



# Beta Systems Architecture

## Service Manager Manual

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# Introduction

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## Introducing the BSA Service Manager

### BSA Service Manager

The BSA Service Manager is an application for controlling, monitoring and dynamically changing specific central functions of a product started task while the started task (STC) is running.

The BSA Service Manager enables dynamic control of the products in the running system. It displays the current activities and connections, and facilitates the maintenance and support of functions. The functionality is integrated into an online application that can run within a product ISPF online application, or can be used as a separate ISPF application.

The BSA Service Manager/ISPF application provides a set of online panels, tutorials, messages and accompanying programs that comply with ISPF conventions.

### Features

- Specific status information on products, on the various add-ons and on special BSA components can be requested and displayed.
- Detailed information on central functions and features can be requested and displayed.
- The BSA Service Manager is automatically available in all Beta product started tasks, and is also available as a central BSA standalone started task.
- Dynamic changes in program control can be carried out while the product and started task (STC) are running.
- LST members and LST keywords can be altered to change program control
- Dynamic features such as TCP/IP connections can be activated.
- Information necessary for Beta Support can easily be obtained.
- License keys can be dynamically modified.
- The BSA Service Manager can be used to control and monitor started tasks with subsystem IDs other than the started task with the subsystem ID in use (does not apply to batch jobs and started tasks which are running as RFF jobs)
- Diagnostic reports can be generated to provide environment information for the use of Beta Systems support.

## Conventions used in this manual

### Sideheads

This manual contains different types of information:

- Task-based information, for example, procedures containing a sequence of numbered steps
- Reference information, for example, panel and parameter descriptions

The sideheads in the margin help you locate the required information quickly.

### Keys

All keys are written in uppercase letters. Function keys (also called program function keys) are referred to as PF*n*, for example:

Use PF8 to scroll downwards and PF7 to scroll upwards.

Use PF11 to scroll to the right and PF10 to scroll to the left.

### Panels

Panels are displayed in a monospaced font and framed in a box. As a rule, the entire panel is displayed.

The following applies to the displayed panels:

- The padding character for required fields is the dot ( . ) and the padding character for optional fields is the underline character ( \_ ).
- The panel ID is displayed in the top-left corner of the panel. (You can turn this display on or off using the primary command PANELID.)

```

PEB4GCB -----
Command ==> _____

Started Task Status Information                               Subsys-ID - B92P
                                                            Sysname  - BETA

STC Name      : BETA92P                                     JES Id   : S0010230  ASID: 486
Start Date   : 15.04.2013                                  Start Time : 14:40:37:00
Elapsed Time : 4033 MIN
Status      : ACTIVE
OCF Conn.   : NO                                           ARM Conn.  : NO
DB Type     : MASTER / SHARED
System      : PROD                                         Location   : BERLIN

      Storage Region / Allocated
      Above      / Below
      524288K   / 57272K      9128K   / 2804K

STC Transaction Information
GCB Name ==> * _____ (Name or Mask)
FCB Name ==> _____ (Name or Mask)

Press the ENTER key to display the selected information.

```

Panel names are included in the index to help you find tasks and procedures that refer to certain panels.

**JCL**

JCL is displayed in a small monospaced font and framed in a dashed box. Lowercase *italic* characters are used for generic cards and variables.

```

+-----+
|jobcard
|//INIT      EXEC PGM=BST01ARI,
|//  PARM='ssid,BETA.PARMLIB(BnnSSIxx)'
|//*
|//*STEPLIB DD  DSN=BETA.APFLD,
|//*           DISP=SHR
|//*
|//SYSUDUMP DD  SYSOUT=*
+-----+

```

The values in lowercase *italic* characters must be replaced with the appropriate values, for example, *nn* and *xx* in the member name *BnnSSIxx*.

**Dataset names**

The manual uses the high-level qualifier BETA for libraries that are typically shared by BSA and the Beta Systems DCI products. For example, BETA.PARMLIB is used to refer to the Beta parameter library.

The manual uses the high-level qualifier BSA for BSA libraries. *BETAnn* is used for libraries and databases of the product with the identifier *nn*. For example, BSA.LOAD is used for the BSA load module library, and BETA92.LOAD is used for the *\_beta log|z* load module library.

Libraries and databases at your data center will most likely have different names. Make sure that your JCL contains uses correct high-level qualifiers, which comply to the conventions used at your data center.

**Listings and reports**

Like JCL, listings and reports are also displayed in a small monospaced font and framed in a dashed box.

**Console commands**

Console commands are displayed in a large monospaced font. For example:

```

To start the product started task, enter the following console command:
S stcname
where stcname must be replaced with the name of the product started
task.

```

**Keyword and positional parameters**

Keyword parameters and positional parameters are displayed in a monospaced font using the following syntax:

```
PARM='ssid[,TRACE=Y|N]'
```

*ssid* is a required positional parameter where *ssid* refers to the subsystem ID. The subsequent keyword parameter is optional, which is indicated by square brackets. A vertical bar separates alternative values. Keywords are displayed in uppercase letters.

**Allowed values**

Allowed values for parameters are separated using a vertical bar ( | ). Square brackets indicate that a parameter is optional.

**Double-dot operator**

The double-dot operator between integers indicates a range of integer values. For example, **2..5** expands to a list containing the values **2, 3, 4,** and **5**.

**Primary commands**

Primary commands are displayed in uppercase letters. To execute a primary command, type the primary command in the command line and press ENTER.

Many primary commands have a long form and one or several short forms. Instructions in this manual use the long form of the primary command and include short forms in parentheses. For example:

<b>SORT col1[,A D col2,A D col3,A D]</b>	Sorts the displayed table in ascending (A) or descending (D) order in accordance with the specified column(s) (col1, col2, col3).  A list of the column names is displayed in the help panel.
<b>SORT</b>	Displays a help panel for the SORT command for the displayed table.
<b>TPRINT</b>	Prints the displayed table. You can determine where you want to print in the panel TPRINT Parameter which is displayed when you enter the command in the command line.

**Line commands**

Line commands are displayed in the manual in bold uppercase letters. Line commands consist of one, two, or three characters.

Available line commands are listed with each panel, like this:

<b>A</b>	Description of line command <b>A</b>
<b>AB</b>	Description of line command <b>AB</b>

To execute a line command, type the line command in the **Sel** column of the table in front of the desired entry and press ENTER.

## Using the ISPF application

### Panel navigation

All procedures and panel descriptions use the "Primary Selection Menu" as point of reference. For example:

To display started task status definition:

- From the "Primary Selection Menu", select option 2 OPERATION, then 1 STATUS.

You don't have to enter these options in separate steps and you don't have to return to the "Primary Selection Menu" all the time. Do the following to access the List Selection panel in one step:

Enter ...	in the command line to call this panel from ...
2.1	the "Primary Selection Menu"
=2.1	any panel <b>Note:</b> The ISPF jump function is <b>not</b> available under VDF.

### Navigating within a panel

- Use the arrow keys or mouse to move the cursor through the panel.
- Use TAB or NEWLINE to jump directly to the entry fields of a panel:
  - Press TAB to move the cursor to the next entry field to the right or below.
  - Press SHIFT+TAB to move the cursor to the previous entry field.
  - Press NEWLINE to move the cursor down to the next entry field. NEWLINE always moves the cursor to the first entry field in a line.

### Saving changes

- To modify existing data or enter new data, type the data in the entry field or fields and press ENTER to save your changes.
- To quit a panel or an application without saving changes, use the following commands or keys:

Use command ...	or function key ...	to ...
END	PF3	quit a panel
RETURN	PF4	quit an application

**Scrolling within tables**

When tables contain more information than can be displayed in one screen, use the following commands or keys to scroll:

Use command ...	or function key ...	to scroll ...
DOWN	PF8	down
UP	PF7	up
RIGHT	PF11	right
LEFT	PF10	left

**Displaying line commands**

Available line commands are displayed below the panel title in ISPF tables. Depending on the type of table, you can turn the display off by using the primary commands PROF HL OFF and PROF HL ON to turn the display off or on during the current session

**Multi-selection**

You can enter line commands in front of several items in a table before pressing ENTER. The commands will be executed one after the other in the order requested.

**Online help**

- Press PF1 (HELP) to display online help.
- There are help panels for every panel.
- To browse help panels in sequence, press ENTER to display the next help panel in the sequence or B to display the previous help panel.

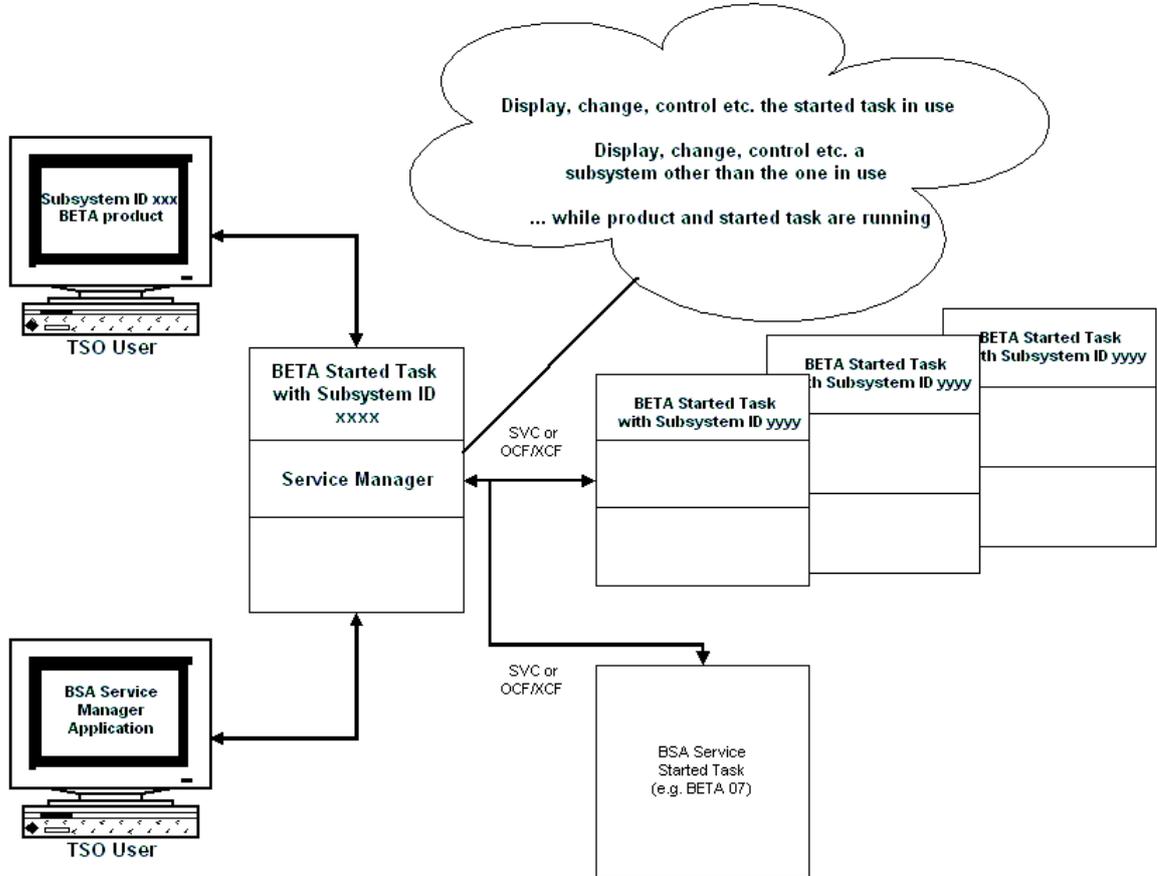
**Messages**

- Each short message of the BSA Service Manager ISPF application has a corresponding long message which provides additional information.
- Short messages are displayed in the upper right margin of the panel. Press PF1 (HELP) to display the corresponding long message.

## How the BSA Service Manager interconnects

### Overview

The following flowchart shows the interconnection of the BSA Service Manager and other Beta products:



## Panel structure

### Overview

This section shows the panel structure under the BSA "Service Manager Selection Menu".

The page references or hyperlinks refer to the section where the corresponding option is described in this manual.

### Panel structure

- 1 PARM (see page 19)
  - 1 PARM (see page 21)
  - 2 MODIFY (see page 29)
  - 3 SYSVAR (see page 35)
- 2 OPERATION (see page 38)
  - 1 STATUS (see page 40)
  - 2 STATISTICS (see page 46)
  - 3 RESOURCES (see page 47)
  - 4 LICENSE (see page 51)
    - 1 ACTIVE (see page 52)
    - 2 ALL (see page 55)
    - 3 DISPLAY (see page 56)
    - 4 UPDATE (see page 58)
  - 5 SECURITY (see page 61)
  - 6 MAINTENANCE (see page 63)
  - 7 TRACE (see page 70)
  - 8 DSALLOC (see page 74)
    - 1 TSOLISTA
    - 2 STCLISTA
- 3 APPLICATION (see page 76)
  - 1 VDF (see page 78)
  - 2 BOF (see page 85)
  - 3 BAF (see page 91)
- 4 CONNECTIVITY (see page 94)
  - 1 ARM (see page 96)
  - 2 OCF
    - 1 LU 6.2 (see page 101)
    - 2 TCP/IP (see page 107)
  - 5 SYSVAR (see page 123)
- 5 SUBSYSTEMS (see page 124)

*(continued)*

(continued)

- R REPORTS (see page 136)
  - 0 GLOBAL (see page 139)
  - 1 SINGLE (see page 140)
  - 2 SERVICE (see page 141)
  - 3 MULTI (see page 143)
  - 4 RFF (see page 144)
  - 5 BQL (see page 145)
  - L LMOD (see page 146)
  - P PACKAGE (see page 147)
  - 0 OVERVIEW (see page 152)
- L LOG (see page 153)
  - 1 SYSTEM (see page 160)
  - 2 GENERATE (see page 163)
  - 3 REPORTS (see page 172)
  - 4 SKELETONS (see page 174)
- D DATABASE (see page 175)
  - 1 DATABASE (see page 178)
  - 2 DICTIONARY (see page 184)
    - 1 TABLES (see page 185)
    - 2 KEYS (see page 191)
    - 3 FIELDS (see page 193)
    - 4 DATABASE (see page 194)
  - 3 STATISTICS (see page 196)
    - 1 BROWSE (see page 197)
    - 2 BATCH (see page 199)
    - 3 CLEANUP (see page 204)
- Q QUERY (see page 205)

## How to call the BSA Service Manager

### Overview

The "Service Manager Selection Menu" gives access to the ISPF application of the BSA Service Manager. It is the first panel to be displayed when you call up the BSA Service Manager.

### Procedure

To call the BSA Service Manager, do one of the following:

- In the Beta product "Primary Selection Menu", enter **D** for "DATABASE – Display Service and Database Selection Menu" and then **S** for "SERVICE – Service Manager", or enter **D.S** directly.
- Call the TSO CLIST directly. The BSA Service Manager is then started as a standalone ISPF application. The CLIST has the name BSASRV and is created in the Beta product CNTL during installation
- In the VDF maintenance function. enter **D.S**.

### Service Manager Selection Menu

The BSA "Service Manager Selection Menu" is displayed:

```

PEB4PRM1 -----
Option ==> _____

Service Manager Selection Menu                               Subsys-ID - B92P
                                                            Sysname  - BETA

  1  PARM          -  Display/Change Started Task Parameters

  2  OPERATION    -  Monitor/Control Started Task
  3  APPLICATION  -  Monitor/Control Started Task Applications
  4  CONNECTIVITY -  Monitor/Control Started Task Connectivities

  5  SUBSYSTEMS   -  Work with Subsystems

R  REPORTS      -  Display Diagnostic Reports Selection Menu (TSO only)
S  SMF          -  Display Selection Menu of beta smf          (TSO only)

D  DATABASE     -  Display Database Selection Menu

Select one of the above options. Press END to return to the previous menu.

```

When you call up the CLIST directly, i.e. the BSA Service Manager as a standalone product, the first panel to be displayed is the "Primary Selection Menu" of the BSA Service Manager, instead of the "Service Manager Selection Menu".

**Options**

<b>Use option ...</b>	<b>to do the following ...</b>
1 PARM	Display and change started task parameters
2 OPERATION	Monitor and control started tasks
3 APPLICATION	Monitor and control started task applications
4 CONNECTIVITY	Monitor and control started task connectivities
5 SUBSYSTEMS	Display the subsystem table and then: <ul style="list-style-type: none"> <li>• Monitor and control connectivities</li> <li>• Display information on subsystems</li> <li>• Select different subsystems to work with</li> </ul>
R REPORTS	Generate reports, for example, Beta SMP/E package information or diagnostic reports for the use of Beta Systems support
S SMF	Display the selection menu of _beta smf
D DATABASE	Display the "Database Selection Menu"

## Working with started task parameters (Option 1)

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## Introduction

### Option 1 - PARM

Option 1 - PARM of the "BSA Service Selection Menu" enables you to display current LST parameters, modify keywords and values, display and adjust modifiable keywords and values and check keyword activation and SYSVAR substitution.

### Display/Change Started Task Parameters

```

PEB4BR00 -----
Option ==> _____

Display/Change Started Task Parameters                Subsys-ID - B92P
                                                    Sysname  - BETA

  1  PARM      -  Display Keywords/Values
  2  MODIFY   -  Display Modifiable Keywords/Values
  3  SYSVAR   -  Check SYSVAR Substitution

Selection only valid for option 1 (PARM):
Please enter a keyword ( fully qualified or generic ) below.
Use blank or asterisk for all keywords.

Keyword      ==> * _____

Select one of the above options or press ENTER directly to select option 1.
Press END to return to the previous menu.

```

### Options

Option	Description
1 PARM	Supplies a list of all the LST parameters specified in the STC at the time of activation. The keywords and values can be modified, inserted and deleted.
2 MODIFY	Supplies a list of all internally defined LST parameter keywords that can be modified. The keywords and values can be modified, inserted and deleted.
3 SYSTEM	Enables you to check the following: <ul style="list-style-type: none"> <li>Whether an LST parameter is active in the current system</li> <li>Whether SYSVAR (static system symbol) substitution is active</li> <li>How a static system symbol is substituted when used for a specified value.</li> </ul>

### Note

For detailed information on keywords and values, refer to the *BSA Installation and System Guide* and the relevant Beta product documentation. There you will find complete lists of keywords and the permissible values for these keywords. Modifiable keywords are product-dependent.

## Displaying LST parameters (Option 1.1)

### Option 1.1

Use option 1.1 to display all or specific LST parameters defined in the started task (STC) at the time of its activation.

#### Notes

- It is not possible to enter 1.1 directly in the "Service Manager Selection Menu". The "Display/Change Started Task Parameters" menu must be opened as an intermediate step.
- For detailed information on LST parameter names and allowed values, see the *BSA Installation and System Guide* and the Beta product documentation.

### Procedure

1. Select option 1 from the "Service Manager Selection Menu". The "Display/Change Started Task Parameters" panel is called:

```

PEB4BR00 -----
Option ==> _____

Display/Change Started Task Parameters                Subsys-ID - B88P
                                                    Sysname  - BETA

  1  PARM      -  Display Keywords/Values
  2  MODIFY   -  Display Modifiable Keywords/Values
  3  SYSVAR   -  Check SYSVAR Substitution

Selection only valid for option 1 (PARM):
Please enter a keyword ( fully qualified or generic ) below.
Use blank or asterisk for all keywords.

Keyword    ==> * _____

Select one of the above options or press ENTER directly to select option 1.
Press END to return to the previous menu.

```

2. You can now generate a list of all LST parameters, or of selected parameters only:
  - To view all LST parameters: Simply select option 1 from the "Display/Change Started Task Parameters" panel without entering anything in the **Keyword** field.
  - To view selected LST parameters only: First specify a full-qualified keyword or a mask in the **Keyword** field, then select option 1 from the "Display/Change Started Task Parameters" panel.

**Result**

Depending on whether you specified a **Keyword**, all or selected LST parameters are displayed in the "Display Parameter Keywords/Values" table:

```

PEB4DI01 ----- Row 1 of 32
Command ==> _____ Scroll ==> PAGE

Display Parameter Keywords/Values          Subsys-ID - B88P
                                           Sysname  - BETA
                                           Seg.: 1 / 7

  U - Update  I - Insert  D - Delete

S U L A Keyword                           Value
N S Y A2G_SUPPORT                          YES
N P Y BQL_MASTER_SSID                      B88V
N P Y BQL_SHARE_OPTION                     ALL
Y O Y BQL_TRACE                            YES
Y P N BQL_TRACE                            YES
N O Y B01LST                               WY
N P Y B88_COMMENT                          BETA88P IS NOW RUNNING (PROD SYSTEM)
N P Y B88_CS_EXITS                          NO
N P Y B88_EXIT_CRYPT_TRACE                 NO
Y P Y B88_EXIT_TRACE                       NO
N P Y B88_LICX_DSNAME                      BETA88.PROD.LICX
Y P Y B88_LOG_CHECKS                       YES
N P Y B88_SSID                             B88P
N P Y B88_TCM_SERVICE                      YES
N P Y B88_TCPIP_PORT_RDF                   5886,10.56.83.100,TCPIP
N P Y B88_TCPIP_PORT_WHD                   5887,10.56.83.100,TCPIP
    
```

**Columns**

Column	Description
S	Input field for a line command
U	Update flag <b>Y</b> Update allowed <b>N</b> Update not allowed
L	Location <b>O</b> OS PARM (parameter was coded in EXEC parm) <b>S</b> SFFPARM (parameter was coded in B01LSTxx member) <b>P</b> Product (parameter was coded in product LST member)
A	Active flag <b>Y</b> Parameter is active <b>N</b> Parameter is inactive When a keyword occurs more than once, the keyword that is found first is normally activated and used.
Keyword	PARM keyword
Value	Value associated with the keyword

**Line commands**

The following line commands are available in the panel:

- U** Update keywords and values (see "Updating keywords and values" on page 24)
- I** Insert keywords and values (see "Inserting keywords and values" on page 26)
- D** Delete keywords and values (see "Deleting keywords and values" on page 28)

## Updating keywords and values

### Overview

Use line command **U** in "Display Parameter Keywords/Values" table to update the keywords and values currently active in a started task. Please note the following:

- You can only use line command **U** to update keywords for which modification is allowed. This is indicated by a **Y** in column **U** of the "Display Parameter Keywords/Values" table.
- Any changes made in this way will only be temporary. When the product started task is stopped and restarted, the changes will no longer be effective. To make a permanent change, you will need to modify the keyword in the actual LST member of the product STC.

### Procedure

1. In the "Display Parameter Keywords/Values" table (see "Displaying LST parameters (Option 1.1)" on page 21), enter line command **U** in front of the keyword you want to modify. the "Update Parameter Keyword Value" panel is called:

```

PEB4NVAL -----
Command ==> _____

Update Parameter Keyword Value                               Subsys-ID - S93P
                                                            Sysname   - BETA

Keyword      : B08_RELOAD_SEQ
Value       ==> NO.....
.....
.....

Press the ENTER key to process your input.
Press the END key to return to the previous panel.
    
```

2. Enter a new value in the **Value** field.

**Note:** Depending on the product concerned, some keywords are checked to verify that the new value is permissible.

3. In the next panel, enter **Y** in the **Confirm** field to confirm the new value for the keyword.

```
PEB4CONF -----  
Command ==> _____  
  
Update Parameter Keyword                               Subsys-ID - S93P  
                                                    Sysname  - BETA  
  
Keyword       : B08_RELOAD_SEQ  
  
Old Value     : NO  
  
  
New Value     : YES  
  
Confirm      ==> . (Y/N)  
  
Press the ENTER key to confirm your request.  
Press the END key to abort the update request.
```

**Result**

The new value for the keyword is displayed and you are reminded that the change is only temporary.

## Inserting keywords and values

### Overview

Use line command **I** in "Display Parameter Keywords/Values" table to insert new keywords and values. Please note that keywords inserted in this way will only be temporary. When the product started task is stopped and restarted, the changes will no longer be effective. To make a permanent change, you will need to modify the keyword in the actual LST member of the product STC.

### Procedure

1. In the "Display Parameter Keywords/Values" table (see "Displaying LST parameters (Option 1.1)" on page 21), enter line command **I** in front of any keyword. The "Display Parameter Keywords for Insertion" panel is called, showing all the keywords that can be inserted:

```

PEB4TD01 ----- Row 1 of 30
Command ==> _____ Scroll ==> PAGE

Display Parameter Keywords for Insertion          Subsys-ID - S93P
                                                Sysname  - BETA

  S - Select

S Keyword
BQL_DICT_FLAG_SEARCH
BQL_QRY_FILESPACE
BQL_QRY_MAXMEMORY
BSA_LICENSE_TRACE
BSA_SNAP_DUMP
BSA_TCPIP_BSM_PORT
BSA_TCPIP_TRACE
BSA_TCPIP_TRACE_BUF
BSA_TCPIP_TRACE_INTERN
BSA_TCPIP_TRACE_LST
BSA_TCPIP_TRACE_SNDRCV
BSA_TRACE
BSA_TRACE_SEC
B08_RELOAD_SEQ
B93_AUTORLD_SETTLE_COUNT
B93_DISPLAY_LIMIT_BYPASS

```

2. Use line command **S** to select the keyword you want to activate. You will be prompted to enter a value for the keyword:

```

PEB4KW2I -----
Command ==> _____

Insert Parameter Keyword Value          Subsys-ID - S93P
                                                Sysname  - BETA

Keyword      : B93_DISPLAY_LIMIT_BYPASS

Value       ==> .....
.....
.....

Press the ENTER key to process your input.
Press the END key to return to the previous panel.

```

3. Specify a value and confirm your entry.

**Result**

The new keyword is displayed and you are reminded that the change is only temporary:

```
PEB4DISI -----  
Command ==> _____  
  
Insert Parameter Keyword - Result                Subsys-ID - S93P  
                                                Sysname   - BETA  
  
The keyword B93_DISPLAY_LIMIT_BYPASS  
was successfully inserted.  
  
New Value : YES  
  
Caution:  
This insert is only temporary. After restarting the product STC with the  
Subsystem-ID Q93V , the insert of the Keyword will no longer be active.  
To activate this insert permanently, please insert the keyword  
B93_DISPLAY_LIMIT accordingly in the LST member of the product STC.  
  
Press the END key to return to the previous panel.
```

## Deleting keywords and values

### Overview

Use line command **D** in the "Display Parameter Keywords/Values" table to delete a keywords and its value. Please note the following:

- You can only use line command **D** to delete keywords for which modification is allowed. This is indicated by a **Y** in column **U** of the "Display Parameter Keywords/Values" table.
- Keywords deleted in this way will only be removed temporarily. When the product started task is stopped and restarted, the changes will no longer be effective. To make a permanent change, you will need to deactivate the keyword in the actual LST member of the product STC.
- When you delete a keyword, its default will be used in the LST member. Please refer to the product documentation.

### Procedure

1. In the "Display Parameter Keywords/Values" table (see "Displaying LST parameters (Option 1.1)" on page 21), enter line command **D** in front of the keyword that you want to delete.
2. Confirm that you want to delete this keyword.

### Result

The deletion is confirmed and you are reminded that the change is only temporary:

```

PEB4DISD -----
Command ==> _____

Delete Parameter Keyword - Result                               Subsys-ID - S93P
                                                                Sysname   - BETA

The keyword B93_DISPLAY_LIMIT_BYPASS
was successfully deleted.

Caution:
This change is only temporary. After restarting the product STC with the
Subsystem-ID S93P , the delete of the Keyword will no longer be active.
To activate this delete permanently, please delete the keyword
B93_DISPLAY_LIMIT accordingly in the LST member of the product STC.

Press the END key to return to the previous panel.

```

## Displaying modifiable LST parameters (Option 1.2)

### Option 1.2

Use option **1.2** to display the LST parameters that can be modified. All these keywords have already been defined internally. Please note the following:

- It is not possible jump directly to option **1.2** from the "Service Manager Selection Menu". The "Display/Change Started Task Parameters" menu (Option **1**) must be opened as an intermediate step.
- For detailed information on LST parameters and their permissible values, see the *BSA Installation and System Guide* and the Beta product documentation. Modifiable LST parameters are product-dependent.
- The list shows the maximum number of modifiable LST parameters. When a keyword is active, the current value is also displayed.

### Procedure

1. Select option **1** from the "Service Manager Selection Menu". The "Display/Change Started Task Parameters" panel is called.
2. Select option **2** to display the "Display Modifiable Keywords/Values" table listing all the active and inactive parameter keywords that are modifiable:

```

PEB4DI02 ----- Row 1 of 40
Command ==> _____ Scroll ==> PAGE

Display Modifiable Parameter Keywords/Values          Subsys-ID - S93P
                                                    Sysname  - BETA
U - Update  I - Insert  D - Delete                      Seg.: 1 / 7

S A Keyword                                     Value
N BQL_DICT_FLAG_SEARCH
N BQL_QRY_FILESPACE
N BQL_QRY_MAXMEMORY
Y BQL_TRACE                                     NO
N BSA_LICENSE_TRACE
N BSA_SNAP_DUMP
N BSA_TCPIP_BSM_PORT
N BSA_TCPIP_TRACE
N BSA_TCPIP_TRACE_BUF
N BSA_TCPIP_TRACE_INTERN
N BSA_TCPIP_TRACE_LST
N BSA_TCPIP_TRACE_SNDRCV
N BSA_TRACE
N BSA_TRACE_SEC
Y B08_ARCHIVE_SYNC                             YES
Y B08_ARCHIVE_TRACE                             NO

```

### Columns

Column	Description
S	Input field for a line command
A	Active flag: <b>Y</b> means keyword is active, <b>N</b> keyword is inactive
Keyword	PARM keyword
Value	Its associated value

**Line commands**

- U** Update modifiable keywords and values (see "Updating modifiable keywords and values" on page 31)
- I** Insert modifiable keywords and values (see "Inserting modifiable keywords and values" on page 33)
- D** Delete modifiable keywords and values (see "Deleting modifiable keywords and values" on page 34)

## Updating modifiable keywords and values

### Overview

Use line command **U** in the "Display Modifiable Parameter Keywords/Values" table (see page 29) to update modifiable keywords.

Note the following:

- You can only delete keywords that have been activated, i.e. keywords that have **Y** in column **A**.
- You can only update active keywords, i.e keywords that have **Y** in column **A**.
- Any changes made in this way will only be temporary. When the product started task is stopped and restarted, the changes will no longer be effective. If you want to make a permanent change, modify the keyword in the LST member of the product STC.

### Procedure

1. In the "Display Modifiable Keywords/Values" table (see page 29), enter line command **U** in front of the keyword you want to modify. The "Update Parameter Keyword Value" panel is opened:

```

PEB4NVAL -----
Command ==> _____

Update Parameter Keyword Value                               Subsys-ID - S93P
                                                            Sysname  - BETA

Keyword      : BQL_TRACE
Value       ==> NO.....
.....
.....
.....

Press the ENTER key to process your input.
Press the END key to return to the previous panel.

```

2. Enter a new value and then confirm that value in the next panel.

**Result**

The "Result" panel confirms that the update was successful and reminds you that the change is only temporary.

```
PEB4DIS -----  
Command ==> _____  
  
Update Parameter Keyword - Result                               Subsys-ID - S93P  
                                                                Sysname  - BETA  
  
The keyword BQL_TRACE  
was successfully updated.  
  
New Value : YES  
  
Caution:  
This change is only temporary. After restarting the product STC with the  
Subsystem-ID S93P , the update of the new value will no longer be active.  
To activate this update permanently, please change the keyword  
BQL_TRACE accordingly in the LST member of the product STC.  
  
Press the END key to return to the previous panel.
```

## Inserting modifiable keywords and values

### Overview

Use line command **I** in the "Display Modifiable Parameter Keywords/Values" table (see page 29) to insert new keywords and values to the ones currently active in a started task.

Note the following:

- You can only insert modifiable keywords that have not yet been activated. These are the keywords that have **N** in column **A**.
- Any changes made in this way will only be temporary. When the product started task is stopped and restarted, the changes will no longer be effective. If you want to make a permanent change, modify the keyword in the LST member of the product STC.

### Procedure

1. In the "Display Parameter Keywords/Values" table (see page 29), enter **I** in front of the keyword that you want to insert. The "Insert Parameter Keyword Value" panel is opened:

```

PEB4KW2I -----
Command ==> _____

Insert Parameter Keyword Value                               Subsys-ID - S93P
                                                            Sysname   - BETA

Keyword           : BQL_TRACE

Value             ==> .....
.....
.....

Press the ENTER key to process your input.
Press the END key to return to the previous panel.

```

2. Specify a value for the keyword, for example YES.

Lists of valid values for the various keywords can be found in the *BSA Installation and System Guide* and in the product documentation.

### Result

The "Result" panel confirms that the keyword was successfully inserted and reminds you that the insert is only temporary.

## Deleting modifiable keywords and values

### Overview

Use line command **D** in the "Display Modifiable Parameter Keywords/Values" table (see page 29) to delete modifiable keywords and values that are currently active in a started task.

Note the following:

- You can only delete keywords that have been activated, i.e. keywords that have **Y** in column **A**.
- Any changes made in this way will only be temporary. When the product started task is stopped and restarted, the changes will no longer be effective. If you want to make a permanent change, modify the keyword in the LST member of the product STC.

### Procedure

1. In the "Display Modifiable Parameter Keywords/Values" table (see page 29), enter **D** in front of the keyword that you want to delete. The "Delete Parameter Keyword" panel is opened:

```

PEB4COND -----
Command ==> _____

Delete Parameter Keyword                               Subsys-ID - B93S
                                                       Sysname  - BETA

Keyword      : BQL_TRACE

Confirm     ==> . (Y/N)

Press the ENTER key to confirm your request.
Press the END key to abort the deletion request.

```

2. Confirm that you want to delete the keyword.

### Result

The "Result" panel confirms that the keyword was successfully deleted and reminds you that the delete is only temporary.

## Checking keyword activation and SYSVAR substitution (Option 1.3)

### Option 1.3

Option **1.3** enables you to check the following:

- Whether an LST parameter keyword is active in the subsystem used
- Whether SYSVAR (static system symbol) substitution is active
- How a static system symbol has been or would be substituted if used in a specified value

All three checks are performed in one action.

### Static system symbols

Static system symbols are used to represent fixed values such as system names and sysplex names. System-defined static system symbols are, for example, `&SYSCClone`, `&SYSNAME`, `&SYSPLEX` and `&SYSR1`.

To enable SYSVAR support, the following LST parameter must be defined in member B01LSTxx in the BETA.PARMLIB:

```
SYSVAR_SUPPORT = YES
```

When SYSVAR support is enabled, static system variables are replaced with their substitution values defined for the system. Static system symbols and their substitution text are defined, for example, in member IEASYMxx in the SYS1.PARMLIB. The substitution text is defined at system initialization and remains fixed for the life of an IPL.

For more information on SYSVAR substitution support, see the *BSA Installation and System Guide*. For more information on using and coding system symbols, see chapter 2 of the IBM publication *MVS Initialization and Tuning Reference*.

### Note

- It is not possible to enter **1.3** directly in the "Service Manager Selection Menu". The "Display/Change Started Task Parameters" menu must be opened as an intermediate step.
- You can use option **4.S** to display the static system symbols defined in the system.

**Procedure**

1. To carry out a check, do the following:

In the "Service Manager Selection Menu" enter **1** for option "PARM – Display/Change Started Task Parameters" and then **3** for option "SYSVAR – Check SYSVAR Substitutions". The "SYSVAR Substitution" panel is called:

```

PEB4CHKS -----
Command ==> _____

SYSVAR Substitution                               Subsys-ID - S93P
                                                Sysname  - BETA

LST Parameter Keyword :
Keyword   ==> .....

LST Parameter Value :
Value     ==> .....

Press the END key to return to the previous menu.

```

2. Enter the following in this panel:
  - The name of the keyword you want to check, for example, B93\_COMMENT
  - The value to be assigned to this keyword, for example: BETA 93 V7R1 ON &SYSNAME IS NOW ACTIVE

**Note:** You must specify values in both fields of this panel.

**Result panel**

```

PEB4SYSV ----- No SYSVAR support
Command ==> _____

SYSVAR Substitution                               Subsys-ID - S93P
                                                Sysname  - BETA

Result of Status Check for LST Parameter Keyword :

Keyword      : B93_COMMENT
Status       : **ACTIVE**

Result of Substitution Check for LST Parameter Value :

Value        : BETA 93 V7R1 ON &SYSNAME IS NOW ACTIVE
Substitution  : BETA 93 V7R1 ON BETA IS NOW ACTIVE

Press the ENTER key to return to the previous menu.
    
```

The result panel displays the result of the check:

- The LST parameter keyword is active in the subsystem used:

```

...
Keyword      : B93_COMMENT
Status       : **ACTIVE**
...
    
```

- SYSVAR (static system symbol) substitution is not active:

```

PEB4SYSV ----- No SYSVAR support
Command ==> _____
...
    
```

- The static system symbol would be substituted in the specified value as follows if SYSVAR substitution was activated:

```

...
Result of Substitution Check for LST Parameter Value :

Value        : BETA 93 V7R1 ON &SYSNAME IS NOW ACTIVE
Substitution  : BETA 93 V7R1 ON BETA IS NOW ACTIVE
...
    
```

## Monitoring and controlling started tasks (Option 2)

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## Introduction

### Option 2 - OPERATION

**Option 2 - OPERATION** of the "Service Manager Selection Menu" enables you to display both general and detailed information on the current status of the started task in use. It also provides facilities for specific maintenance and support activities, for example activating traces and analyzing modules.

### Started Task Monitoring and Control

```

PEB4STC -----
Option ==> _____

Started Task Monitoring and Control                Subsys-ID - S93P
                                                    Sysname   - BETA

  1 STATUS      - View Status Information about STC (GCB/FCB)
  2 STATISTICS  - Statistic Information about STC
  3 RESOURCES   - ENQ Processing

  4 LICENSE     - Display/Change License Conditions
  5 SECURITY    - Refresh BQL User RACF Table

  6 MAINTENANCE - Display PTF Level Information
  7 TRACE      - Dynamic Trace Facility

  8 DSALLOC    - Display Allocated Datasets

Select one of the above options. Press END to return to the previous menu.

```

### Options

Option	Description
1 STATUS	Displays general information about the selected Beta subsystem and its status.
2 STATISTICS	Displays SFF statistics for a particular started task.
3 RESOURCES	Displays OS or SFF enqueue information for a particular started task, and enables you to free SFF queues.
4 LICENSE	Provides the options that enable you to dynamically display and update the license file.
5 SECURITY	Refreshes the BQL user RACF table.
6 MAINTENANCE	Displays PTF level information and enables you to view all the Beta CSECTs.
7 TRACE	Enables you to activate or deactivate BSA traces.
8 DSALLOC	Displays allocated datasets

## Displaying STC status information (Option 2.1)

### Option 2.1

Option **2.1** shows general system and BSA information on the selected Beta product subsystem and its status.

You can also display information on two kinds of control blocks:

- Group control blocks (GCB) (see "Displaying group control blocks (GCB)" on page 42)
- Function control blocks (FCB) (see "Displaying function control blocks (FCB)" on page 44)

### Procedure

To display general system and BSA information on the selected subsystem, including subsystem status, enter **2.1** in the "Service Manager Selection Menu". The "Started Task Status Information" panel is opened.

### Started Task Status Information

```

PEB4GCB -----
Command ==> _____

Started Task Status Information                               Subsys-ID - S93P
                                                            Sysname   - BETA

STC Name      : BETA93BA                JES Id    : STC02146   ASID: 116
Start Date   : 20.02.2002              Start Time: 09:03:15:00
Elapsed Time : 1957 MIN
Status       : ACTIVE
OCF Conn.    : NO                      ARM Conn.  : NO
DB Type      : MASTER / SHARED
System       : BSAB93                  Location   : BERLIN

Storage Region / Allocated
  Above      / 33864K          Below
1874M       /                8168K   / 2964K

STC Transaction Information
GCB Name ==> * _____ (Name or Mask)
FCB Name ==> _____ (Name or Mask)

Press the ENTER key to display the selected information.

```

To refresh the status display, exit the panel and call it again.

**Fields**

<b>Field</b>	<b>Description</b>
STC Name	Name of the started task
Start Date	Start date of the started task
Elapsed Time	Elapsed time of the started task in use
Status	Status of the started task (active or inactive)
OCF Conn.	Indicates whether the Open Communication Facility (OCF) is presently active
DB Type	BSA database type (master/slave – shared)
System	BSA database name of the system
JES ID	JES identification
Start Time	Start time of the started task
ARM Conn.	Automatic Restart Management (ARM) connection
Location	BSA database name of the location
ASID	Address space identification in numerical display
Storage Region/ Allocated Above	The storage available and the allocated storage above the 16 MB line (values in kilobytes) are displayed
Storage Region/ Allocated Below	The storage available and the allocated storage below the 16 MB line (values in kilobytes) are displayed

## Displaying group control blocks (GCB)

### Overview

Use option **2.1** to display information on group control blocks (GCB).

### Procedure

1. In the "Service Manager Selection Menu" enter **2.1** to call the "Started Task Status Information" panel:

```

PEB4GCB -----
Command ==> _____

Started Task Status Information                               Subsys-ID - S93P
                                                            Sysname   - BETA

STC Name   : BETA93BA           JES Id   : STC02146   ASID: 116
Start Date : 20.02.2002        Start Time: 09:03:15:00
Elapsed Time: 1957 MIN
Status     : ACTIVE
OCF Conn.  : NO                 ARM Conn. : NO
DB Type    : MASTER / SHARED
System     : BSAB93             Location  : BERLIN

Storage Region / Allocated
Above      Below
1874M     / 33864K             8168K   / 2964K

STC Transaction Information
GCB Name ==> * _____ (Name or Mask)
FCB Name ==> _____ (Name or Mask)

Press the ENTER key to display the selected information.
    
```

2. In the lower part of the panel, specify a name of a GCB in the **GCB Name** field. Masks are allowed. The default setting is an asterisk (\*), which will display all GCBs. To display all GCBs starting with BSA, for example, specify **BSA\***.

### Result

The "Display GCB Information" table is called:

```

PEB4DI03 ----- Row 1 of 10
Command ==> _____ Scroll ==> PAGE

Display GCB Information                               Subsys-ID - S93P
                                                            Sysname   - BETA

Select FCB ==> * (Name or Mask)
Used CPU Time ==> 0 (CPU Time in sec, > ,or <)

S - Select

S GCB Name Active FCB Total Number of FCBS SFF GCB CPU Time
                               Disp Nodisp Wait Storage (hhmmss)
BSA-BQL BSA-BQL 3 0 0 3 83K 00.00.12
BSA-BQL1 BSA-BQL1 5 0 0 5 39K 00.00.02
BSA-BQL2 BSA-BQL2 5 0 0 5 60K 00.00.02
BSA-BQL3 BSA-BQL3 5 0 0 5 60K 00.00.02
BSA-BQL4 BSA-BQL4 6 0 0 6 85K 00.00.02
BSA-BQL5 BSA-BQL5 6 0 0 6 137K 00.00.06
BSA-OCF BSA-OCF 2 0 0 2 1K 00.00.00
BSA-SRV 16263444 3 0 0 2 33K 00.00.08
BSA-TCP BSA-TCP 2 0 0 2 796B 00.00.00
BSATCPSV BSATCPSV 2 0 0 2 52K 00.00.10
***** BOTTOM OF DATA *****
    
```

**Fields**

Field	Description
Select FCB	The default (*) displays all FCBs of a GCB. You can enter an FCB name. Masks are allowed.
Used CPU Time	You can enter the used CPU time in seconds of an FCB in seconds. The default is 0, which displays all FCBs of a GCB. You can use the following operators: > greater than < less than

For information on how these fields are used, see "Displaying specific FCBs" on page 45.

**Columns**

Column	Description
S	Column to select the FCBs of a GCB You can filter the displayed FCBs using the fields <b>Select FCB</b> and <b>Used CPU Time</b> . The default (an asterisk in the field <b>Select FCB</b> ) results in the display of all FCBs of the selected GCB.
GCB Name	Name of the GCB
Active FCB	Name of the FCB that is in control when the panel was called
Number of FCBs	Number of associated FCBs divided into a status display on the following: <b>Total</b> Total number of FCBs <b>Disp</b> Active number of FCBs <b>Nondisp</b> Inactive FCBs <b>Wait</b> Active FCBs awaiting a result
SFF Storage	Amount of storage from the SFF storage pool reserved for the programs of a group being run. The storage is displayed in K (kilobytes) or in B (bytes).
GCB CPU Time	cumulative CPU time the GCB has used

**Line commands**

**S** Select an FCB or FCBs of a group in accordance with the selection parameter entered in the fields **Select FCB** and **Used CPU Time** (see "Field description" above).

## Displaying function control blocks (FCB)

### Overview

Use option **2.1** to display information on function control blocks (FCB).

### Procedure

1. In the "Service Manager Selection Menu" enter **2.1** to call the "Started Task Status Information" panel:

```

PEB4GCB -----
Command ==> _____

Started Task Status Information                               Subsys-ID - B93P
                                                            Sysname   - BETA

STC Name   : BETA93BA           JES Id   : STC02146   ASID: 116
Start Date : 20.02.2002        Start Time: 09:03:15:00
Elapsed Time: 1957 MIN
Status     : ACTIVE
OCF Conn.  : NO                 ARM Conn. : NO
DB Type    : MASTER / SHARED
System     : BSAB93             Location  : BERLIN

Storage Region / Allocated
Above      / Below
1874M     / 33864K             8168K    / 2964K

STC Transaction Information
GCB Name  ==> * _____ (Name or Mask)
FCB Name  ==> _____ (Name or Mask)

Press the ENTER key to display the selected information.
  
```

2. In the lower part of the panel, specify a name of an FCB in the **FCB Name** field. Masks are allowed. To display all FCBs starting with **SUB**, for example, specify **SUB\***.

**Note:** If you enter \* in the **FCB Name** field, it will display the same information as this MODIFY command:

```
F stcname,TL
```

3. Remove the asterisk from the **FCB Name** field.

### Result

The "Display FCB Information" panel displays all FCBs prefixed by **SUB\***:

```

PEB4DI04 ----- Row 1 of 11
Command ==> _____ Scroll ==> PAGE

Display FCB Information                               Subsys-ID - S93P
                                                            Sysname   - BETA

FCB Name Transact Module Associated SFF Elapsed CPU
          Name      Group  Storage Time (hhmmss)
SUBSYS   09032641 Q92SRINT PRINTERS 320K 00.00.00
SUBSYS   09032634 Q92SRINT          320K 00.00.00
SUBSYS   09032618 Q92SRINT          320K 00.00.00
SUBSYS   09032564 B23SSRD INPUT    265K 00.00.00
SUBSYS   09032563 B23SSRD          265K 00.00.00
SUBSYS   09032562 B23SSRD          265K 00.00.00
SUBSYS   09032556 B23SSRD          265K 00.00.00
SUBSYS   09032557 B23SSRD          265K 00.00.00
SUBSYS   09032559 B23SSRD          265K 00.00.00
SUBSYS   09032560 B23SSRD          265K 00.00.00
SUBSYS   09032561 B23SSRD          265K 00.00.00
***** BOTTOM OF DATA *****
  
```

**Displaying specific FCBs**

To display information on specific FCBs, do either of the following:

- In the "Started Task Status Information" input panel, restrict the display of the FCBs to a certain number by means of **Select FCB** and **Used CPU Time**. For example, specify **BSA\*** in the **Select FCB** field and **> 5** in the **Used CPU Time** field. All the FCBs matching these criteria are displayed in the "Display FCB Information" panel.
- In the "Display GCB Information" table, enter **S** in front of a GCB and press enter. The FCBs for the selected GCB are displayed in the "Display FCB Information" panel.

**Display FCB Information**

```

PEB4DI04 ----- Row 1 of 1
Command ==> _____ Scroll ==> PAGE

Display FCB Information Subsys-ID - B93P
GCB Name : BSA-BQL Sysname - BETA

FCB Name Transact Module Associated SFF Elapsed CPU
Name Group Storage Time (hmmss)
BSA-BQL BSA-BQL BST01FS BSA-BQL 160B 00.00.30
***** BOTTOM OF DATA *****
    
```

**Columns**

Column	Description
FCB Name	Name of the FCB
Transact	Name of the associated transaction
Module Name	Name of the load module
Associated Group	Name of the group the displayed FCB belongs to
SFF Storage	Amount of storage used by the function. The storage is displayed in K (kilobytes) or in B (bytes).
Elapsed CPU Time	Used CPU time used by the function (in hours, minutes, seconds)

## Displaying statistics for a started task (Option 2.2)

### Option 2.2

Option **2.2** enables you to view Subsystem Function Facility (SFF) operating statistics for a started task. The same information is called by console command:

```
F stcname,ST
```

### Procedure

In the "Service Manager Selection Menu", select option **2.2**. The "SFF Operating Statistics" panel comes up:

```
PEB4STA ----- Row 1 of 35
Command ==> _____ Scroll ==> PAGE

SFF Operating Statistics                               Subsys-ID - B93P
                                                    Sysname  - BETA

DSA SIZE : 00000000  BEG ADDR : 00000000  LOCK REQUESTS : 2254641
WAITS    : 17539    SICA      : 16F01050  SSCA         : 00BA15E8
WQE No   : 38196
SSID     : B93P     SVC       : 242/X'F2'  PTF No      : PBS1461
-----
TYPE     : SVC 242
MODULE   : BST01SVC PTF No   : NEW      CR.DATE: 30.01.2014 TIME: 09:33:00
SYSTEM   : PROD     PRODUCT  : 93
LOCATION  : BERLIN   ROUTE_TO : NONE      GOTO_OCF: NONE
-----
TYPE     : UXSIN
MODULE   : B02UXSIN PTF No   : NEW      CR.DATE: 20.05.2014 TIME: 11:37:28
ENTRY    : 948F5B58 LENGTH   : 0004A8  CR.DATE: 03.03.2014 TIME: 14:47:00
USER     : BETA93P  JOBNAME  : BETA93P  JOBID: S0044696
-----
TYPE     : UXSEC
MODULE   : B93UXSE6 PTF No   : NONE     CR.DATE: 20.05.2014 TIME: 11:37:28
ENTRY    : 93F76C00 LENGTH   : 001400  CR.DATE: 03.03.2014 TIME: 14:36:00
```

### Result

The system name, product name and the location are retrieved from the database system record of each Beta product. If these entries are missing, question marks (??) are displayed in the respective fields. This may be an indication that SFF and the relevant Beta product are not working properly.

However, when a BSA component (for example, VDF or OCF/X-system-router BOF STC) is in use, question marks (??) always appear in the fields concerned. This does not indicate an error because these BSA components do not use a database or the related system records.

## Displaying and freeing enqueue information (Option 2.3)

### Option 2.3

An enqueue is an operation that places items in a queue to control the access to resources. You can use option **2.3** to display Operating System (OS) or Subsystem Function Facility (SFF) enqueue information on the selected started task. In addition, line command **F** is available to enable you to free selected SFF enqueues. This section explains the following:

1. How to display SFF enqueue information
2. How to free an SFF enqueue (line command **F**)
3. How to display OS enqueue information

### 1. Displaying SFF enqueue info

To view SFF enqueue information, do the following:

1. In the "Service Manager Selection Menu", select option **2.3**. The "ENQ Processing" panel comes up:

```

PEB4ENQ -----
Command ==> _____

ENQ Processing                                     Subsys-ID - S93P
                                                Sysname  - BETA

Environment ==> SFF          (S)FF, (O)S
Prefix       ==> ____        (B)QL, (A)RC, (T)CP, (V)DF
Resource    ==> * _____

Press the ENTER key to display the selected information.
Press the END key to return to the previous menu.

```

2. Accept the default **SFF** in the **Environment** field.
3. In the **Prefix** field, select a special group of SFF enqueues, or leave the field blank.

- In the **Resource** field, enter a major name as a search criterion, e.g. **BETA**.

The "Display SFF ENQ Information" panel is called:

```

PEB4DI05 ----- Row 1 of 1
Command ==> _____ Scroll ==> CSR

Display SFF ENQ Information Subsys-ID - B09W
F - Free Resource Sysname - BETA

S Holder User System Status Function Resource
Name Name Name
BETA09W PMUST BETA SHR 12290418 VDF_PMUST1 ISP B09
***** BOTTOM OF DATA *****
    
```

**2. Freeing SFF enqueues**

To free a resource in an SFF queue, enter **F** in front of that resource. After pressing ENTER you will be asked to confirm that you really want to free the resource.

**Note**

- The **Free Resource** function (line command **F**) is only available for a limited group of archive enqueues.
- Use this function only when you are advised to do so by a Beta Systems support employee.

### 3. Displaying OS enqueue info

This function displays enqueues that have been created by Beta Systems products only.

1. In the "Service Manager Selection Menu", select option 2.3. The "ENQ Processing" panel comes up (see above).
2. Specify **OS** in the **Environment** field.
3. In the **Prefix** field, select a special group, e.g. **BQL**.
4. In the Resource field, enter a major name as a search criterion, e.g. **BETA**. Specify a complete string or a substring beginning with the first character of a major name.

The "Display OS ENQ Information" panel is called:

```

PEB4DI06 ----- Row 1 of 90
Command ==>                               Scroll ==> CSR

Display OS ENQ Information                    Subsys-ID - S93P
                                             Sysname  - BETA

Holder System Status Resource
      Name      Major  Minor
BETA02P BETA    EXCL  BETASFM B02P
BETA04AP BETA    EXCL  BETASFM B04B
BETA07P BETA    EXCL  BETASFM B07P
BETA07W BETA    EXCL  BETASFM B07W
BETA09BA BETA    EXCL  BETASFM S09P
BETA09P BETA    EXCL  BETASFM B09P
BETA09SE BETA    EXCL  BETASFM GB09
BETA098 BETA    EXCL  BETASFM B098
BETA15P BETA    EXCL  BETASFM B15P
BETA28C BETA    EXCL  BETASFM B28C
BETA28GB BETA    EXCL  BETASFM U28K
BETA28I BETA    EXCL  BETASFM B28I
BETA28P BETA    EXCL  BETASFM B28P
BETA48D BETA    EXCL  BETASFM B48D
BETA48FR BETA    EXCL  BETASFM FR48
BETA48IT BETA    EXCL  BETASFM B48I
BETA55H BETA    EXCL  BETASFM B55H

```

**ENQ processing fields**

Field	Description
Environment	Select the environment SFF (Subsystem Function Facility) or OS (Operating System).
Prefix	Select BQL, ARC, TCP or VDF (VTAM Dialog Facility) to limit the selection: <b>BQL</b> enqueues from BQL <b>ARC</b> enqueues from archive requests used for archiving, reloading or tape view <b>TCP</b> enqueues from TCP/IP requests when users log on to the system, or when ports are (de)activated for add-ons, for example BWE <b>VDF</b> enqueues from users logged on to VDF When a prefix is selected, the enqueue name is composed of the prefix and the resource name: <i>prefix_resource name</i> .
Resource	Enter a resource name, masks are allowed.

**Line commands**

**F** Free a resource ("Display **SFF** ENQ Information" only).

**Columns**

Column	Description
Holder	Name of the holder (a holder is a started task or a job name).
User	Name of the user who is the owner of the resource (SFF enqueues only)
System Name	Name of the system where the resource request has been started and where the connected enqueue is located.
Status	Status of the OS enqueue: <b>EXCL</b> exclusive access to one resource at a time. <b>SHR</b> more than one user can access the resource at the same time
Function Name	Internal name of the function (SFF enqueues only).
Resource Name	Name of the resource (SFF enqueues only).
Resource Major	Major name of the resource (OS enqueues only).
Resource Minor	Minor name of the resource (OS enqueues only).

## Displaying and updating license information (Option 2.4)

### Overview

The "License Information Menu" enables you to display and update license information. This applies to all Beta Systems licenses for z/OS products.

License information on all the licenses of your Beta Systems products is contained in your license file, which is read by the STC when it is started. The "License Information Menu" also provides an option to update license information dynamically when you have received a new license file.

### Navigation

From the "Service Manager Selection Menu" choose:

- **Option 2.4**

The "License Information Menu" is displayed.

### License Information Menu

```

PEB4LCX0 -----
Option ==> _____

License Information Menu                               Subsys-ID - B93P
                                                    Sysname  - BETA

 1 ACTIVE      - Display Active License Conditions
 2 ALL         - Display All z/OS License Conditions
 3 DISPLAY     - Display License File
 4 UPDATE     - Update License File

Select one of the above options. Press END to return to the previous menu.

```

### Options

Option	Purpose
1 ACTIVE	Displays the license conditions of the currently active license file.
2 ALL	Displays the license conditions of all the standard z/OS products in the specified license file.
3 DISPLAY	Displays the actual text contents of the specified license file.
4 UPDATE	Enables you to dynamically update license information.

## Displaying active license information

### Overview

Option 1 ACTIVE of the "License Information Menu" enables you to display the active license information of the selected active subsystem ID.

### Navigation

From the "Service Manager Selection Menu" choose:

- Option **2.4.1**

The "Display active License Information" panel is displayed.

### Display active License Information panel

The following example shows a license file for a \_beta log|z subsystem.

```

PEB4LX15 ----- Row      1 of      1
Command ==> _____ Scroll ==> PAGE

Display active License Information                Subsys-ID - B92P
                                                Sysname   - BETA

Data Set Name : PROD.BSA.LICX.CPU#2828
Obtained from : PROD.BETA.PARMLIB(B92LST00)

Company       : Beta Systems Software AG          ID : 111362
Address      : 10559, Berlin, Alt-Moabit 90d, DE

License will expire on 2022-12-31                Reason Code: 0

S - Select                                         Page 1 of 3
                                                ( LEFT/RIGHT )

Sel Product      InstID          Type      StartDate TermDate
S B92.G7 - Be... UNSPECIFIED    Production 2017-06-29 2022-12-31
***** BOTTOM OF DATA *****

```

You can scroll to the right (normally PF11) for further information.

### Fields

For more details, see "License check handling" in *BSA Installation and System Guide*.

Field	Description
Data Set Name	Dataset name of the license file.
Obtained from	The Parmlib or STC where the license file is held, or information on the last dynamic update.
Company	The name of the company that owns the license file, as registered at Beta Systems order desk.
Address	The address of the company that owns the license file.

Field	Description
License will expire [on   in nnn days]	Expiry data of the license for the base product in the license file. Once this date elapses, the bases product and its add-ons will no longer be usable.
Reason Code	Condition code returned by the STC for the base license. The following are possible: <b>0</b> OK <b>1</b> Warning <b>2</b> Toleration mode <b>4</b> Goodwill mode

**Columns**

For more details, see "License check handling" in *BSA Installation and System Guide*.

Column	Description
Product	Name of the product and the type of license for that product. This can be MIPS, Usage or Server.
InstID	The installation ID of the product in the license file.
Type	The installation type. This can be Trial, Test, Production or Standby.
StartDate	The date on which the license takes effect.
TermDate	The date on which the license expires.
Policy	The license policy, which determines how a product will behave under certain circumstances. This can be Tolerant or Enforced.
Term	The license termination type, either Permanent or Temporary.
Goodwill	The number of days the product can still be used if certain parameters in the license file are invalid.
Warning	The number of days before expiry date after which a warning message is be issued.
DB InstID	The installation ID of the product database.

**Line command**

The following line command is available in the displayed table:

**S** Displays the articles contained in the license file

**Displaying file contents**

Line command **S** displays the articles for the various components and add-ons in the license file:

```

PEB4LX17 ----- Row          1 of          6
Command ==> _____ Scroll ==> PAGE

Display active License Information          Subsys-ID - 9203
                                           Sysname  - BETA
Product   : B92.G7 - Beta 92 G7 - Process History Manager MIPS
License Type : MIPS
Cpu Type   : 2828-0006-68F7

Base license will expire on 2022-12-31          Reason Code: 0

Article          Expiration  StartDate  TermDate
BWE - Beta 92 G7 Interface to Beta ... on 2022-12-31 2017-06-29 2022-12-31
CTM - Beta 92 G7 Plugin for Control-M on 2022-12-31 2017-06-29 2022-12-31
DPL - Beta 92 G7 Volume Packet for ... on 2022-12-31 2017-06-29 2022-12-31
DSR - Beta 92 G7 Data Set Reader      on 2022-12-31 2017-06-29 2022-12-31
ESS - Beta 92 G7 Support for SAP      on 2022-12-31 2017-06-29 2022-12-31
TES - Beta 92 G7 Transaction Enviro... on 2022-12-31 2017-06-29 2022-12-31
***** BOTTOM OF DATA *****
    
```

**Fields**

Field	Description
License Type	Type of license for the product The license type can be MIPS, Usage or Server.
CPU Type	This value defines the processor type (for example, 2828) and the number of processors in use (for example, 0006).
Base license will expire on	Date on which the license for the base license will expire When this happens, the add-ons will no longer be usable.
Article	Add-on or application included in the license file for the base product
Expiration	Date on which the article expires

## Displaying specified z/OS license conditions

**Overview** Option 2 ALL of the "License Information Menu" enables you to display the license information contained in a specific z/OS license file.

**Navigation** From the "Service Manager Selection Menu" choose:

- **Option 2.4.2**  
 The "Display License Information" panel is displayed, where you can enter the name of the license file.  
 Leave the fields blank to display the license information contained in the z/OS license file that has been defined for the selected subsystem ID.

### Display License Information panel

```

PEB4LX20 -----
Command ==> _____

Display License Information                               Subsys-ID - S93P
                                                         Sysname  - BETA

Please enter license file related selection criteria below:

Data Set Name ==> _____ (*)
Member Name   ==> _____ (*)

(*) If you leave the fields blank, the active license file will be used.

Press the ENTER key to display the selected data.
Press the END key to return to the previous menu.
    
```

**Result** The conditions for all the products in the specified license file are shown. The result fields and columns are similar to those displayed by option 2.4.1 (see "Displaying active license information" on page 52).

**Fields**

Field	Description
Data Set Name	Dataset name of the license file.
Member Name	Member name if this is a PO dataset.

## Displaying license file contents

### Overview

Option 3 DISPLAY of the "License Information Menu" enables you to display the text contents of a specific license file.

### Navigation

From the "Service Manager Selection Menu" choose:

- Option **2.4.3**

The "Display License File" panel is displayed, where you can enter the name of the license file.

### Display License File panel

```

PEB4LX30 -----
Command ==> _____

Display License File                               Subsys-ID - B92P
                                                    Sysname  - BETA

Please enter license file related selection criteria below:

Data Set Name ==> _____

Member Name   ==> _____

Press the ENTER key to display the selected data.
Press the END key to return to the previous menu.

```

### Fields

Field	Description
Data Set Name	Dataset name of the license file.
Member Name	Member name if this is a PO dataset.

**Result**

The actual text contained in the license file is displayed in the panel:

```

PEB4LX35 ----- Row          1 of      839
Command ==> _____ Scroll ==> PAGE

Display License File                               Subsys-ID - B92P
                                                    Sysname   - BETA

Data Set Name : PROD.BSA.LICX
Obtained from : Data set selected by user

-----
<?xml version="1.0" encoding="UTF-8"?>
<lic:definition xmlns:lic="http://www.betasystems.com/schemas/licenseDefinition"
  <lic:body hash="1010519289" hashID="B-CODE-01" >
    <lic:creation date="2013-02-20" time="10-26-08"/>
    <lic:customer id="111362" name="Beta Systems Software AG">
      <lic:address city="Berlin" city2="" country="DE"                name="Be
    </lic:customer>
    <lic:installation Product="Agilizer 4DataProcessing"              goodwill=""
    <lic:articles>
      <lic:article name="3270 Module">
        <lic:param name="license" value="YES"/>
      </lic:article>
      <lic:article name="Base">
        <lic:param name="Execution counter" value="99999"/>
        <lic:param name="Interval" value="365"/>

```

You can scroll through the displayed text page-by-page. Other scroll amounts are not supported.

For more information on the displayed content, see "Definition of terms used in a license file" in *BSA Installation and System Guide*.

## Updating license information

### Overview

Option 4 UPDATE of the "License Information Menu" enables you to update license information dynamically, for example, after you have received a new license file.

The following conditions must be fulfilled for dynamic update:

- The active license file is defined via the LST parameter *Bnn\_LICX\_DSNAME* (**not** via the DD statement *BnnLICX*).
- The license data in the new license file is valid.

### Update methods

According to your preference, you can choose between the following methods for the update after having received a new license file:

- a) Upload your new license file to z/OS under a new name and then update the license information from the new license file. If the update has been successful, make your change permanent by replacing the contents of your original license file (the one defined via the LST parameter *Bnn\_LICX\_DSNAME*) with the contents of your new license file. The "Update License File" panel lets you generate JCL for a batch job that carries out this task.

-OR-

- b) Make a backup of your active license file (dataset or member), upload your new license file to z/OS replacing your active license file (the one defined via the LST parameter *Bnn\_LICX\_DSNAME*), and then update the license information from the replaced license file.

**Important:** You should never use method b) without making a backup first. In case of any problems during the update, your backup enables you to revert to the original situation by restoring your backed-up license file under its original name and running option **2.4.4** again.

#### Note on master/slave

If you are working with *BQL\_SHARE\_OPTION=ALL*, option **2.4.4** has to be called for the license information update on the master and on each slave.

Otherwise option **2.4.4** has to be called for the license information update on the master only.

**Procedure**

1. In the "Service Manager Selection Menu", choose option **2.4.4**.

The "Update License File" panel is displayed:

```

PEB4LX40 -----
Command ==> _____

Update License File                               Subsys-ID - B92P
                                                Sysname  - BETA

Please enter below the name of the data set/member which contains the new
license conditions:

Data Set Name ==> _____ (*)
Member Name   ==> _____ (*)

Generate job to replace file after successful update ==> NO (**)

(*) If you leave the fields blank, the active license file will be used.
(**) If the data set name and/or the member name do not match the
definition set in the current LST parameter B88_LICX_DSNAME, and the
field is set to YES, a job is created which replaces the contents
of the data set and/or member name of the current LST parameter
B88_LICX_DSNAME with the contents of this data set and/or member name.

Press the ENTER key to process the update request.
Press the END key to return to the previous menu.

```

2. Depending on your chosen update method:
  - If a), use the fields **Data Set Name** and **Member Name** to specify the name of your uploaded license file and press ENTER.
  - If b), leave the fields **Data Set Name** and **Member Name** blank and press ENTER. This means that your active license file will be used (i.e. the one defined via the LST parameter `Bnn_LICX_DSNAME`).

A confirmation panel is displayed.

3. Check the displayed file names carefully. If they are correct, type **Y** in the **Confirm** field and press ENTER to initiate the update.

```

PEB4LX44 -----
Command ==> _____

Update License File                               Subsys-ID - Q93V
                                                Sysname  - BETA

Current License File: BETA.LICX(LICX)

New License File   : BETA.LICX.ALT(NEWLICX)

Confirm           ==> Y (Y/N)

Press the ENTER key to confirm your request.
Press the END key to abort the update request.

```

If the update was okay, panel PEB4LX40 is displayed again with the **Update successful (RC-0)** message.

The rest of the procedure is only of interest if you have chosen method a).

4. When you are returned to the previous panel, enter YES in the **Generate job...** field to generate JCL for a copy job.
5. Specify a sysout class and modify or confirm the job card in the displayed panel to continue with the batch job generation.

```

PEB4LX45 -----
Command ==>

Update License File                               Subsys-ID - Q92S
                                                Sysname  - BETA

SYSPRINT Options:

Sysout Class ==>

Job Card:
==> //COPLIX JOB 1,ACCOUNT,CLASS=A,MSGCLASS=P,NOTIFY=&SYSUID
==> /*
==> /*
==> /*

Press ENTER to continue with the batch job generation.
Press END to abort the batch job generation.

```

The generated JCL is displayed in the ISPF editor. You can submit the job immediately or save the JCL for later use.

## Result

If the license data in the new license file is valid:

- The active license information is updated.
- If you have chosen method a) and specified YES in the **Generate job...** field, submit the generated JCL to make the change permanent. Otherwise, the change will only be reflected in the STC and will only be temporary.
- The new dataset name and details of the change can be displayed under option 2.4.1 (see "Displaying active license information" on page 52):

```

Data Set Name : ALLSYS.Q92.TEST2.LICX
Obtained from : Dynamically overwritten by USERBSA on 2017-12-19 at 14:47:47

```

## Fields

Field	Description
Data Set Name	Dataset name of the license file.
Member Name	Member name if this is a PO dataset.
Generate job to replace file after successful update	If YES, JCL for a batch job is generated that replaces your active license file with the specified new license file. Default=NO

## Refreshing the BQL user RACF table (Option 2.5)

### Option 2.5

BQL contains an internal BQL user RACF table used for the relevant product started task. The RACF table holds the user RACF profiles. These are necessary for database access. The use of this table is product-specific, not all Beta Systems products use it.

- When a product uses this particular RACF table, you can display the specified users under option **2.5**.
- You can also use option **2.5** to refresh the BQL RACF table after profiles have been changed in RACF. When the next request is sent to the database, the new profiles will come into effect.

Option **2.5** has the same effect as the following MODIFY command:

```
F stcname,REFRESH RCF,U=userid
```

For more information see the *BSA Installation and System Guide*.

### Procedure

To refresh the BQL user RACF table, do the following:

1. In the "Service Manager Selection Menu", select option **2.5**. The "Display BQL User RACF Table" panel is called:

```
PEB4RCF5 ----- Row 1 of 1
Command ==> _____ Scroll ==> PAGE

Display BQL User RACF Table                               Subsys-ID - S93P
                                                           Sysname  - BETA
R - Refresh User                                         Max. User : 1024

S SR User Id  RACF Grp Creation      Attrb. User Name
      Date      Time Sp Op Au
N PMUST      BETA88 02/28/2013 11:27 N N N PETER MUSTERMANN
***** BOTTOM OF DATA *****
```

2. Enter **R** in front of a user profile, press ENTER and confirm the refresh.

**Columns**

<b>Column</b>	<b>Description</b>
Max. User	The maximum number of users that can be entered in the internal BQL RACF user table. This number is equivalent to the value entered in the LST parameter BQL_USER.
S	Input field for a line command
SR	When Y is displayed, the user has already been refreshed.
User Id	ID of the user
RACF Grp	RACF group the user belong to
Cre.Date	Date the user was inserted into the RACF table
Cre.Time	Time the user was inserted into the RACF table
Attr. Sp	User has the attribute SPECIAL.
Attr. Op	User has the attribute OPERATOR.
Attr. Au	User has the attribute AUDITOR.
User Name	User name of the user

**Line commands**

**R** Refresh the selected user

**Primary commands**

Alternatively, you can use primary command **REF**.

## Displaying PTF level information (Option 2.6)

**Overview** Option **2.6** enables you to display PTF level information and information on Beta Systems modules and CSECTs.

**Navigation** From the "Service Manager Selection Menu" choose:

- Option **2.6**

The "BETA Module Information" selection panel is displayed, where you can enter selection criteria to limit the number of hits.

### BETA Module Information panel

```

PEB4MQT1 -----
Command ==>

BETA Module Information                               Subsys-ID - B93P
                                                    Sysname  - BETA

Module Name or Mask      ==> BST05*
CSECT Name or Mask      ==> *
Data Set Name or Mask   ==> PROD.V6BSA.LOAD

Specified Dataset only  ==> NO           (Y)es, (N)o
Search LNKLST/LPA      ==> NO_         (Y)es, (N)o
Search Destination     ==> STC         (O)nline, (S)TC
Max. Number of Entries ==> 10000       (Used for Modules and CSECTs)

Press the ENTER key to display the selected information.
Press the END key to return to the previous menu.

```

**Fields**

<b>Field</b>	<b>Description</b>
Module Name or Mask	Module name, masks are allowed.
CSECT Name or Mask	CSECTs are relocatable units, all elements of which are to be loaded into adjoining main storage locations. Enter a CSECT name, masks are allowed.
Data Set Name or Mask	A fully qualified dataset name or a mask.
Specified Dataset only	<p><b>NO</b> means that a search for information is carried out as defined in fields <b>Module Name or Mask</b> and <b>CSECT Name or Mask</b>. Libraries are searched in the same order as they are loaded, namely:</p> <ol style="list-style-type: none"> <li>1. BnnLOAD library (<i>nn</i> = product number)</li> <li>2. ISPLLIB/BnnLLIB</li> <li>3. STEPLIB</li> <li>4. LINKLIST (LNKLST)</li> <li>5. LPALIB</li> </ol> <p>A check on whether a search in a particular library is allowed is made on each dataset to be searched for information. If a search on the specified dataset is not allowed, the library will be skipped and the next one will be checked.</p> <p>Libraries that do not permit searches are listed in a table. The table can be displayed using the primary command ?. The dataset names and reasons why access is not permitted are shown, for example, NOT AUTHORIZED.</p> <p><b>YES</b> means that a search is carried out on the dataset entered in the <b>Data Set Name or Mask</b> field (<b>Note</b>: No mask allowed if YES). A search will only be carried out on the dataset specified, not necessarily on all the libraries in load order. A search will also be made if the dataset is not allocated at the time of the online session.</p>
Search LNKLST/LPA	<p><b>YES</b> means that the LINKLIST and LPA libraries are included in the search. You must confirm that these libraries are to be included because scanning these libraries may take a considerable amount of time.</p> <p><b>NO</b> is the default.</p>

Field	Description
Search Destination	<p><b>(S)TC</b> means that the request is sent with the subsystem ID to the relevant started task in use and that information is retrieved from there. The library concatenation of the started task is scanned. This is the default.</p> <p><b>(O)nlne</b> means that the current TSO user session will be scanned in the order of the relevant user's library concatenation. As a result, you will know which libraries are online. This may be of importance when errors associated with the user's online environment occur.</p>
Max. Number of Entries	The maximum number of modules and CSECTs to be displayed is defined here. If more modules are found than can be displayed, you will receive a message.

**BETA Module Information table**

The "BETA Module Information" table displays PTF module information matching the selection criteria:

```

PEB4MQT2 ----- Row 1 of 51
Command ==>                               Scroll ==> PAGE

BETA Module Information                      Subsys-ID - B93P
                                           Sysname  - BETA

Module : BST05*   CSECT : *
DSName : PROD.V6BSA.LOAD

S - Select BETA-CSECTs      B - Browse all CSECTs

S Module  T  PTF      Length DDName  DSName
          Number
BST05ANA  NEW  0771A8 STEPLIB PROD.V6BSA.LOAD
BST05BQL  NEW  090FF8 STEPLIB PROD.V6BSA.LOAD
BST05BQ1  NEW  03BE30 STEPLIB PROD.V6BSA.LOAD
BST05BQ2  NEW  03C350 STEPLIB PROD.V6BSA.LOAD
BST05BRT  NEW  001A20 STEPLIB PROD.V6BSA.LOAD
BST05CL   NEW  048228 STEPLIB PROD.V6BSA.LOAD
BST05CLS  NEW  000750 STEPLIB PROD.V6BSA.LOAD
BST05CMD  NEW  0446E8 STEPLIB PROD.V6BSA.LOAD
BST05CV4  NEW  048BE8 STEPLIB PROD.V6BSA.LOAD
BST05DBL  NEW  048978 STEPLIB PROD.V6BSA.LOAD
BST05DMY  NEW  007458 STEPLIB PROD.V6BSA.LOAD
BST05EDT  NEW  016C88 STEPLIB PROD.V6BSA.LOAD
    
```

**Columns**

Column	Description
Module	Name of the module
T	<i>blank</i> means normal module, <b>A</b> stands for the module alias
PTF Number	PTF number
Length	Length of the module
DDName	DD name of the module's load library
DSName	Dataset name of the module's load library

**Line commands**

The following line commands are available in the "BETA Module Information" table:

- S**      Select Beta CSECTs of a module
- B**      Browse all Beta and all other CSECTS, for example, *IBM CSECTS*

**Primary commands**

The following primary commands are available in the "BETA Module Information" table:

**?**              Displays all libraries where the search was not allowed  
These libraries are listed in a table. In the table the dataset names and the reasons why access to the libraries is not possible is displayed, for example, NOT AUTHORIZED.

**SORT**          Changes the sort order of the displayed modules

The following commands can be entered:

- SORT MODULE (or SORT M)
- SORT DDNAME (or SORT DD)
- SORT DSNAME (or SORT DS)
- SORT PTF

**Note:** The TPRINT command is not available in this table.

## Displaying module CSECT information

### Procedure

1. Select option **2.6** to open the "BETA Module Information" table (see "Displaying PTF level information (Option 2.6)" on page 63).
2. Enter **S** in front of a module to display all Beta CSECTs of the selected module, and press ENTER.  
(You can also enter **B** to show all CSECTs of a module.)

The "BETA Module Information" table is displayed:

```

PEB4MQT3 ----- Row 1 of 47
Command ==> _____ Scroll ==> PAGE

BETA Module Information                               Subsys-ID - B93P
                                                    Sysname  - BETA

Module : BST05BQL      ALIAS of :
DSName : BSA.LOAD

Module Attributes :   AMODE : 31
                    RMODE : ANY
                    AUTH  : 0
                    ATTR  : RN RU

S - Browse CSECT

S CSECT   PTF      Version  Type  Compile   Compile  Length  CHKSUM
          Number
BST05SMS NEW    V6R1M0   C    30.01.2014  10.53    005880  0000026507884099
BST05FDB NEW    V6R1M0   C    30.01.2014  10.53    00BC48  0000116820069469
BST05BQL NEW    V6R1M0   C    30.01.2014  10.59    000A20  0000000331349597
BST00ZLW NEW    V6R1M0   C    30.01.2014  10.22    002710  0000005316087669
BST00COM NEW    V6R1M0   A    30.01.2014  09.32    001248  0000001024347227
BST00WLM NEW    V6R1M0   A    29.01.2014  22.53    000A54  0000000357053280
    
```

### Fields

Field	Description
Module	Name of the module
DSName	Dataset name
Module Attributes	Attributes of the load module: AMODE Addressing mode assigned to the module RMODE Residency mode assigned to the module AUTH Authorization code ATTR Attributes can be: RN (reenterable) RU (reusable) RF (refreshable) OL (only loadable) NX (not executable)

**Columns**

<b>Column</b>	<b>Description</b>
S	Input field for a line command
CSECT	Name of the CSECT
PTF Number	PTF number
Version	Beta product version
Type	<b>A</b> Assembler program <b>C</b> C program <i>blank</i> Program type could not be clearly identified
Compile Date	Compile date of the CSECT
Compile Time	Compile time of the CSECT
Length	Length of the CSECT
CHKSUM	Checking sum used for the CSECT

## Displaying module CSECT contents

### Procedure

1. Select option **2.6** to open the "BETA Module Information" input panel (see "Displaying PTF level information (Option 2.6)" on page 63).
2. In the **Search Destination** field, specify **Online**. The "Beta Module Information" table is opened (see "Displaying module CSECT information" on page 67).
3. Enter **S** in front of a CSECT to display its contents:

```

PEB4MQT7 ----- Row 1 of 120
Command ==>                               Scroll ==> PAGE

BETA Module Information                      Subsys-ID - B93P
                                           Sysname  - BETA

Module : BST00PI      CSECT : BST00PI
DSName : PROD.V6BSA.LOAD

Abs-Adr  RelAdr      Content of CSECT
00000000 000000 47F0F068 00000000 00000000 0000C2E2 *ã00Ç      BS*
00000010 000010 E3F0F0D7 C940D5C5 E6404040 4040E5F6 *T00PI NEW  V6*
00000020 000020 D9F1D4F0 4040F1F2 4BF0F74B F2F0F1F3 *R1M0 12.07.2013*
00000030 000030 40F1F44B F4F1404D C35D40C3 D6D7E8D9 * 14.41 (C) COPYR*
00000040 000040 C9C7C8E3 40C2C5E3 C140E2E8 E2E3C5D4 *IGHT BETA SYSTEM*
00000050 000050 E240E2D6 C6E3E6C1 D9C540C1 C740F2F0 *S SOFTWARE AG 20*
00000060 000060 F0F44B40 40404040 90ECD00C 18CF51CC *04.   °\ü..dél*
00000070 000070 000058F0 00109180 F0744780 C08841F0 * i0 .j00Eã0äh 0*
00000080 000080 C08856F0 C4180C0F 184158E0 C41C580E *ähioD... i0D.i.*
00000090 000090 000041F0 00000700 47F0C0A0 40007000 * 0 .ã0äm ø *
000000A0 0000A0 89F00008 BFFDC09C 58E00010 58EE0304 *i0 .xÜääi0 .i0.*
000000B0 0000B0 58EE00A0 B218E000 12FF4770 C0D258E0 *i0 µ¥.0 ..ã0äki0*
000000C0 0000C0 C41C1891 5810E000 5800E004 18F118E9 *D..ji.0 i 0..1.Z*
000000D0 0000D0 0EE0123F 4770C1BC 182117BB 41E00100 *.0..ã0A`...| 0.*
    
```

### Note

This option is only available for online modules, not for started tasks. If you do not select **Online** in the Search Destination field of the input panel, you will receive the message **Data not available**.

### Columns

Column	Description
Abs-Adr	the absolute address of the program instruction in the load module
RelAdr	the relative address of the program instruction in the load module starting with 0
Content of CSECT	the dump formatted CSECT displayed in hexadecimal and in characters

## Working with the Dynamic Trace Facility (Option 2.7)

### Option 2.7

Use option **2.7** to dynamically activate or deactivate available BSA traces. You can also optionally allocate a dataset or a SYSOUT class for the trace output, to be used instead of the JES job log. You can change the output medium regardless of trace changes. Instead of the JES joblog, a dataset under the DD name BSATRACE can be used. When the started task is activated, this dataset will be used for the trace output.

### Note

Please note that the changes are only temporary. After restarting the product started task (STC) with the subsystem ID, the trace changes will no longer be active. To activate a permanent trace change, insert the relevant keyword in the LST member of the Beta product STC.

### Define the trace beforehand

The trace must be defined beforehand in one of the following Beta parameter library members:

- in the **PARM** field in the EXEC statement of the started task or
- in the **B01LST** parmlib member (SFF parameter) or
- in the **BnnLST** parmlib member (product parameter), where *nn* stands for a product number

The **Keyword** column of the "Dynamic Trace Activation/Deactivation" panel then lists all the traces that are available for dynamic activation. A value in the **CurrValue** column indicates that the trace has already been activated with this value.

### Activating traces

The "Dynamic Trace Activation/Deactivation" panel enables you to activate or deactivate traces or to allocate a dataset or a SYSOUT class for trace output.

- The upper portion of the panel enables you to activate or deactivate a trace.
- The lower part enables you to optionally allocate a file for trace output.

**Procedure**

1. Select option **2.7** from the "Service Manager Selection Menu" to display the "Dynamic Trace Activation/Deactivation" panel.

```

PEB4TR01 -----
Command ==> _____

Dynamic Trace Activation/Deactivation                Subsys-ID - Q93V
                                                    Sysname  - BETA

      Keyword                CurrValue  NewValue

BQL   : BQL_TRACE           NO        ==> ___ (Y)es,(N)o
TCP/IP: BSA_TCPIP_TRACE     YES       ==> ___ (Y)es,(N)o,(S)ho,(E)rr
        BSA_TCPIP_TRACE_INTERN NO        ==> ___ (Y)es,(N)o
        BSA_TCPIP_TRACE_SNDRCV  ==> ___ (Y)es,(N)o
        BSA_TCPIP_TRACE_BUF     ==> ___ (Y)es,(N)o

Trace Output Information
Disposition ==> ___ (S)HR, (O)LD, (M)OD, (N)EW
Data Set Name ==> _____
or use
SYSOUT   ==> ___ (Y)es
FREE Data Set ==> ___ (Y)es

Press the ENTER key to verify the entered values.
Press the END key to return to the previous panel.

```

2. If required, allocate a file for trace output. There is an example of how to allocate a dataset (see "Allocating a new dataset for a trace" on page 73).
3. Activate or deactivate the trace(s). You will be prompted to confirm each trace keyword change.

**Freeing traces**

To free a dynamically activated trace, enter YES in the **FREE Data Set** field. You will receive notification that the trace is now inactive. You can only free datasets which have been **dynamically** assigned to a DD name. Datasets that have a BSATRACE JCL statement when the STC is started cannot be dynamically freed.

**Fields**

<b>Field</b>	<b>Description</b>
Keyword	Heads a list of the traces available for activation
CurrValue	A value here shows that the trace concerned has already been activated. YES shows that it is still active.
NewValue	Enables you to activate or deactivate a trace. More than one new value can be specified in this column.
Disposition/Data Set Name	If you want to use a dataset instead of Sysout (SYSOUT field must be blank): Disposition and name of the dataset allocated for a trace. Specify OLD, SHR or MOD to use an existing dataset. If you specify NEW, an additional panel will be displayed, where you can specify the required allocation parameters for the new dataset.
SYSOUT	If you want to use Sysout instead of a dataset (Disposition and Data Set Name must be blank): Specify YES to use SYSOUT for trace output. An additional panel will be displayed, where you can specify the Sysout class, form and extension.
FREE Data Set	FREE dynamically frees the allocated dataset or SYSOUT. The activated trace function remains active and trace data is written to the job log or SYSLOG. To deactivate the trace, set the keyword value to NO.

## Allocating a new dataset for a trace

### Overview

In the lower part of the "Dynamic Trace Activation/Deactivation" panel (see "Working with the Dynamic Trace Facility (Option 2.7)" on page 70) you can optionally allocate a file for the trace output. You can choose between an existing dataset, or new dataset, or SYSOUT.

### Procedure

To allocate a new dataset for trace output:

1. Select option **2.7** to display the "Dynamic Trace Activation/Deactivation" panel.
2. In the upper part of the panel, activate a trace by setting a keyword in the **NewValue** field.
3. In the lower part of the panel, specify **NEW** in the **Disposition** field and a dataset name in the **Data Set Name** field, and press ENTER.

An additional panel is displayed, where you can specify the necessary parameters for allocating a new dataset for output of the trace data.

4. In the "Trace Data Set Allocation Parameter" panel, specify the following:
  - Space units in blocks, tracks or cylinders
  - Primary and secondary quantity in above units
  - Volume serial number
  - Unit type
  - Blocksize (if space units are in blocks)
  - Storage class, data class and management class for SMS management

After successful allocation you will receive a message that the dataset will be used for the trace.

### Note

- If allocation fails, the trace request will be canceled.
- To allocate a dataset you will need the security rights for the started task and the online user for the relevant dataset.

## Displaying allocated datasets (Option 2.8)

### Option 2.8

Option **2.8** displays the datasets allocated to the user's online session or the started task.

### Procedure

To display allocated datasets:

1. Select option **2.8** from the "Service Manager Selection Menu". The "Display Allocated Files" panel is called:

```

PEB4LASE -----
Option ==> _____

Display Allocated Files                               Subsys-ID - S93P
                                                    Sysname  - BETA

1  TSOLISTA    -  List allocated Files of Online Session
2  STCLISTA    -  List allocated Files of Started Task

Optional Selection Criteria :
Please enter a DD name ( fully qualified or generic ) below.
Use blank or asterisk for all DD names.

DD-Name  ==> * _____

Select one of the above options. Press END to return to the previous menu.

```

2. In the **Option** field, type one of the following:
  - 1** (TSOLISTA) to display datasets allocated to the user's online session
  - OR-
  - 2** (STCLISTA) to display datasets allocated to the started task
3. Optionally, specify a DD name or mask in the **DD Name** field, for example SYS\*.
4. Press ENTER.

**Result for 1 TSOLISTA**

All the files starting with **SYS** that are allocated to the online user are displayed:

```

PEB4LATB ----- Row 1 of 24
Command ==> _____ Scroll ==> PAGE

Display Allocated Files - online session          Subsys-ID - S93P
                                                    Sysname   - BETA

DDNAME  Dataset Name                               Volume Disp.
SYSPROC
  FLS.MASTER.CEEXEC                               FLS010 SHR
  FLS.MASTER.ISPCLIB                             FLS010 SHR
  BETA.SPF.ISPCLIB                               BETA00 SHR
  ISP.SISPCLIB                                   02ARES SHR
  SYS1.HRFCLST                                   02ARES SHR
  SYS1.DGTCLIB                                   02ARES SHR
  EOY.SEOYCLIB                                   02ADL2 SHR
  SYS1.SCBDCLST                                  02ARES SHR
  ALTAIP.ZEKE.ISPCLST                           PROD00 SHR
SYSHelp
  SYS1.HELP                                       02ARES SHR
  ISP.SISPHELP                                   02ARES SHR
SYSEXEC
  ISP.SISPEXEC                                   02ARES SHR
  CASCS.V1R5M0.REXX                             BETA00 SHR
SYSUDUMP
    
```

**Result for 2 STCLISTA**

All the files starting with **SYS** that are allocated to the STC are displayed:

```

PEB4LATB ----- Row 1 of 48
Command ==> _____ Scroll ==> PAGE

Display Allocated Files - Started Task          Subsys-ID - S93P
                                                    Sysname   - BETA

DDNAME  Dataset Name                               Volume Disp.
SYSRINT
  BETA93BA.BETA93BA.STC02989.D0000103.?         MOD
SYSUDUMP
  BETA93BA.BETA93BA.STC02989.D0000109.?         MOD
SYS00004
  BSAB.BETA93.SYNC                               SHRBSA SHR
SYS00005
  BSAB.BETA93.LOG                                SHRBSA SHR
SYS00006
  BSAB.BETA93.MAIN                               SHRBSA SHR
SYS00007
  BSAB.BETA93.MAIN.KEY                           SHRBSA SHR
SYS00008
  BSAB.BETA93.LIST.KEY                           SHRBSA SHR
SYS00009
  BSAB.BETA93.LIST                               SHRBSA SHR
SYS00010
    
```

**Columns**

Column	Description
DDName	DD name
Dataset Name	Name of the dataset
Volume	Volume where the dataset is stored
Disp	Disposition of the dataset: SHR, NEW or MOD

## Monitoring and controlling STC applications (Option 3)

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## Introduction

### Option 3 - Application

Option **3 - Application** of the "Service Manager Selection Menu" enables you to monitor and dynamically control specific BSA functions, components and add-ons such as VDF, for example.

### Application Monitoring and Control

Select option 3 from the "Service Manager Selection Menu" to open the "Application Monitoring and Control" panel:

```
PEB4APL -----  
Option ==> _____  
  
Application Monitoring and Control                               Subsys-ID - B88Y  
                                                                Sysname  - BETA  
  
  1 VDF      -  VTAM Dialog Facility  
  2 BOF      -  Base Output Facility  
  3 BAF      -  Base Archive Facility Tape Resources  
  
  
Select one of the above options. Press END to return to the previous menu.
```

## Working with the VTAM Dialog Facility (Option 3.1)

### Option 3.1

Option 3.1 enables you to view the following VTAM Dialog Facility information:

- All users currently active in VDF (see page 79)
- VTAM LU information (see page 81)
- Access control block (ACB) of the VDF in use (see page 83)

The ACB identifies the VTAM application ID of the VDF.

### Definition of VDF

The VTAM Dialog Facility (VDF) is a set of services set up to manage the dialogue between 3270-type display terminals running within a native VTAM (non-TSO) environment and applications running within an SFF operating environment. Thus the VDF allows users in non-TSO environments access to the Beta products.

With extensions provided via the CICS and IMS Access Facilities (CAF and IAF) Beta products can also be accessed from CICS and IMS operating environments. The VDF is the basic component for the operation of the Product Enhancement Facilities VAF, CAF, and IAF.

## Displaying all users currently active in VDF

### Procedure

- To display all users currently active in the VDF application, select option 3.1 from the "Service Manager Selection Menu". The "VDF Application Control" panel is called:

```

PEB4VDF -----
Command ==> _____

VDF Application Control                               Subsys-ID - Q09U
                                                    Sysname  - BETA

Action    ==> USER                (D)isplay ACB,(U)ser

Optional Selection Criteria for DISPLAY :
Luname    ==> ALL                   ALL or VTAM-LU

Optional Selection Criteria for USER :
Userid    ==> *                     Name or Mask
Product   ==> *                     Product Number or Mask

Press the ENTER key to display the selected information.
Press the END key to return to the previous menu.

```

- Specify **USER** in the **Action** field.
- Leave the asterisk in the **Userid** and **Product** fields to display all users working with all products.  
(You could also specify selection criteria here by entering a user ID and/or a 2-digit product number.)

### Result

The "VDF Display User" panel is called, listing all the users currently logged on the VDF application. The maximum number of users who can be logged on to the VDF application is also displayed.

```

PEB4VDFU ----- Row 1 of 2
Command ==> _____ Scroll ==> CSR

VDF Display User                               Subsys-ID - Q09U
                                                    Sysname  - BETA

Max. allowed User: 00500

S - Display VTAM-LU Information

S UserID  ST TermID  Logmode  Type  Prod  TranID  LGN-Time  Pool  Stor.  CPUtime
PMUST3   BT01TN02 SNX32702 VAF  B92  08000888 08:00:05  01 0415K 00:00:00
AMUST    BT01TN31 SNX32702 VAF  B09  11380040 11:37:53  02 0047K 00:00:00
*****
***** BOTTOM OF DATA *****

```

**Fields**

Field	Description
Action	Specify <b>user</b> or <b>display</b> .
Luname	The logical unit (LU) name of VTAM (a type of network access unit that enables end users to gain access to network resources and communicate with each other).  Only one user can be connected to one luname at any one time. Valid selection criterion for the ACB are ALL or a VTAM luname. Masks are not allowed.
Userid	A user ID, masks are allowed.
Product	2-digit product number of the product where the user is logged on, masks are allowed

**Columns**

Column	Description
User ID	User identification of the users logged on to VDF.
ST	Active status of the user: '*' means that the user request is currently being processed.
TermID	Luname
Logmode	Logmode name indicates which terminal settings are used; this field corresponds to the VTAM parameter LOGMODE.
Type	VAF, CAF or IAF
Prod	Beta product number
TranID	Transaction ID
LGN Time	User's logon time to VDF
Pool	pool number in use (internally used)
Stor	The amount of allocated storage in KB for the user
CPUtime	The CPU time used by a VDF session; when a user opens more than one VDF session, the CPU time used by each session is displayed separately.

The monitor function is also described in the *\_beta vaf User Guide*.

## Displaying VDF VTAM LU information

### Note

The procedure described below displays same information as called by the following operator command:

```
F NET,E,ID = Luname
```

Please refer to the IBM literature for more information.

### Procedure

1. To display VTAM LU information, use option **3.1** to call the "VDF Application Control" panel (see page 79).
2. Specify **USER** in the **Action** field. The "VDF Display User" table is called.
3. Enter **S** in front of a user ID. The "VDF Application Control" panel containing **VTAM LU-Information** is called:

```
PEB4VDFX ----- Row 1 of 26
Command ==>                               Scroll ==> CSR

VDF Application Control                      Subsys-ID - Q09U
                                           Sysname  - BETA

VDF VTAM LU-Name : BT01TN02

VTAM LU-Information
IST097I DISPLAY ACCEPTED
IST075I NAME = DEBETA01.BT01TN02, TYPE = DYNAMIC APPL
IST486I STATUS= ACT/S , DESIRED STATE= ACTIV
IST1447I REGISTRATION TYPE = CDSERVR
IST1629I MODSRCH = NEVER
IST977I MDLTAB=***NA*** ASLTAB=***NA***
IST861I MODETAB=***NA*** USSTAB=***NA*** LOGTAB=***NA***
IST934I DLOGMOD=***NA*** USS LANGTAB=***NA***
IST1632I VPACING = 7
IST597I CAPABILITY-PLU ENABLED ,SLU ENABLED ,SESSION LIMIT 0000001
IST231I APPL MAJOR NODE = BT01TN
IST1425I DEFINED USING MODEL BT01TN*
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST1500I STATE TRACE = OFF
IST271I JOBNAME = TCPIP , STEPNAME = TCPIP , DSPNAME = IST89A69
IST228I ENCRYPTION = OPTIONAL , TYPE = DES
```

4. Scroll down (usually PF8) to view a second panel:

```
PEB4VDFX ----- Row 17 of 26
Command ==>                               Scroll ==> CSR

VDF Application Control                      Subsys-ID - Q09U
                                           Sysname  - BETA

VDF VTAM LU-Name : BT01TN02

VTAM LU-Information
IST1563I CKEYNAME = BT01TN02 CKEY = PRIMARY CERTIFY = NO
IST1552I MAC = NONE MACTYPE = NONE
IST1050I MAXIMUM COMPRESSION LEVEL - INPUT = 0 , OUTPUT = 0
IST1633I ASRCVLM = 1000000
IST1634I DATA SPACE USAGE: CURRENT = 0 MAXIMUM = 2048
IST1669I IPADDR..PORT 10.56.70.174..1150
IST171I ACTIVE SESSIONS = 000000001, SESSION REQUESTS = 000000000
IST206I SESSIONS:
IST634I NAME STATUS SID SEND RECV VR TP NETID
IST314I END
***** BOTTOM OF DATA *****
```

**Result**

All the relevant information on the LU can be viewed.

## Displaying the VDF access control block

### Note

The procedure described below displays same information as called by the following operator command:

```
F NET,E,ID = Luname of the VTAM application ID
```

Please refer to the IBM literature for more information.

### Procedure

1. To display ACB (Access Control Block) of the VDF in use, use option **3.1** to call the "VDF Application Control" panel (see page 79).
2. Specify **DISPLAY** in the **Action** field.
3. Specify a **VTAM LU** or **ALL** in the **Luname** field.

The "VDF Application Control" panel containing **VTAM ACB Information** is called:

```
PEB4VDF A ----- Row 1 of 24
Command ==>                               Scroll ==> CSR

VDF Application Control                      Subsys-ID - Q09U
                                             Sysname  - BETA

VTAM Application Name : VDFQ93U

VTAM ACB Information
IST097I DISPLAY ACCEPTED
IST075I NAME = DEBETA01.VDFQ93U , TYPE = APPL
IST486I STATUS= ACT/S , DESIRED STATE= ACTIV
IST1447I REGISTRATION TYPE = CDSERVR
IST977I MDLTAB=***NA*** ASLTAB=***NA***
IST861I MODETAB=***NA*** USSTAB=***NA*** LOGTAB=***NA***
IST934I DLOGMOD=***NA*** USS LANGTAB=***NA***
IST1632I VPACING = 7
IST597I CAPABILITY-PLU ENABLED ,SLU ENABLED ,SESSION LIMIT NONE
IST231I APPL MAJOR NODE = QBETA09U
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST1500I STATE TRACE = OFF
IST271I JOBNAME = Q09UV4 , STEPNAME = Q09UV4 , DSPNAME = IST48B1A
IST228I ENCRYPTION = OPTIONAL , TYPE = DES
IST1563I CKEYNAME = VDFQ93U CKEY = PRIMARY CERTIFY = NO
IST1552I MAC = NONE MACTYPE = NONE
```

4. Scroll down (usually PF8) to view a second panel of ACB information:

```
PEB4VDF A ----- Row 17 of 24
Command ==>                               Scroll ==> CSR

VDF Application Control                      Subsys-ID - Q09U
                                             Sysname  - BETA

VTAM Application Name : VDFQ93U

VTAM ACB Information
IST1050I MAXIMUM COMPRESSION LEVEL - INPUT = 0 , OUTPUT = 0
IST1633I ASRCVLM = 1000000
IST1634I DATA SPACE USAGE: CURRENT = 0 MAXIMUM = 0
IST171I ACTIVE SESSIONS = 000000001, SESSION REQUESTS = 000000000
IST206I SESSIONS:
IST634I NAME STATUS SID SEND RECVR TP NETID
IST635I BT01TN02 ACTIV-S FD7B66EFE9D4A1A 0023 001E DEBETA01
IST314I END
***** BOTTOM OF DATA *****
```

The same information would be displayed by operator command

F NET,E,ID = *Luname of the printer*

## Working with the Base Output Facility (BOF) (Option 3.2)

### Option 3.2

Option 3.2 enables you to view the following Base Output Facility information:

- Printers currently active in BOF (see page 86)
- BOF VTAM LU information (see page 89)
- BOF access control blocks (see page 90)

### Started task

BOF normally uses the Beta 07 started task.

### Definition of BOF

The Base Output Facility (BOF) provides a set of services for managing printing requests to 3270-type printers (or emulations). SNA LU types 0, 1, 3 and 6.2 protocols are supported. BOF supports printing to JES and printing to file and handles the printing to VTAM printers initiated by, for example, Beta 93.

## Displaying BOF printers

### Procedure

- To display printers currently active in the BOF application, select option **3.2** from the "Service Manager Selection Menu". The "BOF Application Control" input panel is opened:

```

PEB4BOF -----
Command ==> _____

BOF Application Control                               Subsys-ID - B07P
                                                    Sysname  - BETA

Action                ==> PRINTER                (D)isplay ACB,(P)rinter

Optional Selection Criteria for DISPLAY :
SNA VTAM ACB Name    ==> NO_                    (Y)es,(N)o
LU6.2 / PCF VTAM ACB Name ==> YES                (Y)es,(N)o

Optional Selection Criteria for PRINTER :
Printer              ==> *_____              Name or Mask
Printer Status       ==> ALL__                  (A)ctive,(E)rror,(F)ree,
                                                    A(L)l

Press the ENTER key to display the selected information.
Press the END key to return to the previous menu.
    
```

- Specify **Printer** in the Action field.
- If required, specify **Optional Selection Criteria for PRINTER** in the **Printer** and **Printer Status** fields.

### Result

- The "BOF Display Printer" table displays the printers currently logged on to the BOF application.
- Which printers are displayed depends on what you specified in the "BOF Application Control" input panel.
- This table spreads out over three panels. Scroll to the right (normally PF11) to view the other two panels.

```

PEB4BOFP ----- Row 1 of 2
Command ==> _____ Scroll ==> PAGE

BOF Display Printer                               Subsys-ID - Q07V
                                                    Sysname  - BETA
                                                    Seg.: 1 / 3

S - Display VTAM-LU Information

S Printer Typ Status Logon Time Pages Lines Logmode Sense Bufsize
TNPTAS02 LU1 F/D/?/? 17:02:18:11 0 0 SCS 00000000 728
VPF1QV01 LU1 F/D/?/? 18:01:14:31 0 0 SCS 00000000 728
***** BOTTOM OF DATA *****
    
```

**Fields**

<b>Field</b>	<b>Description</b>
Action	Choose Printer or <b>ACB</b> display.
SNA VTAM ACB Name	Selection criterion used for the display of <b>ACBs</b> ; enter <b>YES</b> or <b>NO</b>
LU6.2/PCF VTAM ACB Name	Selection criterion used for the display of <b>ACBs</b> ; enter <b>YES</b> or <b>NO</b> .
Printer	Selection criterion used for printer display; enter a printer name. Masks are allowed. Default = *.
Printer Status	Selection criterion used for printer display; select <b>Active</b> , <b>Error</b> , <b>Free</b> or <b>All</b> . Default = <b>ALL</b> .

**Columns**

<b>Column</b>	<b>Description</b>
Printer	Name of the printer
Typ	Printer type: LU1 = SCS printer, LU2 = LU type 2 printer, LU3 = LU type 3 printer, LU6 = PCF-print or APPC-print, IP = PCF-print via a TCP/IP connection, ? = printer type could not be identified yet
Status	Printer status types are: 1: <b>A</b> printer is active <b>P</b> printer is pended <b>I</b> intervention of printer <b>E</b> error <b>O</b> open status of the printer 2: <b>C</b> printer is connected <b>D</b> printer is disconnected <b>R</b> printer is in a reconnect status 3: <b>N</b> session initialization request has been set to <b>NO</b> while logging onto the system <b>Q</b> session initialization request has been set to <b>YES</b> while logging onto the system <b>P</b> printer is in <b>PRINT</b> status <b>W</b> printer is active and waiting for requests 4: <b>O</b> request type <b>OPEN</b> <b>P</b> request type <b>PRINT</b> <b>C</b> request type <b>CLOSE</b> <b>T</b> request type <b>TEMPORARY OPEN</b> <b>I</b> request type <b>PC-INFO FOR PCF</b>

<b>Column</b>	<b>Description</b>
Logon Time	Logon time of the printer
Pages	Pages processed
Lines	Lines processed
Logmode	Logmode name indicates which terminal settings are used; this field corresponds to the VTAM parameter LOGMODE
Sense	VTAM sense code, refer to your IBM manuals for an explanation of the accompanying sense code
Bufsize	Size of buffer (as determined in the RUSIZE of the logmode)
IP Address	IP address of the printer
F1/F2/F3/F4/ST/ H3/CH/SI	Special printer status flags for internal use only; see the printer status flag table in message 9750I in <i>BSA Messages and Codes</i> .

## Displaying BOF VTAM LU information for a printer

### Procedure

1. To display BOF VTAM LU information on a specific printer, select option **3.2** from the "Service Manager Selection Menu". The "BOF Application Control" input panel is opened (see page 86).
2. Specify **Printer** in the Action field.
3. If required, specify **Optional Selection Criteria for PRINTER** in the **Printer** and **Printer Status** fields. The "BOF Display Printer" table is opened.
4. Enter **S** in front of a printer name. The "BOF Application Control" table is called:

```

PEB4BOFV ----- Row 1 of 23
Command ==> _____ Scroll ==> CSR

BOF Application Control                               Subsys-ID - B07W
                                                    Sysname  - BETA

BOF VTAM Printer LU-Name : PMUSTLU1

VTAM LU-Information
IST097I DISPLAY ACCEPTED
IST075I NAME = DEBETA01.PMUSTLU1, TYPE = APPL
IST486I STATUS= ACT/S , DESIRED STATE= ACTIV
IST1447I REGISTRATION TYPE = CDSERVR
IST977I MDLTAB=***NA*** ASLTAB=***NA***
IST861I MODETAB=MODETAB USSTAB=***NA*** LOGTAB=***NA***
IST934I DLOGMOD=SCS USS LANGTAB=***NA***
IST1632I VPACING = 7
IST597I CAPABILITY-PLU ENABLED ,SLU ENABLED ,SESSION LIMIT NONE
IST231I APPL MAJOR NODE = APBERVPF
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST1500I STATE TRACE = OFF
IST271I JOBNAME = BETA14W , STEPNAME = BETA14W , DSPNAME = IST3DD87
IST228I ENCRYPTION = OPTIONAL , TYPE = DES
IST1563I CKEYNAME = PMUSTLU1 CKEY = PRIMARY CERTIFY = NO
IST1552I MAC = NONE MACTYPE = NONE

```

5. Scroll down (usually PF8) to view additional BOF VTAM LU information.

## Displaying the BOF access control block

### Overview

The following operator command is used to display the BOF access control block (ACB):

```
D NET,E,ID = Luname of the BOF application ID
```

You can view either the SNA VTAM ACB or the LU6.2 / PCF VTAM ACB.

### Procedure

1. To display the Access Control Block (ACB) of the BOF in use, select option **3.2** from the "Service Manager Selection Menu". The "BOF Application Control" input panel is opened (see page 86).
2. Specify **Display** in the Action field.
3. Next choose between displaying the **SNA VTAM ACB** and the **LU6.2 / PCF VTAM ACB** by specifying YES or No in the respective fields. Set one of the fields to **YES**. (If you set both fields to **YES** or both fields to **NO**, you will receive the message *invalid selection*.)

When you press ENTER, the "BOF Application Control" table is called:

```
PEB4B0FA ----- Row 1 of 24
Command ===> _____ Scroll ===> CSR

BOF Application Control                               Subsys-ID - B07W
                                                    Sysname  - BETA

  BOF VTAM Application Name : BERB07

VTAM ACB Information
IST097I DISPLAY ACCEPTED
IST075I NAME = DEBETA01.BERB07 , TYPE = APPL
IST486I STATUS= ACT/S      , DESIRED STATE= ACTIV
IST1447I REGISTRATION TYPE = CDSERVR
IST977I MDLTAB=***NA*** ASLTAB=***NA***
IST861I MODETAB=***NA*** USSTAB=***NA*** LOGTAB=***NA***
IST934I DLOGMOD=***NA*** USS LANGTAB=***NA***
IST1632I VPACING = 7
IST597I CAPABILITY-PLU ENABLED ,SLU ENABLED ,SESSION LIMIT NONE
IST231I APPL MAJOR NODE = APBER07
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST1500I STATE TRACE = OFF
IST271I JOBNAME = BETA07W , STEPNAME = BETA07W , DSPNAME = IST8E8AB
IST228I ENCRYPTION = OPTIONAL , TYPE = DES
IST1563I CKEYNAME = BERB07 CKEY = PRIMARY CERTIFY = NO
IST1552I MAC = NONE MACTYPE = NONE
```

4. Scroll down (normally PF8) to display the second panel.

## Working with Base Archive Facility (BAF) tape resources (Option 3.3)

### Option 3.3

Option **3.3** enables you to view archive users and to free tape resources.

Because this exclusive resource access is only valid for tapes, only tapes are displayed, not DASD.

After a tape view, an archive or reload function has been executed by the started task or a batch job in a Beta product, you can use option **3.3** to display the archive users and free tape resources by selecting the relevant subsystem ID of the Beta Systems product in use.

### Prerequisites

Parameter B08\_ARCHIVE\_SYNC=YES (default) must be set in the started task of the subsystem in use.

When this parameter is set to NO, z/OS controls tape access, not the Beta Systems started task. As a result, option **3.3** will display neither archive users nor tape resources.

### Definition of BAF

The Base Archive Facility (BAF) provides a set of services to write onto archives, read from archives and administer archived data.

## Using BAF to display archive users

### Option 3.3

To display archive users, select option **3.3** from the "Service Manager Selection Menu". The "Display Archive User" panel is opened:

```

PEB4BAFX ----- Row 1 of 1
Command ==>                               Scroll ==> PAGE

Display Archive User                          Subsys-ID - Q93U
F - Free Resource                             Sysname  - BETA

S Holder  User   System  Status Resource Name
          Name
Q93UV4  PMUST  BETA   EXCL  ARC_H00518
***** BOTTOM OF DATA *****
    
```

### Columns

Table	Description
S	Input field for a line command
Holder	The holder is the started task or a batch job, for example, an archive or reload job
User	User ID initiating the request
System Name	The name of the system where the request is initiated
Status	Status of the resource: EXCL stands for exclusive access to a resource at any one time, SHR means that more than one user can access the resource at the same time
Resource Name	Name of the resource used to protect the resource for access of more than one user at the same time; resource name is composed of the prefix ARC_ and the volser name of the tape

### Line commands

**F** Free a resource

## Freeing BAF tape resources

### When to use this option

BAF tape resources should only be freed under exceptional circumstances. For example:

A tape unit has been exclusively requested and now needs to be available for another request, you can free the tape unit here. The advantage of having the tape unit freed here is that the user does not need to be canceled – only his/her request is canceled.

The user for whom the resource has been freed is not allowed to execute archive requests during this time, for example, tape view.

Any batch jobs currently undergoing processing and urgent reload requests will be canceled in the started task.

### Procedure

1. To free BAF tape resources, select option **3.3** from the "Service Manager Selection Menu". The "Display Archive User" panel is opened (see "Using BAF to display archive users" on page 92).
2. Enter **F** in front of a tape resource. The "Free SFF Enqueue" panel is called:

```
PEB4CONQ -----
Command ==>

Free SFF Enqueue                               Subsys-ID - Q93U
                                                Sysname  - BETA

Resource   : ARC_H00518

Confirm   ==>   (Y/N)

Press the ENTER key to confirm your request.
Press the END key to abort the release request.
```

3. Confirm that you want to free the tape resource.

### Result

The resource is freed and can now be accessed by more than one user at the same time.

## Controlling started task connectivities (Option 4)

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## Introduction

### Overview

**Option 4 - Connectivity** in the "Service Manager Selection Menu" enables you to view information on connections established between Beta started tasks and/or connections between clients/add-ons and Beta started tasks. You can display information on specific components of the operating system, and the users logged onto the system by means of certain connection types.

In addition, you can check and change some specific connection types, for example, TCP/IP connections, while the program is running.

### Started Task Connectivities

Select option 4 from the "Service Manager Selection Menu" to open the "Started Task Connectivities" menu:

```

PEB4SCON -----
Option ==>> _____

Started Task Connectivities                               Subsys-ID - B88Y
                                                         Sysname  - BETA

  1  ARM          -  Automated Restart Manager Connections
  2  OCF          -  Open Communication Facility

  S  SYSVAR       -  Display Static System Symbols

Select one of the above options. Press END to return to the previous menu.

```

### SORT tables

In option 4 you can use the primary command SORT in all panels containing table displays.

**SORT**                    Show the table display in a certain order

## Displaying ARM connections (Option 4.1)

### Option 4.1

Option **4.1** enables you to view the connections between batch jobs and/or started tasks and IBM's Automatic Restart Management (ARM).

### What is ARM?

Automatic restart management is an MVS recovery function that can improve the availability of specific batch jobs or started tasks. When a job or task fails, automatic restart management can restart the job or task without operator intervention.

### Enabling ARM support

To have started tasks and/or batch jobs participate in automatic restart management, code the following keyword in member B01LSTxx:

```
ARM_SUPPORT = type
```

where *type* is one of the following:

STC        Enables ARM for started tasks

BATCH     Enables ARM for batch jobs

ALL        Enables ARM for started tasks and batch jobs

For more information on automatic restart management, see the *BSA Installation and System Guide* and the IBM publication *MVS Setting Up a Sysplex*.

### Procedure

1. In the "Service Manager Selection Menu", enter **4.1** to call the "Automated Restart Management (ARM) Connections" panel:

```
PEB4CARM -----
Command ==> _____

Automated Restart Management (ARM) Connections          Subsys-ID - Q93U
                                                         Sysname  - BETA

Restart Group  ==> *                               Name or Mask

Element Type   ==> SFF$BETA                          Name or Mask

Jobname / STC  ==> *                               Name or Mask

Press the ENTER key to display the selected information.
Press the END key to return to the previous menu.
```

- Specify a **Restart Group**, an **Element Type** and a **Jobname** or **STC** to limit the number of hits. The "ARM Connection" panel is opened:

```

PEB4ARMD ----- Row 1 of 12
Command ==>                               Scroll ==> PAGE

ARM Connection                               Subsys-ID - Q93U
                                             Sysname  - BETA
                                             Seg.: 1 / 3

Total Number of ARM-Elements : 12
Maximum Number of ARM-Elements : 20

Jobname  Typ  St   Register-Time   First Restart   Last Restart
BETA04AP STC  AVA 03/06/02   12:03:42      *** NONE ***   *** NONE ***
BETA09BA STC  AVA 03/06/02   11:55:47      *** NONE ***   *** NONE ***
BETA93BA STC  AVA 03/06/02   12:01:54      *** NONE ***   *** NONE ***
Q07UV4   STC  AVA 02/27/02   11:52:45      *** NONE ***   *** NONE ***
Q09UV4   STC  AVA 03/01/02   15:39:18      *** NONE ***   *** NONE ***
Q48NV4   STC  AVA 03/07/02   11:41:46      *** NONE ***   *** NONE ***
Q91CV4   STC  AVA 03/04/02   14:11:18      *** NONE ***   *** NONE ***
Q91UV4   STC  AVA 03/04/02   14:09:08      *** NONE ***   *** NONE ***
Q92J341  STC  AVA 03/06/02   14:38:02      *** NONE ***   *** NONE ***
Q93UDSC  STC  AVA 02/22/02   09:16:57      *** NONE ***   *** NONE ***
Q93UEDF  STC  AVA 02/21/02   15:28:12      *** NONE ***   *** NONE ***
Q93UV4   STC  AVA 03/04/02   09:05:10      *** NONE ***   *** NONE ***
***** BOTTOM OF DATA *****
    
```

- This table spreads out over three panels. Scroll to the right (usually PF11) to view the other two panels.

**Fields (PEB4CARM)**

Field	Description
Restart Group	Name of the restart group as defined in the ARM policy. Masks are allowed.
Element Type	Name of the element type; all Beta started tasks and/or batch jobs logged onto ARM are of type SFF\$BETA. It is also possible to select other element types. Masks are allowed.
Jobname / STC	Name of the batch job or started task to be selected. Masks are allowed.

**Fields (PEB4ARMD)**

Field	Description
Total Number of ARM-Elements	Number of currently active elements (STCs or batch jobs) in the couple dataset of ARM. Non-Beta elements are also included in this figure.
Maximum Number of ARM-Elements	Maximum number of elements that can be created in the couple dataset.

**Columns (PEB4ARMD)**

<b>Column</b>	<b>Description</b>
Jobname	Name of the job.
Typ	Type of task: STC stands for started task, BATCH for batch jobs.
St	Status of the task: AVA stands for "currently logged on" and "available", RTY for "task is in the ARM retry modus".
Register-Time	Time of the first ARM registration.
First Restart	Time of the first restart of the started task or batch job.
Last Restart	Time of the last restart.
Restart Group	Name of the restart group where the task (started task or batch job) was started.
Element Name	The element name of the task used in ARM, the name of Beta started tasks or batch jobs consisting of the following parts, for example: BETA\$TA\$BETA04AP = Beta (fixed), followed by \$ as a separator, the sysclone name of the operating system where the ARM registration took place (the value of the static system symbol &sysclone is displayed), followed by \$ as a separator. The last part is the name of a started task or batch job.
Initial System	Name of the operating system where the ARM registration took place.
Current System	Name of the operating system where the started task or batch job is currently active.
Elementtype	ARM element type: SFF\$BETA is always used as the ARM element type for Beta started tasks or batch jobs.
Termtype	Term type as defined by the ARM policy for the started task or batch job. For more information on ARM, refer to the <i>BSA Installation and System Guide</i> and to the IBM publication <i>MVS Setting Up a Sysplex</i> .
JESGroup	Name of the JES group where the started task or batch job was started.
ASIDX	Address space ID of the started task or batch job, displayed in hexadecimal characters.
LVL	Level used in the ARM policy for the STC or batch job.
Total Restarts	Number of restarts processed so far.

Column	Description
Number of Restarts	Number of defined restarts allowed for the STC or batch job.
Maximum of Restarts	Maximum number of restarts that can be made.
Restart Interval	Restart interval in hundredths of seconds. This is the period of time after which the STC or batch job is automatically restarted after ending abnormally.
Event-Exit	Name of the ARM event exit as specified in the LST parameter ARM_EVENT_EXIT in the active B01LSTxx member. See <i>BSA Installation and System Guide</i> for details.

## Controlling the Open Communication Facility (Option 4.2)

### Overview

Option **4.2.1** enables you to control Open Communication Facility (OCF) connections that use LU 6.2 protocols.

### Option 4.2.1

Option **4.2.1** enables you to do the following:

- Display VTAM ACB information
- View OCF LU 6.2 connections

## Displaying VTAM ACB information for LU 6.2

### Overview

This option displays the same information as operator command:

`D NET,E,ID = Luname of the VTAM application ID`

See the IBM literature for more information on the output.

### Procedure

1. In the "Service Manager Selection Menu" enter **4.2** to call the "OCF Application Control" menu.

```

PEB4OCF -----
Option ==> _____

OCF Application Control                               Subsys-ID - Q93U
                                                    Sysname  - BETA

  1 LU 6.2      - Control LU 6.2 Applications
  2 TCP/IP      - Control TCP/IP Applications

Select one of the above options. Press END to return to the previous menu.

```

2. Select option **1** to call the "OCF/LU 6.2 Control" input panel:

```

PEB4ASNA -----
Command ==> _____

OCF/LU 6.2 Control                               Subsys-ID - A000
                                                    Sysname  - BETA

Action      ==> DISPLAY          (D)isplay ACB,(V)iew Connection

Optional Selection Criteria for VIEW :

Subsys Id   ==> *___           Connected Subsystem Id or Mask

Press the ENTER key to display the selected information.
Press the END key to return to the previous menu.

```

- Specify **DISPLAY** in the **Action** field. The "OCF Application Control" output panel is called:

```

BETA Systems Architecture - Version 6 ----- Row 1  of 22
Command ==>                               Scroll ==> PAGE

   OCF Application Control                      Subsys-ID - A000
                                           Sysname  - BETA

   OCF VTAM Application : OCF1

VTAM ACB Information
IST097I DISPLAY ACCEPTED
IST075I NAME = DEBETA01.OCF1 , TYPE = APPL
IST486I STATUS= ACTIV      , DESIRED STATE= ACTIV
IST1447I REGISTRATION TYPE = CDSERVR
IST977I MDLTAB=***NA*** ASLTAB=***NA***
IST861I MODETAB=MODEAPPG USSTAB=***NA*** LOGTAB=***NA***
IST934I DLOGMOD=***NA*** USS LANGTAB=***NA***
IST1632I VPACING = 7
IST597I CAPABILITY-PLU ENABLED ,SLU ENABLED ,SESSION LIMIT NONE
IST231I APPL MAJOR NODE = APPCOCF
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST1500I STATE TRACE = OFF
IST271I JOBNAME = B93V410 , STEPNAME = B93V410 , DSPNAME = IST0F3C0
IST228I ENCRYPTION = OPTIONAL , TYPE = DES
IST1563I CKEYNAME = OCF1 CKEY = PRIMARY CERTIFY = NO
IST1552I MAC = NONE MACTYPE = NONE
    
```

- Scroll down (usually PF8) to view the lower part of the panel.

**Fields**

Field	Description
Action	Select DISPLAY or VIEW
Subsystem ID	Selection criterion for VIEW only. Enter a subsystem ID. Masks are allowed.

## Viewing OCF LU 6.2 applications

### Procedure

1. In the "Service Manager Selection Menu", enter **4.2.1** to call the "OCF/LU 6.2 Control" input panel:

```

PEB4ASNA ----- No data found
Command ==> _____

OCF/LU 6.2 Control                               Subsys-ID - A000
                                                Sysname  - BETA

Action    ==> VIEW...      (D)isplay ACB,(V)iew Connection

Optional Selection Criteria for VIEW :

Subsys Id ==> *___        Connected Subsystem Id or Mask

Press the ENTER key to display the selected information.
Press the END key to return to the previous menu.

```

2. Specify **VIEW** in the **Action** field.
3. In the Subsys Id field, enter the SSID of the subsystem whose connections you want to view. Masks are allowed. To view all connections to all subsystems, leave the asterisk (\*) in the field and press ENTER.

### Result

The "OCF Application Control" table is called. Depending on your specifications in the "OCF/LU 6.2 Control" input panel, this table displays all the subsystems connected to the subsystem ID currently in use, or only specific subsystems. Field **Subsys-ID** at the top right shows the SSID of the subsystem currently in use.

```

BETA Systems Architecture - Version 6 ----- Row 1 of 2
Command ==> _____ Scroll ==> CSR

OCF Application Control                               Subsys-ID - A000
                                                Sysname  - BETA

OCF VTAM Connection

Local Remote Status Local Converse RU      Retry Sess Logmode
SSID SSID  LOC REM CON ApplID ApplID Size Cnt Acnt Int
A000      ACT          A000Q91S
      Q91S    ACT ACT A000Q91S Q91SA000 8C8C  5  0  10  4 APPC01
***** BOTTOM OF DATA *****

```

**Fields**

Field	Description
Action	select 'Display' or 'View'
Subsystem ID	valid selection criterion only for 'View', enter a subsystem ID, masks are allowed

**Columns**

Column	Description
Local SSID	Subsystem ID of the local system
Remote SSID	Subsystem ID of the remote system and in the same OCF node
Status LOC	Status of the local subsystem ID, status levels are: <b>ACT</b> for <i>active</i> , <b>PND</b> for <i>pending</i> , <b>INA</b> for <i>inactive</i> , <b>RTY</b> for <i>retry</i> , <b>REX</b> for <i>retry exceeded</i> .
Status REM	Status of the remote subsystem ID, status levels are: <b>ACT</b> for <i>active</i> , <b>PND</b> for <i>pending</i> , <b>INA</b> for <i>inactive</i> , <b>RTY</b> for <i>retry</i> , <b>REX</b> for <i>retry exceeded</i> .
Status CON	Status of the connection, status levels are: <b>ACT</b> for <i>active</i> , <b>PND</b> for <i>pending</i> , <b>INA</b> for <i>inactive</i> , <b>REX</b> for <i>retry exceeded</i> .
Local ApplID	Name of the local VTAM application.
Converse ApplID	Name of the remote VTAM application used to establish the connection.
RUSIZE	RUSIZE value used for the connection (for more information see the <i>BSA Installation and System Guide</i> )
Retry Cnt	Retry values of the OCF converse definition in the LST member: Cnt – maximum number of retries.
Retry Acnt	Retry values of the OCF converse definition in the LST member: Acnt- number of processed retries.
Retry Int	Retry values of the OCF converse definition in the LST member: Int – interval of the retries in seconds.
Sess	Number of defined session in the VTAM application or in the OCF converse definition.
Logmode	Name of the VTAM logmode used for the connection (only APPC01 is a valid name).

**Note on "XCF data obtained"**

If XCF connection data is available, you can use the line commands **XM** and **XT** (see "**Displaying information on XCF members**" on page 129) in the subsystem table to display XCF member information. The two line commands use different data sources of the XCF administration system.

**Note on status REX  
(retry exceeded)**

The most recent attempt to establish a connection was unsuccessful because the retry limit was reached. The next time the partner system sends a request, there will be a new attempt at establishing a connection.

## Working with TCP/IP connections (Option 4.2.2)

### Overview

Option **4.2.2** enables you to control Open Communication Facility (OCF) connections that use TCP/IP.

### Option 4.2.2

Option **4.2.2** enables you to do the following:

- Activate ports
- Display ports and users
- Deactivate ports
- Refresh ports
- Display users
- Cancel users
- Resolve symbolic IP addresses
- Display TLS status information

## Activating TCP/IP ports

### Procedure

1. In the "Service Manager Selection Menu", enter **4.2** to call the "OCF Application Control" selection menu:

```

PEB4OCF -----
Option ==> _____

OCF Application Control                               Subsys-ID - Q92S
                                                    Sysname  - BETA

  1 LU 6.2      - Control LU 6.2 Applications
  2 TCP/IP      - Control TCP/IP Applications

Select one of the above options. Press END to return to the previous menu.

```

2. Select option **2** to call the "TCP/IP Application Control" input panel:

```

PEB4TCP -----
Command ==> _____

TCP/IP Application Control                           Subsys-ID - Q92S
                                                    Sysname  - BETA

Action   ==> A..... (A)ctivate,(D)isplay,(U)ser,(R)esolve,
                (S)tatus
Port     ==> *_____ TCP/IP Port
Port type ==> *_____ BSA, BWE, EUI, OSY, AUD, etc.
Product  ==> *_____ Product Number

Selection Criteria for USER (optional) or RESOLVE (required)

User Id   ==> *_____ Name or Mask
Conn. SSID ==> *_____ Connected Subsystem ID
IP-Address ==> _____
           ==> _____
           ==> _____

Press the ENTER key to display the selected information.
Press the END key to return to the previous menu.

```

3. In the **Action** field, specify **A** for **Activate TCP/IP ports**.
4. To specify specific ports, enter values in the **Port**, **Port type**, and **Product** fields. Press ENTER.

### Result

- The message *Command scheduled* is shown on the upper right of the panel.  
(You will need to display the result of port activation separately.)
- The activation of ports is also reflected in the job log.

**Fields**

<b>Field</b>	<b>Description</b>
Action	<p><b>A</b> Activates TCP/IP ports</p> <p><b>D</b> Displays TCP/IP ports</p> <p><b>U</b> Displays users connected to TCP/IP ports</p> <p><b>R</b> Resolves symbolic IP address (canonical notation) to numeric IPv4/IPv6 notation</p>
Port	<p>Port number</p> <p>Masks are allowed. Default * displays all ports that have been defined in the LST member and started.</p>
Port Type	Port type, for example BWE, EUI, OSY
Product	2-digit product number (Masks are allowed.)
User ID	<p>Selection criterion for users</p> <p>Enter a mask or a specific user ID.</p>
Conn. SSID	Selection criterion for the subsystem ID the user is connected to or is working from
IP-Address	<p>Symbolic IP address (canonical notation)</p> <p>Used for resolve action (<b>R</b>) (see "Resolving symbolic IP addresses" on page 117)</p>

## Displaying TCP/IP ports and users

### Procedure

1. In the "Service Manager Selection Menu" select option **4.2.2** to call the "TCP/IP Application Control" panel (see "Activating TCP/IP ports" on page 107).
2. In the **Action** field, specify **D** for **Display TCP/IP port**.
3. If required, enter values in the fields **Port**, **Port type**, and **Product**. Press ENTER.

The "TCP/IP Application Control - Display Ports/Users" table is called:

```

PEB4TCPP ----- Row 1 of 5
Command ==> _____ Scroll ==> PAGE

TCP/IP Application Control - Display Ports/Users          Subsys-ID - 9203
                                                         Sysname   - BETA
                                                         Seg.: 1 / 4

  I - Inactivate Port   R - Refresh Port   U - Display User   L - Limit

S Pr Port  Port Status IP-Address
   Type
92 49273 BSA  ACTIVE prod.zs.de.eu.beta.ads
92 49273 OSY* ACTIVE prod.zs.de.eu.beta.ads
92 49274 BSA  ACTIVE proddev.zs.de.eu.beta.ads
92 49275 BWE  ACTIVE prodv6.zs.de.eu.beta.ads
92 49279 BWE  ACTIVE prod.zs.de.eu.beta.ads
***** BOTTOM OF DATA *****

```

4. Scroll to the right (usually PF11) to view more information.

## Columns

Column	Description
Pr	Beta product number
Port	Port number
Port Type	<p>Port type, for example OSY</p> <p>An asterisk ( * ) placed after the port type (for example <b>BWE*</b>) indicates access via a BSA global port.</p> <p>A hash ( # ) placed after the port type (for example <b>BWE#</b>) indicates access via the BSA Communication Integrator.</p> <p>The ports are application ports of the BSA Communication Integrator or the BSA TCP/IP Server, i.e. ports used to connect Open Systems add-ons to the BSA Communication Integrator or the BSA TCP/IP Server and product STC on the z/OS system.</p> <p>The ports can be deactivated, activated or refreshed. When an asterisk ( * ) or hash ( # ) is displayed for the port, the port can be deactivated, but not activated or refreshed.</p> <p>When a logon request is sent to the BSA Communication Integrator or to the BSA TCP/IP server, the ports showing an asterisk ( * ) or hash ( # ) will be automatically activated.</p> <p>The service ports of the BSA Communication Integrator are not displayed.</p>
Status	Status of the port, for example ACTIVE
IP Address	IP address of the port as specified in the LST parameter
Active User	Number of active users
Invalid User	<p>Number of invalid users</p> <p>An invalid user is still logged onto the system, but the user's identification key has expired (TOKEN expired).</p>
Sessiontime Limit	Limit of the session time in minutes
Limit Conn. Wait	Max. number of client connects/logons ( <i>Bnn_TCPIP_MAX_CLIENT[_app]</i> ) and wait time ( <i>Bnn_TCPIP_CLIENT_WAIT[_app]</i> )
Keepalive	Interval in seconds that is used to send keepalive probes
Encr	Encryption defined for this port
Started Task	Name of the started task
Server Function	Name of the server function in use
Server Program	Name of the server program in use
Client Program	Name of the client program currently in use

Column	Description
Logon exit	Name of the logon exit used
Status	<p><b>L</b> Logon exit Y = exit is available, N = exit unavailable</p> <p><b>P</b> Product exit Y = exit is active, N = exit inactive</p> <p><b>S</b> Special exit Y = exit is active, N = exit inactive</p> <p><b>C</b> Crypt exit Y = exit is active, N = exit inactive</p>

**Line commands**

- I** Deactivate port (see "Deactivating TCP/IP ports" on page 112)
- R** Refresh port (see "Refreshing TCP/IP ports" on page 113)
- U** Display user (see "Displaying users logged onto ports" on page 114)
- L** Display/change the TCP/IP connection limit

## Deactivating TCP/IP ports

### Procedure

1. In the "Service Manager Selection Menu" select option **4.2.2** to call the "TCP/IP Application Control" panel (see "Activating TCP/IP ports" on page 107).
2. In the **Action** field, specify **D** for **Display TCP/IP port**.
3. If required, enter values in the fields **Port**, **Port type**, and **Product**. Press ENTER.  
The "TCP/IP Application Control - Display Ports/Users" table is called.
4. Enter **I** in front of a port to deactivate it.

### Results

- *Command scheduled* appears at the top right of the panel.
- All users currently logged on to this port are automatically logged off.
- You can view the results by calling the "TCP/IP Application Control - Display Ports/Users" table anew (see "Displaying TCP/IP ports and users" on page 109).
- Port deactivation is reflected in the job log.

## Refreshing TCP/IP ports

### Procedure

1. In the "Service Manager Selection Menu" select option **4.2.2** to call the "TCP/IP Application Control" panel (see "Activating TCP/IP ports" on page 107).
2. In the **Action** field, specify **D** for **Display TCP/IP port**.
3. If required, enter values in the fields **Port**, **Port type**, and **Product**. Press ENTER.  
The "TCP/IP Application Control - Display Ports/Users" table is called.
4. Enter **R** in front of a port to refresh it.

### Results

- *Command scheduled* appears at the top right of the panel.
- First, the port is deactivated and all users currently logged on to this port are automatically logged off. Next, the port is reactivated with the parameters that were previously valid.
- You can view the results by calling the "TCP/IP Application Control - Display Ports/Users" table anew (see "Displaying TCP/IP ports and users" on page 109).
- Port refresh is reflected in the job log.

## Displaying users logged onto ports

### Overview

There are two ways of displaying users logged on to ports:

- By specifying **U** for user in the **Action** field of the "TCP/IP Application Control" input panel
- By following the procedure described below

### Procedure

1. In the "Service Manager Selection Menu" select option **4.2.2** to call the "TCP/IP Application Control" panel (see "Activating TCP/IP ports" on page 107).
2. In the **Action** field, specify **D** for **Display TCP/IP port**.
3. If required, enter values in the fields **Port**, **Port type**, and **Product**. Press ENTER.

The "TCP/IP Application Control - Display Ports/Users" table is called.

4. Enter **U** in front of a port to display the users who are logged onto this port.

### Results

The user-oriented version of the "TCP/IP Application Control - Display Ports/Users" table is called. Scroll to the right (usually PF11) to view more information.

```

PEB4TCPU ----- Row 1 of 2
Command ==> _____ Scroll ==> PAGE

TCP/IP Application Control - Display Ports/Users          Subsys-ID - Q93V
                                                         Sysname   - BETA
                                                         Seg.: 1 / 2

C - Cancel User

S Prod User      Port Conn Status      Logon          Last Activity  Encr
  Type SSID      Date          Time          Date          Time          Port  Port
  93 REINH1      BWE Q93V ACTIVE 06.02.2017 10:02 06.02.2017 10:02 29353 52652
  93 REINH2      BWE Q93V ACTIVE 06.02.2017 10:01 06.02.2017 10:01 29353 52615
***** BOTTOM OF DATA *****
    
```

These two panels show all the users who are logged onto a particular port via TCP/IP to the selected subsystem or to another subsystem (see column **Conn.SSID**).

**Columns**

<b>Column</b>	<b>Description</b>
Prod	Beta product number
User	Name of the user
Port Type	<p>Port type, for example <b>OSY</b></p> <p>An asterisk ( * ) placed after the port type (for example <b>OSY*</b>) indicates access via a BSA global port.</p> <p>A hash ( # ) placed after the port type (for example <b>OSY#</b>) indicates access via the BSA Communication Integrator.</p> <p>The ports are application ports of the BSA Communication Integrator or the BSA TCP/IP server, i.e. ports used to connect Open Systems add-ons to the BSA Communication Integrator or the BSA TCP/IP server and product STC on the z/OS system.</p> <p>The ports can be deactivated, activated, or refreshed. When an asterisk ( * ) or hash ( # ) is displayed for the port, the port can be deactivated, but not activated or refreshed.</p> <p>When a logon request is sent to the BSA Communication Integrator or to the BSA TCP/IP server, the ports showing an asterisk ( * ) or hash ( # ) will be automatically activated.</p> <p>The service ports of the BSA Communication Integrator are not displayed.</p>
Conn. SSID	Subsystem ID the user is connected to
Status	Status of the port, for example ACTIVE
Logon Date/Time	Date and time when the user logged onto the system
Last Activity Date/Time	Date and time of the user's last activity
Encr	Encryption actually used for this connection
Host Port	Number of the host port
Host IP-Address	IP address of the host
Server Port	Number of the server port
Server IP-Addr.	IP address of the server
Clnt Port	Number of the client port
Client IP-Addr.	IP address of the client

**Line commands**

**C** Cancel user (see "Canceling users" on page 116)

## Canceling users

### Displaying users

There are two ways of displaying users logged onto ports:

- By specifying **U** for user in the **Action** field of the "TCP/IP Application Control" input panel
- By following the procedure described below

### Procedure

1. In the "Service Manager Selection Menu" select option **4.2.2** to call the "TCP/IP Application Control" panel (see "Activating TCP/IP ports" on page 107).
2. In the **Action** field, specify **D** for **Display TCP/IP port**.
3. If required, enter values in the fields **Port**, **Port type**, and **Product**. Press ENTER.

The "TCP/IP Application Control - Display Ports/Users" table is called.

4. Enter **U** in front of a port to display the users who are logged onto this port.
5. Enter **C** in front of a user and press ENTER.

### Results

- *Command scheduled* appears at the top right of the panel.
- The user is automatically logged off.
- You can view the results by calling the "TCP/IP Application Control - Display Ports/Users" table anew (see "Displaying TCP/IP ports and users" on page 109).
- Canceling users is reflected in the job log.

## Resolving symbolic IP addresses

### Overview

You can use option **4.2.2** to find out how symbolic IP addresses (canonical notation) are resolved. Name resolution is handled by the resolver of the z/OS system, for example, according to definitions in TCPIP.DATA.

### Procedure

1. In the "Service Manager Selection Menu", enter **4.2** to call the "OCF Application Control" selection menu:

```

PEB40CF -----
Option ==> _____

OCF Application Control                               Subsys-ID - Q93V
                                                    Sysname  - BETA

  1 LU 6.2      - Control LU 6.2 Applications
  2 TCP/IP      - Control TCP/IP Applications

Select one of the above options. Press END to return to the previous menu.

```

2. Select option **2** to call the "TCP/IP Application Control" input panel.
3. In the **Action** field, specify **R** for **Resolve** and type the symbolic IP address (canonical notation) in the **IP-Address** field.

```

PEB4TCP -----
Command ==> _____

TCP/IP Application Control                           Subsys-ID - Q93V
                                                    Sysname  - BETA

Action      ==> R..... (A)ctivate,(D)isplay,(U)ser,(R)esolve,
                    (S)tatus
Port        ==> *_____ TCP/IP Port
Port type   ==> *_____ BSA, BWE, EUI, OSY, AUD, etc.
Product     ==> *_____ Product Number

Selection Criteria for USER (optional) or RESOLVE (required)

User Id     ==> *_____ Name or Mask
Conn. SSID ==> *_____ Connected Subsystem ID
IP-Address ==> RICOHSPC440DN.PRINTER.DEVELOP.BETA.ADS_____
           ==> _____
           ==> _____
           ==> _____

Press the ENTER key to display the selected information.
Press the END key to return to the previous menu.

```

4. Press ENTER.

**Result**

The resolved IP addresses are displayed in a table.

```

PEB4TCPD -----
Command ==> _____ Scroll ==> PAGE

TCP/IP Application Control - Resolve DNS          Subsys-ID - Q93V
                                                Sysname  - BETA

Product STC   : Q93VV7
IP-Address   :
-----
RICOHSPC440DN.PRINTER.DEVELOP.BETA.ADS

-----
Task      Resolved IP-Address          Styp HOSTID(V4)
TCPDEV   2001:8DB:A:143:10:56:143:49  1C13 10.56.83.115
TCPDEV   10.56.143.49                 1002 10.56.83.115
TCPPIP   2001:8DB:A:143:10:56:143:49  1C13 10.56.83.100
TCPPIP   10.56.143.49                 1002 10.56.83.100
***** BOTTOM OF DATA *****
    
```

**Columns**

Column	Description
Task	Name of the TCP/IP started task (IP stack)
Resolved IP-Address	Resolved IP address in numeric notation (IPv4 or IPv6)
Styp	Type of socket family 1002 IPv4 1C13 IPv6
HOSTID(V4)	Host address (numeric IPv4)

## Displaying TLS status information

### Procedure

1. In the "Service Manager Selection Menu" select option **4.2.2** to call the "TCP/IP Application Control" panel (see "Activating TCP/IP ports" on page 107).
2. In the **Action** field, specify **S** for **Status TCP/IP port**. Press ENTER.  
The "TCP/IP Application Control - Display Ports/Users" table is called.

### Result

The status-oriented version of the "TCP/IP Application Control - Display Ports/Users" table is called.

```

PEB4TCPS -----
Command ==> _____ Scroll ==> PAGE

TCP/IP Application Control - Display Ports/Users      Subsys-ID - 9203
                                                    Sysname   - BETA

S Pr  Port  Port      TLS Status      Resolved IP-Address
   Type      Stack      Status
B92 BSA  49273 TCPIP   TLS#NOPOL  10.56.83.100
B92 BSA  49274 TCPDEV  TLS#APPL   10.56.83.115
B92 BWE  49275 TCPIP   TLS#NOPOL  2001:8DB:A:83:10:56:83:100
B92 BWE  49279 TCPIP   TLS#NOPOL  10.56.83.100
***** BOTTOM OF DATA *****
    
```

### Columns

Column	Description
Pr	Beta product number
Port Type	Port type, for example BWE
Port	Port number
Stack	Name of the TCP/IP task (IP stack)
TLS Status	Status of secure or non-secure port INACTIVE     Port is inactive TLS#NOPOL    Port is nonsecure ACTIVE       Port is nonsecure TLS#APPL     Port is secure
Resolved IP-Address	Resolved IP address in numeric notation

### Line commands

- S**     Displays detailed information on the port

## TCP/IP Application Control - Resolve DNS

The following information is displayed when you enter line command **S**:

```

PEB4TCPE -----
Command ==> _____ Scroll ==> PAGE

TCP/IP Application Control - Resolve DNS          Subsys-ID - 9203
                                                Sysname   - BETA

IP-Address:
-----
PRODDEV.ZS.DE.EU.BETA.ADS

-----
Resolved IP-Address   : 10.56.83.115

Additional Resolve Information

Product               : B92          Product Addon       : BSA
Port                  : 49274
Task/Stack            : TCPDEV       TLS-/Stack Status   : TLS#APPL
Optional resolve value :             IP ANY-Address Synonym:
Version resolved Address: IP4        Nr. resolved Address : 01

Press the END key to return to the previous menu.

```

## Fields

Field	Description
IP-Address	IP address as specified in the PORT LST parameter
Resolved IP-Address	Resolved IP address in numeric notation
Product	Product number
Product Addon	Product addon, for example BWE
Port	Port number
Task/Stack	Name of the TCP/IP started task (IP stack)
TLS-/Stack Status	Status of secure or non-secure port INACTIVE    Port is inactive TLS#NOPOL   Port is nonsecure ACTIVE      Port is nonsecure TLS#APPL    Port is secure
Optional resolve value	Optional value used to resolve the IP-Address
IP ANY-Address Synonym	Synonym value used for a TCP/IP ANY address
Version resolved Address	Version of the resolved IP address: IP4 or IP6
Nr. resolved Address	Number of the entry in the internal resolution table

## Working with TCP/IP OCF connections (Option 4.2.3)

**Overview** Option 4.2.3 enables you to control Open Communication Facility (OCF) connections that use TCP/IP.

**Availability** Option 4.2.3 is only available if the selected subsystem is a Beta 02 started task with TCP/IP OCF connections.

**TCP/IP OCF Connections** Option 4.2.3 displays the TCP/IP OCF connections in a table:

```

PEB4T005 -----
Command ==> _____ Scroll ==> PAGE

TCP/IP OCF Connections                               Subsys-ID - Q02W
                                                    Sysname  - BETA
                                                    Seg.: 1 / 1

XM - Display XCF Member Information  XT - Display XCF-STC Connection

S  Loc. Rem.  Status  Local  Converse  IP-Address  Task  Retry
  SSID SSID L  R  C  ApplID  ApplID
Q02W      AC      00#28891      10.56.83.100  TCPIP
      Q88L  AC AC      01#28892  10.56.83.40  TCPIP      7  0  5
      Q88D  AC AC      02#28893  10.56.83.30  TCPIP      9  0  4
      Q024  AC AC      01#28892  10.56.83.40  TCPIP      7  0  5
      Q023  AC AC      02#28893  10.56.83.30  TCPIP      9  0  4
      Q88C  AC
***** BOTTOM OF DATA *****
    
```

**Columns**

<b>Column</b>	<b>Description</b>
Loc. SSID	Subsystem ID of the local system
Rem. SSID	Subsystem ID which is found on another system and is integrated into an OCF group
Status L	Status of the local subsystem ID: AC Active PN Pending IN Inactive RT Retry RE Retry exceeded
Status R	Status of the remote subsystem ID: AC Active PN Pending IN Inactive
Status C	Status of the connection: AC Active PN Pending IN Inactive RT Retry RE Retry exceeded
Local ApplID	Name of the local connection application
Converse ApplID	Name of the remote connection application used to establish connection
IP-Address	IP address of the port
Task	Processing task of the port (IP stack)
Retry	Retry values of the OCF converse definition in the LST member Cnt Maximum number of retries Acnt Number of processed retries Int Retry interval in seconds

**Line commands**

You can use the following line commands to display XCF information if the subsystem ID is a member of a sysplex:

- XM** Displays XCF member information
- XT** Displays XCF-STC connection

## Displaying static system symbols (Option 4.S)

### Option 4.S

Option **4.S** enables you to display the static system symbols defined in the system.

Please refer to option **1.3** (see "**Checking keyword activation and SYSVAR substitution (Option 1.3)**" on page 35) for information on how to check whether SYSVAR (static system symbol) substitution has been activated and how static system symbols are replaced with the values defined for the active system.

### Procedure

To display the static system symbols and their values, enter **4.S** in the "Service Manager Selection Menu". The "Static System Symbols" table is called:

```

PEB4SVAR ----- Row 1 of 5
Command ==> _____ Scroll ==> PAGE

  Static System Symbols                               Subsys-ID - Q93U
                                                    Sysname  - BETA

Symbol      Value
&SYSALVL.   2
&SYSCLONE.  TA
&SYSNAME.   BETA
&SYSPLEX.   PLEX
&SYSR1.     O2ARES
***** BOTTOM OF DATA *****

```

This table lists the symbols and values assigned to them.

## Working with subsystems (Option 5)

<b>In this chapter</b>	<b>Topic</b>	<b>Page</b>
	Subsystem table .....	125
	Selecting a different subsystem.....	128
	Displaying information on XCF members .....	129
	Displaying RSB information.....	131
	Displaying security exit information .....	132
	Displaying subsystem information .....	134

# Subsystem table

## Overview

**Option 5 - SUBSYSTEM** of the BSA Service Manager menu is the central access point for subsystem-related functions.

## Viewing available subsystems

1. In the "Service Manager Selection Menu", select option 5. The "Beta Subsystem Selection" panel is called:

```

PEB4SIB -----
Command ==> _____

Beta Subsystem Selection                               Subsys-ID - B93P
                                                       Sysname  - BETA

Selection via STC Name/Jobname ( SSID must be * )

STC Name  ==> *.....

Selection via Subsystem ID ( STC Name must be * )

SSID      ==> *...
Active    ==> ___ (Y)es, (N)o or blank

Enter one of the above parameters or press ENTER directly to display the over-
view panel. Press END to return to the previous menu.
    
```

2. Leave asterisks in the STC Name and SSID fields to view a table of all available subsystems, both active and inactive:

```

PEB4SID ----- Row 14 of 184
Command ==> _____ Scroll ==> PAGE

Display Beta-STC Information Overview                 Subsys-ID - B93P
                                                       Sysname  - BETA

OC - Control LU 6.2 Applications OX - OCF/XCF Connections
TC - Control TCP/IP Applications XT - Display XCF-STC Connection
XM - XCF Memberinformation SE - Security Exits
RB - RSB Information SI - Beta Subsystem Information
S - Select a Subsystem

Sel  SSID A Jobname Jobnumber System PI Location Name L O X D
     B88P Y BETA88P S0006726 BETA 88 BERLIN PROD Y N N M
     B88W Y BETA88W8 S0011769 BETA 88 BERLIN PROD Y N N M
     B89J N
     B89P Y BETA89P S0000068 BETA 89 BERLIN PROD Y N N M
     B914 Y BETA914 S0059516 BETA 91 BERLIN B914 Y N N M
     B916 Y BETA916 S0049993 BETA 91 BERLIN B916 Y N N M
     B92E Y BETA92PE S0061878 BETA 48 BERLIN PROD Y N N M
     B92P Y BETA92P S0058701 BETA 92 BERLIN PROD Y N N M
     B93P Y BETA93P S0044696 BETA 93 BERLIN PROD Y N N M
     B93W Y RABBIT S0000232 BETA 93 BERLIN RABBIT Y N N M
     B97P Y BETA97P S0011195 BETA 97 BERLIN PROD Y N N M
    
```

**Result**

The request to display subsystems is always sent to the current target subsystem of the BSA Service Manager. The subsystem table displays the following subsystems:

- All local subsystems defined on the MVS system where the Service Manager's target subsystem is running
- All remote subsystems connected via OCF/XCF

To access a remote subsystem not currently displayed in the subsystem table because it is not connected via OCF/XCF, make an appropriate subsystem the current target subsystem first (line command **S**) and then display the subsystem table again.

**Columns in STC  
information overview**

Column	Description
S	Input field for a line command
SSID	Indicates the subsystem ID
A	Indicates whether the subsystem is active (Y) or not (N)
Jobname	Displays the name of the STC or job
System	Displays the MVS system name
PI	Displays the product ID, for example 88 or 93
Location	Indicates the system's physical location of installation
Name	Displays the Beta Subsystem name, which is defined in the product database
L	Indicates whether the subsystem is local (Y) or not (N)
O	Indicates whether an OCF connection is used for the communication between this subsystem and the TSO user's system:  <b>Y</b> Communication with this system uses OCF (the OCF connection is provided by this subsystem). <b>C</b> Communication with this system uses OCF (the OCF connection is provided by another subsystem). <b>N</b> Communication with this system does not use OCF, for example, because the subsystem is on the local system.
X	Indicates whether there is an active XCF connection
D	Indicates how the database is connected:  <b>M</b> Master <b>S</b> Slave or no database

---

<b>Line commands</b>	<b>S</b>	Selects this subsystem as the Service Manager's target subsystem (see "Selecting a different subsystem" on page 128).
	<b>OC</b>	Calls OCF/LU6.2 Control (same as Service Manager option 4.2.1 (see "Displaying VTAM ACB information for LU 6.2" on page 101))
	<b>OX</b>	Displays information on OCF and XCF connections (similar to Service Manager option 4.2.1, Action VIEW (see "Viewing OCF LU 6.2 applications" on page 103))
	<b>TC</b>	Calls TCP/IP Applications Control (same as Service Manager option 4.2.2 (see "Displaying TCP/IP ports and users" on page 109))
	<b>XM</b>	Displays XCF member information (see "Displaying information on XCF members" on page 129)
	<b>XT</b>	Displays information on the XCF complex (see "Displaying information on XCF members" on page 129)
	<b>RB</b>	Displays the contents of the Remote System Blocks (RSB) (see "Displaying RSB information" on page 131) (if entered in front of a local system with OCF connections).
	<b>SE</b>	Displays information on security exits and the Beta SVC (see page 132).
	<b>SI</b>	Displays information from the subsystem control area (SSCA) of the MVS subsystem interface (see "Displaying subsystem information" on page 134).

## Selecting a different subsystem

### Overview

When you call the BSA Service manager from a Beta product, the Service Manager will use the same subsystem as ID as the product you called it from. This subsystem ID will be displayed in the upper right hand corner of the "Service Manager Selection Menu". You can use **Option 5 - SUBSYSTEM** to change to a different subsystem.

### Procedure

1. In the "Service Manager Selection Menu", select option 5. The "Beta Subsystem Selection" panel is called (see "Subsystem table" on page 125).
2. Specify the subsystems you want to have displayed in the "Display BETA-STC Information Overview" table. You can call all available subsystems, or you can limit the list as follows:
  - To select subsystems by STC name, specify the STC name or a mask in the **STC-Name** field. In this case, the **SSID** field must contain an asterisk.
  - To select subsystems by SSID, specify an SSID or mask in the **SSID** field. In this case, the **STC-Name** field must contain an asterisk.
  - To limit the list to active or inactive subsystems, specify **Yes** or **No** in the **Active** field. Leave this field blank to display both.
3. In the "Display BETA-STC Information Overview" table, enter line command **S** in front of the subsystem that you want to change to.

### Result

The BSA Service Manager will use the subsystem you selected and message "Subsystem ID changed" is issued.

## Displaying information on XCF members

**Line commands XM / XT** You can use the line commands **XM** and **XT** in the "Display Beta-STC Information Overview" table to display XCF member information. The two line commands draw on two different data sources from the XCF administration system:

- XM displays the registered members of the selected subsystem. If XCF is active, there is always at least one member, namely the member for the STC itself. One member is added for each user when a connection is established from another LPAR. A user's member is deleted when this user logs off from the LPAR.
- XT displays a list of the SSIDs with which an XCF connection has been established since the subsystem was started.

### XCM Member Information

```

PEB4XCM2 ----- Row 1 of 1
Command ==> _____ Scroll ==> PAGE

OCF/XCF Application Control          Subsys-ID - F883
                                      Sysname  - BETA

XCF Member Information

Jobname System  SSID Job Type SC Status  Membername      Source Token
F883STC BETA    F883 STC   TA ACTIVE  xxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxx
*****
***** BOTTOM OF DATA *****

```

### OCF/XCF application control

Column	Description
Jobname	The name of the STC or job. The value <b>**UNAV**</b> indicates that this information is unavailable. This may be due to the following: <ul style="list-style-type: none"> <li>• The system is not a BSA V4 or BSA V6 system.</li> <li>• The system is not at present reachable from the LPAR where the XT request was processed.</li> </ul>
System	The MVS system name. The value <b>**UNAV**</b> indicates that this information is unavailable (see above).
SSID	The subsystem ID.
Job Type	The type of the XCF member: <b>STC</b> Started task <b>JOB</b> Job <b>TSU</b> TSO user
SC	MVS sysclone name.
State	The state of the XCF connection: <b>CREATED</b> Connection has been established <b>ACTIVE</b> Connection is active <b>QUIESCED</b> Group or node is stopped <b>FAILED</b> Connection has failed or has been interrupted
Membername	The name of the XCF member.
Source Token	The ID of the XCF member.

## Displaying RSB information

### Line command RB

To display RSB (Remote System Blocks) information on the started tasks (remote subsystems) connected to a local subsystem via OCF, enter line command **RB** in front of that subsystem in the "Display Beta-STC Information Overview" table.

### Display OCF/RSB Data

```

PEB4RSBD ----- Row 1 to 2 of 2
Command ==>                               Scroll ==> CSR

Display OCF/RSB Data                        Subsys-ID - Q02W
                                           Sysname  - BETA

Target System Information

FromSSID : Q02W      Jobname : Q02WV4
System   : BETA      Sysplex : INSTPLEX   Sysclone : TA

ConSSID  Product  System  State  RSBA
Q02Z    BETA02   BT40    ACT    103DB048
Q88E    BETA88   BT40    ACT    0FA67118
***** Bottom of data *****
    
```

### Columns

Column	Description
ConSSID	Subsystem ID of the remote subsystem
Product	Beta product name
System	MVS system name
State	State of the started task: <b>ACT</b> Active <b>INACT</b> Inactive
RSBA	Address of the remote system block (RSB)

### Note

The RSB of a subsystem will be preserved until the next IPL. This makes it possible to display the RSB of a subsystem after its STC has been stopped.

## Displaying security exit information

### Line command SE

In the "Display Beta-STC Information Overview" table, enter line command **SE** in front of a subsystem to display information on the SVC and loaded security exits.

### SFF Security Exit Display

```

PEB4SETB -----
Command ==> _____ Scroll ==> PAGE

SFF Security Exit Display                      Subsys-ID - B93P
                                              Sysname  - BETA

SVC INFORMATION:

TYPE      : SVC 242
MODULE    : BST01SVC  PTF No   : PBS0510  CR.DATE: 01.12.2016 TIME: 15:26:00
JOB CORR  : S0000187DEBETAJ2D36C2F21.....:

JCDBSTAT  : NOT AVAILABLE
MSTR_SSID : B93P

-----
TYPE      : UXSIN                               LO.DATE: 11.11.2017 TIME: 11:40:10
MODULE    : B02UXSIN  PTF No   : PBS0537  CR.DATE: 25.09.2017 TIME: 17:30:00
ENTRY     : 93E7F448  LENGTH   : 000628
USER      : BETA93P   JOBNAME  : BETA93P   JOBID: S0000187

-----
TYPE      : UXSEC                               LO.DATE: 11.11.2017 TIME: 11:40:10
MODULE    : B93UXSEC  PTF No   : NONE     CR.DATE: 25.09.2017 TIME: 17:29:00
ENTRY     : 93E7CBD0  LENGTH   : 001430
USER      : BETA93P   JOBNAME  : BETA93P   JOBID: S0000187
  
```

### SVC information

Field	Description
TYPE	Number of the BETA SVC
MODULE	Module name of the SVC
PTF No	PTF level of the SVC
CR.DATE/TIME	Date and time when the SVC was created

**EXIT information**

<b>Field</b>	<b>Description</b>
TYPE	Exit type
MODULE	Module name of the exit
ENTRY	Name of the entry point
USER	RACF name of the user who uses this exit
PTF No	PTF level of this exit
LENGTH	Length of the exit in bytes (hexadecimal value)
JOBNAME	Job name of the started task that uses this exit
JOBID	JES ID of the job of the started task that uses this exit
LO.DATE/TIME	Date and time the exit was loaded
CR.DATE/TIME	Date and time the exit was created

## Displaying subsystem information

### Line command SI

In the "Display Beta-STC Information Overview" table, enter line command **SI** in front of a subsystem to display information on that subsystem. The information is taken from the subsystem control area (SSCA) of the MVS subsystem interface.

### Beta Subsystem Information

```

PEB4SISU -----
Command ==> _____

Beta Subsystem Information                               Subsys-ID - B92P
                                                         Sysname   - BETA

System Related Information
Subsystem ID : B92P      SSCA Address : 00BC3168  SICA Address : 17D01050
ASIDX       : 0046      ASCB Address : 00FB0700  SVC Number   : 243
System Name  : BETA      SYSCclone  : TA         Goto OCF SSID :
Job Corr(SYST): S0000098DEBETAJ2D8361029.....:
Job Corr(USER):

bsa Related Information
System Level : V7R1      bsa Level   : 1771-02   bsa PTF Level : PBS4297

Product Information
System       : PROD      Product ID  : 92
Product Level : V7R1-03  Product PTF : POM7635
Master-SSID  : B92P      Location   : BERLIN

Support Information
ARM : N   OCF : N   SYSVAR : N   XCF : Y   64B : Y   JCDBSTAT: NOAV

```

### System-related information

Field	Description
Subsystem ID	Subsystem ID of the started task
ASIDX	MVS address space ID (hexadecimal value)
System Name	Name of the MVS system where the STC is running
SSCA Address	Address of the subsystem control area (SSCA), which contains BSA and product-specific information
ASCB Address	Address of the MVS address space control block (ASCB)
SYSCclone	Short name of the system in the sysplex
SICA Address	Address of the SFM interface control area (SICA)
SVC Number	Number of used Beta SVC
Goto OCF SSID	To be able to communicate via OCF with a system outside the sysplex, the OCF parameters must be defined in a subsystem within the sysplex. This field displays the ID of the subsystem where the OCF parameters have been defined.
Job Corr(SYST)	System part of job correlator
Job Corr(USER)	User part of job correlator

**BSA-related information**

Field	Description
System Level	BSA version, release and modification number
bsa Level	BSA modification level
bsa PTF Level	BSA PTF level

**Product information**

Field	Description
System	Beta system name
Product ID	Product identification number
Product Level	Product version, release and modification number
Product PTF	Product PTF level
Master-SSID	Subsystem ID of the database master
Location	Physical location of the installation

**Support information**

Field	Description
ARM	System supports automatic restart management (Y/N)
OCF	System is connected via OCF (Y/N)
SYSVAR	System supports static system variables (Y/N)
XCF	System is connected via XCF (Y/N)
64B	System supports 64-bit addressing (Y/N)
JCDBSTAT	Status of job correlator support for product database

## Diagnostic reports (Option R)

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## Introduction

### Option R - REPORTS

Option R - REPORTS of the "Service Manager Selection Menu" serves as a central access point for providing diagnostic information.

All options provide system-related environment information that is used for solving problems that you may have reported. Several options generate JCL for reports that collect the required information on your environment. Beta Systems support may ask you to use one of these options to generate the corresponding diagnostic report.

**Note:** This option cannot be used under VDF, but requires TSO.

### Diagnostic Reports Selection Menu

```

PEB4INFO -----
Option ==>> _____

Diagnostic Reports Selection Menu                               Subsys-ID - B93P
                                                            Sysname   - BETA

  0 GLOBAL           - Global JCL Settings

  1 SINGLE          - Information on Single STC Environment
  2 SERVICE         - Initiate Support Service for Single STC

  3 MULTI           - Information on Several STCs of a Product
  4 RFF             - Information on RFF Environment

  5 BQL             - Information on BQL Definitions

  L LMOD            - Information on Load Modules
  P PACKAGE         - Information on Beta SMP/E Packages
  0 OVERVIEW        - Overview of All Beta Subsystems

Select one of the above options. Press END to return to the previous menu.
    
```

**Options**

<b>Option</b>	<b>Description</b>
0 GLOBAL	Here you specify global settings for the batch reports that are generated by the options of the "Diagnostic Reports Selection Menu".
1 SINGLE	This option generates a batch job that provides information on the environment of a single subsystem (optionally with a dump).
2 SERVICE	This option causes a started task to write information on its environment (optionally with a dump).
3 MULTI	This option generates a batch job that provides information on several subsystems of one product.
4 RFF	This option generates a batch job that requests an STC to provide information on the RFF environment of the subsystem (optionally with a dump).
L LMOD	This option displays information on Beta Systems product modules.
P PACKAGE	This option displays information on Beta Systems product SMP/E packages.
O OVERVIEW	This option generates a batch job that provides a list of the Beta Systems product subsystems defined to the system and their status.

## Global JCL settings (Option R.0)

### Option R.0

Use option **R.0** to specify global JCL settings for batch reports.

To be able to generate JCL for diagnostic reports, you have to specify the name of your BSA.ISPSLIB. You can also specify other values, which are used as defaults when generating JCL for diagnostic batch reports.

The name of your BSA.ISPSLIB and your default values are saved in your ISPF profile. It is possible for you to override your defaults at the time when you generate JCL for a diagnostic batch report.

### Global JCL Settings

```

PEB4IN00 -----
Command ==> _____

Global JCL Settings                               Subsys-ID - B93P
                                                Sysname  - BETA

Dataset Name
BSA ISPSLIB ==> .....
Output Parameter
Sysout Class ==> *

Dataset Name ==> _____
                                Space Requirement   SMS Information
                                Unit    ==> CYL     StorClass ==> _____
Volume      ==> SMS_____ Primary ==> 1_____ MgmtClass ==> _____
Unit        ==> ##NONE## Second. ==> 1_____ DataClass ==> _____

Job Card
==> //BSADIAG JOB 1,ACCOUNT,CLASS=A,MSGCLASS=P,NOTIFY=&SYSUID.....
==> _____
==> _____
==> _____

Press the ENTER key to update your profile data.
Press the END key to return to the previous menu.
    
```

### Fields

Field	Description
BSA ISPSLIB	Name of the BSA ISPSLIB, which contains the skeletons used when generating JCL for batch reports
Sysout Class	Default sysout class to be used for output
Dataset Name	Default name of dataset to be used for output
Volume, Unit, Space etc.	Default allocation attributes for new datasets

## Diagnostic report on single STC environment (Option R.1)

### Option R.1

Option **R.1** generates JCL for a batch job that collects information and writes a diagnostic report on a single STC environment.

**Note:** To be able to use this option, the name of your BSA.ISPSLIB has to be defined under option **R.0**.

### Information on Single STC Environment

```

PEB4IN10 -----
Command ==> _____

Information on Single STC Environment                               Subsys-ID - B93P
                                                                    Sysname   - BETA

Problem Number ==> 000-R000-0000
Ssid           ==> B93P (Subsystem Id)

Dump required? ==> NO. (Y)es,(N)o   Sysout Class ==> *
                                                                    Release Dump ==> YES (Y)es,(N)o

Does SFFFDUMP/SYSABEND for the current problem already exist?

                ==> NO. (Y)es,(N)o

If you are using other LST-members for RFF applications (e.g. reader, batch
utilities) than for the selected STC, please enter the LST-member suffixes:

B01LST        ==> 00
BnnLST        ==> 00

Press the ENTER key to generate the batch job.
Press the END key to return to the previous menu.

```

### Fields

Field	Description
Problem Number	Specify the problem number (if available) for which you are providing information; this number will be included in the diagnostic report
Ssid	Subsystem ID of the started task that is the object of the diagnostic report
Dump required?	Specify YES if you want to cause the writing of a diagnostic dump (BSADIAGD/BSADIAGA)
Sysout Class	Sysout class to be used for the diagnostic dump (BSADIAGD/BSADIAGA)
Release Dump	<b>YES</b> The dump is automatically released after writing. <b>NO</b> The dump is released manually or when the STC is stopped.
SFFFDUMP/ SYSABEND already exists?	Specify YES if an SFFFDUMP/SYSABEND is already available for this problem.
B01LST BnnLST	If RFF programs don't use the same LST members as the STC, specify the suffixes of the LST members used by the RFF programs.

## Initiate support service for single STC (Option R.2)

### Option R.2

Option R.2 sends a request to the selected started task in order to provide information on this subsystem.

### Initiate Support Service for Single STC

```

PEB4IN20 -----
Command ==> _____

Initiate Support Service for Single STC                Subsys-ID - B93P
                                                    Sysname  - BETA

Problem Number ==> 000-R000-0000
Ssid           ==> B93P (Subsystem Id)

Dump required? ==> NO. (Y)es,(N)o   Sysout Class ==> *
                                                    Release Dump ==> YES (Y)es,(N)o

Enter the sysout class for BSADIAG in the pertaining STC:

Sysout Class   ==> *

If you want to release the generated BSADIAG output, enter YES below.
If you want to continue the BSADIAG output, enter NO below.

Release BSADIAG   ==> YES (Y)es,(N)o
Asynchron Processing ==> NO_ (Y)es,(N)o

Press the ENTER key to initiate the processing.
Press the END key to return to the previous menu.

```

**Fields**

<b>Field</b>	<b>Description</b>
Problem Number	Specify the problem number (if available) for which you are providing information; this number will be included in the diagnostic report
Ssid	Subsystem ID of the started task that is to receive the request
Dump required?	Specify YES if you want to cause the writing of a diagnostic dump (BSADIAGD/BSADIAGA)
Sysout Class	Sysout class to be used for the diagnostic dump (BSADIAGD/BSADIAGA)
Release Dump	<b>YES</b> The dump is automatically released after writing. <b>NO</b> The dump is released manually or when the STC is stopped.
Sysout Class	Sysout class to be used by the STC for BSADIAG; specify an asterisk ( * ) to use the Sysout class of the STC.
Release BSADIAG	<b>YES</b> The BSADIAG report is released after writing; it will be available in Beta 92, SCLM etc. under the name of the STC. <b>NO</b> The BSADIAG report is not released, but remains available in the STC and can be used for appending additional data.
Asynchron Proc.	<b>YES</b> For asynchronous processing, i.e. you can continue to work with your screen after your request has been initiated. Your request will be processed in the background and the result of your request will be available under the DD name BSADIAGA/BSADIAGD. <b>NO</b> Your screen remains locked until your request has been completed by the STC and the information is available under the DD name BSADIAGA/BSADIAGD.

## Diagnostic report on multi-STC environment (Option R.3)

### Option R.3

Option **R.3** generates JCL for a batch job that collects information and writes a diagnostic report on a multi-STC environment.

**Note:** To be able to use this option, the name of your BSA.ISPSLIB has to be defined under option **R.0**.

### Information on STCs of a Product

```

PEB4IN30 -----
Command ==> _____

Information on STCs of a Product                               Subsys-ID - B93P
                                                                Sysname  - BETA

Problem Number ==> 000-R000-0000

Enter the product number for which the job shall be generated:

Product Number ==> 93

Enter the subsystem id mask:

Ssid           ==> *...

Press the ENTER key to generate the batch job.
Press the END key to return to the previous menu.
    
```

### Fields

Field	Description
Problem Number	Specify the problem number (if available) for which you are providing information; this number will be included in the diagnostic report
Product Number	Two-digit number of the product that is the object of the diagnostic report
Ssid	Appropriate mask covering the subsystems that are the object of the diagnostic report

## Information on RFF environment (Option R.4)

### Option R.4

Option **R.4** generates JCL for a batch job that collects information and writes a diagnostic report on the RFF environment of a subsystem.

**Note:** To be able to use this option, the name of your BSA.ISPSLIB has to be defined under option **R.0**.

### Information on RFF Environment

```

PEB4IN40 -----
Command ==> _____

Information on RFF Environment                               Subsys-ID - B93P
                                                            Sysname  - BETA

Problem Number ==> 000-R000-0000
Ssid           ==> B93P (Subsystem Id)

Dump required? ==> NO. (Y)es,(N)o   Sysout Class ==> *
                                                Release Dump ==> YES (Y)es,(N)o

Enter the LST-member suffixes:

B01LST        ==> 00
BnnLST        ==> 00

Press the ENTER key to generate the batch job.
Press the END key to return to the previous menu.

```

### Fields

Field	Description
Problem Number	Specify the problem number (if available) for which you are providing information; this number will be included in the diagnostic report
Ssid	Subsystem ID of the started task that is the object of the diagnostic report
Dump required?	Specify YES if you want to cause the writing of a diagnostic dump (BSADIAGD/BSADIAGA)
Sysout Class	Sysout class to be used for the diagnostic dump (BSADIAGD/BSADIAGA)
Release Dump	<b>YES</b> The dump is automatically released after writing. <b>NO</b> The dump is released manually or when the STC is stopped.
B01LST BnnLST	If RFF programs don't use the same LST members as the STC, specify the suffixes of the LST members used by the RFF programs.

## Information on BQL definitions (Option R.5)

### Option R.5

Option **R.5** generates JCL for a batch job that collects information and writes a diagnostic report on the BQL definitions (tables, fields and keys) of a subsystem.

**Note:** To be able to use this option, the name of your BSA.ISPSLIB has to be defined under option **R.0**.

### Information on BQL Definitions

```

PEB4IN50 -----
Command ==> _____

Information on BQL Definitions                               Subsys-ID - B93P
                                                           Sysname  - BETA
Problem Number ==> 000-R000-0000

Ssid           ==> B93P   (Subsystem Id)

Press the ENTER key to generate the batch job.
Press the END key to return to the previous menu.

```

### Fields

Field	Description
Problem Number	Specify the problem number (if available) for which you are providing information; this number will be included in the diagnostic report
Ssid	Subsystem ID of the started task that is the object of the diagnostic report

## Information on load modules (Option R.L)

### Option R.L

Option **R.L** generates JCL for a batch job that collects information and writes a diagnostic report on Beta Systems load modules.

**Note:** To be able to use this option, the name of your BSA.ISPSLIB has to be defined under option **R.0**.

### Information on Beta load modules

```

PEB4MI02 -----
Command ==> _____

Beta Module Information                               Subsys-ID - B93P
                                                    Sysname  - BETA

Module Name or Mask      ==> BST*....

Search Destination       ==> STC...      (0)nline, (S)TC
Search LNKLST/LPA       ==> NO.         (Y)es, (N)o

Press the ENTER key to display the selected information.
Press the END key to return to the previous menu.
    
```

### Fields

Field	Description
Module Name or Mask	Name of the module (masks are allowed)
Search Destination	<p><b>STC</b>      Looking for matching modules in the library concatenation of the current STC (default)</p> <p><b>Online</b>    Looking for matching modules in the library concatenation of the current TSO user</p>
Search LNKLST/LPA	Specify YES to include LINKLIST and LPA libraries in the search; the default is NO

## Information on Beta SMP/E packages (Option R.P)

### Option R.P

You can use option **R.P** to display information on Beta Systems SMP/E packages. You can also display the contents of SMP/E packages and verify their correct installation.

### SMP/E packages

There are two kinds of SMP/E packages:

- User packages (package name starts with a **U**)
- Consolidated service packages (package name starts with an **X**)

### Information on Beta SMP/E packages

```

PEB4PI00 -----
Command ==> _____

Beta SMP/E Package Information                               Subsys-ID - B93P
                                                            Sysname  - BETA

Package Name or Mask   ==> *.....

Search Destination     ==> ONLINE      (O)nline, (S)TC, (V)DF
Search LNKLST/LPA      ==> NO.         (Y)es, (N)o
VDF Subsystem ID       ==> _____  SSID or mask

Press the ENTER key to display the selected information.
Press the END key to return to the previous menu.

```

**Fields**

<b>Field</b>	<b>Description</b>
Package Name or Mask	<p>Package name</p> <p>Masks are allowed. You can use ? (= any single character) in any position and * (= any sequence of characters) in trailing position. For example:</p> <p><b>U??61*</b> selects all user packages of V6R1  <b>X??61*</b> selects all service packages of V6R1</p>
Search Destination	<p>Specify where you want to look for SMP/E packages. By default, the information is retrieved from the started task of the current target subsystem (STC).</p> <p><b>Online</b>    Scanning the current TSO user session in the order of the user's library concatenation.</p> <p><b>STC</b>        Scanning the library concatenation of the started task.</p> <p><b>VDF</b>        Scanning the library concatenations of the load modules and the online components of the VDF started task; the request is sent to the VDF started task with the ssid specified in the <b>VDF Subsystem ID</b> field.</p> <p><b>Note:</b> Do not choose <b>Search Destination = Online</b> if you are in split screen with a different Beta product.</p>
Search LNKLIST/LPA	<p>YES includes the linklist and LPA libraries in the search; the default is NO.</p> <p><b>Warning:</b> Including the linklist and LPA libraries in the scanning is likely to take a considerable amount of time. It may also lead to security violations at some sites. YES will therefore lead to the display of an additional panel for manual confirmation.</p>
VDF Subsystem ID	<p>If Search Destination = VDF:</p> <p>Subsystem ID of the VDF started task whose libraries are to be scanned. You can specify a mask and select the desired system from the table of matching entries.</p>

**Status verification**

The status of load modules, panels, messages, and skeletons is checked if the search destination is **Online** or **VDF**. Only load modules are checked if the search destination is **STC**. PTFs of type SAMPLE and CLIST are never checked.

The contents of the selected user packages is verified automatically before they are displayed in the "Beta SMP/E Package Information" table. The contents of a service package is only verified when you select it with line command **S** in this table. Line command **B** displays the contents of a package without status verification.

**Beta SMP/E Package Information (packages)**

```

PEB4PI05 ----- Row 1 of 9
Command ==> _____ Scroll ==> PAGE

Beta SMP/E Package Information (STC) ( LEFT/RIGHT )

S - Select Package (with verification) B - Browse Package (content only)

Sel Prod Version Package Module PTF-Num Status Date Time
B93 V6R1M0 XPM61L02 B9361L02 PPM6410 NO CHECK 27.08.2015 14.47
B93 V6R1M0 UPM61112 B9361112 PPM6395 CHANGED 21.07.2015 15.48
B93 V6R1M0 UPM61111 B9361111 PPM6403 OK 13.08.2015 15.52
B93 V6R1M0 UPM61110 B9361110 PPM6336 CHANGED 02.06.2015 12.14
B93 V6R1M0 UPM61109 B9361109 PPM6315 CHANGED 02.06.2015 12.23
BSA V6R1M0 XBS61L02 BST61L02 PBS0296 NO CHECK 13.08.2015 15.09
BSA V6R1M0 UBS61207 BST61207 PBS0276 LMOD OK 27.07.2015 08.41
BSA V6R1M0 UBS61206 BST61206 PBS0252 CHANGED 04.06.2015 16.48
BSA V6R1M0 UBS61205 BST61205 PBS0248 OK 04.06.2015 15.54
***** BOTTOM OF DATA *****
    
```

**Columns**

Column	Description
Prod	Product code (Bnn or BSA)
Version	Product version
Package	Package name The name of a user package starts with a <b>U</b> . The name of a consolidated service package starts with an <b>X</b> .
Module	Name of descriptive package module
PTF-Num	PTF number of descriptive package module

Column	Description
Status	<p>Package status:</p> <p>OK Verification of the entire package was successful.</p> <p>LMOD OK Verification of the load modules in the package was successful. The package also contains other member types (PANEL, MSG, or SKEL), which were not checked because of the search destination (STC).</p> <p>REPLACED The package has been replaced by a higher level.</p> <p>MISMATCH Verification of at least one member in the package was not successful.</p> <p>NO CHECK The package was not verified because it is a consolidated service package (name starts with an <b>X</b>). Enter line command <b>S</b> to verify the package.</p> <p>CHANGED At least one verified member of the package has been superseded by a later PTF.</p>
Date/Time	Compile date/time of the descriptive package module
DDName/DSName	<p>DD name and dataset name where the descriptive package module was found</p> <p>Press PF11 to display this information. Values depend on the search destination.</p>

**Line commands**

The contents of a service package is verified when you select it with line command **S**. Line command **B** displays the contents without status verification.

**Beta SMP/E Package Information (modules)**

```

PEB4PI35 ----- Row 1 of 294
Command ==> _____ Scroll ==> PAGE

Beta SMP/E Package Information (STC) ( LEFT/RIGHT )

Package : XPM61L02 PTF-Num : PPM6410 Member : B9361L02 Status : CHANGED
Prod : B93 Version : V6R1M0 Date : 27.08.2015 Time : 14.47
DDName : STEPLIB DSName : QAB93.Q93V.LOAD

PTF-Num Member Type Status CurrPTF CurrDate CurrTime CurrMember
PBF6001 B23SSRT ASM LMOD OK PBF6001 27.01.2014 16.40 B23SSRT
PBF6008 B23DBQRY C LMOD OK PBF6008 09.05.2014 11.14 B23DBQRY
PBF6010 B23B00 C LMOD OK PBF6010 15.08.2014 11.42 B23B00
PBF6011 B23ONTKN C LMOD OK PBF6011 11.08.2014 15.40 B23ONTKN
PBF6013 B23ONLFF C LMOD OK PBF6013 15.08.2014 11.44 B23ONLFF
PBF6014 B23ONLF2 C LMOD OK PBF6014 15.08.2014 11.49 B23ONLF2
PBF6015 B23ONQY2 C LMOD OK PBF6015 15.08.2014 11.51 B23ONQY2
PBF6016 PE23DQ05 PANEL NO CHECK
PBF6017 PF23DQ05 PANEL NO CHECK
PBF6018 PG23DQ05 PANEL NO CHECK
PBF6019 PI23DQ05 PANEL NO CHECK
PBF6025 PI23NTEV PANEL NO CHECK
PBF6026 PI23NTE1 PANEL NO CHECK
PBF6037 B23SS610 ASM LMOD OK PBF6037 20.07.2015 16.32 B23SS610
    
```

**Columns**

<b>Column</b>	<b>Description</b>
PTF-Num	PTF number defined in package module
Member	Pertaining member defined in package module
Type	Member type defined in package module
Status	<p>PTF status:</p> <p>OK            Verification of member of type PANEL, MSG, or SKEL was successful.</p> <p>LMOD OK      Verification of load module was successful.</p> <p>MISMATCH    Information on member (PTF number or name of PANEL/MSG/SKEL) does not match the information on package contents.</p> <p>SUPERSEDED This PTF has been superseded by a later PTF.</p> <p>UNKNOWN     No check information found in currently active member (PANEL, MSG, or SKEL).</p> <p>NOT AV        No check information found in currently active member (load module).</p> <p>NO CHECK     Verification of member not possible because of search destination: PANEL, MSG, and SKEL are not checked when the search destination is STC.</p> <p>NOT FOUND    Member could not be found.</p> <p>SKIPPED      Verification of member not possible because of type: SAMPLE and CLIST are never checked.</p>
CurrPTF	PTF number found in currently active member
CurrDate/CurrTime	Compile date/time found in currently active member
CurrMember	Member name found in currently active member
DDName/DSName	<p>DD name and dataset name where the currently active member was found</p> <p>Press PF11 to display this information. Values depend on the search destination.</p>

## Overview of all Beta subsystems (Option R.O)

### Option R.O

Option **R.O** generates JCL for a batch job that provides information on all Beta Systems product subsystems defined to z/OS.

**Note:** To be able to use this option, the name of your BSA.ISPSLIB has to be defined under option **R.O**.

## **\_beta smf reports (Option S)**

<b>In this chapter</b>	<b>Topic</b>	<b>Page</b>
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## Introducing SPIN

### SPIN

SPIN stands for Single Point of Information and is about delivering the right information to the right people at the right time.

### SPIN reports

The Beta Systems products include sample SPIN reports for evaluating SMF records, for example, in order to monitor changes to the configuration of your system. `_beta` access sample reports evaluate selected IBM SMF records. Sample reports of other Beta Systems products evaluate the SMF records that are written by this product.

The product database also contains the descriptions of these SMF records. With the help of a set of ISPF panels, you can also create your own reports according to your needs. You can create new reports by modifying existing reports or you can create them from scratch using the assistant.

### `_beta smf`

SPIN reports contain instructions for the BSA utility `_beta smf`, which is a central building block of SPIN. `_beta smf` selects the data required for evaluation from the SMF records and prepares these data in the desired format.

For detailed information on `_beta smf`, see the *`_beta smf Manual`*.

### SMF data

The availability of suitable SMF data is a prerequisite for SPIN reporting.

Please contact your SMF administrators to make this data available to you in an SMF archive. `_beta smf` cannot process the data of the active SMF dataset or log stream.

**Important:** The writing of SMF records can be enabled or disabled for each subtype in the configuration settings of each Beta Systems product. Make sure that the writing of the SMF subtypes required for your evaluation is enabled in your Beta Systems product.

### Transferring report results to other platforms

The reports that are generated by `_beta smf` on the mainframe can be converted to UTF-8 and then transferred to other platforms for display.

You can use the EJM agent to transfer the output datasets to a PC and transform the generated report with the help of XSLT for display in a web browser.

**Example**

Following is an example of an audit report that was generated for \_beta doc|z:

Audit – Level 1 – Overview

---

### Description

This report provides a quick overview on the changes that were made to the system configuration. It shows the number of administrative modifications per LPAR and system. The displayed information is grouped according to sections and types of modification (added, changed, deleted). The summary shows accumulated values of the changes. The details view shows the sections and subsections where definitions have been changed. The following database tables have been evaluated for this report:  
 SYS, VCI, B93CGR, LGFSYS, GLN, GLR, LDD, LDR, LIX, SAA, SAS, DCR, DSO, DSU, LRI, LRN, PCR, PPN, SOP, MGN, MGR, MLR, MUS, APR, AVR

The report provides an ideal basis for balancing planned modifications and for detecting undesired modifications. If there are unplanned modifications, analyze the details of the system configuration to find out who carried out which changes and why.

Details view can be expanded and collapsed per system. LPAR and system names include links, which enable you to jump quickly between the summary and the details view.

#### Report

Provider	Beta Systems
Product	Beta 93
Package	Audit
Level	1
ID	PAUD1AA
Layout Version	6.1.1

---

#### Evaluated Range

Sysplex	INSTPLEX
From	1957-01-29 00:00:00.00
To	2014-01-24 23:59:59.99
First Hit	2014-01-01 08:02:01.20
Last Hit	2014-01-23 18:30:10.65

---

#### Run Environment

Job Name	B93#LGF
JES ID	J0006233
Started	01/24/2014 12:44:50
Mode	L
Return Code	00
RC Info	Ended_normally
Programm	BST16LGF
Version	V6R1 #TZZ

### Summary

LPAR	Subsystem	Section	Added	Changed	Deleted
BETA	C000	Total	1	5	3
		OUTPUT	1	0	0
		PROCESSING	0	3	0
		SYSTEM	0	2	3

### Details

[collapse all] [expand all]

Table	Added	Changed	Deleted
LPAR: BETA Subsystem: C000	1	5	3
OUTPUT	1	0	0
POST_PROCESSING_NOTES PPN	1	0	0
PROCESSING	0	3	0
LISTS_AND_REPORTS LDR	0	3	0
SYSTEM	0	2	3
LGF_SETTINGS LGFSYS	0	1	0
SYSTEM_SETTINGS SYS	0	1	0
USER_PROFILES VCI	0	0	3

## Terms and concepts

### Before you begin

Option S - SMF of the "Service Manager Selection Menu" serves as a central access point to panels and data related to \_beta smf and SPIN reporting.

Before you start working with these panels, you should be familiar with the terms and concepts described in this section.

### \_beta smf

\_beta smf is a very efficient and versatile tool for processing SMF data in the IBM z/OS mainframe environment. \_beta smf selects the data required for your evaluations and prepares these data in the desired format, for example, CSV or XML.

For detailed information on \_beta smf, see the *\_beta smf Manual*.

### SMF system options

The SMF system options record contains product-related settings that are required for the generation of \_beta smf reports. These settings include the name of the \_beta smf input file, the SMF record number of the product, and JCL parameters for output.

### SMF report definitions

An SMF report definition in the database includes metadata (name, ID, etc.), JCL, and control statements for \_beta smf. For ease of reading, the term JCL will be used in the following to mean both the JCL with the \_beta smf control statements.

Each report that is stored in the database is identified by a unique name and a unique report ID:

- The maximum length of the report name is 32 digits.
- The exact length of a report ID is 7 digits. Report IDs of user-defined reports (type **Cust**) must start with the character **A**, **B**, **C** or **D**. Report IDs with the initial characters **E** through **Z** are reserved for reports of type **Base**.

A report name and a report ID are both required.

## Variables

The JCL of SPIN reports typically contains variables that reference information defined in the SMF system options (**S.1**).

You can store JCL in the database with variables preserved or with variables resolved. Storing the JCL with variables preserved is recommended. It is also possible to store both versions in the database if you are using different names and IDs.

Variables must be resolved before you can submit the JCL to run `_beta smf`. If JCL is stored on the database with variables included, you can use the line command **X** in the "Display SMF Report Definitions" table to resolve them. If you want to create JCL for new reports with variables resolved, use the primary command EXE instead of GEN when you create the report.

SMF skeletons can also include variables, which are resolved by `_beta smf` when you run the report job.

## Report types

The sample reports distributed by Beta Systems have the report type **Base**. Reports of this type cannot be deleted or modified.

User-defined reports have the report type **Cust**. There are two ways of creating user-defined reports:

- You can create a new report on the basis of an existing report (type **Base** or **Cust**) under option **S.3**. Make a copy of a suitable report and then apply your modifications.
- You can create a new report from scratch under option **S.2**. Select the fields that you need from the table displayed for the subtype you want to evaluate and specify output format and filter criteria as needed.

A report of the type **Base** cannot be modified by you, but you can create a new report of the type **Cust** by copying the type **Base** report, and then modify your copy.

## Panel-assisted report creation

Option **S.2** includes a set of panels that enable you to create new reports based on the SMF record descriptions in the database. You can select the fields you want to include in your reports from displayed tables and specify output instructions and/or filter criteria as needed. The assistant will generate syntactically correct `_beta smf` JCL for you based on your instructions.

Please note that the panels of the assistant cover only a subset of the functional range of `_beta smf`. But you can always modify the JCL generated by the assistant if a `_beta smf` function is not covered by the panels. For detailed information on the JCL required by `_beta smf`, see the *\_beta smf Manual*.

### **SMF skeletons**

SMF skeletons are used by \_beta smf for outputting formatted reports. Skeletons typically contain header and trailer information for formatted output (for example, XML instructions) and additional text blocks.

SMF skeletons can include variables which are resolved by \_beta smf when you run the report job.

## Selection Menu of \_beta smf

### Option S - SMF

Option S - SMF of the "Service Manager Selection Menu" serves as a central access point to the panels related to \_beta smf.

**Note:** This option cannot be used under VDF, but requires TSO.

### Selection Menu of beta smf

```

PEB6LGF0 -----
Option ==> _____

Selection Menu of beta smf                               Subsys-ID - B93P
                                                         Sysname  - B93PROD

 1 SYSTEM      - Display/Change System Options
 2 GENERATE    - Generate Reports
 3 REPORTS     - Display/Change Reports
 4 SKELETONS   - Display/Change Report Skeletons

 S SMF        - Display SMF Statistics Information

Select one of the above options. Press END to return to the previous menu.

```

### Options

Option	Description
1 SYSTEM	Display and modify product-related settings, which are required for the generation of _beta smf reports <b>Important:</b> Check and edit the SMF system options record that is inserted into the database during update or installation before you start working with _beta smf reports.
2 GENERATE	Generate _beta smf reports based on the SMF record field descriptions, which are available in the product database
3 REPORTS	Display and modify _beta smf reports
4 SKELETONS	Display and modify the skeletons that are used for _beta smf reports
S SMF	Display SMF statistics information of the subsystem (available only if supported by the product)

# \_beta smf system options (Option S.1)

## Overview

The system options record contains product-related settings that are required for the generation of \_beta smf reports. These settings include the name of the \_beta smf input file, the SMF record number of the product, and JCL parameters for output.

Most of the settings that you define under this options correspond to datasets and control parameters used by \_beta smf. For detailed information on datasets and control parameters, see the *\_beta smf Manual*.

**Important:** Check and edit the system options record that is inserted into the database during update or installation before you start working with \_beta smf reports.

## Navigation

### Option S.1

Use the selection panel to select the record for your system.

## System Options Record panel

```

PEB6LS20 ----- Page 1 of 4
Command ==> _____

Update System Options Record      Last Update: B93ADM  07.01.2019 13:22:53

Product           : B93
Subsystem ID      : B93P
Net ID            : DEBETA01

SMF Record Number   ==> 193

License File Name   ==> BETA.LICXFILE.....

Steplib Library 1   ==> BSA.LOAD_____
Library 2          ==> _____
Library 3          ==> _____
Library 4          ==> _____

Press ENTER to update the definition. Press DOWN to display the next page.
Press END to return to the previous panel.

```

## Fields

Field	Description
Product	Beta product identifier ( <i>Bnn</i> )
Subsystem ID	Max. 4-digit subsystem ID
Net ID	VTAM net ID
SMF Record Number	3-digit number of the SMF record type written by the Beta Systems product ( <i>Bnn_SMFREC</i> )
License File Name	Dataset name of the license file
Steplib Library 1-4	Dataset names of up to 4 load module libraries
Input Dataset Name	Name of the dataset which contains the input data of the _beta smf (SMF archive)

Field	Description
Skeleton Dataset Name	Name of the library that contains the skeleton and text members to be used for the LGFLOG output
Skeleton Member Name Text Member Name	Name of the skeleton member and the text member
LGFLOG Output Format	<p>Controls the format of the data written to DD LGFLOG (_beta smf parameter +LGFLOGFMT)</p> <p><b>STD</b> Standard (Default) Converted field values are concatenated without delimiter. Leading and trailing blanks are preserved.</p> <p><b>CSV</b> Data is in CSV format (character-separated values): Like STD, but the fields of each record are separated using a delimiter. The default is a semicolon ( ; ), but you can specify a different character using +DELIMITER.</p> <p><b>XML</b> Data is in XML format</p>
UTF-8 Encoding	Specify YES if you want to cause conversion of LGFLOG output from EBCDIC to UTF-8 (_beta smf parameter +ENCODING)
Sysout Class	Default sysout class to be used for the LGFLOG output
Dataset Name Disposition etc.	<p>Default name of dataset to be used for the LGFLOG with default allocation attributes for new datasets</p> <p>Specify Volume = SMS and Unit = ##NONE## for datasets managed by SMS. You can use the variable &amp;LGFRPIDC in the dataset name, which will be substituted with the ID of your report.</p>
Date Mask	<p>Controls the date format used in _beta smf listings (_beta smf parameter +DATEFORMAT)</p> <p>The following date formats are supported:</p> <p>YYYY-MM-DD MM/DD/YYYY or MM/DD/YY DD/MM/YYYY or MM/DD/YY DD.MM.YYYY or DD.MM.YY YYYY.DDD (Default) or YY.DDD</p>

Field	Description
Time Mask	Controls how many digits are output when converting time fields (_beta smf parameter +TIMEMASK)  <b>blank</b> hh:mm:ss.ff <b>HMS</b> hh:mm:ss <b>HM</b> hh:mm <b>H</b> hh
Job Card	Job card of up to four lines  The variables &ZACCTNUM (account number at logon time) and &ZUSER (user ID) are replaced during variable substitution. &SYSUID is passed to JES.

**Defaults for Generate LGF Report panel**

Some of the values defined in the system options record serve only as defaults for the following panel, which is displayed each time you generate a new report under option **S.2**:

```

PEB6LG99 -----
Command ==> _____

Generate Report

Vendor   : BETA      Subtype  : 025
Product  : B93      Title    : SPOOL ACCESS RECORD

LGFLOG Output Format ==> XML (S)td, (C)sv, (X)m1
UTF-8 Encoding ==> YES (Y)es, (N)o
LGFLOG Output JCL Parameter
Sysout Class ==> *

Dataset Name ==> TRASH.BETA93.V6R1M0.LGFLOG_____
Disposition ==> SHR (S)hr, (N)ew, (M)od, (O)ld
Space Requirement
Unit     ==> CYL      SMS Information
StorClass ==> _____
Volume   ==> SMS_____ Primary ==> 1_____ MgmtClass ==> _____
Unit     ==> ##NONE## Second. ==> 1_____ DataClass ==> _____

Press the ENTER key to confirm the data or to update them temporarily.
Press the END key to return to the previous panel.

```

Accept or modify the displayed values as needed for your actual report (see "Generating a new user-defined report" on page 165).

## Displaying record definitions and control parameters (Option S.2)

### Overview

The product database includes information on the structure of the SMF record subtypes written by this product. You can use option **S.2** to display information on each subtype. You can display the field structure and you can display the corresponding control parameters used in \_beta smf reports. Option **S.2** also enables you to create your own report definitions based on the record information of each subtype.

**Note:** \_beta access displays structures of selected IBM SMF records under this option.

### Navigation

To display which SMF record information is available in the database:

- Choose option **S.2** and specify your selection criteria:
    - For Beta Systems products: Vendor = Beta, Product = Bnn, Subtype = nnn (or masks)
    - For other vendors, e.g. IBM: Vendor = IBM, Record Type = nnn
- All matching entries are displayed in the Record Definitions table.

### Record Definitions table

```

PEB6LG05 ----- Row          1 of 16
Command ==> _____ Scroll ==> PAGE

Display Record Definitions

  S - Select      R - Reports      C - Control statements

Sel  Vendor  Prod SubT Title
-----
BETA  B93  000 LIST READ-IN RECORD
BETA  B93  001 BUNDLE/PRINT RECORD
BETA  B93  002 BUNDLE RECORD
BETA  B93  003 RECIPIENT PACKET RECORD
BETA  B93  005 ONLINE CLEANUP OF LIST/REPORT GENERATION RECORD
BETA  B93  007 LIST/REPORT SPECIFIC MAILING INFO RECORD
BETA  B93  008 PRINT PACKET MAILING INFO RECORD
BETA  B93  010 REPORT CREATION RECORD
BETA  B93  021 LIST/REPORT SELECTION RECORD
BETA  B93  022 MODIFICATION OF GENERATION RECORD (LGR/RGR)
BETA  B93  025 SPOOL ACCESS RECORD
BETA  B93  040 LIST/REPORT ARCHIVING RECORD
BETA  B93  041 LIST/REPORT RELOADING RECORD
BETA  B93  042 DELETION OF LIST/REPORT GENERATION RECORD
BETA  B93  049 BATCH UTILITY RECORD
BETA  B93  050 BWE LOGON/LOGOFF RECORD

```

### Line commands

The following line commands are available in this panel:

- S** Displays the field descriptions of the corresponding subtype or type (enables you to select fields when you generate your own reports (see page 165))
- R** Displays all reports available for this type or subtype in the Report Definitions table (see "Displaying and changing \_beta smf reports (Option S.3)" on page 172)
- C** Displays selected \_beta smf control parameters for the corresponding subtype or type (information only)

**Control Statements**

Following are the control statements displayed when you enter line command **C** in front of the \_beta doc|z subtype 7. For information on how to use these control parameters, see the *\_beta smf Manual*.

```

PEB6LC05 ----- Row          1 of    10
Command ==> _____ Scroll ==> PAGE

Display Control Statements                ( LEFT/RIGHT )

Vendor   : BETA      Subtype : 007
Product  : B93       Title   : LIST/REPORT SPECIFIC MAILING INFO RECORD

S - Select

Sel Control Statement                      ....
+AMOUNTXLAT=ZERO
+XLAT=S007ATTTYP =A*                      : ATTACHMENT
+XLAT=S007ATTTYP =I*                      : INFORMATION_TEXT
+XLAT=S007ATTTYP =L*                      : LINK
+XLAT=S007ATTTYP =S*                      : SECURE_LINK
+XLAT=S007ATTTYP =Z*                      : ZIP_FILE
+AMOUNTRELT=ZERO
+RELTYPE=007,001,300/*B /*B /-C /TO /TO__MAIL_ADDRESS___/ /
+RELTYPE=007,002,300/*B /*B /-C /CC /CC__MAIL_ADDRESS___/ /
+RELTYPE=007,003,300/*B /*B /-C /BCC/BCC_MAIL_ADDRESS___/ /
***** BOTTOM OF DATA *****

```

**Line commands**

The following line commands are available in this panel:

- S** Displays the entire control statement (use for long statements if display is truncated in the table)

# Generating a new user-defined report

## Overview

This section describes how you can use option **S.2** to generate new reports. Please note that the panel-assisted creation of \_beta smf reports provides support for only a basic subset of the \_beta smf functions, but you can always modify the generated JCL and LGF control statements if you need to make use of more advanced functions.

In this example, we will generate a new report for the subtype 25 record (spool access) of \_beta doc|z.

## Procedure

To generate a new user-defined report:

1. In the "Display Record Definitions" panel, enter line command **S** in front of the subtype that you want to generate the report for.

This will display all fields of this record in a table (field names with ### instead of the subtype number indicate a record header field):

```

PEB6LG35 ----- Row          15 of      43
Command ==> _____ Scroll ==> PAGE

Display Record Definition                               Page 1 of 3
                                                         ( LEFT/RIGHT )

Vendor   : BETA           Subtype : 025
Product  : B93           Title   : SPOOL ACCESS RECORD

Prim. Commands: GEN (erate)  EXE (cute)  RES (et)  CLE (ar)
Line Commands: S - Select    F - Filter  US - Undo Select  UF - Undo Filter

Sel  Field          Req Fmt Title
S###SYSPLEX        C   SYSPLEX NAME
S###SYSNAME        C   SYSTEM NAME
S###SYSCLONE       C   SYSCLONE NAME
S###SMFID          C   SMF ID
S###CPUID          C   CPU ID
S025USER          C   USER ID
S025RQST          C   REQUESTOR
S025FORM          C   FORM NAME
S025EXT           C   EXTENSION NAME
S025REPORT        C   REPORT NAME
S025TITLE         C   LIST/REPORT TITLE
S025JOBNM         C   JOB NAME

```

2. Scroll to the first field you want to include in your report and enter line command **S** in front of the field.

This will select the field for output in your report. For certain data types of fields, you will be requested to provide formatting instructions in an additional panel before the field is selected (see "Additional output format instructions" on page 168).

- Repeat this for the other fields you want to select for your report. Optionally, you can also define filters for one or more fields using line command **F**. You will be requested to provide filtering instructions in an additional panel when defining a filter (see "Additional filter instructions" on page 169).

Your current requests (fields selected for output (line command **S**) and fields used in filters (line command **F**)) are shown in the table in column **Req**. The following panel shows four fields that are selected, one of them with a filter.

```

PEB6LG35 ----- Row      15 of      43
Command ==> _____ Scroll ==> PAGE

Display Record Definition                               Page 1 of 3
                                                         ( LEFT/RIGHT )

Vendor   : BETA           Subtype : 025
Product  : B93           Title   : SPOOL ACCESS RECORD

Prim. Commands: GEN (erate)  EXE (cute)  RES (et)  CLE (ar)
Line Commands: S - Select    F - Filter  US - Undo Select  UF - Undo Filter

Sel  Field          Req Fmt Title
----  -----
S###SYSPLEX          C  SYSPLEX NAME
S###SYSNAME          C  SYSTEM NAME
S###SYSCLONE         C  SYSCLONE NAME
S###SMFID            C  SMF ID
S###CPUID           C  CPU ID
S  S025USER          S F C  USER ID
S025RQUST            C  REQUESTOR
S  S025FORM          S  C  FORM NAME
S  S025EXT           S  C  EXTENSION NAME
S  S025REPORT        S  C  REPORT NAME
S025TITLE            C  LIST/REPORT TITLE
S025JOBNM            C  JOB NAME

```

- After you have selected all your fields and defined all your filters, enter one of the following primary commands to trigger the creation of JCL for your report:
  - GEN if you want variables to be preserved
  - EXE if you want variables to be substituted

This will display the "Generate Report" panel (see page 171).

- 5. Accept or overwrite the displayed values (defaults from **S.1**) in this panel and press ENTER.

This generates the JCL for your report and displays it in the ISPF editor.

```

PEB6LG20 ----- Columns 001 072
Command ==> _____ Scroll ==> CSR_
Vendor : BETA
Save on database: DBCREate - Create LGF report      Product : B93
                  DBREPlace - Replace LGF report    Subtype : 025
-----
***** ***** Top of Data *****
000001 &LGFJCR1
000002 /* +---1---+---2---+---3---+---4---+---5---+---6---+---7-
000003 /* REPORT NAME : &LGFRPNAM
000004 /* REPORT ID   : &LGFRPIDC
000005 /* REPORT TITLE: &LGFITILE
000006 /* GENERATED  : ON &ZDATE AT &ZTIME BY &ZUSER
000007 /* +---1---+---2---+---3---+---4---+---5---+---6-- SEB6LG0G
000008 //&LGFRPIDC EXEC PGM=BST16LGF,REGION=0M,PARM=(L)
000009 //STEPLIB DD DISP=SHR,
000010 //          DSN=&LGFLLIB1
000011 //          DD DISP=SHR,
000012 //          DSN=&LGFLLIB2
000013 //LGFLICX DD DISP=SHR,
000014 //          DSN=&LGFLICXF
000015 //LGFINSMF DD DISP=SHR,
000016 //          DSN=&LGFINDSN,
000017 //          DCB=BUFNO=250

```

- 6. Check and if necessary modify the JCL in the ISPF editor.
- 7. Follow instructions to save your report on the database.

**Saving a report**

- If you want to create a **new report**:
  1. Enter the primary command DBCREATE (short form: DBCRE) to display the "Create Report Definition" panel.
  2. Specify the name and ID of your report (both required) and a title (optional) in the panel and press ENTER to save the report.

```

PEB6LR99 -----
Command ==> _____

Create Report Definition

Vendor           : BETA
Product          : B93
Subtype          : 025

Report Type      : CUST
Report Name      ==> MY_B93_SUBTYPE_025.....
Report ID        ==> AREJS25

Title ==> My report for B93 subtype 25 (Spool Access)_____

For Non-Beta Vendor

Record Type      : ###

Press the ENTER key to insert the definition.
Press the END key to abort the processing.

```

**Result:** You are returned to the "Display Record Definition" panel. The message **Insert successful** in the upper right corner of this panel indicates that your report has been saved. You can now continue to work with your existing field and filter requests or press PF3 to leave this panel if you are finished.

- If you want to overwrite an **existing report**:
  1. Enter the primary command DBREPLACE (short form: DBREP) to display the "Replace Report Definition" panel.
  2. Type \* (or another mask) in the **Report Name** and the **Report ID** field and press ENTER to display a table with your existing reports for this product/subtype combination.
  3. Enter the line command **S** in front of the appropriate report to select it.  
This will return you to the "Replace Report Definition" panel.
  4. Change the title of the report if necessary and press ENTER to save the report.

**Result:** You are returned to the "Display Record Definition" panel. The message **Update successful** in the upper right corner of this panel indicates that your report has been saved. You can now continue to work with your existing field and filter requests or press PF3 to leave this panel if you are finished.

**Additional output format instructions**

An additional panel requesting output format instructions is displayed when you select fields of certain data types. Press ENTER to use default instructions, or type the desired value in each field and then press ENTER. If you leave the panel with F3, the field will not be selected.

If the data type of the field is **D (date)**, specify the output format of the date value in the displayed panel:

```

PEB6LG98 -----
Command ==> _____

Select Record Field

Field Name      : S###DTE
Field Format    : D          date

Additional Output Format Instruction

Date Output    ==> _          blank - standard output
                                   W   - week numberdate in format yyyy-Wnn
                                   D   - day of the week like MON, TUE, etc.

Press the ENTER key to execute your request.
Press the END key to return to the previous panel.

```

If the data type of the field is **B (binary)**, specify the output format of the field value in the displayed panel; type the appropriate value in the Accumulate field if you want \_beta smf to accumulate the values of this field when you run your report.

```

PEB6LG97 -----
Command ==> _____

Select Record Field

Field Name      : S###STY
Field Format     : B          binary

Additional Output Format Instruction
Binary Output ==> _          blank - standard output
                               0 - suppress leading zeros
Accumulate      ==> _          blank - no accumulation
                               + - default
                               K - kilo
                               M - mega
                               G - giga
                               T - tera

Press the ENTER key to execute your request.
Press the END key to return to the previous panel.

```

A similar panel will be displayed for the data types **M** and **R** (microseconds with and without mask), **P** (packed), **K** (1024 units) and **N** (100th seconds).

**Additional filter instructions**

An additional panel requesting filter instructions is displayed when you select fields for filtering. You can specify filters the data types binary and character and for fields with translation instructions.

If the data type of the field is **B (binary)**, the displayed panel allows you to specify a single value or a value range as filter criterion.

```

PEB6LG88 -----
Command ==> _____

Select Record Field for Filtering

Field Name      : S000PAGES
Field Format     : B          binary
Field Length    : 00004      Output Length   : 00010

NUMBER OF PAGES

Field   Op  Value/Mask          (*) operator: EQ, NE, LT, GT, LE, GE
PAGES  ge  1000.....
        le  5000_____

Press the ENTER key to execute your request.
Press the END key to return to the previous panel.

```

The corresponding filter instructions in the generated JCL will look like this:

```

*---+---1---+---2---+---3---+---4---+
+SFILTER=PAGES +0000001000
+SFILTER=PAGES -0000005000
+ANDFILTER=SPAGES

```

If the data type of the field is **B (binary)**, the displayed panel allows you to specify up to three filter criteria (OR-connection).

```

PEB6LG89 -----
Command ==> _____

Select Record Field for Filtering

Field Name      : S025USER
Field Format     : C           character
Field Length    : 00008      Output Length   : 00008

USER ID

Field   Op  Value/Mask          (*) operator: EQ, NE
USER   eq  b93adm1.....
       eq  b93adm2_____
       _  _____

Press the ENTER key to execute your request.
Press the END key to return to the previous panel.

```

The corresponding filter instruction in the generated JCL will look like this:

```

*---+---1---+---2---+---3---+---4---+
+SFILTER=USER      =B93ADM1*
+SFILTER=USER      =B93ADM2*

```

**Fields with +XLAT-statements**

If the database includes translation instructions for a field (+XLAT statements), the displayed panel shows a list of the translated values. Specify an operator (EQ (equal) and NE (not equal)) to selected a filter criterion from the displayed list.

```

PEB6LG85 ----- Row 1 of 9
Command ==> _____

Select Record Field for Filtering

Field Name      : S000ATTR
Field Format     : C           character
Field Length    : 00001      Output Length   : 00001

ATTRIBUTE BYTE

Press the ENTER key to execute your request.
Press the END key to return to the previous panel.

Field   Op  Value          (*) operator: EQ, NE
ATTR   _  CICS
       _  EXTENDED_INPUT
       _  FFSI
       eq  IMPORT
       eq  AUTO_IMPORT
       _  JES
       _  RELOAD
       _  SUBSYS
       _  BETA39

```

The corresponding filter instructions in the generated report will look like this:

```

*---+---1---+---2---+---3---+---4---+
+SFILTER=ATTR      =IMPORT
+SFILTER=ATTR      =AUTO_IMPORT

```

**Filtering fields with output format instructions**

Filter operations are carried out as string comparisons on converted field content when you run a \_beta smf report. The value of the filter instruction will be compared as a string to the final value of the field as it has been formatted/translated for output.

Please note that the assistant ignores special output format instructions like the suppression of leading zeros when you add filtering instructions. You will have to edit the generated JCL manually to make your filter work in this special case.

**Controlling LGFLOG output**

\_beta smf writes the converted SMF data to DD LGFLOG. The values in the "Generate Report" panel control the format and destination of this output.

```

PEB6LG99 -----
Command ==> _____

Generate Report

Vendor   : BETA      Subtype  : 025
Product  : B93      Title    : SPOOL ACCESS RECORD

LGFLOG Output Format ==> XML (S)td, (C)sv, (X)m1
  UTF-8 Encoding ==> YES (Y)es, (N)o
LGFLOG Output JCL Parameter
Sysout Class ==> *

Dataset Name ==> TRASH.BETA93.V6R1M0.LGFLOG
Disposition ==> SHR      (S)hr, (N)ew, (M)od, (O)ld
                               Space Requirement   SMS Information
                               Unit ==> CYL         StorClass ==> _____
Volume      ==> SMS_____ Primary ==> 1_____ MgmtClass ==> _____
Unit        ==> ##NONE## Second. ==> 1_____ DataClass ==> _____

Press the ENTER key to confirm the data or to update them temporarily.
Press the END key to return to the previous panel.

```

Accept or overwrite the values displayed in this panel:

- **LGFLOG Output Format** controls the format of LGFLOG output (corresponds to \_beta smf parameter +LGFLOGFMT).
- LGFLOG output is encoded in EBCDIC by default. Specifying **Yes** in the **UTF-8 Encoding** field causes the inclusion of a conversion step in the JCL to convert data to UTF-8. Use binary transfer when moving a converted dataset from the z/OS mainframe to another platform.
- **Sysout Class** specifies the class to be used for LGFLOG output. Leave the **Sysout Class** field blank if LGFLOG output is to be written to a dataset, and specify the allocation attributes of the dataset in the appropriate fields.

## Displaying and changing \_beta smf reports (Option S.3)

**Option S.3** provides access to the reports that are stored in the database. This includes the sample reports that are distributed with a product (type **Base**) and your own reports (type **Cust**) that you have created under option **S.3** or **S.2**.

**Navigation** Option **S.3**  
Use the selection panel to select the available reports.

### Display Report Definitions table

```

PEB6LR05 ----- Row          1 of      18
Command ==> _____ Scroll ==> PAGE

Display Report Definitions                               Page 1 of 3
                                                         ( LEFT/RIGHT )
  S - Select      I - Insert      C - Copy      D - Delete      X - eXecute

Sel Vendor  Prod  SubT  RepT  Report Name                                Report ID
BETA      B93   000   BASE  S000_SAMPLE                            PLGC0AA
BETA      B93   001   BASE  S001_SAMPLE                            PLGC0BA
BETA      B93   002   BASE  S002_SAMPLE                            PLGC0CA
BETA      B93   003   BASE  S003_SAMPLE                            PLGC0DA
BETA      B93   005   BASE  S005_SAMPLE                            PLGC0EA
BETA      B93   007   BASE  S007_SAMPLE                            PLGC0FA
BETA      B93   008   BASE  S008_SAMPLE                            PLGC0GA
BETA      B93   010   BASE  S010_SAMPLE                            PLGC0HA
BETA      B93   021   BASE  S021_SAMPLE                            PLGC0IA
BETA      B93   022   BASE  S022_SAMPLE                            PLGC0JA
BETA      B93   025   BASE  S025_SAMPLE                            PLGC0KA
BETA      B93   040   BASE  S040_SAMPLE                            PLGC0LA
BETA      B93   041   BASE  S041_SAMPLE                            PLGC0MA
BETA      B93   042   BASE  S042_SAMPLE                            PLGC0NA
BETA      B93   049   BASE  S049_SAMPLE                            PLGC0OA
BETA      B93   050   BASE  S050_SAMPLE                            PLGC0PA

```

**Note:** You can also display this table for an individual subtype by entering line command **R** in front of this subtype under option **S.2**.

**Line commands** The following line commands are available in this panel:

- S** Selects the report for:
  - Update or display in the ISPF editor (if type **Cust**)
  - Display in the ISPF browser (if type **Base**)
- C** Creates a new report (Copy)
- I** Creates a new report (Insert, for example, to insert available report members into the database)
- D** Deletes a report
- X** Causes variable substitution and displays the report in the ISPF editor (changes will **not** be saved to the database)

### Modifying a report

To modify an existing report definition of type **Cust**:

1. Enter line command **S** in front of the report.

This will display the "Update Report" panel, where you can change the title of the report.

```

PEB6LR10 -----
Command ==> _____

Update Report                               Last Update: REINH2  01/29/2014 10:53:09

Vendor           : BETA      (B)eta,(I)BM
Product          : B93      Bnn (nn - Beta product number)
Subtype          : 000      Number

Report Type      : CUST
Report Name      : REJ_CONVERT
Report ID        : AREJUTF

Title ==> UTF-8-TEST_____

For Non-Beta Vendor

Record Type      : ###

Press the ENTER key to update the definition and/or for the next page.
Press the END key to return to the previous panel.

```

2. Type the new title if you want to change it. Press ENTER to continue.

This will display the JCL of the report in the ISPF editor.

3. Edit the JCL and control statements as needed. Press PF3 to leave the ISPF editor and save the modified report on the database.

This will return you to the "Display Report Definitions" panel. The message "Update successful" in the upper right corner of this panel indicates that your changes have been saved.

#### Notes

- If you want to leave the ISPF editor without saving your changes, use CANCEL instead of PF3. If you have saved the temporary dataset in the ISPF editor, there is no way of preventing the last saved changes from being stored on the database.
- Entering line command **S** in front of a report of type **Base** will display the JCL and control statements of the report in the ISPF editor, but your potential changes will not be stored in the database.

## \_beta smf skeletons (Option S.4)

### Overview

\_beta smf works with a set of skeletons when generating certain types of formatted report output.

Each skeleton includes individual variables and/or variable data sections, which \_beta smf replaces with actual data when you are running the report.

**Note:** You must have update access to the library to be able to access the skeletons using this option.

### Select Report Skeletons

```
PEB6LL00 -----  
Command ==> _____  
  
Select Report Skeletons  
  
ISPF Library:  
Project   ==> BETA93__  
Group    ==> V6R1M0__  
Type     ==> LGFSLIB_  
Member   ==> _____ (Blank or pattern for member selection list)  
  
Other Partitioned or Sequential Dataset:  
Dataset Name ==> _____  
  
Press the ENTER key to display the selected members.  
Press the END key to return to the previous menu.
```

You can use the "Select Report Skeletons" panel like any standard ISPF Library selection panel for selecting and editing your skeleton members.

### Further information

For information on which skeletons are used by \_beta smf, see the description of the following DD statements in the *\_beta smf Manual*:

- LGFSLOG
- LGFTLOG
- LGFSPACK
- LGFTPACK
- LGFSLOGX
- LGFTLOGX

## Databases, dictionaries, queries (Option D)

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## Introduction

### Working with databases

Option **D** of the "Service Manager Selection Menu" enables you to display the databases of the selected subsystem ID.

- Communication is offered with the help of Beta Query Language (BQL).
- Beta Systems product databases use internally formatted VSAM ESDS datasets to store data. All descriptions of fields, tables, and keys are stored in the database definition file (DD *BnnDEF*).
- The connections between the logical file and the physical dataset names are defined in the database description.
- A field is defined by its name, its type (character, integer, small integer, byte or flag) and its internal and external length.
- A table is a collection of fields which are assigned to a logical file name and if necessary to a logical key file name.
- A table may possess one or more keys to accelerate access to the individual records in the table.

### Example: VDF databases

The following databases are described as examples of databases necessary for the VTAM Dialog Facility (VDF):

<i>hlq.DEF</i>	The database definition file contains all the definitions of the files, tables, and records on the database.
<i>hlq.VDF</i>	System parameters and user profiles are stored in this database.
<i>hlq.VDF.KEY</i>	The keys used by the VDF database are stored in this database.
<i>hlq.SYNC</i>	The synchronization file is used to control access to the databases.

**Database Selection Menu** Select option D from the "Service Manager Selection Menu" to call the "Database Selection Menu". This is the starting point for working with databases:

```
PEB5DAS0 -----  
Option ==> _____  
  
Database Selection Menu                               Subsys-ID - F09A  
                                                    Sysname  - BETA  
  
  1 DATABASE    -  Display or Update System Database  
  2 DICTIONARY  -  Display Dictionary Information  
  3 STATISTICS  -  Statistics of Database Usage  
  Q QUERY       -  Database Query  
  
Select one of the above options. Press END to return to the previous menu.
```

## Displaying databases (Option D.1)

### Procedure

Select option **1** from the "Database Selection Menu" to display a list of databases for the selected subsystem ID. The "Data Set Definition Selection" panel is called:

```

PEB5DD10 ----- Row 1 of 4
Command ==> _____ Scroll ==> PAGE

Dataset Definition Selection Page 1 of 3
( LEFT/RIGHT )
Databases for SSID F09A SYSVAR Support : INACTIVE

I - Insert Model F - Format Model
S - Select Dataset Definition or Update Model or Status D - Delete Model or Empty
X - Database Extension R - Reset Model (ERR)
RX - Reset Database Extension (FEX)

Sel Dataset Name X Total Free % Sta
BETA09.DB.DEF 00000180 00000089 050 OPN
BETA09.DB.SYNC 00000180 00000177 001 OPN
BETA09.DB.VDF 00001800 00001716 004 OPN
BETA09.DB.VDF.KEY 00000900 00000836 007 OPN
***** Bottom of data *****
    
```

### Columns

Column	Description
Data Set Name	Names of the datasets. All datasets are VSAM/ESDS organized.
X	<p><b>Y</b> in this column indicates the presence of database extensions based on concatenated datasets (EXT01, EXT02 etc.). The current BSA version provides only limited support for this type. While it is possible to continue to work with the existing database, the current BSA version does not support any further extension.</p> <p><b>Important:</b> It is no longer meaningful to work with concatenated VSAM datasets because BSA (as of V4) supports the so-called "extended VSAM datasets", which enable a total maximum size of 28 GB for BQL databases. If you are still working with concatenated datasets, include the task of merging these datasets when planning your database maintenance.</p>
Total	Total number of 4K blocks allocated.
Free	Total number of free 4K blocks.
%	Percentage of 4K blocks currently in use.

Column	Description
Sta	<p>Status of the database component:</p> <p><b>USE</b> (in use): The dataset is in use.</p> <p><b>ERR</b> (error): An error occurred.</p> <p><b>FEX</b>: Format extend has ended in error.</p> <p><b>MOD</b> (model): Not available for VDF.</p> <p><b>ONL</b> (read only): The dataset can only be read.</p> <p><b>FMT</b> (format): Not available for VDF.</p> <p><b>FUL</b> (full): The dataset is full.</p> <p><b>EMP</b> (empty): The dataset is empty.</p> <p><b>OPN</b> (open): The dataset is active.</p>

**Line commands**

- S** Select a dataset to display definitions
- I, F, D, R** Insert model, format model, delete model or empty, reset model in error.  
These line commands are explained in the Beta product documentation when spool files, index files or cache files are available for the product.
- X** starts the dynamic database extension manually. This command is only available for dynamic databases. This means that the database must fulfill the following conditions:
- Type is DA (DATA) or KE (KEY)
  - Secondary space has been defined or volume candidates are available or both
- Maximum size:** BQL databases support a total maximum size of 4 GB for a standard VSAM dataset and of 28 GB for an extended VSAM dataset. Extended VSAM datasets are defined via the SMS data class.
- RX** Reset FEX status (Format EXtend error)

## Displaying dataset information

### Overview

Under option **D.1**, line command **S** in front of a dynamic database provides the same information as the IDCAMS LISTCAT command. If the selected database does not support dynamic extension (e.g. a SPOOL database), the amount of information provided is reduced. The examples below show the results for a dynamic database.

### Procedure

1. Select option **1** from the "Database Selection Menu" to display a list of databases for the selected subsystem ID. The "Data Set Definition Selection" panel is called.
2. Enter the line command **S** in front of a database file to display page 1 of the "Display Data Set Information" panel:

```

PEB5DD21 ----- Page 1 of 3
Command ==>

Display Data Set Information

Product           : B93                SYSVAR Support : INACTIVE
Data Set Name     : QAB93.Q93U.DB.MAIN

Database Information
Short Name        : B93MAIN            File ID         : 00012
CI Size           : 04096
High Alloc RBA   : 0000090000
High Used RBA    : 0000090000

Cache Buffer       : 00000050

Type              : DA                I/O-Read       : 000000366
Data Set Status   : OPN              I/O-Write      : 000000003
High Water Mark   : 90 Percent       I/O-Requests   : 0000201377
Caching           : 100 Percent

Press DOWN to display the next page or END to return to the previous panel.

```

3. Scroll down (normally PF8) to display page 2:

```

PEB5DD22 ----- Page 2 of 3
Command ==> _____

Display Data Set Information

Product           : B93                SYSVAR Support : INACTIVE
Data Set Name     : QAB93.Q93V.DB.MAIN

VSAM Information
Catalog Name      : CATALOG.MVSICF1.VQAP2
Cluster Name     : QAB93.Q93V.DB.MAIN
Data Name        : QAB93.Q93V.DB.MAIN.DATA
Extended VSAM File : NO

Space Information
Primary Space     : 000500 Cylinders Record Length : 04096
Secondary Space   : 000000 Cylinders Records per Track : 00012
Total Space       : 000500 Cylinders Tracks per Cylinder : 00015
Number of Extents : 001

SMS Information
MGMTCLAS         : MC#STD             STORCLAS      : SC#QAP2     DATACLAS    :

Press DOWN / UP to display the next / previous page or END to return.

```

4. Scroll down again to display page 3:

```

PEB5DD23 ----- Page 3 of 3
Command ==> _____

Display Data Set Information

Product           : B93                SYSVAR Support : INACTIVE
Data Set Name     : QAB93.Q93V.DB.MAIN

Volume Information
Number of Volumes : 01                Number of Volume Candidates : 00

Vol_01 Vol_02 Vol_03 Vol_04 Vol_05 Vol_06 Vol_07 Vol_08 Vol_09 Vol_10
QAP202

Press UP to display the previous page or END to return to the previous panel.
    
```

**Fields (general)**

Field	Description
Product	The Beta Systems product you are currently working with.
Data Set Name	The VSAM file name of the selected dataset.  If a static system symbol was replaced in the dataset name, then both forms of the dataset name will be displayed – the actual dataset name with the replaced value, and the name stored in the database definition file with the static system symbol.
SYSVAR Support	Indicates whether SYSVAR support is active or inactive.

**Fields (Database Information)**

Field	Description
Short Name	Short name used by the system.
File ID	Unique number automatically assigned by the system.
Clsize	Size of the VSAM control interval.
High Alloc RBA	Number of the highest allocated relative byte address.
High Used RBA	Number of the highest used relative byte address.
Volume	The volume currently in use. When <b>SMS</b> appears here, the assignment of a volume or a unit has been left to the SMS.
Cache Buffer	Number of 4K storage buffers for performance improvement.

Field	Description
Type	<p>Indicates the type of database:</p> <p><b>NO</b> Definition file</p> <p><b>CA (CACHE)</b> Cache file</p> <p><b>DA (DATA)</b> Data file</p> <p><b>GL (GLOBL)</b> Global index file</p> <p><b>IX (INDEX)</b> Index file</p> <p><b>KE (KEY)</b> Key file</p> <p><b>LO (LOG)</b> Log file</p> <p><b>SP (SPOOL)</b> Spool file</p> <p><b>SY (SYNC)</b> Synchronization file</p>
Data Set Status	<p>The dataset status can be:</p> <p>CLS closed</p> <p>EMP empty</p> <p>ERR error</p> <p>FEX format extend error</p> <p>FMT format</p> <p>FUL full</p> <p>MOD model</p> <p>ONL read only</p> <p>OPN open</p>
High Water Mark	<p>Displays the high water mark value (in percent), which is used as a warning level for used space (xxx9550W)</p> <p>You can change the high water mark of a database using BST05CMD or BST05UPF. (For examples, see the description of the corresponding utility in "Databases and database batch utilities" in <i>BSA Installation and System Guide</i>.)</p>
Warning threshold/ Allocated	<p>These values are displayed only if the optional MAXSIZE value has been defined for this database in the database definition file:</p> <p><b>Warning threshold</b> is a user-defined value (in cylinders) which can be used to monitor the growth of dynamic databases when extents are formatted (messages xxx9549I and xxx9549W).</p> <p><b>Allocated</b> displays the amount of allocated space (in percent) in relation to the warning threshold.</p>
I/Os	Number of read/write operations, number of requests.

Field	Description
Caching	Database access displayed in percentage points. Shows access processed via the BQL speedmaster function, not via the database.

**Fields (VSAM Information)**

Field	Description
Catalog Name	Name of the VSAM catalog.
Cluster Name	Name of the VSAM cluster.
Data Name	Name of the VSAM cluster type DATA.
Extended VSAM File	Extended VSAM files are defined via the SMS data class.

**Fields (Space Information)**

Field	Description
Primary Space	Primary space required by the file in cylinders.
Secondary Space	Secondary space required by the file in cylinders.
Total Space	Total space allocated to the file in cylinders.
Number of Extents	Number of extents used by the file.
Record Length	Maximum length of a dataset record.
Records per Track	Number of records per track.
Tracks per Cylinder	Number of tracks per cylinder.

**Fields (SMS Information)**

Field	Description
MGMTCLAS	Only if SMS is used; MVS management class.
STORCLAS	Only if SMS is used; MVS storage class.
DATACLAS	Only if SMS is used; MVS data class.

**Fields (Volume Information)**

Field	Description
Number of Volumes	Number of volumes that have been defined.
Number of Volumes Candidates	Number of unused volumes that are still available.
Vol_01 .. Vol_10	Volser number(s) of the volume(s) on which the dataset resides.

## Using the dictionary (Option D.2)

### Procedure

Select option **D.2** from the "Service Manager Selection Menu" to display the "Dictionary Selection Menu":

```

PEB5DI00 -----
Option ==> _____

Dictionary Selection Menu

1 TABLES      - Display Table Definitions
2 KEYS         - Display Key Definitions
3 FIELDS       - Display Field Definitions
4 DATABASE     - Display System Database
                  ( Summary Information )

System      - TEST
Location    - BERLIN
Subsys-ID   - F09A
User ID     - PMUST

Select one of the above options. Press END to return to the previous menu.

```

### Primary commands

The following primary commands are available in all tables that are displayed under this option:

- `SORT col1[,A|D col2,A|D col3,A|D]`** Sorts the displayed table in ascending (A) or descending (D) order in accordance with the specified column(s) (col1, col2, col3). A list of the column names is displayed in the help panel.
- `SORT`** Displays a help panel for the SORT command for the displayed table.
- `TPRINT`** Prints the displayed table. You can specify where you want to print in panel "TPRINT Parameter", displayed when you enter the command in the command line.

## Displaying tables

### Overview

Option **D.2.1** provides information on all the tables defined in the definition file. It also enables you to display a list of all the fields and keys defined for a particular table. A key defines the order in which the fields of a table are sorted.

### Procedure

1. Select option **D.2** from the "Service Manager Selection Menu" to display the "Dictionary Selection Menu".
2. Select option 1 to call the "Display Database Tables" panel, which provides information on all the tables defined in the definition file.

```

PEB5DI02 ----- Row 1 of 1
Command ==> _____ Scroll ==> PAGE

Display Database Tables

F - Display field definitions      K - Display key definitions

Sel Table   Long Name           Length Comment
VC          VC                00282  USER VC TABELLE
***** BOTTOM OF DATA *****
    
```

### Columns

Column	Description
Table	Short name of the table
Table long name	Name of the table
Length	Length of the table in bytes
Comment	Brief description of the purpose of the table

### Line commands

- F** Display all fields assigned to a table.
- K** Display all key assigned to a table.

## Displaying the fields assigned to a table

### Procedure

1. Select option **D.2** from the "Service Manager Selection Menu" to display the "Dictionary Selection Menu".
2. Select option **1** to call the "Display Database Tables" panel, which provides information on all the tables defined in the definition file.
3. Enter line command **F** in front of one of the tables displayed. The "Display Fields for Table xxxx" is called, showing a list of all the fields assigned to a table:

```

PEB5DI21 ----- Row 1 of 7
Command ==> _____ Scroll ==> PAGE

Display Fields for Table VC

S - Display field definitions

Sel Field   Long Name           C Pos   Internal External
VCUSER     VCUSER              N 00000 C 0008  C 0008
VCPROF     VCPROF              N 00008 C 0004  C 0004
VCGROUP    VCGROUP             N 00012 C 0003  C 0003
VCNAME     VCNAME              N 00015 C 0008  C 0008
VCRES      VCRESERVE           N 00023 C 0001  C 0001
VCLENGTH   VCLENGTH            N 00024 S 0002  C 0004
VCDATA     VCVARIABLES         N 00026 V 0256  V 0256
***** BOTTOM OF DATA *****
    
```

### Columns

Column	Description
Field	Short name of the field
Long name	Full name of the field
C	<b>N</b> indicates non-conversion fields. <b>Y</b> indicates that a field will be converted. During data conversion a text is assigned to a field's value. The assigned text will be used for external display. Only flag and byte fields have to be converted.
Pos	Position of a field in the table.

Column	Description
Internal	Field format or type and internal field length The following field types may appear in this column: <b>C</b> Character <b>V</b> Variable character (max. 1000 bytes) <b>I</b> Long integer (4 bytes) <b>S</b> Small integer (2 bytes) <b>B</b> Byte <b>F</b> Flag (1 byte) <b>H</b> Hexadecimal representation
External	Field type and external field length Whereas field types with non-displayable characters such as the date field can be used for internal data representation, external display requires the use of character fields (C).

**Line commands**

**S** Display field information.

**Token fields**

Note that a token field (**G**) represents a logical name that summarizes a set of different fields. Therefore a token field cannot be selected with the line command **S**.

In panel "Display Fields for Table ...", the fields that are summarized in a token are listed below the token name. Calculate how many fields a token consists of. Add up the internal or external field length until the length of the token field is obtained. The following example shows a token field defined by an external length of 19; it consists of a date field (length 8) and a time field (length 11).

<b>Internal</b>	<b>External</b>
G 0008	G 0019
D 0004	C 0008
T 0004	C 0011

## Displaying the keys assigned to a table

### Overview

Line command **K** in the "Database Table Display" panel displays a key's short and long name, the length of the key, and the table the key is assigned to.

### Procedure

1. Select option **D.2** from the "Service Manager Selection Menu" to display the "Dictionary Selection Menu".
2. Select option **1** to call the "Display Database Tables" panel, which provides information on all the tables defined in the definition file.
3. Enter line command **K** in front of one of the tables displayed. The "Display Keys for Table xxxx" is called, showing a list of all the keys assigned to a table:

```

PEB5DI22 ----- Row 1 of 1
Command ==> _____ Scroll ==> PAGE

Display Keys for Table VC ( LEFT/RIGHT )

S - Display key definition

Sel Key Long Name Length Table Type
VCKEY VCKEY 00023 VC UN
***** BOTTOM OF DATA *****
    
```

### Columns

Column	Description
Type	<p><b>Un</b> indicates that the key is unique.</p> <p><b>Ge</b> indicates that the key is used in a table more than once (generic).</p>

### Line commands

**S** display all fields assigned to a key

## Displaying field and key information

### Procedure

1. Select option **D.2** from the "Service Manager Selection Menu" to display the "Dictionary Selection Menu".
2. Select option **1** to call the "Database Table Display" panel, which provides information on all the tables defined in the definition file.
3. Depending on what you want to see, do one of the following:
  - Enter line command **F** in front of one of the tables displayed. The "Display Fields for Table xxxx" is called, showing a list of all the fields assigned to a table.
  - Enter line command **K** in front of one of the tables displayed. The "Display Keys for Table xxxx" is called, showing a list of all the fields assigned to a table.
4. Select a field or a key with line command **S**:
  - From the "Display Fields for Table xxxx" to call the "Definition for Field xxxx" panel:

```

PEB5DI24 ----- Row 1 of 1
Command ==> _____ Scroll ==> PAGE

Definition for Field VCUSER

Field   Long Name           C Internal External
VCUSER  VCUSER                N C 0008  C 0008
Comment : USER
-----

```

- From the "Display Keys for Table xxxx" to call the "Definition for Key xxxx" panel:

```

PEB5DI23 ----- Row 1 of 4
Command ==> _____ Scroll ==> PAGE

Definition for Key VCKEY

S - Display field definition

Sel Field   Long Name           C Pos  Internal External
VCUSER      VCUSER                N 00000  C 0008  C 0008
VCPROF      VCPROF                N 00008  C 0004  C 0004
VCGROUP     VCGROUP               N 00012  C 0003  C 0003
VCNAME      VCNAME                N 00015  C 0008  C 0008

```

5. If you select a field definition with line command **S** in the "Definition for Key xxxx" panel, the "Definition for Field xxxx" panel is called for that particular field.

**Token fields**

Note that a token field (**G**) represents a logical name that summarizes a set of different fields. Therefore a token field cannot be selected with the line command **S**.

In panel "Display Fields for Table ...", the fields that are summarized in a token are listed below the token name. Calculate how many fields a token consists of. Add up the internal or external field length until the length of the token field is obtained. The following example shows a token field defined by an external length of 19; it consists of a date field (length 8) and a time field (length 11).

<b>Internal</b>	<b>External</b>
G 0008	G 0019
D 0004	C 0008
T 0004	C 0011

## Displaying keys

### Overview

Option **D.2.2** provides information on all the keys defined in the database. It also enables you to display a list of all the fields assigned to a particular key, and the fields assigned to a particular table.

### Procedure

1. Select option **D.2** from the "Service Manager Selection Menu" to display the "Dictionary Selection Menu".
2. Select option 2 to call the "Display Database keys" panel:

```

PEB5DI03 ----- Row 1 of 1
Command ==> _____ Scroll ==> PAGE

Display Database Keys ( LEFT/RIGHT )

F - Display field definitions      T - Display table definitions

Sel Key      Long Name      Length Table  Type
VCKEY      VCKEY          00023 VC      UN
*****
***** BOTTOM OF DATA *****
    
```

### Columns

Column	Description
Table	Name of the table a key is assigned to

### Line commands

- F** Display all the fields assigned to a key (see below).
- T** Display all the fields assigned to a table. Supplies the same information as line command **F** in the "Display Database Tables" panel (see "Displaying the fields assigned to a table" on page 186).

**Fields assigned to a key**

Enter line command **F** in front of a key to display the fields defined for that key:

```

PEB5DI21 ----- Row 1 of 4
Command ==> _____ Scroll ==> PAGE

Display Fields for Key VCKEY

  S - Display field definition

Sel Field   Long Name           C Pos  Internal External
VCUSER     VCUSER             N 00000 C 0008  C 0008
VCPROF     VCPROF             N 00008 C 0004  C 0004
VCGROUP    VCGROUP           N 00012 C 0003  C 0003
VCNAME     VCNAME             N 00015 C 0008  C 0008
***** BOTTOM OF DATA *****
    
```

## Displaying fields

### Overview

Option **D.2.3** provides information on all the fields defined in the database (see "Displaying the fields assigned to a table" on page 186).

### Procedure

1. Select option **D.2** from the "Service Manager Selection Menu" to display the "Dictionary Selection Menu".
2. Select option **3** to call the "Display Database fields" panel:

```

PEB5DI04 ----- Row 1      of 916
Command ==> _____ Scroll ==> PAGE

Display Database Fields

      F - Display field definition      T - Display table definitions

Sel  Field      Long Name                                C Internal External
-----
ABRBLKNL ABR_ABRBLKNL                                N 00004 I 00010 C
ABRBLKP0 ABR_ABRBLKP0                                N 00004 I 00010 C
ABRBLKP1 ABR_ABRBLKP1                                N 00004 I 00010 C
ABRDISP0 ABR_ABRDISP0                                N 00002 S 00005 C
ABRDISP1 ABR_ABRDISP1                                N 00002 S 00005 C
ABREXP00 ABR_ABREXP00_PRIMARY                        N 00004 D 00010 C
ABREXP01 ABR_ABREXP01_SECODARY                       N 00004 D 00010 C
ABRRES   ABRRES                                       N 00008 C 00008 C
ABRSTMP0 ABR_STMP0                                    N 00008 H 00016 C
ABRSTMP1 ABR_STMP1                                    N 00008 H 00016 C
ADRCAT   ADR_DATASET_CAT                             Y 00001 B 00011 C
ADRDATE  ADR_ADRDATE                                 N 00004 D 00010 C
ADRDSN   ADR_DSNME                                   N 00044 C 00044 C
ADRDSN00 ADR_DATASET_EXT                             N 00004 I 00007 C
ADREXPDT ADR_ADREXPDT                               N 00004 D 00010 C
ADRFILS  ARC_FILE_SEQUENCE                           N 00002 S 00005 C

```

## Displaying system databases

### Procedure

1. Select option **D.2** from the "Service Manager Selection Menu" to display the "Dictionary Selection Menu".
2. Select option **4** to call the "Display System Databases" panel. This shows a table of all the system databases:

```

PEB5DI01 ----- Row 1 of 4
Command ==> _____ Scroll ==> PAGE

Display System Databases ( LEFT/RIGHT )

Data Set Name          X Sta FileID Buffer  % Type HWM
BETA09.DB.DEF          OPN 00001 00000000 050 NO 00
BETA09.DB.SYNC         OPN 00255 00000000 001 SY 90
BETA09.DB.VDF          OPN 00256 00000020 004 DA 90
BETA09.DB.VDF.KEY     OPN 00257 00000020 007 KE 90
***** BOTTOM OF DATA *****
    
```

3. Scroll to the right (normally PF11) to view additional information.

### Columns

Column	Description
Dataset name	Name of the system database.
Stat	The <b>Status</b> column can contain one of the following: <b>USE</b> (in use): the dataset is in use <b>CLS</b> (closed): the dataset cannot be opened <b>MOD</b> (model): not available for VDF <b>ONL</b> (read only): the dataset can only be read <b>FMT</b> (format): not available for VDF <b>EMP</b> (empty): the dataset is empty <b>ERR</b> (error): an error occurred <b>FEX</b> Format extend error <b>FUL</b> (full): the dataset is full <b>OPN</b> (open): the dataset is active and can be used by the started task
FileID	File identification number; the file ID is automatically assigned by the system.
Buffer	Number of buffers that can be used for cache.
%	Number of 4K blocks in use displayed as percentage.

Column	Description
Type	<p>Database type. The following database types may be displayed:</p> <p><b>DA</b> (DATA) for a VDF.Data file.</p> <p><b>KE</b> (KEY) for a VDF.Key file.</p> <p><b>SY</b> (SYNC) for a Sync.Data file.</p> <p><b>NO</b> for a definition file.</p> <p><b>SP</b> (SPOOL) for a spool file.</p> <p><b>CA</b> (CACHE) for a cache file.</p> <p><b>IX</b> (INDEX) for an index file.</p>
HWM	<p>Displays the high water mark value (in percent), which is used as a warning level for used space</p> <p>You can change the high water mark of a database using BST05CMD or BST05UPF. (For examples, see the description of the corresponding utility in "Databases and database batch utilities" in <i>BSA Installation and System Guide</i>.)</p>
VolSer	<p>The volume currently in use. When <b>SMS</b> is displayed here, the assignment of a volume or unit has been left to the <b>SMS</b>.</p>
Unit	<p>The unit type where the dataset is stored.</p>
Space	<p>The space in cylinders required by the dataset.</p>
Clsize	<p>The size of the Control Interval (CI). This can be a value between 1 and 7. The value specified will then be multiplied by 4096.</p>
Short Name	<p>Short name of the dataset.</p>

## Statistics on database usage (Option D.3)

### Overview

The Beta Systems Architecture functionality enables the generation of product-specific database statistics.

Statistics can be displayed online or written to a batch report.

### Option D.3

Select option **D.3** from the "Service Manager Selection Menu" to display the "Database Statistics Menu":

```

PEB5UBPP -----
Option ==> _____

Database Statistics Menu                                System   -  PROD
                                                        Location  -  BERLIN
                                                        Subsys-ID -  B92P
                                                        User ID   -  REINH1

 1  BROWSE      -  Display Statistics Database Values
 2  BATCH       -  Generate Statistics Database Batch Report
 3  CLEANUP     -  Batch Job for Statistics Database Cleanup

Select one of the above options. Press END to exit.

```

### Options

Option	Purpose
1 BROWSE	To display database statistics.
2 BATCH	To generate a batch report on database statistics.
3 CLEANUP	To generate a job that deletes obsolete statistical data from the database.

## Displaying database statistics

### Overview

The **BROWSE** option in the "Database Statistics" Menu enables you to display statistics for the selected subsystem.

### Procedure

1. Select option 1 BROWSE from the "Database Statistics Menu (**D.3.1**) to call the "Display Statistic Values" input panel.

```

PEB5UBP1 -----
Command ==> _____

Display Statistic Values

Start Date (MM/DD/YYYY)  ==> 01.01.2010
End   Date (MM/DD/YYYY)  ==> TODAY_____

Selection                ==> M           per (H)our, (D)ay, (M)onth

Subdivision by
  SSID, Sysclone, Sysplex ==> Y           (Y)es, (N)o

Optional Selection Criteria:

Subsystem ID              ==> * _____
Sysclone Name             ==> * _____
Sysplex Name              ==> * _____

Press ENTER to display the Database Statistics Table.
Press END to return to the previous menu.

```

2. Enter the time selection criteria to limit the date range of the records that are to be reflected in the statistics (**Start Date/End Date**).

**Note:** When specifying a time range, please remember that the longer the time range, the longer the selection process takes.

3. Select the interval that is to be the basis for your statistics (**Hourly, Daily, Monthly**).
4. Set field **Subdivision by SSID, Sysclone, Sysplex** to YES or NO, depending on your requirements and the product concerned (you will find more information in the documentation for the product).
5. Specify the optional selection criteria. For more information on the specifications in each of the following fields, refer to the table (see "Table of fields in the statistics panels" on page 201).

**Result**

The "Statistics Table (...)" is displayed in accordance with the selection criteria you specified. The table below is an example of monthly statistics, with field **Subdivision by SSID, Sysclone, Sysplex** set to Yes:

```

PEB5UB10 ----- Row 1 of 56
Command ==> _____ Scroll ==> PAGE

Statistics Table (Monthly)

S - Display daily statistics

Sel SSID Sysc Sysplex Date IN_PAGES OUT_PAGES ARCH_PAGES
TW30 30 PLEX30 03/2013 5 0 0
F09A TA INSTPLEX 03/2013 59675 0 6
S TW30 30 PLEX30 04/2013 10858 0 0
F09A TA INSTPLEX 04/2013 240517 0 0
TW30 30 PLEX30 05/2013 175340 0 0
F09A TA INSTPLEX 05/2013 51808 0 550
***** BOTTOM OF DATA *****

```

**Note**

The results that you receive depend on the Beta Systems product you are generating statistics for. All results tables will include the **Date**, and if field **Subdivision by SSID, Sysclone, Sysplex** is set to **YES**, also the **SSID, Sysc** and **Sysplex** columns. However, columns such as **Count, IN\_PAGES, OUT\_PAGES, ARCH\_PAGES**, for example, are product dependent. Please refer to the relevant Beta Systems product documentation for details.

**Line command S**

- Line command **S** in front of a month in the "Statistics Table (Monthly)" table displays the daily statistics for that month.
- Line command **S** in front of a day in the "Statistics Table (Daily)" table displays the hourly statistics for that day. In the "Statistics Table (Daily)" table you can scroll to the right and the left (normally PF11/PF10 respectively).
- Line command **S** is not available in the "Statistics Table (Hourly)" table.

## Generating batch reports on database statistics

### Overview

The BATCH option in the "Database Statistics Menu" enables you to use \_beta report to generate reports containing selected statistics on database usage.

### Procedure

1. Select option 2 BATCH from the "Database Statistics Menu" to call the "Statistic Batch Report" panel:

```

PEB5UBP2 -----
Command ==> _____

Statistics Batch Report

Start Date (MM/DD/YYYY)  ==> YESTERDAY.
End   Date (MM/DD/YYYY)  ==> TODAY_____

Selection                  ==> D           per (H)our, (D)ay, (M)onth

RPGPRINT/WORKFILE Options ==> Y           (Y)es, (N)o

Optional Selection Criteria:

Subsystem ID                ==> _____
Sysclone Name               ==> _____
Sysplex Name                ==> _____

Press ENTER to generate the respective batch job.
Press END to return to the previous menu.

```

2. Specify the start and end dates and any other selection criteria relevant to your product/report (see "Table of fields in the statistics panels" on page 201).
3. When you are satisfied with your specifications, press ENTER
  - If you set the **RPGPRINT/WORKFILE Options** field to (N)o, the procedure is now complete.
  - If you set the **RPGPRINT/WORKFILE Options** field to (Y)es, the "RPGPRINT/RPGWORK Options" panel is displayed:

```

PEB5UBOP -----
Command ==> _____

RPGPRINT Options:

Class      ==> _           Writer Name ==> _____
Forms Number ==> _____ User ID      ==> _____
Destination ==> _____

RPGWORK Options:

Type       ==> _____ (T)RK, (C)YL
Prim. Space ==> _____
Sec. Space  ==> _____

Job Card:
==> //UBPREP JOB 1,ACCOUNT,CLASS=A,MSGCLASS=P,NOTIFY=&SYSUID
==> //*
==> //*
==> //*

Press ENTER to continue with the job generation. Press UP to display the
previous page. Press END to return to the previous menu.

```

4. Only if you set the **RPGPRINT/WORKFILE Options** field to (Y)es:  
Fill in the fields (see "Table of fields for RPGPRINT, RPGWORK, RPTRUN and RPTLIST" on page 203) as required and press ENTER.
5. The job is generated and the JCL is displayed, enabling you to accept or modify the entries before submitting the job.

**Result**

The results that you receive depend on the Beta Systems product you are generating statistics for. All results tables will include the **Date**, and if field **Subdivision by SSID, Sysclone, Sysplex** is set to **YES**, also the **SSID**, **Sysc** and **Sysplex** columns. However, columns such as **Count**, **IN\_PAGES**, **OUT\_PAGES**, **ARCH\_PAGES**, for example, are product dependent. Please refer to the relevant Beta Systems product documentation for details.

## Table of fields in the statistics panels

### Overview

This table lists the fields in the statistics panels in alphabetical order. If a field as a whole consists of more than one input field, the input fields are described in the **Remarks** column.

Use this table as a reference when specifying selection criteria etc. For product-dependent fields, please refer to the documentation for the product concerned.

Field	Description	Remarks
RPGPRINT/ WORKFILE Options	Enables you to specify the parameters required for the RPGPRINT and RPGWORK files.	<p><b>(Y)es</b> You will receive a second panel enabling you to specify the parameters required for the RPGPRINT and RPGWORK files.</p> <p><b>(N)o</b> The default values for RPGPRINT and RPGWORK will be accepted. These are normally sufficient.</p> <p>For the fields available when this option is set to YES, please refer to the separate table (see "Table of fields for RPGPRINT, RPGWORK, RPTRUN and RPTLIST" on page 203). You will find additional information in the <i>_beta report Manual</i>.</p>
Selection	Use this parameter to specify the time period that is to be used as the basis for the statistics. You can choose between (H)our, (D)ay, (M)onth	<p><b>H</b> Hourly; the smallest unit for a record. The values are accumulated and stored every full hour. If the system was not active during the full hour for some reason, then the values of the last hour that are not yet stored are added to the current hour interval and are then stored for this hour.</p> <p><b>D</b> Daily; the hourly records are added on a daily basis prior to being displayed.</p> <p><b>M</b> Monthly; the hourly records are added on a monthly basis prior to being displayed.</p>
Start/End Date	Use these parameters to specify the date range that is to be used as the basis for the statistics.	<p>Choose between the following date formats:</p> <ul style="list-style-type: none"> <li>• American: MM/DD/YY or MM/DD/YYYY</li> <li>• Continental: DD.MM.YY or DD.MM.YYYY</li> <li>• British: DD/MM/YY or DD/MM/YYYY</li> <li>• Julian: YY.DDD or YYYY.DDD</li> <li>• International: YYYY-MM-DD</li> </ul>
Subdivision by	Use this field to specify whether you want to display statistics separately for each system.	See Subsystem ID, Sysclone Name and Sysplex Name.

---

<b>Field</b>	<b>Description</b>	<b>Remarks</b>
Subsystem ID		Specifies which subsystem produces the BSA statistics record. The keyword can be generic (e.g. SP2*) or blank
Sysclone Name		Specifies the Sysclone name of the system on which the subsystem ID which produced the BSA statistics was active. The keyword can be generic (e.g. T*) or blank
Sysplex Name		Specifies the sysplex name of the system on which the subsystem ID which produced the BSA statistics was active. The keyword can be generic (e.g. INSTPL*) or blank

## Table of fields for RPGPRINT, RPGWORK, RPTRUN and RPTLIST

### Overview

This table lists, in alphabetical order, the fields that are available when you set parameter RPGPRINT/WORKFILE Options to (Y)es. Doing so enables you to specify the parameters required for the RPGPRINT and RPGWORK files.

For more detailed information, please refer to the *\_beta report Manual*.

Field	Description	Remarks
Class	Specifies an output class for printing the report.	Valid classes are A*-Z* and 0 – 9. Default = *
Destination	Assigns the destination of the SYSOUT dataset.	Optional.
Forms Number	Identifies the forms on which the SYSOUT dataset is to be printed.	Optional.
Job Card	Specifies a job card for the current print job.	If you have already defined a job card, it is displayed here and can be modified as required.
Prim. Space	Size in Type of the primary space required for the RPGWORK dataset.	Default = 15 Optional.
Sec. Space	Indicates the unit for additional DASD space, if required.	Default = 5
Type	Indicates the unit for the space required for the RPGWORK dataset	TRK = tracks CYL = cylinders Default = CYL
User ID	Identifies a node (destination) and a TSO user ID at that node.	Optional.
Writer Name	Identifies the member name of the external writer name.	Default = RPGPRINT Optional.

## Deleting obsolete statistics data

### Overview

The CLEANUP option in the "Database Statistics Menu" enables you to generate a batch job that deletes obsolete usage data from the statistics database.

### Time range

The time range of the data that will be deleted is controlled by the program and cannot be changed by the user.

All data that is older than three years will be deleted. The deletion date is always based on January 1 of the current year. For example, a job that is generated on any date of the year 2013 deletes statistical data of the years 2009, 2008, etc.

### Procedure

To delete obsolete statistical data:

1. Select option **3** Cleanup from the "Database Statistics Menu".
2. If necessary, edit the job card in the displayed panel and press ENTER.

The JCL for the cleanup job is generated from the corresponding skeleton and displayed in the editor.

3. Enter SUB to submit this job.

## Making a database query (Option D.Q)

### Overview

The database query option **D.Q** provides access to the systems databases. This option is intended for use in diagnostics on the advice of Beta Systems support staff.

A profound knowledge of the product and basic knowledge of relational database technology are required to make any use of this information.

### BQL SELECT command

You will find a detailed description of the SELECT command in the *\_beta report Manual*. This manual includes a comprehensive description of the syntax and provides examples of how to use the command correctly.

### Warning

Please use the BQL **SELECT** command only. Incorrect use of the UPDATE and DELETE commands may damage the databases beyond repair, resulting in a permanent loss of data.

Do **not** update or delete records except when instructed to do so by Beta Systems personnel.

### Database query panel

Select option **Q** from the "Database Maintenance Menu" to enter a Beta Query Language (BQL) command online. The "Generic Command Interface" panel is called:

```

PEB5DQ00 -----
Command ==> _____

Generic Command Interface                               Ssid : B93P

Router          : BQRT      Router name          (*) Input case sensitive
                                     ==> NO_ (Y)es,(N)o
Command         ==> _____ (S)elect
Table           ==> _____ Table name
Condition       ==> _____ (*)
Fields          ==> _____
Values         ==> _____ (*)

Command (leave above command field blank): Resources Limit ==> NO_ (Y/N)
==> SELECT TABLE VC FIELDS(*)_____ (*)
==> _____ (*)
==> _____ (*)
==> _____ (*)
==> _____ (*)

Press the ENTER key to issue the request.
Press the END key to return to the previous menu.
    
```

**Database query methods** There are two ways of making the database query:

- You can enter the required data in the fields in the upper half of the panel (Command, Table, Condition, Fields, Values).

-OR-

- You can enter the database query in BQL format in the multi-line field in the lower half of the panel. The **Command** field in the upper half of the panel must be left blank in this case.

### Fields: Database Query

Parameter	Purpose
Command	If you do not want to use a BQL command in the lower portion of the panel, enter the SELECT command, or simply enter <b>S</b> .
Table	To specify the name of the database table. You can view a complete list of all the available tables under option 1 ("Tables") of the "Dictionary Selection Menu".
Condition	Enables you to use logical operators to define selection criteria.
Fields	Enter all the database fields that are to be selected. You can view a complete list of all the available fields under option 3 (Fields) of the "Dictionary Selection Menu". To select all fields, use "*" as a mask.
Values	Enter the operator value that refers to the contents of a field.
Resources Limit	Set this parameter to YES if you want to limit the storage space. You can specify values in an additional panel (see "Limiting resources for a BQL query" on page 207).  The default is NO under TSO/ISPF and YES under VDF (VAF/CAF/IAF).
BQL Command	Instead of using the fields <b>Command</b> , <b>Table</b> , <b>Condition</b> , <b>Fields</b> , <b>Values</b> of the upper half half of the panel, you can enter your database query in BQL format in the multi-line field here. The <b>Command</b> field in the upper half of the panel must be left blank in this case.  For details on BQL syntax, see the description of the BQL SELECT command in the <i>_beta report Manual</i> .

## Limiting resources for a BQL query

### Database query resources

For reasons of performance and storage, and with regard to the amount of data to be processed, you may want to limit the resources available for a database query. This description assumes that you have selected option **Q** from the "Database Maintenance Menu" to enter a Beta Query Language (BQL) command online. In the "Database Query" panel you have set the **Resources Limit** parameter to YES. When you press ENTER, the "Generic Command Interface - Resources Limitation" panel is displayed:

```

PEB5DQ01 -----
Command ==> _____

Generic Command Interface - Resources Limitation          Ssid : B93P

Primary space for allocation of temporary dataset :

Space           ==> 50..      (0 - 2000 Cylinders)

Memory used in address space :

Memory          ==> 10..      (0 - 2000 MBytes)

Press the ENTER key to issue the request.
Press the END key to return to the previous panel.
    
```

You can now specify the resources that are to be available for the database query.

### Fields

Field	Description
Space	Enter the space allocation of the temporary dataset used for data storage in cylinders. If you specify Space=0, then no temporary dataset is created.
Memory	Specify a memory amount in megabytes. The entry in this field cannot be changed if only one address space is available for all users.

### Note

The default value size is 50 cylinders for a temporary dataset and 2 MB of central storage under VDF. The system administrator can use the LST parameters BQL\_QRY\_MAXMEMORY and BQL\_QRY\_FILESPACE to change both these values for the system. For a description of these parameters, see "Global LST parameters for BQL" in *BSA Installation and System Guide*.

# RACF security

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## Activating RACF security for BSM functions

### Overview

Each BSA Service Manager option and function can be protected by RACF definitions. This is achieved by means of the user-specific security exit B04UXSEC, which has to be included in the load module sequence of the started task.

### Messages

You can check the JESMSGLOG of the started task to find out whether RACF security for BSM functions is active.

If the security exit B04UXSEC is found, the following message is output to indicate that RACF security for BSM functions is active:

```
9313I SECURITY ENVIRONMENT FOR THE FUNCTIONS OF THE BSA SERVICE
MANAGER IS ACTIVE (GLOBAL_SEC_MSG: YES|NO)
```

If the security exit B04UXSEC is not found, the following message is output to indicate that RACF security for BSM functions is not active:

```
9314W SECURITY ENVIRONMENT FOR THE FUNCTIONS OF THE BSA SERVICE
MANAGER IS NOT ACTIVE
```

### Linking B04UXSEC

1. Open member B04UXSEC in the BSA.SAMPLIB and make sure that comment signs are set as follows in these lines:

```
*           SELECT THE APPROPRIATE RETURNCODE IN R15
*-----
--
*           XR    R15,R15           SET UP RC=0 FOR RACF-CALL OR
*           LA    R15,4           SET UP RC=4 TO BYPASS RACF-
CALL
*-----
--
```

2. Open sample job B04UXASM in the BSA sample library. This job creates the user exit in a load module library.
  - In the SYSIN DD statement, enter the name of the source library where B04UXSEC has been stored as a member.
  - In the SYSLIB DD statement, replace BSA.SAMPLIB with the name of your installation sample library.
  - In the SYSLMOD DD statement, specify the dataset name of the output library for load module B04UXSEC.

**Note:** As of level 1461-03, you can also use the tailored job in member G#04XSEC in the BSA.CNTL.
3. Submit the job.

Expect RC=0.

## RACF definitions

### Overview

Beta product resources are defined to RACF in user resource class \$BETA. This class is defined in the security exit and can be changed (field **RACFCLAS**) if necessary.

### Format of the profile

*B04.ssid.functiongroup.function*

where:

*B04* = fixed value

*ssid* = subsystem ID of the started task to be protected

*functiongroup* = function group (see the assignment table below)

*function* = BSA Service Manager function (see the assignment table below)

The functions are permanently associated with the function codes in the user exit. These assignments must not be changed.

### Assignment table

The following table shows the assignment of BSA functions to their function codes and online options:

Option	Description	Function group	Function	Access	Function code
<b>1</b>	<b>PARM</b>				
1.1	Keywords	LST	KWDLST	READ	1
		LST	KWDUPDT	UPDATE	2
1.2	Modifiable keywords	LST	KWDLST	READ	1
		LST	KWDUPD	UPDATE	2
1.3	SYSVAR substitution	LST	SYSVAR	READ	3
<b>2</b>	<b>STC operation</b>				
2.1	GCB/FCB	STC	TASKLST	READ	4
2.2	SFF operating statistics	STC	STCINFO	READ	5
2.3	ENQ processing	STC	ENQLST	READ	6
		STC	ENQFREE	UPDATE	7

Option	Description	Function group	Function	Access	Function code
2.4.1	License keys  (See note on <b>2.4.n</b> )	STC	LCX01	READ	27
2.4.2		STC	LCX02	READ	26
2.4.3		STC	LCX03	READ	28
2.4.4		STC	LCX04	UPDATE	29
2.5	RACF user table	STC	URLST	READ	11
		STC	URTUPD	UPDATE	12
2.6	Maintenance	STC	MODINFO	READ	13
2.7	TRACE facility	LST	KWDLST	READ	1
		LST	KWDUPD	UPDATE	2
2.8.2	LISTA	STC	LISTA	READ	14
<b>3</b>	<b>Application Control</b>				
3.1	VDF	APL	VDFLST	READ	15
3.2	BOF	APL	BOFLST	READ	16
3.3	BAF	STC	ENQLST	READ	6
		STC	ENQFREE	UPDATE	7
<b>4</b>	<b>Connectivity</b>				
4.1	ARM	CON	ARM	READ	17
4.2.2 or 5, OC or OX	OCF	CON	OCF	READ	18
4.2.2 or 5, TC	TCP/IP	CON	TCP	READ	19
	TCP/IP	CON	TCP	UPDATE	20

Option	Description	Function group	Function	Access	Function code
4.S	SYSVAR	CON	SYSVAR	READ	21
<b>R</b>	<b>Reports</b>				
all	All reports	STA	DBINFO	READ	25
<b>L</b>	<b>LOG</b>				
all	All options	LGF	LGFSTA	READ	31
<b>D</b>	<b>Database</b>				
D.3.1	Browse	STA	STABRW	READ	22
D.3.2	Batch RPG	STA	STARPG	READ	23
D.3.3	Statistics Cleanup	STA	STAREP	UPDATE	24
D.4	File tailoring	DBT	DBFT	READ	30

**Note on 2.4.n  
(License keys)**

To be able to use function code 29 (update LICX file), the user must also be authorized for function code 27.

**Activating RACF**

The following profiles activate RACF for all or special BSA Service Manager functions:

B04.ssid.LST.KWDLST : READ

B04.ssid.LST.KWDUPD : UPDATE

## RACF definition examples

### Overview

The following is an example of RACF commands which can be used to protect BSM resources.

If enhanced generic naming (EGN) is switched on, use two asterisks instead of a single asterisk in resource names.

For example, specify `B04.**` instead of `B04.*` in an installation where EGN is active.

### Deny access

To lock all BSA Service Manager functions, enter the following definition:

```
RDEFINE $BETA (B04.*) UACC(NONE)
```

### Access READ

To allow user/group **USER1** to use the keyword READ function, specify the following:

```
RDEFINE $BETA (B04.*) UACC(NONE)
RDEFINE $BETA B04.*.LST.KWDLST UACC(NONE)
PERMIT B04.*.LST.KWDLST CLASS($BETA) ID(USER1)
ACCESS(READ)
```

### Access UPDATE

To allow user/group **ADMIN** to use the keyword UPDATE function, enter the following:

```
RDEFINE $BETA (B04.*) UACC(NONE)
RDEFINE $BETA B04.*.LST.KWDUPD UACC(NONE)
PERMIT B04.*.LST.KWDUPD CLASS($BETA) ID(ADMIN)
ACCESS(UPDATE)
```

## Security-related LST parameters

### Overview

The following LST parameters affect the security functions of BSA Service Manager.

### LST parameters

Parameter name	Value	Description	Opt./Req.	Default
BSA_SECURITY_PROFILE_MSG_BSM	YES   NO	As of BSA V7R1-03: If a function is RACF-protected via B04UXSEC, the short message Authorization failed is displayed when the user lacks authorization.  If YES, the user can display details on the denied RACF resource in the long message (PF1). Specify NO if you don't want this.	Optional	YES
BSA_SECURITY_GLOBAL_MSG_BSM	YES   NO	As of BSA V7R1-03: Controls whether ICH408I are output  NO Output of ICH408I messages is handled according to the specifications of B04UXSEC.  YES Messages are always output, independently of the specifications of B04UXSEC.  <b>Note:</b> If you are not authorized for the KWDUPD function, you can use the primary command RACFMSG under option <b>D.S.1</b> to change this parameter dynamically.	Optional	NO

---

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