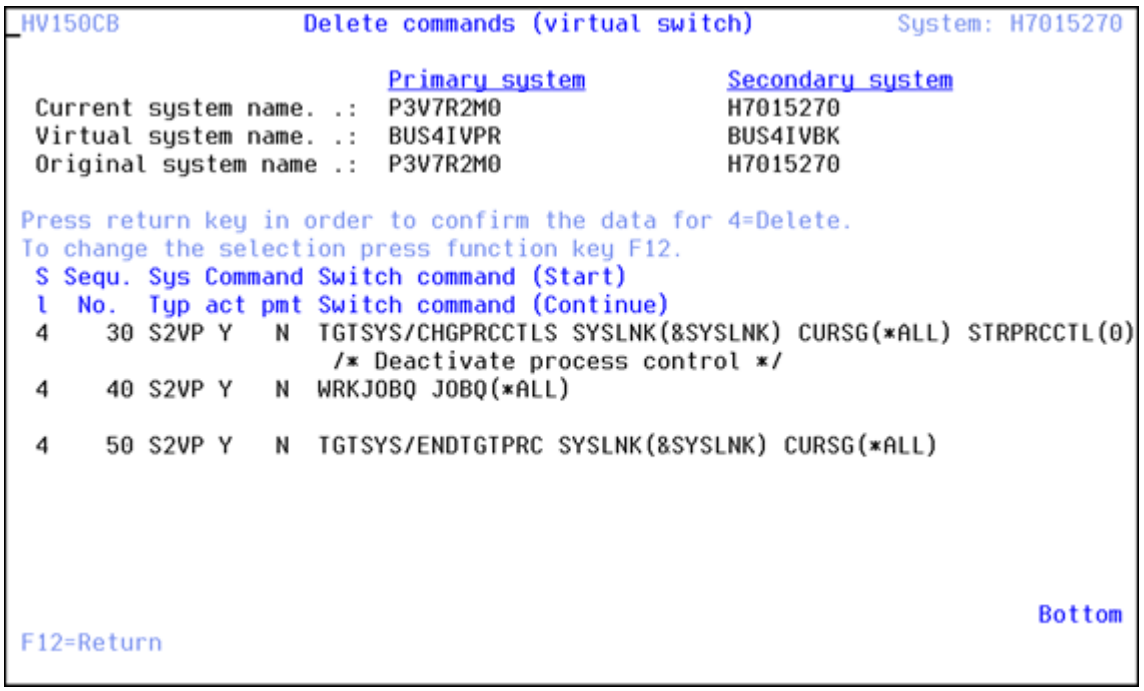
Switch-Over Command Line
A valid command must be specified here, which is to be executed during switch-over.

3.10.3.2 Selection 3 - Copy commands (virtual switch)



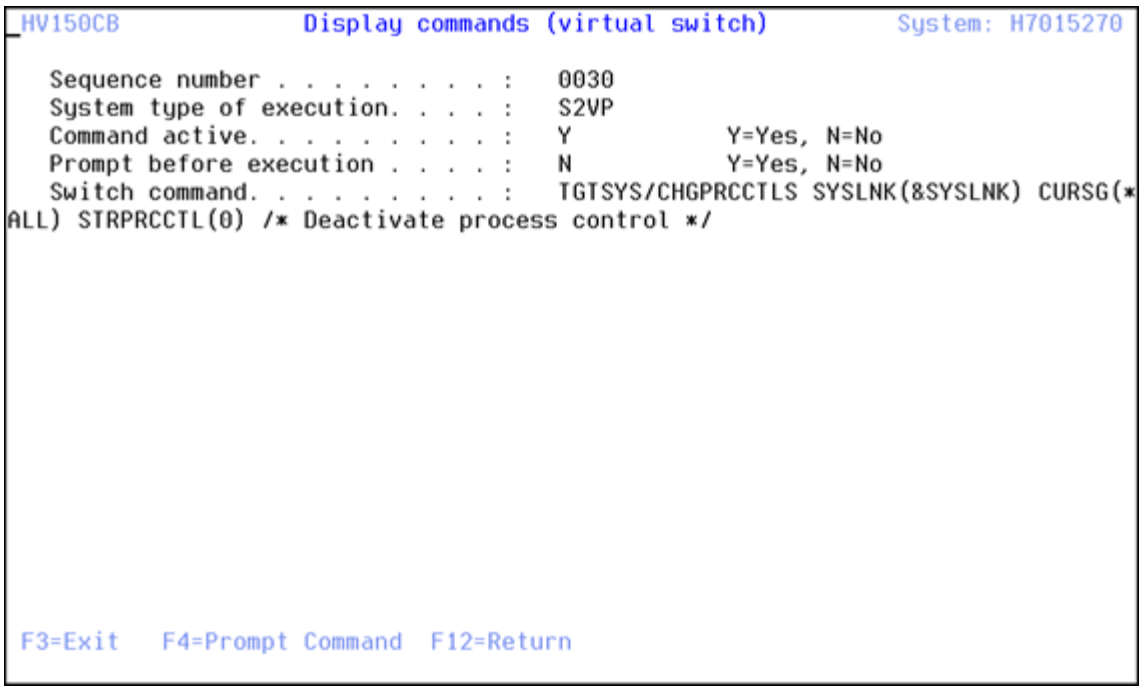
This mask is used to copy a switch-over command. Here you can enter a system type (P2VS, VS2P, S2VP or VP2S) and a new sequence number under which the copied switch-over command is stored. Via 'Change' this entry can then be edited.

3.10.3.3 Selection 4 - Delete commands (virtual switch)



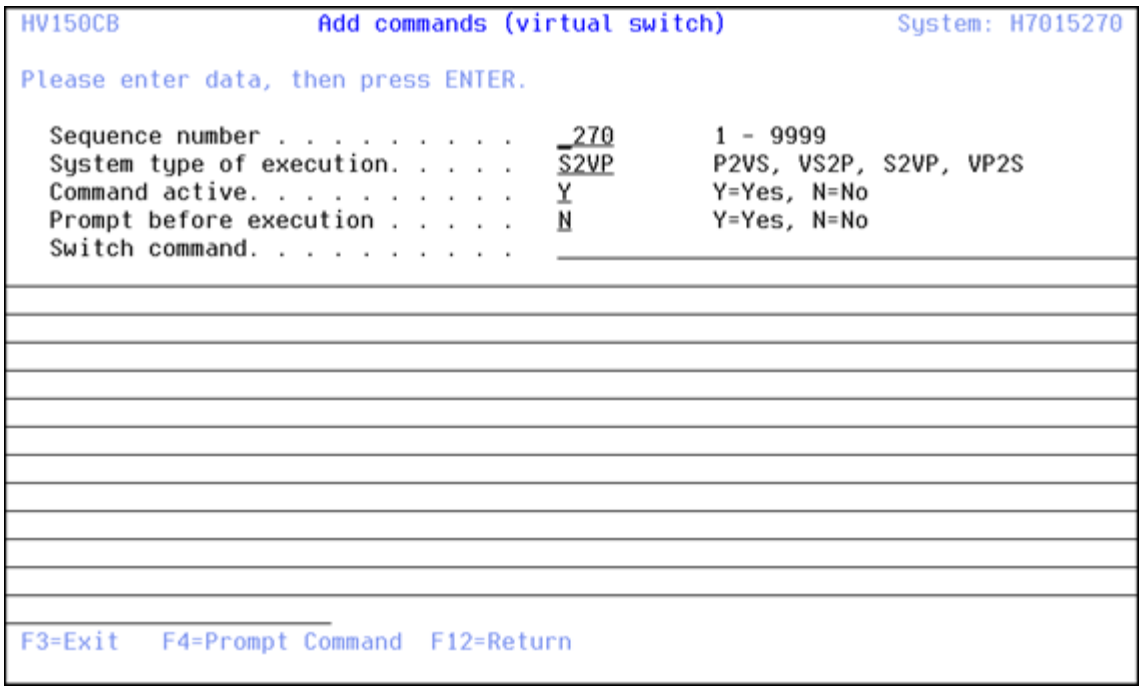
This mask is used to delete one or more switch-over commands from the list. The entries to be deleted are displayed once again and deleted by confirming with the Enter key.
The deletion process can be canceled with F12.

3.10.3.4 Selection 5 - Display commands (virtual switch)



This mask is used to display all parameters belonging to a Switch-Over command.

3.10.3.5 Command key F6 - Add command (virtual switch)



This mask is used to add a SWITCH-Over command.

Sequence number
Enter the new sequence number here. It identifies the sequence in which the respective switch-over commands are executed.

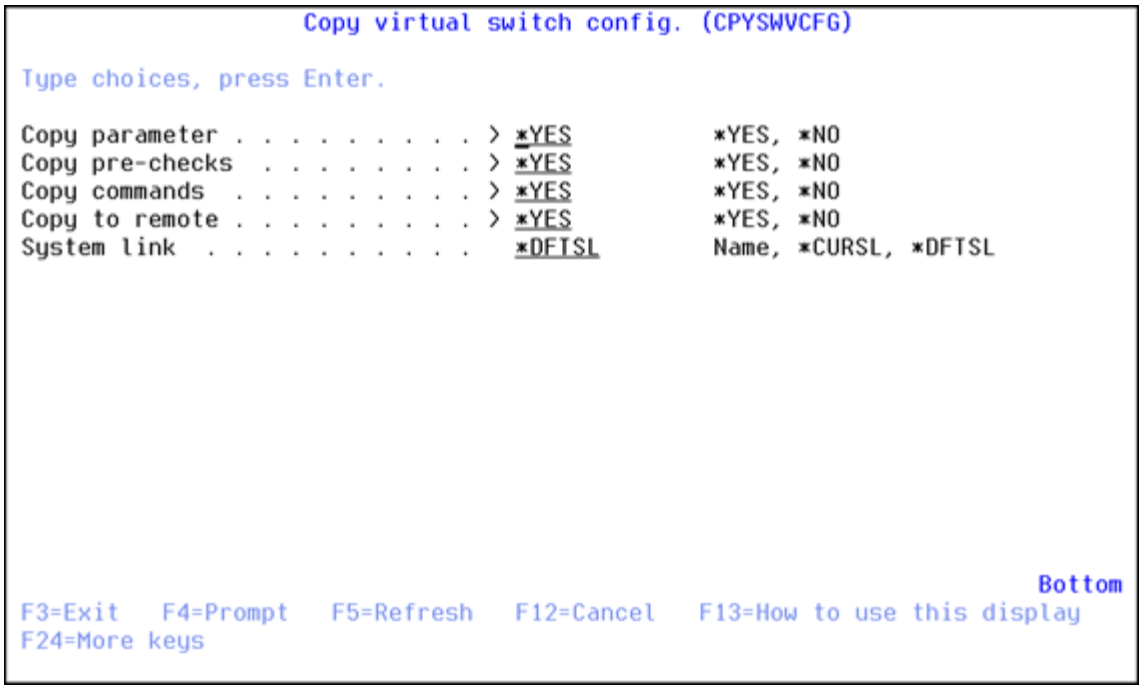
System type of execution
The system type can be specified here (P2VS, VS2P, S2VP or VP2S).

Command active
Here you can specify whether the command should be executed ("Y") or not ("N").

Prompt command before execution
This indicator decides whether the command is prompted or not. If the command is prompted, it means that it is executed interactively.

Switch-Over Command Line
A valid command must be specified here, which is to be executed during switch-over.

3.10.4 Menu item 4 - Copy commands and parameters to library SRCSYS



This menu item copies the configuration of the switch configuration to SRCSYS or TGTSYS and to the remote system.

The user has the following input options for the parameters:

Copy parameters
If the parameters are to be copied.

Valid values for the parameter **Copy parameter** are:

***YES**
The switch configuration parameters are copied. *YES is the default value.

***NO**
The switch configuration parameters are not copied.

Copy Preliminary Exams
Shall copy the preliminary exams.

Valid values for the **Copy preliminary checks** parameter are:

***YES**
The preliminary checks are copied. *YES is the default value.

***NO**
The preliminary examinations are not copied.

Copy commands
If the switch-over commands are to be copied.

Valid values for the **Copy commands** parameter are:

***YES**
The switch-over commands are copied. *YES is the default value.

***NO**
The switch-over commands are not copied.

Copy to remote
If the configuration is to be copied to remote.

Valid values for the **Copy to remote** parameter are:

***YES**
The configuration is copied to the remote system.

***NO**
The configuration is not copied to the remote system. *NO is the default value.

System link
Name of the system link used to send the configuration to remote.

Valid values for the **System link** parameter are:

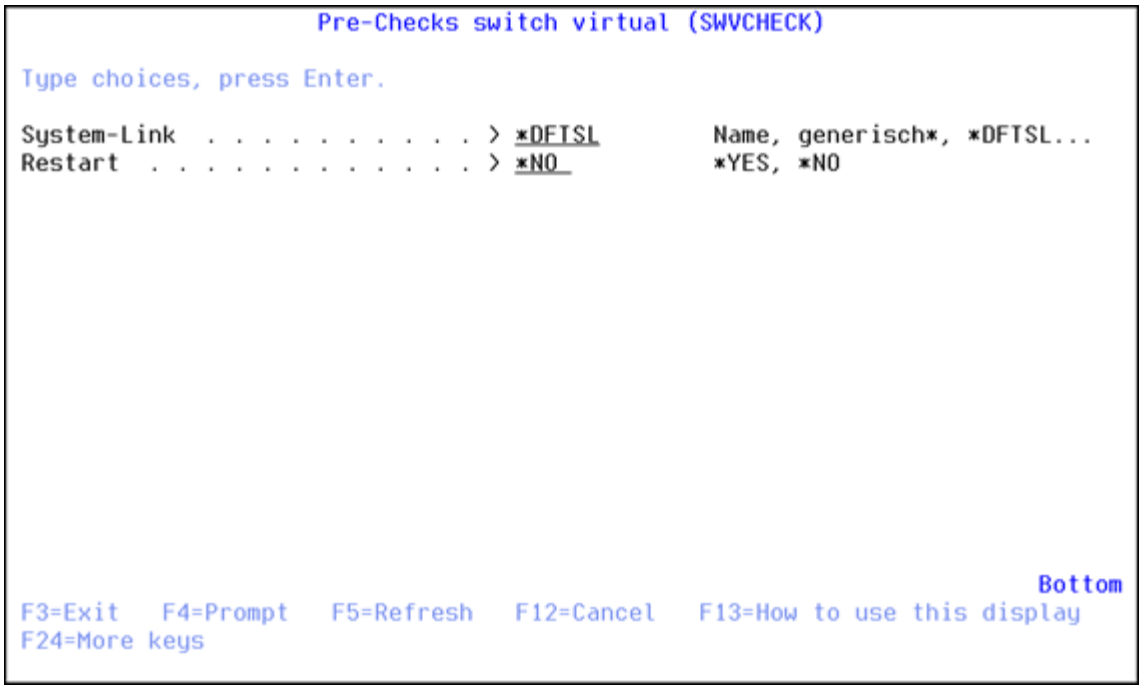
Name
Name of the system link that will be used.

***CURSL**
The current active system link is used.

***DFTSL**
The default system link is used.

The valid command keys are described in detail in the system operator guidance of the current command.

3.10.5 Menu item 10 – Start pre-checks (secondary -> virtual primary)



Executes all commands of the preliminary check (menu item 2). Before each command there is a query whether this command should be executed, then the next command is executed.

The user has the following input options for the parameters:

System link
Name of the system link for which the virtual switch is run.

Valid values for the **System link** parameter are:

Name
Name of the system link that will be used.

generic*
Specify the generic name of the system link. A generic name consists of one or more characters followed by an asterisk (*). All system links whose name has the same prefix as the generic name are taken.

***DFTSL**
The default system link is used.

***ALL**
The command is executed for all system links defined in the HA system.

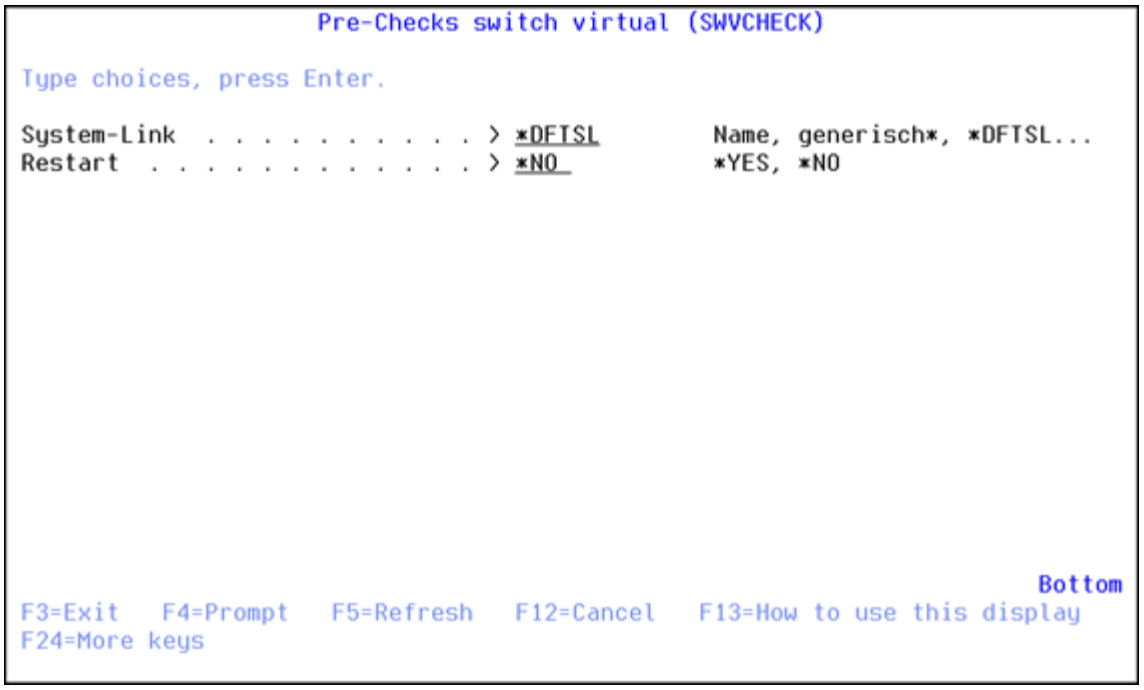
Restart
Should a restart or reboot be performed.

Valid values for the **Restart** parameter are:

***YES**
The virtual switch is restarted.

***NO**
The virtual switch is restarted *NO is the default value.

3.10.6 Menu item 11 – Start pre-checks (Virtual secondary -> Primary)



Executes all commands of the preliminary check (menu item 3). Before each command there is a query whether this command should be executed, then the next command is executed.

The user has the following input options for the parameters:

System link
Name of the system link for which the virtual switch is run.

Valid values for the **System link** parameter are:

Name
Name of the system link that will be used.

generic*
Specify the generic name of the system link. A generic name consists of one or more characters followed by an asterisk (*). All system links whose name has the same prefix as the generic name are taken.

***DFTSL**
The default system link is used.

***ALL**
The command is executed for all system links defined in the HA system.

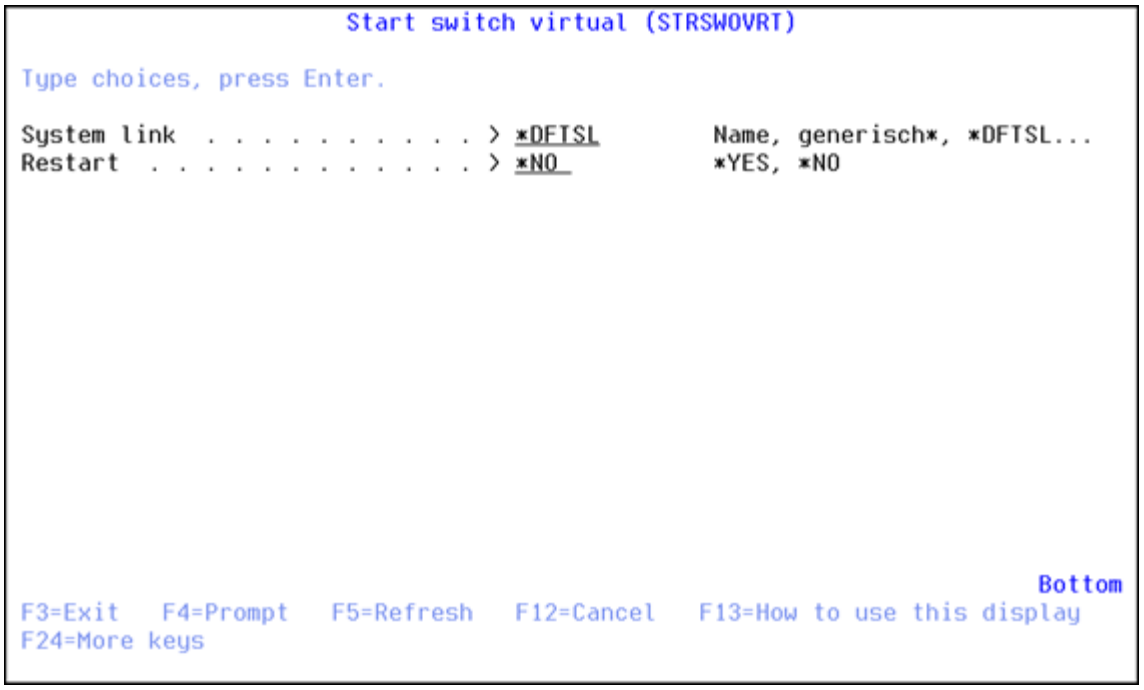
Restart
Should a restart or reboot be performed.

Valid values for the **Restart** parameter are:

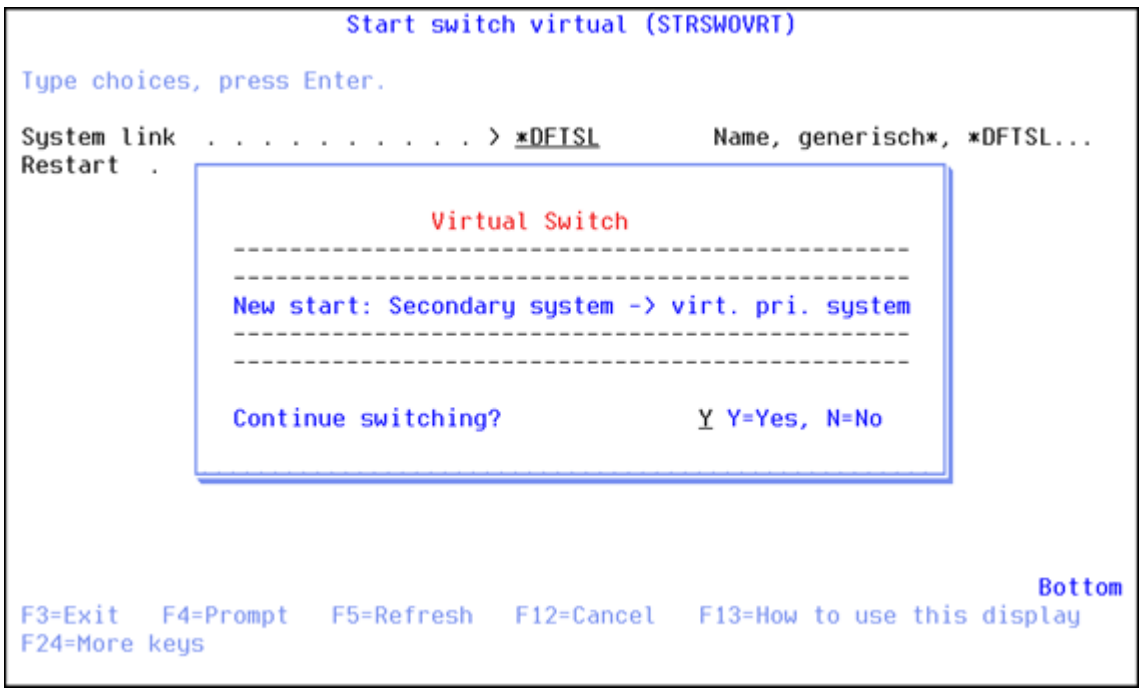
***YES**
The virtual switch is restarted.

***NO**
The virtual switch is restarted *NO is the default value.

3.10.7 Menu item 20 - Start switch (secondary -> virtual primary)

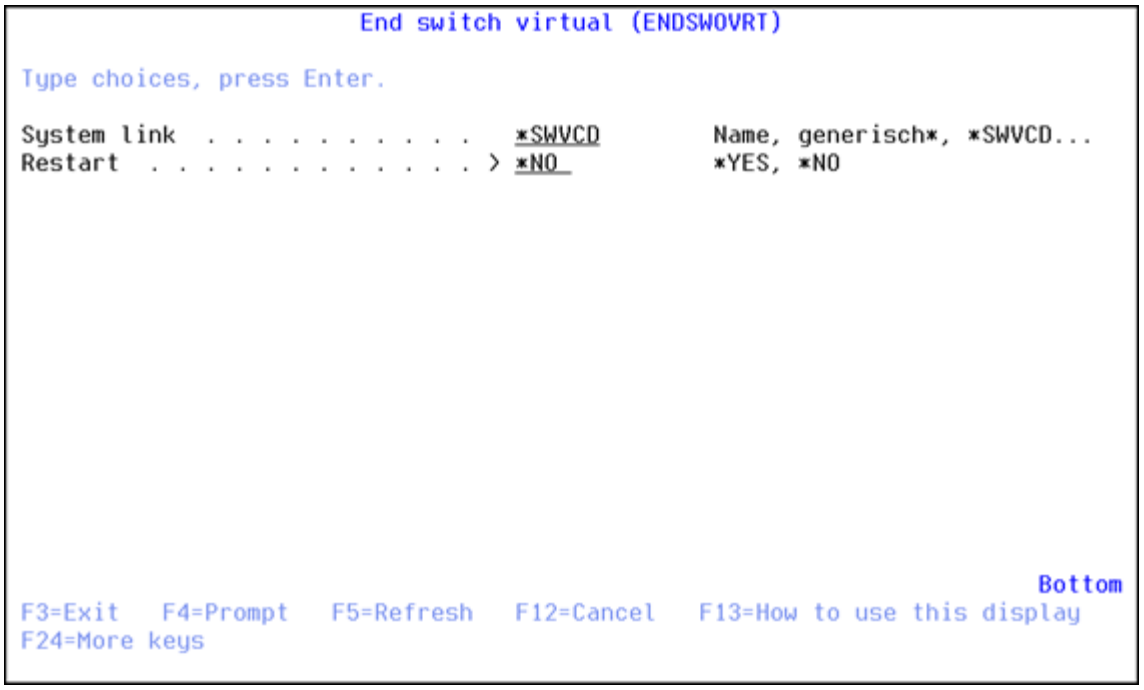


This menu item starts the switch-over from the primary system to the virtual secondary system.



All active commands that were entered under menu item 3 are executed. Each successfully executed command gets a new status.

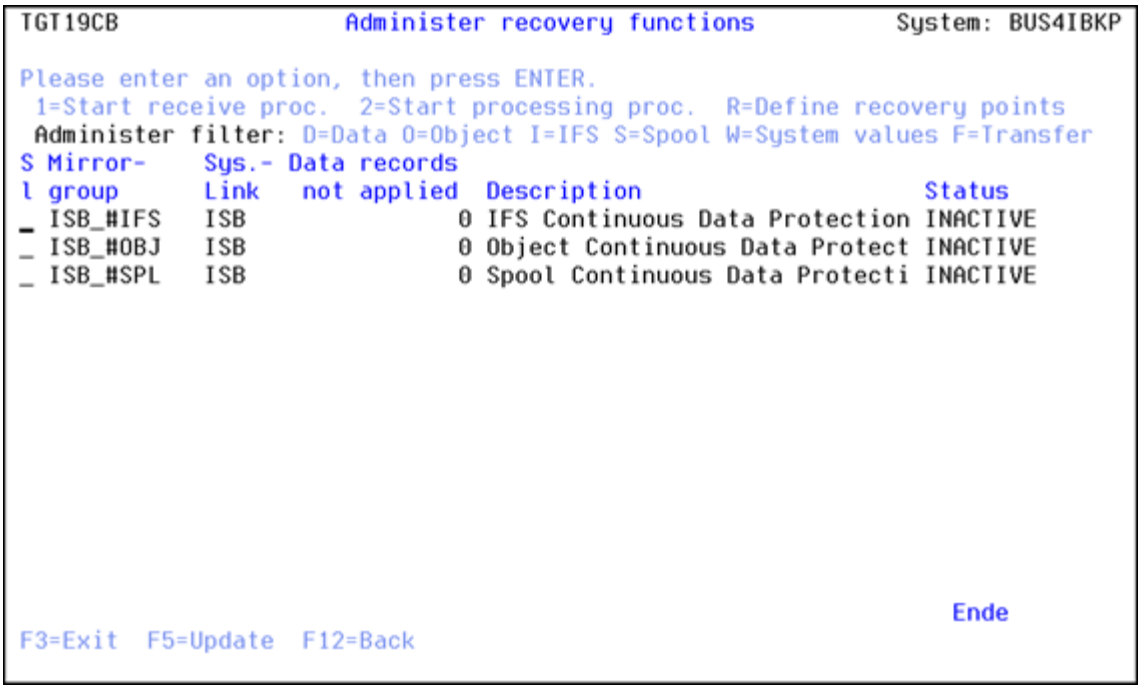
3.10.8 Menu item 21 - End switch (Virtual Secondary -> Primary)



This menu item ends the switch-over from the virtual secondary system to the primary system.

All active commands that were entered under menu item 4 are executed. Each successfully executed command gets a new status.

3.11 Main menu selection 11 - Data recovery for xsb versions



With this selection list the user can restore objects and spool files. The objects or spool files to be restored are selected via filters. The filters for these files, objects, spool files, IFS files and system values can be managed here.

The following valid input fields are available to the user:

Selection

The Selection data field is used to enter the options displayed on the current screen.
The choices can be combined depending on the type of work to be performed.
The options are performed in the order in which the selected items are in the list. When entering an option that is not allowed, an error message appears on the screen.

The following options are available for **mirror group** management:

Selection 1 - Start reception

After the filters for the objects to be restored have been entered and the touchdown point has been defined, this selection option can be used to read the data from the ISB appliance.

Selection 2 - Start processing

After the data has been read from the IPM appliance, it should first be checked whether all and not too much recovery data has been read. With this selection, the data is processed and thus the objects and data are restored.

Selection R - Set recovery point

This selection determines the point from which the data is to be read from the IPM appliance.

Selection D - Manage data filters

This selection option can be used to manage data filters for data to be restored. This option is only possible for an xSB version. The description of the individual masks see description in the primary system, chapter 1.1.4.10.

Selection O - Manage object filters

With this selection option, object filters for objects to be restored can be managed This function is only possible for an xSB version. The description of the individual masks see description in the primary system, chapter 1.1.4.11.

Selection S - Manage spool filters

This selection can be used to manage spool filters for spool files that are to be reflected back. This function is only possible for an xSB version. The description of the individual masks see description in the primary system, chapter 1.1.4.12.

Selection I - Manage IFS filters

With this selection IFS filters can be managed for the IFS files that are to be mirrored back. This function is only possible for an xSB version. The description of the individual masks see description in the primary system, chapter 1.1.4.14.

Selection W - Manage system filters

This selection can be used to manage system value filters for system values that are to be restored. This function is only possible for an xSB version. For the description of the individual masks see chapter 1.1.4.14.

Selection F - Apply filter

This selection copies all filters to another mirror group, thus deleting the filters of the other mirror group and replacing them with the filters of the previously selected mirror group.

The following command keys are valid on the current mask:

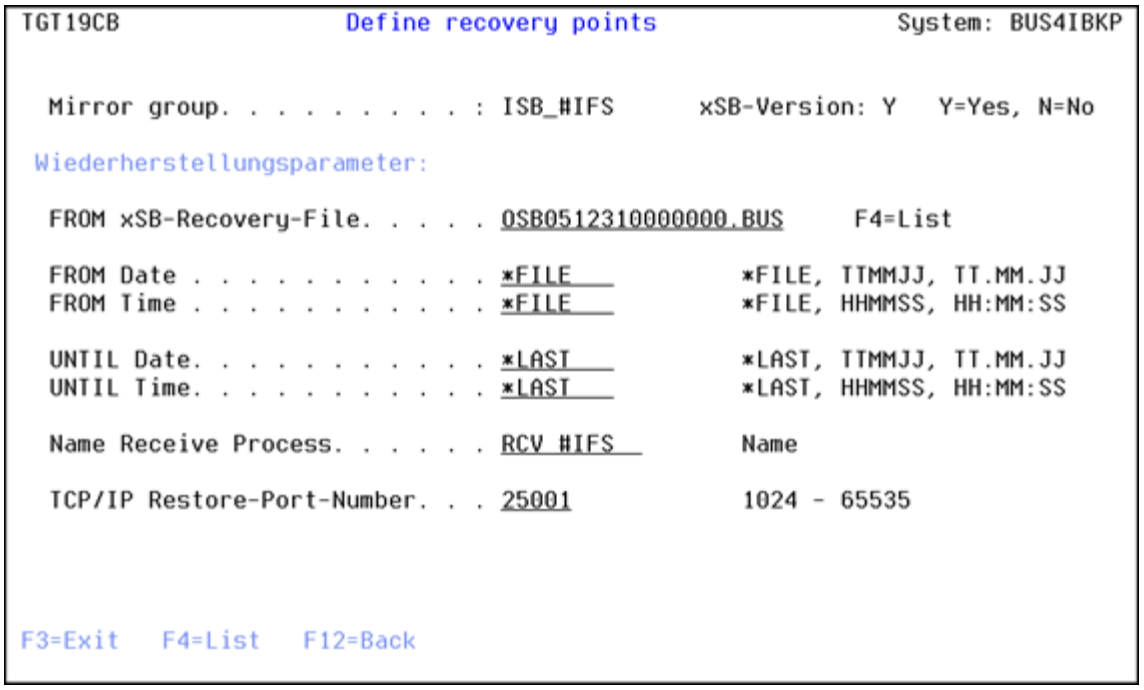
F3=End
Exit the current application function.

F5=Update
This command key is used for updating the selection lists. All options currently entered on the screen are deleted. The display list is rebuilt so that any list entries added, modified or deleted by other users are also displayed or removed.

F12=Back
Back to the previous mask, all entered values of this mask will not be saved.

In this case, the user returns to the main menu of the **HA system BUS4i as** when pressing the command key F3=End.

3.11.1 Selection R - Set recovery point



With the selection option R in the management list of xSB mirror groups the user has the possibility to define the touchdown points for the recovery of the objects, data and spool files.

The current **mirror group** is displayed on each mask.

Mirror group
Name of the **mirror group for** which the called command is to be executed.

xSB version
It is displayed whether the current application is an xSB mirror group.

The following input fields are available to the user on the current screen:

FROM xSB backup file
Here, the backup file from which the data is to be fetched from the ISB appliance is defined. The command key F4 can be used to display the possible backup checkpoints.

FROM date
Here you define from which date the data should be fetched from the IPM appliance.

Valid values for the **FROM date** parameter are:

DDMMYY
Specify valid date from which the data will be fetched.

***FILE**
The data is fetched from the backup file starting from the first date.

FROM time
Here you define from which time and date the data should be fetched from the ISB appliance.

Valid values for the parameter **FROM time** are:

HHMMSS
Specify valid time from which the data will be fetched.

***FILE**
The data is fetched from the backup file starting from the first date and time.

BIS date
Here you define the date up to which the data should be fetched from the IPM appliance.

Valid values for the **BIS date** parameter are:

DDMMYY
Specify valid date until which the data will be fetched.

***LAST**
The data is fetched from the backup files up to the last date.

UNTIL time
Here you define the time and date up to which the data are to be fetched from the ISB appliance.

Valid values for the **BIS time** parameter are:

HHMMSS
Specify valid time until which the data will be fetched.

***LAST**
The data is fetched from the backup files up to the last date and time.

Name receiving process
Name of the process that receives the data sent by the primary system.

TCP/IP port number
Port over which the communication between primary and secondary system takes place. Valid values are from 1024 to 65535.

Valid command keys of the mask:

F3=End
Exit the current application function.

F12=Previous display
Back to the previous mask, all entered values of this mask are not saved. The user returns to the management list of mirror groups.

3.11.2 Selection D - Manage data filters (only for xSB versions)

This selection option can be used to manage data filters for data to be restored. This option is only possible for an xSB version. The description of the individual masks see description in the primary system, chapter 1.1.4.10.Selection D - Manage data filters (only for xSB versions).

3.11.3 Selection O - Manage object filters (only for xSB versions)

With this selection option, object filters for objects to be restored can be managed This function is only possible for an xSB version. The description of the individual masks see description in the primary system, chapter 1.1.4.11.

3.11.4 Selection S - Manage spool filters (xSB versions only)

This selection can be used to manage spool filters for spool files that are to be reflected back. This function is only possible for an xSB version. The description of the individual masks see description in the primary system, chapter 1.1.4.12.

3.11.5 Selection I - Manage IFS filters (xSB versions only)

With this selection IFS filters can be managed for the IFS files that are to be mirrored back. This function is only possible for an xSB version. The description of the individual masks see description in the primary system, chapter 1.1.4.14.

3.11.6 Selection W - Manage system value filter (only for xSB versions)

This selection can be used to manage system value filters for system values that are to be restored. This function is only possible for an xSB version. For the description of the individual masks see chapter 1.1.4.14.

3.11.7 Selection F - Apply filter

Press "F" to select the mirror group from which the filters from the SRC mirror group will be transferred to the current TGT mirror group.

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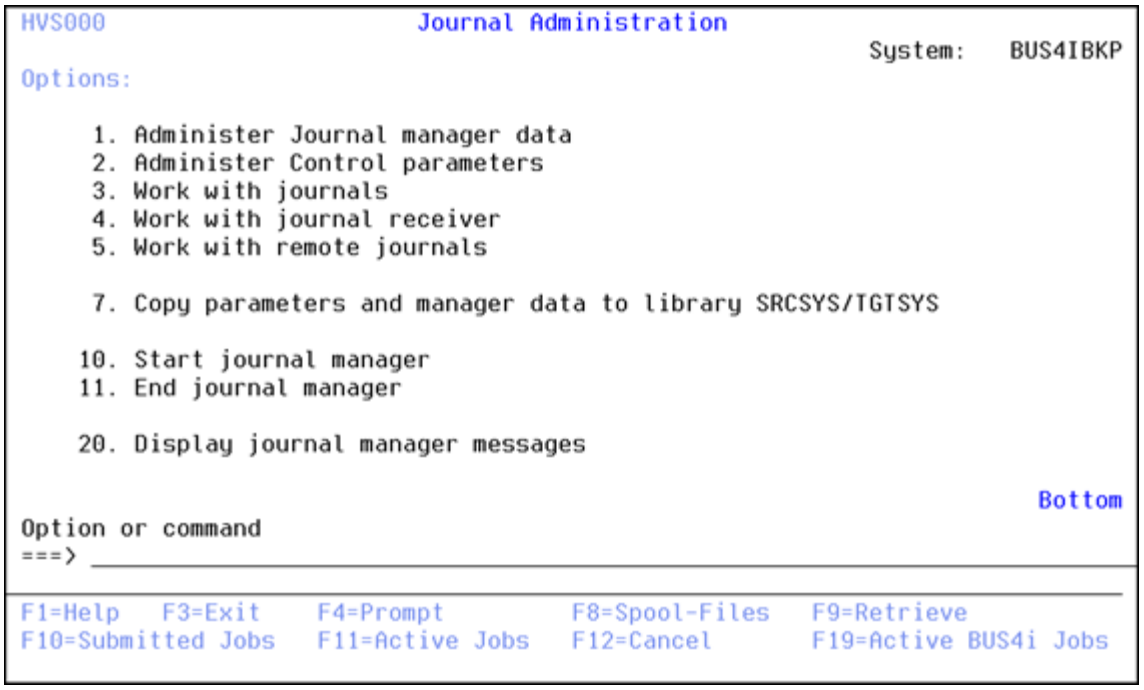
3.12 Main menu selection 20 – Administer Journals



The following menu items can be selected on the screen:

Menu item 1: Manage journal manager data
This menu item is used to manage the journal manager data. It is possible to add, modify and delete journals to the manager.

Menu item 2: Manage control parameters
Here you can manage the parameters with which you control the journal manager.

Menu item 3: Work with journals
This menu item can be used to display all (blank or *ALL entries in both selection fields) or individual journals defined on the system. Via options, changes can be made to the journals as well as the journal recipients. The journals and attributes are displayed.

Menu item 4: Work with journal receivers
This menu item can be used to display all (blank or *ALL entries in both selection fields) or individual journals defined on the system. The journals, with the attributes, the deletion options and the retention time for journal receivers are displayed. Options can be used to make changes to the journal recipients and their retention period.

Menu item 5: Work with remote journals
This menu item can be used to display all (blank or *ALL entries in both selection fields) or individual remote journals defined on the system. Parameters for remote journals are displayed. Options can be used to add, activate or deactivate remote journals, for example.

Menu item 7: Copy parameters and data to library SRCSYS/TGTSYS
This menu item can be used to copy the configuration of the journal manager to TGTSYS or SRCSYS and to the remote system.

Menu item 10: Start journal manager
This menu item can be used to start the journal manager.

Menu item 11: Exit journal manager
This menu item can be used to exit the Journal Manager.

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Menu item 20: Display journal manager messages

This menu item can be used to display the messages of the journal manager.

3.12.1 Menu item 1 - Manage journal manager data

With this selection it is possible to manage the journal manager data. It is possible to add, modify and delete journals to the manager. The description of the individual masks, the functions and the parameters are described in chapter 1.1.11.1.

3.12.2 Menu item 2 - Manage control parameters

This menu item is used to manage the control parameters of the journal manager. The description of the parameters are described in chapter 1.1.11.2.

3.12.3 Menu item 3 - Work with journals

With this menu item the journals can be managed. The description of the individual masks, the functions and the parameters are described in chapter 1.1.11.3.

3.12.4 Menu item 4 - Work with journal receivers

With this menu item the journal receivers can be managed. The description of the individual masks, the functions and the parameters are described in chapter 1.1.11.4.

3.12.5 Menu item 5 - Work with remote journals

This menu item can be used to display all or individual remote journals defined on the system. Parameters for remote journals are displayed. Via options e.g. remote journals can be added, activated or deactivated. The description of the individual masks, the functions and the parameters are described in chapter 1.1.11.5.

3.12.6 Menu item 7 - Copy parameters and data

With this menu item the configuration of the journal manager can be copied to TGTSYS or SRCSYS and to the remote system. The description of the individual masks and the parameters are described in chapter 1.1.11.6.

3.12.7 Menu item 10 - Start journal manager

This can be used to start the journal manager if it is not active and the value in the "Activate journal manager" control parameters is set to "Y".

3.12.8 Menu item 11 - Exit journal manager

This can be used to exit the journal manager if it is active.

3.12.9 Menu item 20 - Display journal manager messages

Via this menu item you can display the messages of the journal manager. The description of the individual masks and the parameters are described in chapter 1.1.11.9.

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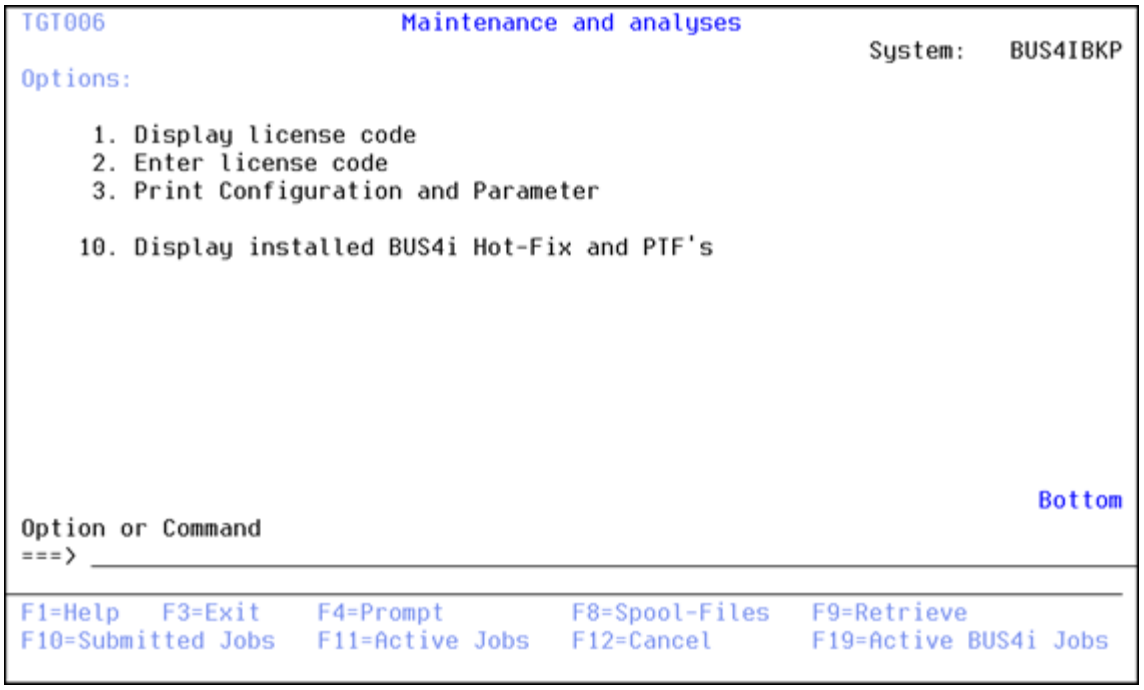
3.13 Main menu selection 21 - Maintenance and analyses



The following menu items can be selected on the screen:

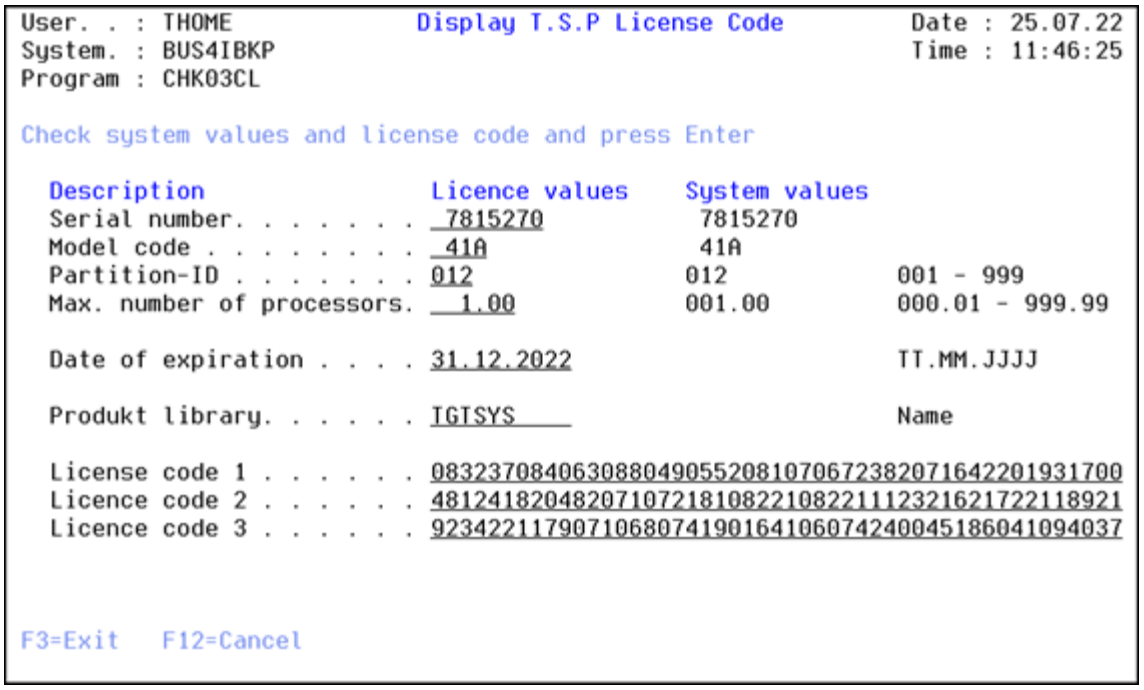
Menu item 1: Display current license code
With this menu item the user can display the current license code.

Menu item 2: Enter license code
With this menu item the license code can be entered.

Menu item 3: Print configuration and parameters
This menu item can be used to print out the BUS4i configuration.

Menu item 10: Display current BUS4i software status
This menu item can be used to display the current BUS4i software status.

3.13.1 Menu item 1 - Display current license code



This selection menu allows the user to view the current license code.

The following menu items are displayed on the current screen:

Serial number
The serial number is displayed in this field.

Model number
This field displays the model number.

Partition ID
The partition ID is displayed.
Valid input values are: 000.10 - 999.99

Max. Number of processors
The number of maximum processors is displayed.
Valid input values are: 001 - 999

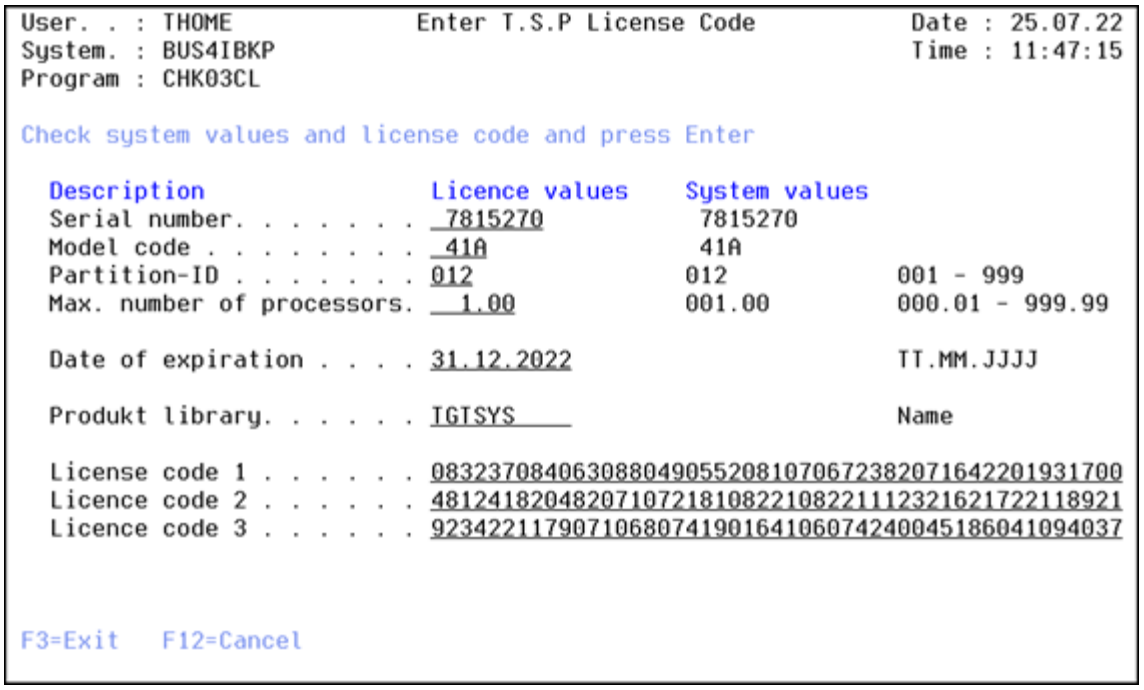
Validity date
The validity date BIS is displayed here.
Valid input values are: DD (day), MM (month), YYYY (year)

Product Library
The name of the associated product library is displayed.

License code 1-3
License codes 1-3 are displayed here.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

3.13.2 Menu item 2 - Enter license code



This selection menu allows the user to enter the current license code.

The following menu items are displayed on the current screen:

Serial number
The serial number is entered in this field.

Model number
The model number is entered in this field.

Partition ID
The partition ID is entered in this field.
Valid input values are: 000.10 - 999.99

Max. Number of processors
The number of maximum processors is entered in this field.
Valid input values are: 001 - 999

Validity date
The validity date BIS is entered here.
Valid input values are: DD (day), MM (month), YYYY (year)

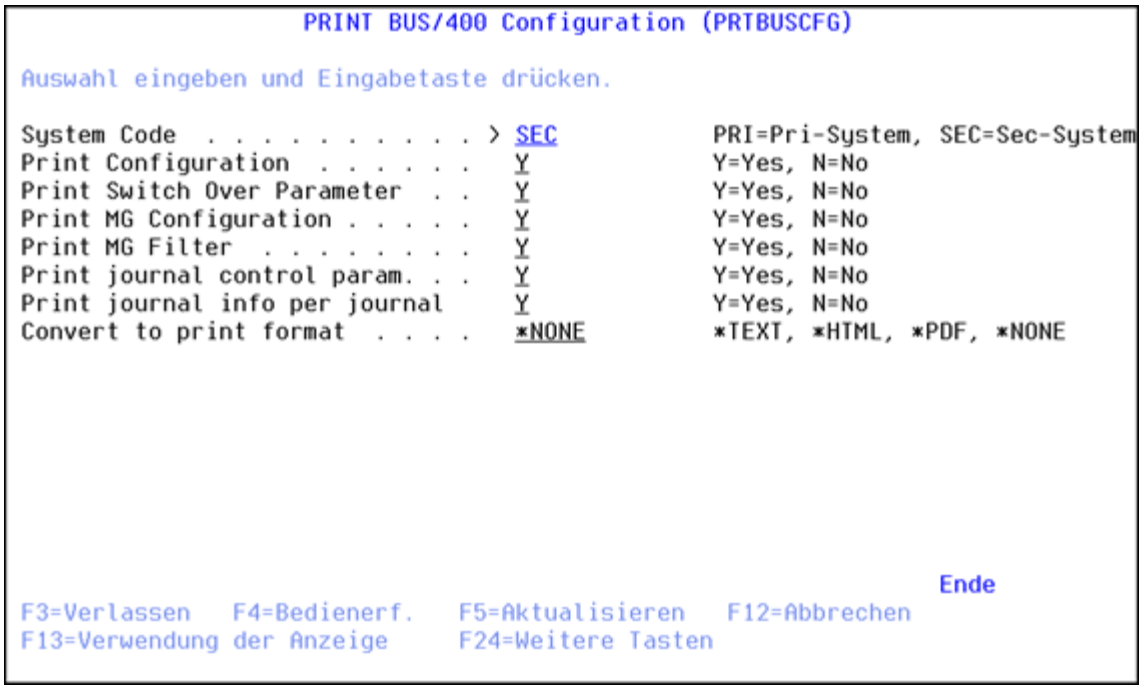
Maximum number of users
Here the user can enter the maximum number of users.
Valid input values are: 001-999.

Product Library
The name of the associated product library can be entered here.

License code 1-3
License codes 1-3 can be entered in this field.

The description of the valid command keys is given in detail in the documentation of the current mask or can be read in the overview.

3.13.3 Menu item 3 - Print configuration and parameters



The "System Code" parameter is used to specify whether the configuration is to be printed for the primary or secondary system.

The various parameters of the BUS4i configuration can be printed via the other selection options.

Thereby the output format can be determined via the "Convert to print format" parameter as follows:

***NONE**
a spool file is created for the user BUS4i (WRKSPLF BUS4i: printer file: TGT56D)

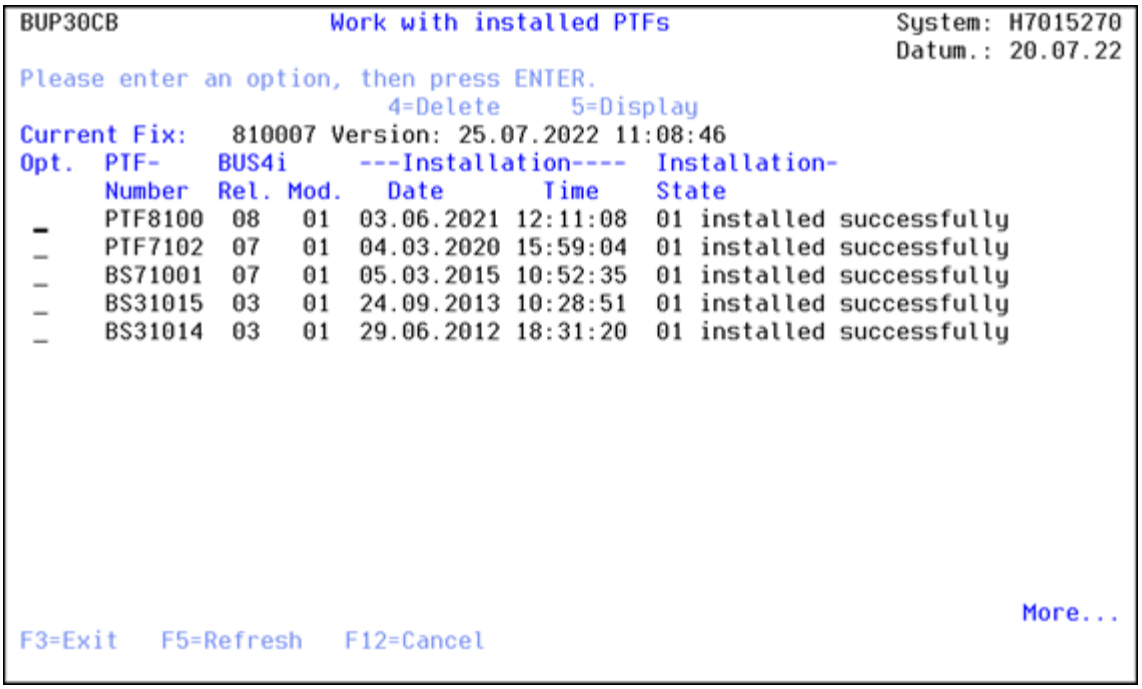
***TEXT**
Spool file SRC56D is converted to text file src56d.txt and placed in \tmp directory

***HTML**
Spool file SRC56D is converted to text file src56d.html and placed in \tmp directory

***PDF**
Spool file SRC56D is converted to text file src56d.pdf and placed in \tmp directory

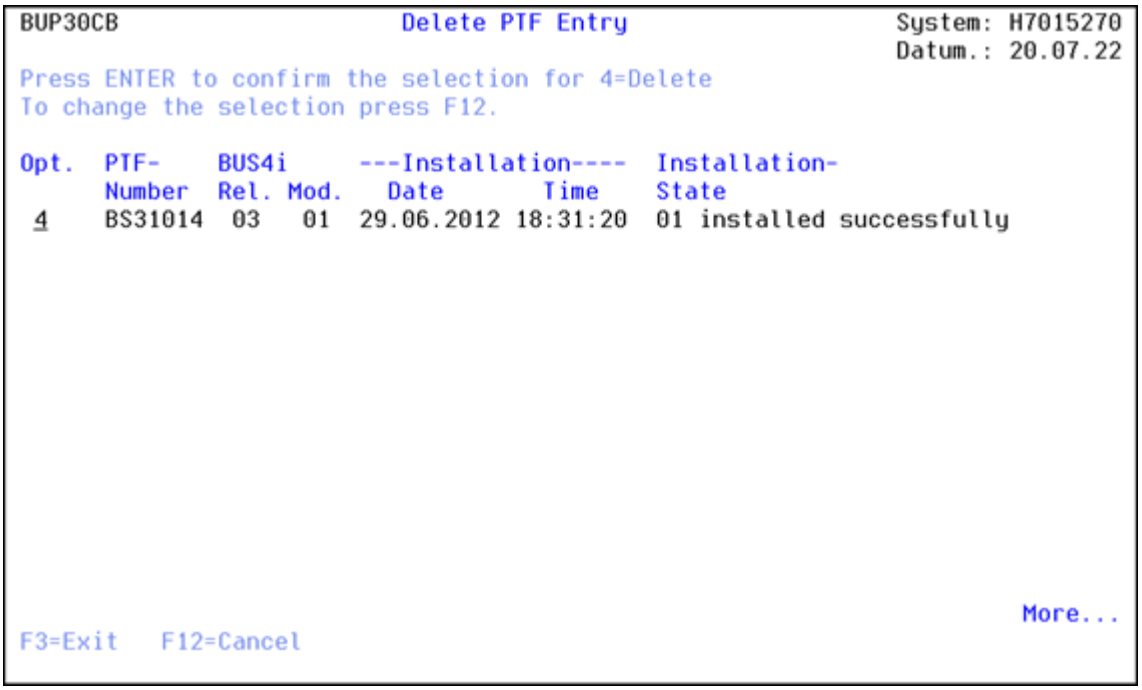
The default value is *NONE.

3.13.4 Menu item 10 - Display current BUS4i software status



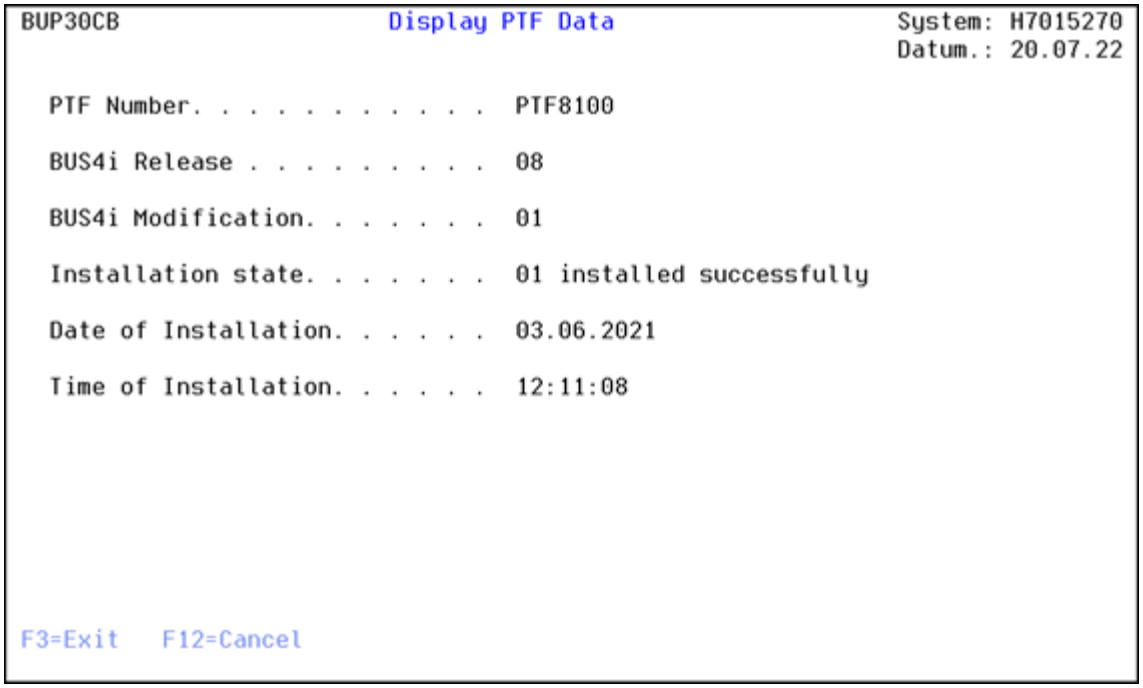
Here you get a list of all PTF installations and hotfixes of the HA system BUS4i. You can display the PTFs or delete installed PTFs.

3.13.4.1 Selection 4 - Delete PTF entry



The selected PTF entries are deleted from the database, this must be confirmed beforehand by pressing the Enter key. With the function key F12 the deletion operation can be canceled.

3.13.4.2 Selection 5 - Display PTF data



With the selection additional details about the selected PTF can be displayed. Among others, the date and time of installation.