

3.1

*IBM Tivoli Output Manager for z/OS
Administrator's Guide*



Note:

Before using this information and the product it supports, read the "Notices" topic at the end of this information.

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About this information

This book provides instructions for the administration of IBM® Tivoli® Output Manager. The book is designed to help report administrators, system administrators, security administrators, and database administrators perform the following tasks:

- Capture report output
- Set up custom reports, indexed reports, and bundles of reports
- Automate the online distribution of reports
- Manage historical report data and attributes

This book is intended for those persons who are responsible for customizing and using Output Manager. It assumes that readers have a working knowledge of:

The z/OS® operating system

RACF®

ISPF

Db2®

Web-browser based applications

For installation information, refer to the *IBM Tivoli Output Manager Program Directory*, which is included in the product package, and the *IBM Tivoli Output Manager Installation and Customization Guide*.

For information on viewing and downloading reports in IBM Tivoli Output Manager, and using the Output Manager user interfaces, refer to the *IBM Tivoli Output Manager User's Guide*.

Chapter 1. Introduction to Output Manager

Review these introductory topics to become familiar with Output Manager:

- [“What Output Manager does” on page 1](#)
- [“Output Manager components” on page 5](#)
- [“Report processing” on page 2](#)
- [“General product administration” on page 21](#)
- [“Types of Output Manager rules and definitions ” on page 25](#)

This book provides instructions intended for report administrators, system administrators, security administrators, and database administrators. The book is designed to help these administrators perform the following tasks:

- Capture report output
- Set up custom reports, indexed reports, and bundles of reports
- Automate the online distribution of reports
- Manage historical report data and attributes

For installation information, refer to the *IBM Tivoli Output Manager for z/OS Installation and Customization Guide*.

For information for Output Manager end-users, refer to the *IBM Tivoli Output Manager for z/OS User's Guide*.

Note: All conversions and migrations of third-party report archives (history entries) require services. Contact your IBM sales contact for details. For more information, see [Third-party archive conversion](#) in the *IBM Tivoli Output Manager for z/OS Installation and Customization Guide*.

What Output Manager does

Output Manager captures SYSOUT from jobs on the spool, stores the SYSOUT on disk, and then transforms the SYSOUT into reports that can be viewed, printed, and distributed to end users. Output Manager has both an ISPF interface and a web browser interface. The ISPF interface is used primarily by administrators; the web interface (ITOMweb) is used primarily by report end users.

Key product features and benefits:

- Provides a full-featured ISPF interface for both report administrators and report end-users
- Provides a web-based interface, ITOMweb, for convenient access to viewing and printing reports, archived SYSOUT, and indexed report pages from a web browser
- Enables report administrators to define custom reports that contain a subset of the SYSOUT and indexed report pages that contain certain index fields
- Enables report administrators to create a bundle of reports, arranged by recipient, and print the bundle as a single output stream
- Supports distribution lists that are composed of report recipients to streamline the distribution of individual reports and to reduce distribution costs
- Performs the automatic printing and distribution of reports, and can perform an entire print run of a report again, if necessary
- Prints reports based on printer attributes and recipient IDs that the report administrator defines
- Prints reports based on "dynamic printing parameters" that Output Manager can capture from the SYSOUT and merge with the printer attributes defined by the report administrator
- Enables users to search for both the reports and the Output Manager administrative definitions that they need to access

- Recalls DFSMSHsm-migrated (or equivalent) reports
- Converts reports in third-party archives. CA-View™ and IBM RMDS archives are supported. For more information on additional supported third-party ISV archives, contact your IBM representative or Technical Support.

Note:

All conversions and migrations of third-party report archives (history entries) require services.

- Provides security on Output Manager resources by leveraging RACF (or equivalent security product) profiles by using recipient IDs and distribution lists
- Provides exception reporting during the capture of JES data sets
- Maintains historical information about production reports

Related concepts

[Report processing](#)

The following figure provides a high-level illustration of how Output Manager can fit into a business flow and process reports from start to finish.

[Output Manager components](#)

[Output Manager administrative tutorials](#)

Get familiar with administrating Output Manager with two tutorials: a basic tutorial of Output Manager administrative objects, and a more advanced tutorial that includes report distribution.

[General product administration](#)

[Exception processing](#)

Report processing

The following figure provides a high-level illustration of how Output Manager can fit into a business flow and process reports from start to finish.

In this example, a variety of business applications produce report SYSOUT on the JES spool. Output Manager processes this SYSOUT based on the rules and definitions defined by the report administrator. These rules and definitions are stored in Db2 tables.

Output Manager first selects SYSOUT off the JES spool and archives it based on the defined selector rules, subselector rules, and archive attributes. From the archived SYSOUT, Output Manager creates basic reports and logical custom and indexed reports by using the defined report selection rules, report definitions, and report layouts. The reports can be automatically printed and distributed to recipients via distribution lists. The report administrator and report end-users can also selectively print and reprint reports from the ISPF interface or ITOMweb.

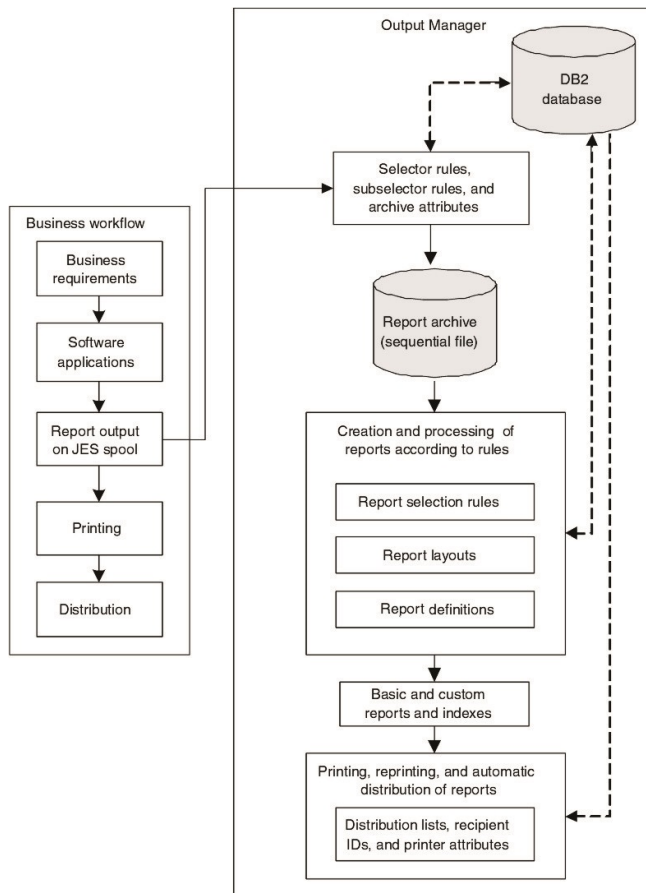


Figure 1. Output Manager in the business flow

Many alternative product implementations are possible. For example, you can print a bundle of reports, arranged by recipient, as a single output stream.

Related concepts

[What Output Manager does](#)

[Output Manager components](#)

[Output Manager administrative tutorials](#)

Get familiar with administrating Output Manager with two tutorials: a basic tutorial of Output Manager administrative objects, and a more advanced tutorial that includes report distribution.

[General product administration](#)

[Exception processing](#)

Process flow

The following steps describe the capture and automatic printing of reports in more detail.

The processing of report bundles is not covered in this section; for information about report bundles, see [Chapter 9, “Report bundling,” on page 153](#).

The capture and automatic printing of reports occurs in the following steps:

1. A business application running on a z/OS system produces a report as SYSOUT on the JES spool.
2. JES notifies Output Manager when SYSOUT that matches a selector is discovered on the spool. Once a matching selector rule is found, Output Manager processes the SYSOUT. (Related section: [Chapter 4, “Selecting output off of the spool with selector rules,” on page 43](#).)
3. If any subselector rules are associated with the selector rule, Output Manager scans the subselector rules in the order in which they are listed to determine if any match the SYSOUT. If a matching

subselector rule is found, Output Manager uses its control fields instead of those in the selector rule. If multiple subselector rules match the SYSOUT, Output Manager uses the first one.

4. Output Manager archives the SYSOUT in its entirety to a sequential file based on the set of archive attributes that is associated with the selector rule. Output Manager also updates the archive index, which is a Db2 table. (Related section: [Chapter 3, “Allocate data sets to be used for archiving SYSOUT with archive attributes,”](#) on page 33.)
5. If the archived SYSOUT matches the criteria in a report selection rule, Output Manager reads the report selection rule, any associated report layout, and any report definitions that have the same report name or layout or both into memory. (Related section: [Chapter 5, “Setting up reports,”](#) on page 71.)
6. Output Manager processes the archived SYSOUT into reports (a basic report or custom report, and possibly an undefined report) based on the report selection rule, layout, and report definitions. A basic report contains the entire contents of the archive data set. A custom report is a logical view that presents a subset of the archive's contents. Undefined reports can be used to identify any pages that have not been accounted for in custom report definitions.

If the report administrator specified an index in a report definition, Output Manager can also create field indexes (index records) that point to the report pages that contain discrete values of the defined index fields.

7. Output Manager performs the automatic printing of the reports. Output Manager automatically distributes the reports to the recipients on the distribution list. The reports are distributed via email, hard copies, or online depending on how the report administrator has specified the distribution options for the recipients. (Related section: [Chapter 6, “Print configuration,”](#) on page 103.)
8. Report end-users who have the proper authority can view and print the basic report and any related custom reports or indexed report pages from the Output Manager ISPF interface, or ITOMweb. Additionally, ITOMweb users can download the reports in PDF, CSV, or text file format for subsequent use in workstation-based tools.

After a report is printed automatically, the report administrator can reprint the report for all recipients on a distribution list, if necessary.

Example of report processing

The following figure depicts an example of how Output Manager can subdivide an archived SYSOUT into three custom reports, each for a different bank branch.

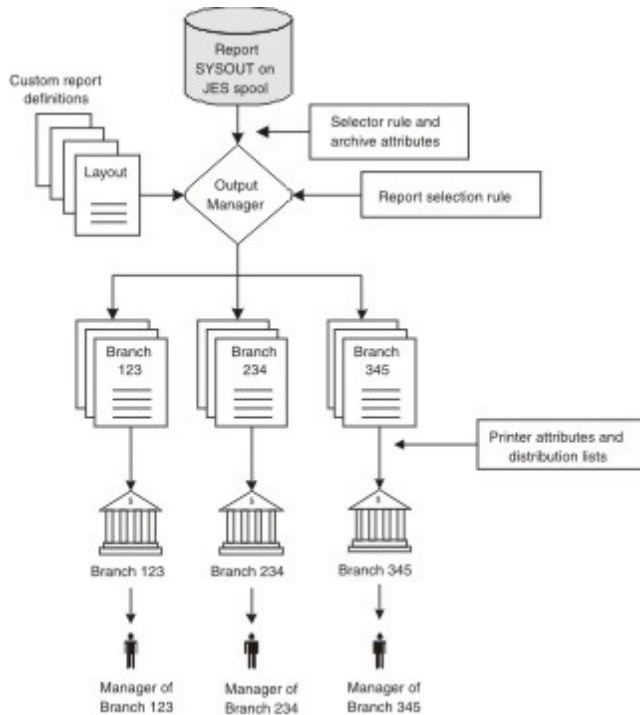


Figure 2. Example of report processing for a bank

In this example, a bank application produces a large, daily report that summarizes the previous day's transactions for three branches. The branch IDs of these branches are 123, 234, and 345. To capture this SYSOUT and create custom reports from it, the report administrator defines the following Output Manager rules and definitions: a selector rule, a set of archive attributes, a report selection rule, three custom report definitions (one for each branch), and a single report layout (for all three custom reports). To distribute hardcopies of the custom reports to the branch managers, the administrator also defines a set of printer attributes and three distribution lists (one for each custom report), each with the distribution format that they want (for example, email, email and hardcopy, or hardcopy only).

When the application produces SYSOUT, Output Manager captures the SYSOUT, archives it, subdivides the archived SYSOUT into three custom reports (one for each branch), and distributes the reports automatically to the branch managers. By providing the branch managers with only the information that they need, Output Manager helps the managers make informed decisions in a timely manner and operate their branches more efficiently.

Output Manager components

An Output Manager system is composed of the following components:

- The application that provides request processing and action definition
- The ISPF interface
- Db2 tables for storing the information that is needed to select and archive SYSOUT, create custom reports, create bundles of reports, and print and distribute reports
- Rule definitions for sending reports to the JES spool and a report indexer
- A started task for archiving SYSOUT to a sequential file
- Archive management facilities
- Optional ITOMweb for viewing and printing reports from a web browser
- The optional ISV recall component for converting third-party reports for use with Output Manager

Note: Output Manager relies on subsystems in z/OS like JES, RACF, Storage Management, Catalog Management, Hierarchical Storage Management, Apache Web Server configuration. It is recommended that you apply the current PTFs for these systems when you migrate from one z/OS to another.

Related concepts

[What Output Manager does](#)

[Report processing](#)

The following figure provides a high-level illustration of how Output Manager can fit into a business flow and process reports from start to finish.

[Output Manager administrative tutorials](#)

Get familiar with administrating Output Manager with two tutorials: a basic tutorial of Output Manager administrative objects, and a more advanced tutorial that includes report distribution.

[General product administration](#)

[Exception processing](#)

Output Manager administrative tutorials

Get familiar with administrating Output Manager with two tutorials: a basic tutorial of Output Manager administrative objects, and a more advanced tutorial that includes report distribution.

It is recommended to begin with the basics tutorial to get to know how Output Manager administrative objects work together. Then, when you're familiar with Output Manager, move on to the advanced distribution concepts in the advanced tutorial.

The “[Output Manager administrative basics tutorial](#)” on page 6 provides a high-level view of Output Manager administrative objects: how they are linked together, and how you can use them to select, store, process, and distribute your data. In this tutorial, you create a simple test report.

The “[Advanced administrator's tutorial](#)” on page 12 is a more in-depth tutorial of all of the Output Manager administrative objects. In this tutorial, you create and distribute custom reports.

Related concepts

[What Output Manager does](#)

[Report processing](#)

The following figure provides a high-level illustration of how Output Manager can fit into a business flow and process reports from start to finish.

[Output Manager components](#)

[General product administration](#)

[Exception processing](#)

Output Manager administrative basics tutorial

This section is a high-level tutorial of Output Manager administrative objects: how they are linked together, and how you can use them to select, store, process, and distribute your data. This section will introduce you to basic concepts to get you started on the right track. Tasks are included to help you follow along and see how the administrative objects work together.

Output Manager fundamentals can be broken down into the following steps:

- Tell Output Manager what to capture and where to store what is captured
- Define a report
- Specify who should receive the report

To perform this tutorial, you need the following SBJTSAMP members:

- **BJT@JCBP**: This sample batch job provides JCL for generating the report output on which the custom report is based. It is recommended that you use this sample batch job as a learning tool: the appropriate values to capture this job will be provided in the following tasks. This JCL is for tutorial and demonstration use only. Normally, a business application generates the base report, and Output Manager captures all or some of its data from the JES spool based on the selection criteria that you define.

Note: Before you begin, copy BJT@JCBP to a PDS library that you have access to, and make the following edits:

1. Edit the Job card to meet your company's standards. If you have to change the job name, note what you change it to. In the tasks below, we will define the selector rule to match these jobs, and you will need to know the values you specified.
 2. Specify a MSGCLASS and a SYSOUT class (in SYSUT2) that will remain on the spool. If the default values X and N cannot be used, take note of which SYSOUT classes are used: you'll need to know the class when defining your selector rule.
- **BJT@PRBP:** This member contains the sample report data that is generated by BJT@JCBP. This data covers six bank branches. Your custom report will contain a subset of this data (the data for the Ash branch).

What to capture, and where to store what is captured

Before Output Manager can capture your data, you have to tell it what to capture and where to store what it captures. This is done using archive attributes and selector rules:

- Archive attribute: “where do you want Output Manager to store what it captures?”
- Selector rule: “what do you want Output Manager to capture?”

Once you have defined an archive attribute and a selector rule, you can submit a batch job to test them. After the batch job is submitted, you can view the SYSOUT from the **View Archives** panel in Output Manager.

Define an archive attribute

Similar to allocating mainframe data sets, you need to tell Output Manager how you want to store data before you ask it to capture anything. For this reason, you should define an archive attribute first.

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
The Administrative Functions menu is displayed.
2. Choose option **A**, Archive Attributes, and press Enter.
3. Specify search criteria, or leave the fields blank, and press Enter.
The list is filtered by your search criteria.
4. Type ADD on the command line and press Enter.
The Archive Attribute Details panel is displayed. The values on this panel define the attributes of the data set to be allocated.
5. In the **Name** field, type a name for this set of archive attributes, for example, MY ARCHIVE ATTR. This name can be up to 24 characters long. (Take note of this name; you will need to specify it later when creating a selector rule.)
6. In the **Archive Mask** field, specify a rule for generating an archive data set name.

The Archive Mask defines the naming rule that will define the data set in which to store the captured data. It may include context-sensitive replacement symbols. For this example, type the following in the Archive Mask field: `<YOUR HLQ>.&JN . .&J# . .&N`

Where *YOUR HLQ* is your high level qualifier, a data set that the Output Manager started task can write to. In this example, the symbols would be replaced with the values of the job name, the job number, and a unique number.

Important: When you create archive attributes for your actual reports, you might need to enter additional variables and literal values to generate unique data set names. It is strongly recommended to include the &N variable to add a sequential number to the name to ensure uniqueness.

7. In the following fields, specify:

- space units: TRACKS
- primary quantity: 15
- secondary quantity: 300

These values are appropriate for running the sample jobs and many other test cases. Once you have a basic understanding of the product, you should tailor these values to be site-specific. When defining archive attributes for production, it is necessary to ensure that space allocations match site standards and are sufficiently large enough to accommodate the amount of data being captured.

8. For all other fields, accept the default settings. To learn about these fields, you can press F1 for Help.
9. Press F3. An exit confirmation panel is displayed.
10. Press Enter to save the archive attributes.

Next: Once you have defined an archive attribute, you can now tell Output Manager what to capture. To do so, create a selector rule.

For more detailed information about archive attributes, see [Chapter 3, “Allocate data sets to be used for archiving SYSOUT with archive attributes,”](#) on page 33.

Create a selector rule

A selector rule tells Output Manager what to capture from the JES spool.

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter. The **Administrative Functions** menu is displayed.
2. Choose option **S**, Selector Rules, and press Enter.
3. Specify search criteria, or leave the fields blank, and press Enter. The resulting list is filtered by your search criteria.
4. Type ADD on the command line and press Enter. The Selector Rule detail panel for a specific selector is displayed.
5. In the **Selector name** field, type a name for the selector rule. For example, MY SELECTOR. This name can be up to 16 characters long and is required.
6. From the **Link** drop-down menu, select option **1**, Choose an archive attribute. Leave the fields in the Search for Archive Attributes panel blank and then press Enter.
7. In the **Archive Attribute Selection** window, type S (Select) next to the name of the archive attribute that you created in the previous task (if you used the example name, MY ARCHIVE ATTR), and press Enter.
8. In the **Status** field, type Enabled to make this selector rule available for use.
9. In the **Job Type** field of the **Selector Rule** panel, type BATCH.
10. In the **Sysout Class** field, type the output class for which to process output. If you're going to use the sample batch job as a test, type XN. (Look at BJT@JCBP in SAMPLIB to get the MSGCLASS from the job card. For example, if it is 'X' type XN. X is the MSGCLASS of the jobcard, and N is in the SYSUT2 line. If you changed these values, use your unique sysout class values. For example, if you changed MSGCLASS to 5 and SYSUT2 to 6, you would type 56.)
11. In the **JES Queue** field, type ALL.
12. Type a slash (/) in the **Advanced Selection criteria** field and press Enter. Specify the following advanced selection criteria on this panel:
 - a) In the **Job Name** field, type the job name to be captured. If you're going to use the sample batch job as a test, type BJT@JCBP. (This value is the job name that is specified in the JCL in the SBJTSAMP member BJT@JCBP. If you had to change the job name, use your updated name.) Normally, you would specify the name of the job at your site that generates the report SYSOUT that you want to capture.
 - b) In the **User ID** field, type your user ID. This will prevent you from picking up anyone else's SYSOUT while running this test.

13. Press F3 to return to the **Selector Rule** panel.
14. In the other fields, accept the default settings. To learn about these fields, press F1 for online Help.
15. Type SAVE on the command line and press Enter to save your selector rule.
16. Press F3 (Exit).
17. Type ACT on the Selector Rules command line and press Enter to activate the selector rule.

Next: It is recommended that you test your archive attribute and selector rule by submitting a batch job that will be captured by the selector rule.

For more detailed information about selector rules, see [Chapter 4, “Selecting output off of the spool with selector rules,”](#) on page 43.

Submit a batch job to test your archive attribute and selector rule

Once you have defined an archive attribute and a selector rule, you can test them by submitting a test batch job. This task uses the sample batch job, BJT@JCBP, in SBJTSAMP.

When the job is submitted, the selector rule that you defined in the previous task will be matched, and Output Manager will store it as an archive according to your archive attribute.

1. Submit the BJT@JCBP sample job. (Navigate to the data set that contains your copied BJT@JCBP, and type SUBMIT on the command line and press Enter.)
Output Manager captures the SYSOUT from the JES spool and stores it according to the values you specified in your archive attribute.
2. From the Output Manager main menu, choose option **V** (View), and then **A** (Archived Sysout).
3. Specify search criteria, or leave the fields blank, and press Enter.
The resulting list is filtered by your search criteria.
4. Find the archive named "BJT@JCBP." If you changed the job name in the sample batch job, search for the job name that you used.
5. Type S (Select) next to the archive in the **CMD** column, and press Enter. The archive is displayed.

Once you understand how archive attributes and selector rules are used to capture and store SYSOUT, you're ready to tell Output Manager how to make reports.

Define a report

Now that you've learned how to instruct Output Manager to capture and archive sysout from the spool, you can define reports for subsequent executions of this job.

Before Output Manager can turn your SYSOUT into deliverable reports, you have to tell it how to format the reports. This is done using report layouts, report definitions, and report selector rules:

- Report layout: Describe the location of particular fields located in the report content
- Report definition: Assigns names to reports and specifies optional field match criteria and indexing
- Report selector rule: Indicates how to handle the selected areas of the SYSOUT by specifying the source (which job generates this report).

The following tasks provide the basic task flow for creating reports. For more information on each of these tasks, see the related section for [Chapter 5, “Setting up reports,”](#) on page 71.

Create a report layout

In this step, you create a simple report layout. A report layout describes to Output Manager the physical arrangement of the original report. Normally, you must have a detailed knowledge of the original report's design to create a report layout.

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter. The Administrative Functions panel is displayed.
2. Choose option **L**, Report Layouts, and press Enter.
3. Specify search criteria, or leave the fields blank, and press Enter.

The resulting list is filtered by your search criteria.

4. Type ADD on the command line and press Enter.

The Layout detail panel is displayed.

5. In the **Layout Name** field, type a name for this report layout, for example, MY LAYOUT. This name can be up to 64 characters long. (Record this name. You will need to specify it later when defining a report selection rule and custom report definition.)
6. In the other fields, accept the default settings. To learn about these fields, press F1 for online Help.
7. Press F3 (Exit). If an exit confirmation pop-up window is displayed, press Enter.

The Layouts panel lists the name of the newly defined layout.

For the purposes of this basic overview, a blank layout is sufficient. For more detailed information about report layouts, see [“Step 1: Describe the physical layout of the report using report layouts” on page 71.](#)

Next: Now that you have a report layout, you can link it to a report definition and a report selection rule.

Create a report selection rule

A report selection rule specifies the criteria against which captured reports are matched and determines if they should be processed into basic or custom reports

This report selection rule will be associated with a report layout. If this layout matches the layout that is linked to a custom report definition, Output Manager will create a custom report based on that layout. Otherwise, Output Manager creates only a basic report.

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
The Administrative Functions panel is displayed.
2. Choose option **R**, Report Selection Rules, and press Enter.
3. Specify search criteria, or leave the fields blank, and press Enter.
4. Type ADD on the command line and press Enter.
The Report panel is displayed.
5. In the **Report name** field, type MY REPORT RULE.
Report names can be up to 64 characters long.
6. Referring back to your test batch job, (BJT@JCBP if you're using the supplied sample), specify values for the following fields:
 - a) In the **Job Name** field, type BJT@JCBP.
 - b) In the **DD Name** field, type SYSUT2.
 - c) In the **Step Name** field, type PRINT.
7. Leave the other fields blank.
8. Link this report selection rule to a layout:
 - a) From the **Link** menu, choose **1**, Choose a Layout. The Search for Layout panel is displayed. Leave the search fields blank, and press Enter. The Layout Selection window is displayed.
 - b) Type S (Select) next to the name of the layout that you created, MY LAYOUT, and press Enter.
 - c) Press F3 to return to the Report Rule panel. The name of the layout that you selected is displayed in the **Layout Name** field.
9. Press F3 (Exit) to return to the Report Rules list panel.
10. Type ACT on the command line of the Report Rules list panel, and press Enter to activate the rule.

For more detailed information about report selection rules, see [“Step 2: Determine which selected SYSOUTs are candidates for processing into reports using report selection rules” on page 75.](#)

Next: Link your report layout to a report definition.

Create a report definition

In this step, you create a report definition to give the report a unique name. A report definition also specifies the conditions that must be met to generate a custom report.

For a custom report to be generated, the following requirements must be met:

- The condition entry fields in the custom report definition must be defined in the associated report layout. For the purposes of this basic review, the report definition will not contain any condition entry fields.
- The report layout that is linked to the custom report definition should match the layout that is assigned to the report selection rule.

To create a custom report definition:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter. The Administrative Functions panel is displayed.
2. Choose option **C**, Custom Reports, and press Enter.
3. Specify search criteria, or leave the fields blank, and press Enter.
The resulting list is filtered by your search criteria.
4. Type ADD on the command line and press Enter.
The Report panel is displayed.
5. In the **Report Name** field, type MY REPORT as the name of the custom report. This name can be up to 64 characters long, and must be specified before the definition is enabled. The name cannot include an asterisk (*).
6. In the **Status** field, change the value to **Enabled**.
7. Link your layout to the report definition:
 - a) From the **Links** menu, choose option **1**, Choose a Layout. The Search for Layout panel is displayed.
 - b) Leave all search fields blank and press Enter. The Layout Selection pop-up window is displayed.
 - c) In the **CMD** column, type S (Select) next to the name of the layout that you created, MY LAYOUT, and press Enter. The layout name is displayed in the **Layout** field.
8. Press F3 (Exit). An exit confirmation pop-up window is displayed.
9. Press Enter to save the report definition.

For more detailed information, including information on field conditions, see [“Creating a custom report definition with condition entries” on page 81](#).

Next: It is recommended that you test your report layout, report definition, and report selection rule by resubmitting your test sample batch job. This time, you'll have a report based on your archive.

Submit a batch job to test your report

Once you have defined your report layout, report definition, and report selection rules, you can re-submit the batch job. This task uses the sample batch job, BJT@JCBP, in SBJTSAMP.

Output Manager will match your selector rule against this batch job and save it as a report. The format of the report will reflect what you defined in your layout, report definition, and report selection rule.

1. Submit the BJT@JCBP sample job.

Tip: Navigate to the data set that contains your copied BJT@JCBP, and type SUBMIT on the command line and press Enter.

Output Manager captures the SYSOUT from the JES spool and stores it according to the values you specified in your archive attribute.

2. From the Output Manager main menu, choose option **V**, View Reports.
3. From the View Reports panel, type **R** Reports, and press Enter.
The Search for Reports panel is displayed.

4. In the **After Date** field, type TODAY to limit the display to only those reports created today, and press Enter.
The Captured Reports panel is displayed.
5. Find the report named "MY REPORT." If you used a different name in the report definition, search for the report name that you used.
6. Type S (Select) next to the report in the **CMD** column, and press Enter. The report is displayed.

Once you understand how archive attributes and selector rules are used to capture and store SYSOUT, you're ready to tell Output Manager how to make reports.

Advanced administrator's tutorial

This tutorial is an advanced tutorial for report administrators.

This tutorial demonstrates how to set up, print, and distribute a custom report for the "Ash" branch office of the "Tree House" bank. The custom report will be available for online viewing (not as hardcopy) and be distributed to one recipient (yourself) by means of a distribution list.

To perform this tutorial, you need the following SBJTSAMP members:

- BJT@JCBP: This member provides sample JCL for generating the report output on which the custom report is based. This JCL is for tutorial and demonstration use only. Normally, a business application generates the base report, and Output Manager captures all or some of its data from the JES spool based on the selection criteria that you define.
- BJT@PRBP: This member contains the sample report data that is generated by BJT@JCBP. This data covers six bank branches. Your custom report will contain a subset of this data (that data for the Ash branch).

In this tutorial, you create all of the Output Manager rules and definitions that are required for creating a custom report from scratch. The optional task of specifying printer attributes is also included to introduce you to this important feature.

The tutorial steps in [Table 1 on page 12](#) provide the most efficient work flow for creating a custom report. Although you can perform some steps in another order, you should follow the tutorial flow; otherwise, you will need to return to one or more previous panels to link Output Manager rules and definitions together.

Step
"Step 1: Start Output Manager" on page 13
"Step 2: Define archive attributes" on page 13
"Step 3: Create a selector rule" on page 14
"Step 4: Create a report layout" on page 15
"Step 5: Define printer attributes" on page 16
"Step 6: Create a report selection rule" on page 17
"Step 7: Create a recipient ID" on page 17
"Step 8: Create a distribution list" on page 18
"Step 9: Create a custom report definition" on page 18
"Step 10: Activate the policy" on page 20
"Step 11: Run and capture the sample bank report" on page 21
"Step 12: View the custom report" on page 21

Step 1: Start Output Manager

To access the Output Manager ISPF interface, use the EXEC program that your system administrator designated for your use.

For example, if the system administrator designated that you use the product's sample EXEC program (BJTUI), you could specify TS0 BJTUI from the ISPF Primary Option Menu panel or specify just BJTUI from the ISPF Command Shell panel (Option 6 on the ISPF Primary Option Menu). If you are unsure of the correct EXEC program to use, contact your system administrator or whomever was responsible for customizing the product.

After you start the product, the Output Manager main menu is displayed.

In this tutorial, you will primarily use option **A**, Administrative Functions, to define reports, report archives, printing attributes, and distribution lists.

Step 2: Define archive attributes

In this step, you define a set of archive attributes for Output Manager to use when allocating a sequential archive file to hold captured SYSOUT.

For Output Manager to create the archive file, the set of archive attributes must specify the following information:

- An archive mask for generating the data set name for the archive file
- An SMS storage class or, if your site does not use SMS, a device type (generic unit name or device address) for indicating where to allocate the archive data set
- Whether to automatically calculate the space for the archive file or to use the space quantities that you specify

To define a set of archive attributes:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter. The Administrative Functions menu is displayed.
2. Choose option **A**, Archive Attributes, and press Enter.

A search panel is displayed. Press Enter to proceed to the Archive Attributes panel.

3. Type ADD on the command line and press Enter.

The Archive Attribute Details panel is displayed.

4. In the **Name** field, type a name for this set of archive attributes, for example, MYARCHIVEATTR1. This name can be up to 24 characters long. (Record this name; you will need to specify it later when creating a selector rule.)

5. In the **Archive Mask** field, type the following variables for generating an archive data set name: TEST.BJTV21.&JOBNAME.&JOBNUMB. Be sure to enter two periods between the variables.

Important: When you create archive attributes for your actual reports, you might need to enter additional variables and literal values to generate unique data set names. It is strongly recommended to include the &N variable to add a sequential number to the name to ensure uniqueness.

6. To indicate where to allocate the archive file, specify one of the following:

- In the **Storage Class** field, specify the SMS storage class to be used to determine the unit or volume where the archive file will be allocated.
- In the **Device Type** field, specify the generic unit name or a device address. This value can be up to eight characters long.

If your site uses SMS, you can complete either field. If your site does not use SMS, you must specify a device type.

7. In the **Auto Calculate** field, type Yes to have the space that is required for allocating the archive file automatically calculated.

Note: When you specify **Yes**, Output Manager ignores any values in the **Primary Quantity**, **Average Record Unit**, **Space Units**, and **Block Size** fields, provided that JES provides the data quantity information that is required for auto calculation.

8. For all other fields, accept the default settings. To learn about these fields, you can press F1 for Help.
9. Press F3. An exit confirmation panel is displayed.
10. Press Enter to save the archive attributes.

For more detailed information about archive attributes, see [Chapter 3, “Allocate data sets to be used for archiving SYSOUT with archive attributes,”](#) on page 33.

Step 3: Create a selector rule

In this step, you create a selector rule (also called a *selector definition*). A selector rule provides criteria for capturing SYSOUT data from the JES spool and for defining what to do with that data when it is archived.

To create a selector rule:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter. The Administrative Functions menu is displayed.
2. Choose option **S**, Selector Definitions, and press Enter. A search panel is displayed. Press Enter to proceed to the Selector Rules panel.
3. Type ADD on the command line and press Enter. The Selector Rule detail panel for a specific selector is displayed.
4. In the **Selector name** field, type a name for the selector rule. This name can be up to 16 characters long and is required.
5. In the **Status** field, type Enabled to make this selector rule available for use.
6. Link the selector rule to your archive attribute that you defined in [“Step 2: Define archive attributes”](#) on page 13:
 - a) Choose option **1**, Choose an archive attribute, from the **Link** menu.
 - b) Specify search criteria to locate your archive attribute, and press Enter.
 - c) In the Archive Attribute Selection window, type S (Select) next to the name of the archive attribute and press Enter. The name of the archive attribute is displayed in the **Archive Attr** field.
7. In the **Sysout Class** field, type N.
8. In the **JES Queue** field, type ALL.
9. Type S in the **Advanced Selection criteria** field and press Enter. The Advanced Selection panel is displayed.
10. In the **Job Name** field, type BJT@JCBP. (This value is the job name that is specified in the JCL in the SBJTSAMP member BJT@JCBP.) Normally, you would specify the name of the job at your site that generates the report SYSOUT that you want to capture.
11. Press PF3 to return to the Selector Rule panel.
12. In the other fields, accept the default settings. To learn about these fields, press F1 for online Help.
13. Press F3 (Exit).
14. If an exit confirmation pop-up window is displayed, press Enter to save your changes.
15. On the Selector Rules list panel, press F3 (Exit).

For more detailed information about selector rules, see [Chapter 4, “Selecting output off of the spool with selector rules,”](#) on page 43.

Step 4: Create a report layout

In this step, you create a report layout. A report layout describes to Output Manager the physical arrangement of the original report, as produced by the application that generated the report SYSOUT. You must have a detailed knowledge of the original report's design to create a report layout.

A layout has three subcomponents: pages, areas, and fields. A page can contain one or more areas, and an area can contain one or more fields. A field indicates the position of a data field.

For this tutorial, you will define three fields that correspond to data in the sample bank report (SBJTSAMP member BJT@PRBP) and use the default page and area.

Note: The row, column, height, and width values for the default page are all zero. In this case, the area encompasses the entire page.

To create a report layout:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter. The Administrative Functions panel is displayed.
2. Choose option **L**, Report Layouts, and press Enter. A search panel is displayed. Press Enter to proceed to the Layouts panel.
3. Type ADD on the command line and press Enter. The Layout detail panel is displayed.
4. In the **Layout Name** field, type a name for this report layout, for example, Bank Branch Layout. This name can be up to 64 characters long. (Record this name; you will need to specify it later when defining a report selection rule and custom report definition.)
5. In the **Print Control** and **Line Count** fields, accept the default values.
6. In the **Description** field, type a description of the report layout. This description can be up to 60 characters long.
7. To define the TITLE field of the bank report, perform the following steps:
 - a) In the **CMD** column (in the lower half of the screen), type I (Insert) next to the default **Area 1** item and press Enter. A new line is added to table, with FIELD displayed in the Type column.
 - b) In the **Name** field, replace FIELD with TITLE.
 - c) With your cursor in the TITLE row, use the PF11 key to scroll right to display additional columns, then enter the following values:
 - In the **Row** field, type 2.
 - In the **Column** field, type 5.
 - In the **Width** field, type 32.
 - In the **Height** field, type 0.
 -
 - d) For the other fields, accept the default settings.
 - e) Press F3 (Exit) to return to the Layout panel.
8. To define the BRANCHTI field, perform the following steps:
 - a) In the **CMD** column, type I (Insert) next to the TITLE field, and press Enter. A new field is added to table, with FIELD displayed in the Type column.
 - b) In the **Name** field, type BRANCHTI.
 - c) With your cursor in the TITLE row, use the PF11 key to scroll right to display additional columns, then enter the following values:
 - In the **Row** field, type 7.
 - In the **Column** field, type 10.
 - In the **Width** field, type 9.

- In the **Height** field, type 0.
 -
 - d) For the other fields, accept the default settings.
 - e) Press F3 (Exit) to return to the Layout panel.
9. To define the BRANCHID field, perform the following steps:
- a) In the **CMD** column, type I (Insert) next to the TITLE field, and press Enter.
A new field is added to table, with FIELD displayed in the Type column.
 - b) In the **Name** field, type BRANCHID.
 - c) With your cursor in the TITLE row, use the PF11 key to scroll right to display additional columns, then enter the following values:
 - In the **Row** field, type 7.
 - In the **Column** field, type 20.
 - In the **Width** field, type 20.
 - In the **Height** field, type 0.
 -
 - d) For the other fields, accept the default settings.
 - e) Press F3 (Exit) to return to the Layout panel.
10. Press F3 (Exit). If an exit confirmation pop-up window is displayed, press Enter.
- The Layouts panel lists the name of the newly defined layout.

For more detailed information about report layouts, see [“Step 1: Describe the physical layout of the report using report layouts” on page 71.](#)

Step 5: Define printer attributes

In this step, you define an optional printer attribute. Printer attributes are used for physically printing a report instance on a printer.

Note: Because the custom report that you are defining will be displayed online only, the printer attribute that you will define is atypical; most fields will be left blank or retain a default value of 0. To define a printer attribute, you must be familiar with the printers and printing environment at your site.

To define printer attributes:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter. The Administrative Functions panel is displayed.
2. Choose option **K**, Printer Attributes, and press Enter.
A search panel is displayed. Press Enter to proceed to the Printer Attributes panel.
3. Type ADD on the command line and press Enter.
The Printer Attributes Detail panel is displayed.
4. In the **Name** field, type a name for the printer attribute. This name can be up to 32 characters long. (Record this name; you will need to enter it later when creating a report selection rule.)
5. In the other fields, accept the default settings. To learn about these fields, you can press F1 for online Help.
6. Press F3 (Exit). An exit confirmation pop-up window is displayed.
7. Press Enter to save the set of printer attributes.

For more detailed information about printer attributes, see [Chapter 6, “Print configuration,” on page 103.](#)

Step 6: Create a report selection rule

In this step, you create a report selection rule.

A report selection rule specifies the criteria against which captured reports are matched to determine if they are candidates for processing into basic or custom reports. This report selection rule will be associated with an optional report layout. If this layout matches the layout that is linked to a custom report definition, Output Manager will create a custom report based on that layout. Otherwise, Output Manager creates only a basic report.

To create a report selection rule:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter. The Administrative Functions panel is displayed.
2. Choose option **R**, Report Selection Rules, and press Enter. A search panel is displayed. Press Enter to proceed to the Report Rules panel.
3. Type ADD on the command line and press Enter. The Report Rule detail panel is displayed.
4. In the **Report Name** field, type the name of the report. This name can be up to 64 characters long. It cannot include an asterisk (*).
5. In the **Status** field, accept the default value of **Enabled**.
6. In the **Match Name** field, accept the default value of **No**.
7. In the **Job Name** field, type BJT@JCBP. (This job name appears in the JCL that is in SBJTSAMP member BJT@JCBP.)
8. In the **DD Name** field, type SYSUT2.
9. In the **Step Name** field, type Print.
10. Link the report selection rule to your layout:
 - a) From the **Link** menu, choose **1**, Choose a Layout.
 - b) Specify search criteria for your layout, then press Enter.
 - c) Type S (Select) next to the name of the layout that you created in "[Step 4: Create a report layout](#)" on page 15", and press Enter.
 - d) Press F3 to return to the Report Rules panel. The name of the layout that you selected is displayed in the **Layout Name** field.
11. Leave all other fields on the Report Rule panel blank.
12. Press F3 (Exit).
13. If an exit confirmation pop-up window is displayed, press Enter.
14. On the Report Rules list panel, press F3 (Exit).
15. If a save confirmation prompt is displayed, press Enter to save the report selection rule.

Step 7: Create a recipient ID

In this step, you create a recipient ID.

This recipient ID will be added to a distribution list for the report. A recipient ID provides information about an individual or a generic location that is to receive the report, for example, a person's name, an address, a building, a printer destination, a SYSOUT class, or a USERID. You can define multiple recipient IDs for a report. However, for this tutorial, you will define only one recipient ID for yourself.

You can link the recipient ID to the set printer attributes. However, you will not do so because you already linked the report selection rule to the set of printer attributes.

To create a recipient ID:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter. The Administrative Functions panel is displayed.
2. Choose option **J**, Recipient IDs, and press Enter.

- A search panel is displayed. Press Enter to proceed to the Recipient IDs panel.
3. Type ADD on the command line and press Enter.
The Recipient Details panel is displayed.
 4. In the **Name** field, type your name. This value can be up to 60 characters long.
 5. In the **Userid** field, type your TSO user ID. This ID can be up to eight characters long.
 6. In the **Access Mask** field, type * as an access mask for the recipient.
An access mask determines whether or not a user can change their Access ID during a session. To allow a user to change their Access ID, specify an Access ID with a wildcard.
 7. In the **Copies** field, accept the default value of 0. A zero value means that the report will be viewable online only. A hardcopy will not be printed.
 8. Leave all other fields blank. To learn about these fields, press F1 for online Help.
 9. Press F3. An exit confirmation window is displayed.
 10. Press Enter to save the recipient ID.

Step 8: Create a distribution list

In this step, you create a distribution list to identify the recipients or locations that are to receive the custom report. For this tutorial, you will add only the recipient ID that you created for yourself to the distribution list.

Note: A report cannot be sent directly to a recipient ID. Recipient IDs must be added to a distribution list for recipients to receive a report either online or as a printed hardcopies.

To create a distribution list:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter. The Administrative Functions panel is displayed.
2. Choose option **D**, Distribution Lists, and press Enter.
A search panel is displayed. Press Enter to proceed to the Distribution Lists panel.
3. Type ADD on the command line and press Enter.
The Distribution List panel is displayed.
4. In the **Dist. List Name** field, type a name for the distribution list up to 60 characters long, then press Enter. The Distribution Lists panel is redisplayed and lists the name of the new distribution list.
5. To add recipients to the distribution list, type ADD on the command line and press Enter.
The Search for Recipient IDs/Distribution lists panel is displayed.
6. Specify search criteria to locate the recipient ID that you created in "[Step 7: Create a recipient ID](#)" on [page 17](#)" and press Enter.
The Recipient Selection panel is displayed.
7. In the **CMD** column, type S (Select) next to your recipient ID and press Enter.
The Distribution List panel is displayed and lists the selected recipient as a member of the distribution list.
8. Press F3 (Exit). An exit confirmation pop-up window is displayed.
9. Press Enter to save the distribution list.

Step 9: Create a custom report definition

In this step, you create a custom report definition that specifies the conditions that must be met to generate a custom report. When specifying these conditions, you use the field names that are defined in the report layout that is linked to the report definition.

For a custom report to be generated, the following requirements must be met:

- The condition entry fields in the custom report definition must be defined in the associated report layout.

- The report layout that is linked to the custom report definition should match the layout that is assigned to the report selection rule.

To create a custom report definition:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter. The Administrative Functions panel is displayed.
2. Choose option **C**, Custom Reports, and press Enter. A search panel is displayed. Press Enter to proceed to the Report Definitions panel.
3. Type ADD on the command line and press Enter. The Basic Report panel is displayed.
4. In the **Report Name** field, type Ash Bank Branch Report as the name of the custom report. This name can be up to 64 characters long. It cannot include an asterisk (*).
5. In the **Status** field, change the value to **Enabled**.
6. Link your layout to the custom report definition:
 - a) From the **Links** menu, choose option **1**, Choose a Layout. The Search for Layouts panel is displayed.
 - b) Specify search criteria for the layout that you created in "[Step 4: Create a report layout](#)" on page 15", and press Enter.
 - c) In the **CMD** column, type S (Select) next to the name of your layout and press Enter. The Basic Report panel is displayed, and your layout is displayed in the **Layout** field.
7. Link your distribution list to the custom report definition:
 - a) From the **Links** menu, choose option **2**, Choose a Distribution List. The Search for Distribution Lists panel is displayed.
 - b) Specify search criteria for the distribution list that you created in "[Step 8: Create a distribution list](#)" on page 18", and press Enter.
 - c) In the **CMD** column, type S (Select) next to the name of your distribution list and press Enter. The Basic Report panel is displayed, and your distribution list is displayed in the **Distribution** field.
8. To specify the report conditions that must be met for a custom report page to be generated, perform these steps:
 - a) At the command line, type ADD and press Enter. The Report Condition Entry panel is displayed.
 - b) Add an inclusive report condition when "Tree House Bank" is found in the TITLE field:
 - i) In the **Condition type** fields, specify 3 (Condition), and 1 (Include).
 - ii) Type S on the line next to the **Field** column, and press Enter. The Selection panel is displayed. The fields populated on this panel are the fields defined in your linked layout.
 - iii) Type S next to the TITLE field, and press Enter. The TITLE field is added to the Report Condition Entry table.
 - iv) In the **OP** field, type EQ.
 - v) In the **Value** field, type Tree House Bank.
 - vi) In the **Case** field, type Yes.
 - vii) In the **Var** field, type 0.
 - c) Add an inclusive report condition when "Branch -" is found in the BRANCHTI field:
 - i) In the **Condition type** fields, specify 3 (Condition), and 1 (Include).
 - ii) Type S on the line below the **TITLE** row, and press Enter. The Selection panel is displayed. The fields populated on this panel are the fields defined in your linked layout.
 - iii) Type S next to the BRANCHTI field, and press Enter. The BRANCHTI field is added to the Report Condition Entry table.
 - iv) In the **OP** field, type EQ.

v) In the **Value** field, type Branch -

Note: You must insert two spaces between the word "Branch" and the hyphen that follows.

vi) In the **Case** field, type Yes.

vii) In the **Var** field, type 0.

d) Add an inclusive report condition when "Ash" is found in the BRANCHID field:

i) In the **Condition type** fields, specify 3 (Condition), and 1 (Include).

ii) Type S on the line below the **BRANCHTI** row, and press Enter. The Selection panel is displayed. The fields populated on this panel are the fields defined in your linked layout.

iii) Type S next to the BRANCHID field, and press Enter. The BRANCHID field is added to the Report Condition Entry table.

iv) In the **OP** field, type EQ.

v) In the **Value** field, type Ash

vi) In the **Case** field, type Yes.

vii) In the **Var** field, type 0.

When you are finished, the table on the Report Condition Entry is as follows:

Field	Op	Value	Case	Var
TITLE	EQ	Tree House Bank	Y	0
BRANCHTI	EQ	Branch -	Y	0
BRANCHID	EQ	Ash	Y	0

e) Press F3 (Exit) to save your entries and return to the Report panel.

Your report condition entries are listed at the bottom of the panel.

Note: The condition entries are connected to one another by the *and* connector. This means that all of these conditions must be true on a SYSOUT page for the page to be included in the custom report.

9. Press F3 (Exit). An exit confirmation pop-up window is displayed.

10. Press Enter to save the custom report definition.

For more detailed information, including an example of using the *or* connector, see [“Creating a custom report definition with condition entries”](#) on page 81.

Step 10: Activate the policy

You must activate the current *policy* to make the selector rule and report selection rule that you created available to Output Manager for report processing.

Note: If you subsequently edit these rules, you must activate them again. In this case, you must specify the SAVE command before issuing the ACTIVATE command. Otherwise, your changes will be lost.

To activate the policy:

1. From the Output Manager main menu, access a panel from which you can activate the policy, as follows:

- Type A . S at the command line to display the Selector Rules panel.
- Type A . R at the command line to display the Report Rules panel.

Note: You can specify the ACTIVATE command from either of these panels.

2. At the command line, type ACTIVATE (or just ACT) and press Enter. The Rules Activation Confirmation pop-up window is displayed.
3. Press Enter to submit the ACTIVATE command. After the command runs, the Rules Activation Results window is displayed.

4. Press Enter to return to the panel from which you started.

Step 11: Run and capture the sample bank report

In this step, you run and capture the sample bank report using the SBJTSAMP members BJT@JCBP and BJT@PRBP.

The BJT@JCBP member provides the JCL for generating the original bank report. The BJT@PRBT member provides the report data for all six bank branches. Output Manager will match your selector rule, report selection rule, custom report definition, and report layout against this base report to create the custom report for the Ash branch.

Note: This step is required to generate report output for this tutorial and is not part of a normal Output Manager task flow.

To generate the sample bank report:

1. In the BJT@JCBP member, edit the ?BJTHLQ? variable to point to the high-level qualifier that your site uses for Output Manager product libraries.
2. Run BJT@JCBP to generate the report SYSOUT. Output Manager captures the SYSOUT from the JES spool and then performs post-capture processing to create your custom report.

Step 12: View the custom report

You can now view the custom report from the Output Manager interface.

To view the custom report:

1. From the Output Manager main menu, choose option **V**, View Reports.
2. From the View Selection menu, choose option **R**, Reports. A search panel is displayed. Press Enter to proceed to the Captured Reports panel.
3. Find the report named "Ash." You can search for the report by using the **Search** pull-down menu.
4. Type V (View) next to it in the **CMD** column, and press Enter. The report is displayed on screen.

General product administration

From the ISPF interface, product administrators can manage the Output Manager system policies using the Policy Administration panel (ISPF A.PA). They can also define messages to product users. Other administration tasks, such as synchronizing Output Manager tables and archive data sets with the z/OS system catalog, must be performed from outside of the ISPF interface.

Related concepts

[What Output Manager does](#)

[Report processing](#)

The following figure provides a high-level illustration of how Output Manager can fit into a business flow and process reports from start to finish.

[Output Manager components](#)

[Output Manager administrative tutorials](#)

Get familiar with administering Output Manager with two tutorials: a basic tutorial of Output Manager administrative objects, and a more advanced tutorial that includes report distribution.

[Exception processing](#)

User messages

From the User Messages panel (ISPF option A.U), you can specify messages.

These messages are displayed when the users start the ISPF interface or ITOMweb.

For more information, see [“Specifying user messages” on page 187](#).

Catalog synchronization

The catalog synchronization process enables you to keep the Output Manager archive and report tables in sync with the z/OS system catalog. It also enables you to mark archive data sets that have been migrated to tape.

For more information, see [“Performing catalog synchronization” on page 215](#).

Batch recall of DFSMSHsm-migrated data sets

From the Archived Sysouts panel (option V.A), report end-users can recall DFSMSHsm-migrated (or equivalent) data sets so that they can view or print them.

Before a recall operation can be performed, the product administrator must have customized the batch recall procedure.

For more information, see the *IBM Tivoli Output Manager for z/OS Installation and Customization Guide*.

Conversion of third-party archived reports

Output Manager ISV recall provides a conversion process to register third-party legacy reports in the Output Manager archive table (BJTARC) and convert them to a format that Output Manager can use.

This conversion process enables report end-users to access these legacy reports through the Output Manager interface.

Note: ISV tapes are eligible for conversion only if they are not encrypted. If your ISV tapes are encrypted, you must use your ISV product to recall them to flat files or SYSOUT before the ISV license expires.

For more information, see the *IBM Tivoli Output Manager for z/OS Installation and Customization Guide*.

Supported third-party ISV products

The ISV recall component supports CA-View™ and IBM RMDS™ archives. For more information on additional supported third-party ISV archives, contact your IBM representative or Technical Support.

For more information on installing and customizing ISV recall, see the *IBM Tivoli Output Manager for z/OS Installation and Customization Guide*.

Exception processing

While processing JES data sets during output capture, Output Manager automatically looks for the following conditions, in the order shown:

1. JCL errors
2. Abends
3. Non-zero return codes

More specifically, Output Manager parses the JES data sets to look for the following messages:

IEF452I - JCL error.

IEF453I - JCL error.

IEFC452I - JCL error.

IEF450I - Abend.

IEF142I - Step completion code.

Output Manager records information for the first JCL error that is encountered (if any) in the Output Manager archive table.

If the condition code from IEF142I is zero, Output Manager does not indicate an exception.

If a job has a non-zero condition code but neither abends nor creates a JCL error, Output Manager records either the last non-zero condition code or the highest condition code, depending on how you set the configuration parameter `CONDITION_CODE`. Only one exception is recorded in the archive table for a JES data set.

Tip: This automatic processing can be augmented with Output Manager TPL (Text Processing Language) rules. For example, if a particular string in a sysout indicates an error, but the job completes successfully, you could create a TPL rule to post a WTO to trigger automation based on that error message.

Related concepts

[What Output Manager does](#)

[Report processing](#)

The following figure provides a high-level illustration of how Output Manager can fit into a business flow and process reports from start to finish.

[Output Manager components](#)

[Output Manager administrative tutorials](#)

Get familiar with administering Output Manager with two tutorials: a basic tutorial of Output Manager administrative objects, and a more advanced tutorial that includes report distribution.

[General product administration](#)

Chapter 2. Overview of administrative functions

Report administrators can use Output Manager administrative functions to define, print, and maintain reports.

If you are a report administrator, it is recommended to perform the administrator's tutorial, "[Output Manager administrative basics tutorial](#)" on page 6.

Types of Output Manager rules and definitions

The following table lists the Output Manager administrative rules and definitions that you can define. The *required* definitions are needed to capture and archive SYSOUT.

The *optional* definitions can be defined, as needed, for your site, to produce basic and custom reports. The recommended definitions provide management features for the associated function. Note that most definitions must be linked to or associated with other types of definitions to be effective.

Rule or definition	Required or Optional	Description	Link to
Archive attributes	Required	Specifies attributes for allocating an archive data set to hold captured SYSOUT data for a basic or custom report.	<ul style="list-style-type: none">• Selector rule• Subselector rule (if defined)
Selector rule (or selector definition)	Required	Specifies criteria for selecting SYSOUT data from the JES spool and for defining what to do with that captured data when it is archived.	Archive attributes
Subselector rule	Optional	Specifies additional criteria for selecting SYSOUT data from the JES spool and for defining what to do with that captured data when it is archived.	Archive attributes
Report layout	Required for custom and indexed reports	Defines the physical page layout of the original report, including where fields are located on a page.	<ul style="list-style-type: none">• Report definition for a custom or indexed report (required)• Report selection rule (optional)
Report selection rule	Optional, but required for reports	Specifies criteria (such as job name, step name, and DD name) against which captured SYSOUT data is matched to determine if it is a candidate for processing into a basic or custom report.	Report layout (optional)

Table 2. Output Manager rules and definitions (continued)

Rule or definition	Required or Optional	Description	Link to
Recipient IDs	Optional, but required for reports	Provides information about the persons or locations that are to receive a report (either online or as a printed hardcopy). For a report to be sent to these recipients, you must include the recipient IDs in a distribution list. In report bundles, recipient IDs provide information for identifying the bundle recipients to receive report packages. Recipients are required if the security feature ARCFILTER is enabled.	<ul style="list-style-type: none"> • Printer attributes (optional) • Distribution lists • Bundle recipients
Distribution list	Required for distributing non-bundled reports during automatic printing or reprint operations. Recommended for managing access to reports for online viewing.	Provides a list of recipients (recipient IDs) that are to receive a report. Optionally, distribution lists may contain child distribution lists. You can specify that all recipients or selected recipients in the list receive a hardcopy of the report. Ignored for report bundles.	<ul style="list-style-type: none"> • Recipient IDs • Printer attributes • Other distribution lists
Printer attributes	Optional	Specifies attributes for printing hardcopies of a report on a printer.	<ul style="list-style-type: none"> • Recipient IDs (optional) • Report definitions (optional) • Distribution lists (optional)
Banner page	Optional	Identifies a banner page that contains additional information that you want to be printed for a report, report bundle, or bundle recipient. The banner page contents must exist in a PDS member.	<ul style="list-style-type: none"> • Report definitions (optional) • Bundle definitions, highest level (optional) • Bundle recipients (optional)
Bundle definition	Optional, used for report bundles only	Identifies a bundle of reports and lists the bundle recipients and reports that are included the bundle.	<ul style="list-style-type: none"> • Recipient IDs (required for bundle recipients) • Report definitions (required for bundle reports) • Banner pages (optional at all levels of the bundle definition)

Table 2. Output Manager rules and definitions (continued)

Rule or definition	Required or Optional	Description	Link to
Report definition	Optional, but required for reports	Specifies the condition entries or index fields that are matched against captured SYSOUT to create a custom report or indexed report pages. If no condition entries or index fields are specified, a basic report is created. Output Manager can dynamically generate a report definition for a basic report based on report selection rule. In bundle definitions, report definitions are selected as the "bundle reports" to include in bundle instances.	<ul style="list-style-type: none"> • Report layout (required for custom and indexed reports) • Distribution list (required for distributing non-bundled reports during print operations) • Banner page (optional) • PRSET member (optional) • Printer attributes (optional)

Administrative Functions menu

The Administrative Functions menu provides access to the Output Manager administrative functions. To display this menu, choose option **A**, Administrative Functions, from the Output Manager main menu.

Allocating data sets to be used for archiving SYSOUT

A - Archive Attributes

Choose this option to display the Archive Attributes panel from which you can view, create, edit, and delete archive attributes. Archive attributes provide parameters for allocating a sequential archive file for captured output.

Selecting output off the spool

S - Selector Rules

Choose this option to display the Selector Rules panel from which you can view, create, edit, and delete selector rules and subselector rules. These rules specify criteria for selecting report output off the JES spool.

T - TPL rules

Choose this option to display the TPL Rules panel, from which you can view, create, edit, and delete TPL rules that can be linked to selector rules. TPL rules provide the ability to perform a WTO (Write to Operator) message or highlight text when a Text Processing Language (TPL) rule matches a string in a SYSOUT captured by a selector rule. A TPL rule defines a "match-action" operation, where "match" is a regular expression that defines the text string to be searched for, and "action" is the writing of a specified output string to the operator, highlighting text, or stopping Output Manager from continuing to read a SYSOUT after a match is made.

Setting up reports

L - Report Layouts

Choose this option to display the Layouts panel from which you can view, create, edit, and delete report layouts. A report layout defines the physical arrangement of a report (where fields are located), as originally produced by an application.

R - Report Selection Rules

Choose this option to display the Report Rules panel from which you can view, create, edit, and delete report selection rules. These rules specify the job selection criteria (for example, job name,

step name, proc step, step number, and DD name) against which captured SYSOUTs are matched to determine if they should be processed into basic or custom reports.

C - Report Definitions

Choose this option to display the Report Definitions panel from which you can view, create, edit, and delete report definitions. A report definition provides criteria for creating a custom or basic report from captured SYSOUT.

TR - Translation administration

Choose this option to display the Translation Administration panel from which you can define translation pairs of source values and replacement values, and define named translations. Output Manager can process values (source values) within a SYSOUT into specified substituted values (replacement values) using translations.

Distributing reports

J - Recipient IDs

Choose this option to display the Recipient IDs panel from which you can view, create, edit, or delete recipient IDs. A recipient ID contains information about a person or location to receive a report and optionally how the reports for that recipient are to be printed.

D - Distribution Lists

Choose this option to display the Distribution Lists panel from which you can view, create, edit, or delete distribution lists. A distribution list is a list of recipients (recipient IDs) that can be linked to a report definition to control the distribution of captured report instances. Distribution lists can contain other (nested) distribution lists.

K - Printer Attributes

Choose this option to display the Printer Attributes panel from which you can view, create, edit, or delete a set of printer attributes. A set of printer attributes can control how reports are physically printed and can contribute values for the "dynamic printing parameters."

B - Banner Pages

Choose this option to display the Banners panel from which you can view, create, edit, or delete banner page definitions or load a banner member. A banner page is optional and provides additional information that you want to include in your report output such as special routing instructions.

M - PRSET members

Choose this option to define, edit, or delete PRSET members.

N - Bundle Administration

Choose this option to define, edit, or delete bundle definitions; or to view or reprint deactivated bundle instances.

General Administration

PA - Policy Administration

Choose this option to perform the following types of administrative functions: initialize policies for a subsystem, edit existing policies, view existing policies, delete existing policies, and manage user variables.

U - User Messages

Choose this option to display the User Messages panel from which you can set system, user, administrative, and auditor messages.

O - Output Manager Environment

Displays the environmental details about Output Manager, including the Db2 Subsystem, Output Manager version, started task name, and JES information.

Administrative task flow

You can define Output Manager rules and definitions in any order. However, for the most efficient work flow, perform the tasks in the following table in the order shown.

If you perform these tasks in another order, you might need to return to previous panels to link the rules and definitions together. For example, if you create a custom report definition and then create a report layout and distribution list for that report, you would need to return to the Report Definitions panel to link the custom report definition to the layout and distribution list.

Note: This work flow does not pertain to defining and activating report bundles. For tasks related to report bundles, see Chapter 9, “Report bundling,” on page 153.

Task	Reference
1. Create a set of archive attributes.	See “Creating a set of archive attributes” on page 33.
2. Create a selector rule.	See “Creating a selector rule” on page 44.
3. Create a report layout.	See “Creating a report layout” on page 72.
4. Define a banner page. (optional)	See “Defining a banner page” on page 126.
5. Define printer attributes. (optional)	See “Creating a set of printer attributes” on page 116.
6. Create a report selection rule.	See “Creating a report selection rule” on page 76.
7. Create a recipient ID.	See “Creating a recipient ID” on page 104.
8. Create a distribution list.	See “Creating a distribution list” on page 109.
9. Create a report definition.	See “Creating a custom report definition with condition entries” on page 81 and “Adding index fields to a report definition” on page 86.
10. Activate the policy to make the selector rules and report selection rules available to Output Manager.	See “Useful commands for administrators” on page 29.

Useful commands for administrators

Product administrators can issue the following commands using the modify (MODIFY) operator console command.

DB2® QUERY ID

Description: Use this command to determine the subsystem ID (SSID) of the Db2 subsystem that the Output Manager started task is using.

Syntax: Use the following command syntax:

```
MODIFY started_task_name,DB2 QUERY ID
```

DB2 QUERY QUEUES

Description: Use this command to determine the status of Output Manager requests to the Db2 database. A message will be displayed that specifies: 1) the number of Db2 requests that are currently queued and waiting for a Db2 task to become available, 2) the total number of Db2 requests (queued and undergoing processing), and 3) the total number of Db2 tasks that are active for the Output Manager started task.

Syntax: Use the following command syntax:

```
MODIFY started_task_name,DB2 QUERY QUEUES
```

POLICY ACTIVATE or ACTIVATE

Description: Use this command to activate the current policy. The *policy* is composed of the set of selector rules, subselector rules and report selection rules that are currently enabled and saved on your Output Manager system. You must activate the policy whenever you create or change a rule. Otherwise, your changes will not take effect.

If the policy is already activated, this command deactivates the current policy and activates the new policy.

Note: The web server options in Type = ITOMWeb, are only loaded when the server is restarted. At server startup, the configuration table is read and the values are stored in local workspace variables. The ACT command should not be allowed for ITOMWeb.

To restrict the use of this command, you can use a RACF profile. The resource name for the ACTIVATE command is *BJT.BJTNAME.CMND.ACTIVATE*, where *BJT* is the SAF ID and *BJTNAME* is the product instance name.

To specify the ACTIVATE command, use in any of the following methods:

- By using the Modify operator command. Use the following syntax:

```
MODIFY started_task_name,POLICY ACTIVATE
```

- By specifying POLICY ACTIVATE in the SBJTSAMP member BJT#IN03. This method activates the policy each time Output Manager is started. For more information, see the customization chapter of *IBM Tivoli Output Manager for z/OS Installation and Customization Guide*.
- By issuing the ACTIVATE command from the command line on the Selector Rules panel or Report Rules panel in the ISPF interface. To do so, you must have administrator authority.
- By issuing the ACT command from the command line on the Policy Administration panel. To do so, you must have administrator authority.
 1. Access the Policy Administration panel (Option A.PA from the main menu).
 2. At the command line, type ACT.
 3. Specify * in both the Subsystem and Type fields and press Enter.
 4. In the activation results pop-up window, press Enter.

Note: The ACT command issued from A.PA does not stop and restart the sysout and report selectors. It only affects the configuration options in the specified Subsystem/Type.

To specify the ACTIVATE command from an ISPF panel:

1. Access the Selector Rules panel (Option A.S from the main menu) or the Report Rules panel (Option A.R from the main menu).

Tip: If you change any rules that comprise the policy, you must specify the SAVE command prior to issuing the ACTIVATE command. Otherwise, your changes will be lost.

2. At the command line, type ACTIVATE (or only ACT) and press Enter.
3. In the Rules Activation Confirmation pop-up window, press Enter.
4. In the activation results pop-up window, press Enter. The panel from which you started is redisplayed and the policy is activated.

Note: The ACT command does not reset the options for current ISPF sessions. Sessions that start after you have saved changes to Type = ISPF options will pick up the new values. Each user starting an ISPF session loads all configuration options from the database.

POLICY DEACT

Description: Use this command to deactivate the policy and stop the selector tasks that are running. Other Output Manager functions, including the ISPF interface, remain available. You might want to stop selectors as part of diagnosing a problem. To reactivate the policy and start the selector tasks again, you must issue the POLICY ACTIVATE command.

Syntax: Use the following command syntax:

```
MODIFY started_task_name,POLICY DEACT
```

QUERY CONDCODE

Description: Use this command to determine the option that is currently in effect for reporting condition codes from jobs (that is, the option that was set with the `CONDITION_CODE` configuration parameter.) This option can be either `LASTNONZERO` (report the last non-zero condition code) or `HIGHEST` (report the highest non-zero condition code).

Syntax: Use the following command syntax:

```
MODIFY started_task_name,QUERY CONDCODE
```

For additional commands: Additional commands can be issued with the Modify command but are more appropriately specified as startup commands. For more information, see the customization chapter of *IBM Tivoli Output Manager for z/OS Installation and Customization Guide*.

Managing the Output Manager started task

You can start or stop the Output Manager started task from SDSF (or an equivalent tool) by using the standard MVS operator commands.

Tip: If you need to recycle JES, you should stop Output Manager before stopping JES and restart Output Manager only after JES has been restarted.

Starting Output Manager

Before starting the Output Manager started task, ensure that Db2 and JES are active.

To start or restart the started task, issue the Start operator command as follows:

```
S started_task_name
```

Stopping Output Manager

To stop the Output Manager started task, issue the Stop operator command as follows:

```
P started_task_name
```

Tip: You should stop the started task before stopping JES or Db2.

How Output Manager handles Db2 connection failures

Output Manager can manage its Db2 connections to prevent problems that might occur because of a Db2 connection failure.

Output Manager handles Db2 connections, as follows:

- If Db2 terminates while Output Manager is capturing SYSOUT for a job, Output Manager deactivates and stops all selector tasks, issues a message that says the Db2 connection was lost, and performs a quiescent shut down.
- SYSOUT will remain on the spool if it is not captured by Output Manager.
- If Db2 is not running when you start Output Manager, Output Manager displays a message that says its connection to Db2 failed and then performs a quiescent shut down. No SYSOUT is captured from the spool. After you start Db2, you must restart the Output Manager started task. Output Manager then activates the selectors, captures and archives SYSOUT, and records the archives in the BJTARC table.
- If Output Manager detects a fatal Db2 error while writing data to its Db2 database, Output Manager performs a quiescent shut down. This situation could occur, for example, because a Db2 table has the

status RO (read only) or UT (being processed by Db2 utilities). You must correct the Db2 error and then restart the Output Manager started task.

Recovery from problems capturing an archive

When Output Manager captures an archive, it is possible that there may be problems, such as allocation problems, space problems that cause X37 abends, or Db2 problems. When any of these problems occurs, the sysout that would have gone into the archive is given the "Error" attributes listed in the Processing Options section of the selector or sub-selector that matched the sysout. This change in attributes happens immediately if the selector or subselector specifies "Combine Sysout = No" or it does not have a "Disposition" of Delete.

When the selector or subselector has Combine Sysout set to Yes and has the Disposition field set to Delete, Output Manager overrides the disposition of Delete with Keep and generates a keep destination to hold the combined SYSOUTs temporarily. All the SYSOUTs that go into archive are kept on the spool until the archive is complete. If there is an error, the sysouts are not removed from the spool, but instead are changed to have the "Error" attributes using a JES command.

If Db2 terminates before Output Manager has finished capturing and archiving all of the combined SYSOUTs, Output Manager deletes the archive file that it created and leaves all of the combined SYSOUTs on the JES spool with the destination that was originally specified in the JCL for the job. After you restart Db2, Output Manager archives the combined SYSOUTs and then deletes the SYSOUTs from the JES spool.

Output Manager generates the keep destination based on the mask that you specify in the KEEP_DEST configuration parameter. If you do not specify a mask in this command, Output Manager generates the keep destination based on the default mask "TOMGR" (for example, TOMGR001).

Tip: You can change the keep destination by editing the KEEP_DEST configuration parameter (specified in Policy Administration, ISPF A.PA). You must reactivate the policy for the change to take effect.

Chapter 3. Allocate data sets to be used for archiving SYSOUT with archive attributes

After Output Manager selects SYSOUT data off the spool, it refers to the set of *archive attributes* that is associated with the selector rule. The archive attributes provide the information that is needed to allocate an archive data set for the SYSOUT.

Archive attributes specify how to generate the unique data set name, where to allocate the data set, space-related parameters for the data set, and the disposition of the data set if data is not successfully saved to it.

After creating a set of archive attributes, you must link it to a selector rule for an archive data set to be created. For more information, see [“Linking a selector rule to archive attributes”](#) on page 50.

When specifying archive attributes, consider the following points:

- The archive mask serves as a template for generating archive data set names. When defining archive masks, ensure that the literal values and variables that you specify will generate *unique* data set names. If non-unique names are generated, errors or unexpected results will occur. For more information, see [“Archive masks”](#) on page 37.
- You should work closely with your SMS administrator to determine how to set SMS parameters such as storage class, management class, and data class. Otherwise, the ACS routines that your site uses might override the values that you specify and cause problems to occur. For example, archive data sets might not be properly allocated or might expire prematurely.
- The attributes **Auto Calculate**, **Primary quantity**, and **Secondary quantity** control the space that is available for archive data sets. You can either set the **Auto Calculate** option to **Yes** to have Output Manager automatically calculate the archive space based on the first SYSOUT received from JES, or specify the primary and secondary quantities. You should *not* enable autocalculation if you are combining SYSOUTs from a job into a single archive (that is, if you set the **Combine Sysout** field to **Yes** in the selector or subselector rule). If you enable autocalculation and JCL errors, B37 abends, or D37 abends occur during archive data set allocation, set the **Auto Calculate** option to **No** and manually estimate the primary space and secondary space that you need. After you specify the estimated values in the **Primary quantity** and **Secondary quantity** fields, reactivate the policy for the changes to take effect. If space-related errors still occur, you might need to increase or decrease the primary and secondary quantities. If you cannot resolve the space issues by adjusting these space parameters, the DASD pool might not contain sufficient space for the archive data sets. In this case, contact your storage administrator to determine if additional DASD volumes are needed.
- Output Manager generates a logical name for an archive based on the “archive name rule” criteria that you specify for a selector or subselector rule. For more information, see [Chapter 4, “Selecting output off of the spool with selector rules,”](#) on page 43 and [“Creating a selector rule”](#) on page 44.

Creating a set of archive attributes

Use the following procedure to create a set of archive attributes that you can link to a selector rule or subselector rule.

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **A**, Archive Attributes, and press Enter.
3. Specify search criteria, or leave the fields blank, and press Enter.
The resulting list is filtered by your search criteria.
4. Type ADD on the command line and press Enter.
The Archive Attributes Details panel is displayed.

Tip: Once archive attributes have been defined, you can type I (Insert) in the **CMD** column and press Enter to display the Archive Attribute Details panel.

5. (Required) In the **Name** field, type a user-defined name for the set of archive attributes. This name can be up to 24 characters in length.
6. In the **Archive Mask** field, type the variables and literal values that you want to use as a template for generating data set names for the archive data sets.

Ensure that you specify a mask that generates *unique* data set names. Otherwise, errors or unpredictable results might occur.

Tip: To help ensure the uniqueness of these names, you can include the &N variable. This variable will add a generated sequential number to the data set names. To view a full list of available variables, view the help for the Archive Attributes panel.

7. Specify information in any of the following optional fields, as needed:

Retention Period

Type the number of days that you want to keep archive data sets. You can specify a number from 1 to 9999, or accept the default value of 0. If you accept the default value of 0, the SMS management class and ACS routines that are defined for your system will determine how long to retain the archived data sets. Normally, you should accept this default value to comply with the SMS configuration for your system. If the value specified in this field is less than the retention period defined by your SMS configuration, this value is ignored.

Print Model

Specify the “model” for determining which user-defined printing attributes to use for printing the archives based on this set of archive attributes. Type one of the following valid values:

- **Classic** - Use the recipient IDs on the distribution list that you select for a reprint request and the optional sets of printer attributes that are linked to these recipient IDs.
- **Report** - Use the sets of printer attributes that are linked to the recipient IDs on the distribution that you select for a reprint request. Output Manager takes the Class, Copies, and Dest values from these sets of printer attributes (along with any other printing parameters that are specified). You can override these Class, Copies, and Dest values for individual recipients on the distribution list; to do so, specify the C (set print Configuration) line command for a recipient on the Distribution List panel. This value is the default value.

Dynamic Print

Indicate whether you want to capture and use the “dynamic printing parameters” (CLASS, DEST, FCB, FORMDEF, FORMS, OPTCD=J, PAGEDEF, PRMODE, TRC, and UCS) for printing the archived reports that are based on this set of archive attributes. Output Manager can capture these printing parameters from the SYSOUT data sets and store them in the BJTDAT table. Type one of the following valid values:

- **No** - Do not dynamically capture and use the “dynamic printing parameters.” Instead, obtain all printing parameters, including the “dynamic printing parameters,” from the printing-related definitions that you create, including the recipient IDs that are on the distribution list and any applicable set of printer attributes. (The **Print Model** setting affects which of these static definitions are used.) This value is the default value.
- **Yes** - Dynamically capture values for the “dynamic printing parameters” and use them for printing archives. If the BJTDAT table does not contain values for some dynamic printing parameters, these values can be provided by the static, printing-related definitions (the recipient IDs or applicable set of printer attributes, depending on how the **Print Model** field is set). If you specify **Yes**, you should set the **Combine Sysout** field in the associated selector rule to **No**; otherwise, the dynamic printing parameters will be taken only from the first SYSOUT in an archive file.

For more information about dynamic printing, see [Chapter 6, “Print configuration,” on page 103](#).

Note: If you specify the DYNAMIC_PRINTER_ATTRIBUTE_CAPTURE or the DYNAMIC_PRINTER_ATTRIBUTE_USE configuration parameter with the option ARCHIVES, REPORTS, or ALL, this parameter will force the capture (or capture and use) of the dynamic printing parameters globally, across all archives, all reports, or all archives and reports, even if the

Dynamic Print field is set to **No** for those objects. These configuration parameters are specified in the Policy Administration panels, (ISPF A.PA).

Management Class

Specify the management class to use for the archive data sets. This value can be up to eight characters in length. If you leave this field blank, the management class that is specified for your SMS-managed system will be used. Contact your storage administrator for information about this management class.

Storage Class

Specify the storage class to use for the archive data sets. This value can be up to eight characters in length. If you leave this field blank, the storage class that is specified for your SMS-managed system will be used. Contact your storage administrator for information about this storage class.

Vol Sers

Type the volume serial numbers (volsers) to be associated with the archive data sets. You can specify up to five volsers, each up to six characters in length.

Tip: If you want to be able to use more than five volumes, do not fill in any volsers: instead, specify a value for DATACLAS that has the number of volumes defined in the VOLUME COUNT parameter.

Device Type

Type a generic unit name. This value can be up to eight characters in length.

Data Class

Specify the data class that you want to use for the archive data sets. This value can be up to eight characters in length. A data class governs the characteristics of SMS-managed data sets, for example, the RECFM and LRECL. If you specify a data class that includes a LRECL value, that LRECL value may take precedence over any other LRECL settings that you specify through the Output Manager interface.

Note: The values used for management class, storage class, and data class can be affected by your site's ACS rules.

Auto Calculate

Indicate whether Output Manager automatically calculates the space for allocating the archive file based on the size of the first SYSOUT data set that is received from JES. Specify either **Yes** (automatically calculate the space) or **No** (do not automatically calculate the space).

If you specify **Yes**, Output Manager ignores any values in the **Space Units**, **Primary Quantity**, **Average Record Unit**, and **Block Length** fields unless JES fails to provide the size of the first SYSOUT data set. If JES fails to provide this size, or if you specify **No**, Output Manager can use the values in these fields to allocate the archive.

If you specify **Yes** in this field and also specify a value from 1 through 100 blocks in the **Secondary Quantity** field, Output Manager will specify the secondary space as a percentage of the primary space in the allocation request. If you specify a secondary quantity greater than 100 blocks, Output Manager will use that value for the secondary space.

Tip: Do not enable autocalculation if you specified **Yes** in the **Combine SYSOUT** field for an associated selector or subselector rule. Otherwise, the archive space is likely to be insufficient for all of the combined SYSOUTs.

Space Units

Specify the type of units to use for allocating space for the archive files. Valid values are: **Blocks**, **Tracks**, **Cylinders**, **Kilobytes**, **Megabytes**, **Bytes**, and **Records**.

Average Record Unit

If you specified **Records** in the **Space Units** field, indicate the type of record units. Valid values are: **B** (bytes) for single-record units, **K** (kilo) for thousand-record units, or **M** (mega) for million-record units.

Primary Quantity, Secondary Quantity

Type the number of units to allocate for the primary space (for an archive data set's primary extent) and for the secondary space (for a secondary extent). In each field, you can specify a number from 0 through 16777215.

Notes:

- a. If you specify **Records** in the **Space Units** field, specify the unit type in the **Average Record Unit** field.
- b. If you set the **Auto Calculate** field to **Yes**, the secondary quantity is a percentage of the primary space allocation, as determined by the autocalculation process.
- c. The upper limit on the primary quantity and the secondary quantity depends on the type of space units (tracks, cylinders, blocks, or records) and on the device that will hold the data. If you set a value that is too large or too small, the archiving process will fail.
- d. Instead of specifying primary and secondary quantities, you can specify a data class and management class. Ask your storage manager for the best data class and management class to use.

Average Block Length

Type the block length for archive data sets in the unit type that is specified in the Average Record Unit field. You can specify a number from 0 through 65535. This value is used in combination with Average Record Unit, Primary quantity, and Secondary Quantity, when Space Units is Blocks and Autocalculate is No.

- a. If the data set already exists, type the data set's Block Size (otherwise 0),
- b. If the data set does not exist, type the Data Class's Block Size (otherwise 0),
- c. Use the LRECL of the archive data set chosen above, plus 4, then rounded up to 27998 (half track) or, if larger than 27998, to 32760.

LRECL

Specify the logical record length (LRECL) that you want to use for the archive data sets based on this set of archive attributes. The LRECL is the maximum length (in bytes) for each record in an archive data set. You can specify a number from 0 through 32756. The default value is 0.

The LRECL for the archive is the maximum of the following four values:

Note: The LRECL of the sysout is always taken into account, if necessary, to ensure that every record of the sysout data set can be written into the archive data set.

Note: The actual block size for the data set is the larger of the following four numbers:

- a. If the data set already exists, the LRECL of the data set is used (otherwise 0),
- b. If the data set does not exist, the Data Class's LRECL is used (otherwise 0),
- c. The archive data set's LRECL chosen above plus 4, then rounded up to 27998 (half track), minus 32 if it is Extended format or (if larger than that number) to 32760.
- d. If the selector or subselector is Combine Sysouts = Yes and the data set is Extended Format (because of the data class chosen by the system, possibly with the assistance of the specified data class), then 32760, else 0.

Abnormal Disposition

Indicate what Output Manager should do with the archive if the save-to-archive operation fails. Valid values are: **Catalog** (allow the archive to be accessible through the catalog) and **Delete** (delete the archive). Delete is not allowed when a non-zero value is specified in the **Retention Period** field.

Note: It is strongly recommended to write archive data to cataloged data sets. Archiving data in uncataloged data sets might produce unexpected results.

Release Unused Space

Indicate whether unused space is to be released by specifying one of the following values: **Yes** to release unused space, or **No** to not release unused space.

8. When you are finished, press F3 (Exit). An exit confirmation pop-up window is displayed.
9. Press Enter to save the set of archive attributes.

If you want to use an existing set of archive attributes as a basis for creating a new one, you can use the C (Copy) line command on the Archive Attributes panel to copy an existing set of archive attributes. On the Archive Attributes Details panel, use the T (pasTe) command to add the copied information. You can then edit the information, and save the new set of attributes under another name.

Archive masks

An archive mask is a template for creating archive data set names.

A mask is composed of variables and literal values in the format of a data set name. A mask value can be up to 44 characters in length. When an archive data set is allocated, the variable symbols in the archive mask are replaced with specific values to generate a data set name.

You can specify two types of variable symbols in an archive mask:

- *Product symbols*, which are provided by Output Manager
- *z/OS system symbols*, which are provided by your z/OS operating system

Each variable name in an archive mask begins with an ampersand (&). If you specify a series of variables, insert a period (.) at the end of one variable name *and* before the next variable name (for example, &JOBNAME.&JOBNUMB). In this situation, the period is used as a concatenation character and will not be part of the archive data set name.

Ensure that the combination of literal values and variables that you specify for an archive mask will result in valid, unique archive data set names. Otherwise, errors or unpredictable results will occur.

To help ensure that these names are unique, you can include the product symbol &N in your archive masks. This symbol causes a generated sequential number to be added to the archive data set names for every instance of the archive.

Important: If you are using multiple output classes for a job, you must include the &N variable in the archive mask to ensure that unique archive data set names are generated for each output class. You should also include the &N variable if you are basing your archive data set names on writer names (that is, you set the **Archive Name Rule Source** field to **W** in the associated selector rule or subselector rule).

Product symbols

Most product symbols have a short form as well as a long form. Both forms result in the same symbolic substitution. By using the short forms, you can reduce the amount of information to type for an archive mask or include more variables in a mask before reaching the length limit.

The special &N variable adds a sequential number that Output Manager generates to an archive data set name to help ensure that the name is unique.

The following list provides the long and short forms, as available, for the product symbols.

Product symbols

&N

The letter N followed by a 7-digit integer from 0000000 through 9999999 that Output Manager generates. This value is added to an archive data set name to help ensure that the name is unique. Do not precede the variable with any literal values; otherwise, the generated numbers might be truncated, causing duplicate numbers in data set names.

Note: The numbers that are produced by the &N archive mask correspond to the number of archives that have been created since Output Manager has been installed. After 9,999,999 archive rows have

been created, the "N" that is put at the beginning will be replaced with a letter other than N, and the whole sequence will be repeated. After 260,000,000 archives have been created, the sequence will repeat.

&JOBNAME or &JN

The name of the job that produced the SYSOUT.

&JOBNUMB or &J#

The JES job number.

&RACFUSER or &RU

The user ID that is associated with the job that produced the SYSOUT.

&USERID or &US

Synonymous with &RACFUSER.

&ACCT01 through &ACCT08

Any one of the first eight accounting subfields from the ACCOUNT parameter of the job card. (No short forms are available for these variables.)

&STEPNAME or &SN

The name of the job step that produced the SYSOUT.

&PROCSTEP or &PS

The name of the PROCSTEP that invoked the procedure that produced the SYSOUT.

&DDNAME or &DD

The DD name that was used to allocate the data set for the SYSOUT.

&STEPNUM or &S#

A unique qualifier that occupies the second-to-last position within the JES data set name that the SAPI interface passes to Output Manager for a SYSOUT. Usually, a JES data set name has the format OWNER.JOBNAME.JOBID.STEPNUM.DDNAME, and the unique qualifier is a step number. For example, given the data set name PDNAME.BJT@JCCS.J0586320.D0000002.JESDSETS, the unique qualifier would be D0000002.

&OUTCLASS or &OC

The SYSOUT class that the SYSOUT was written to.

&FORM

If this variable is used, the form name specified in the JCL will be used in the archive mask. If the JCL does not specify a form, then the literal string "FORM" is used.

&WRITER or &WR;

If this variable is used, the writer name specified in the JCL will be used in the archive mask. If the JCL does not specify a writer, then the literal string "WRITER" is used.

&GDG

The name of the Generation Data Group. The number of generations retained depends on the value of the DEFAULT_GENERATIONS configuration parameter.

Note: When using &GDG to achieve retention-by-generations, the variables that precede &GDG must construct a data set name that is unique for every archive, but not unique for every instance of the archive. Only the generation (&GDG) variable should provide the uniqueness for every instance of the archive.

&GDGnnn

The name of the Generation Data Group, and the number of generations to retain, where *nnn* is the limit parameter and is a value in the range of 1-255. Do not include any leading zeros.

Generation data groups (GDGs) as archive data sets

Output Manager supports the use of generation data groups as archive data sets. This legacy compatibility feature is useful for customers who have used copies-based versioning in their previous ISV products.

Using Generation Data Groups allows Output Manager users to retain reports based on "*Number of copies*". "*Number of copies*" is defined as no fewer than "Number of copies" being retained as cataloged archive data sets, provided at least that number of copies have been captured. For more information on

configuring your environment for GDGs, see the *IBM Tivoli Output Manager Installation and Customization Guide*.

z/OS system symbols

System symbols are divided into two classes: dynamic and static. *Static symbols* are symbols for which values are set at z/OS initialization. They retain their values until z/OS is re-initialized (by means of an IPL) or until someone explicitly changes the values by using an operator command.

You can use the following z/OS operator command to list the set of static system symbols that your site currently uses:

```
D SYMBOLS
```

For more information about your site's static system symbols, contact your systems support department.

Dynamic system symbols are symbols for which values change over time. The following list of symbols is for z/OS 2.1. If your site uses a different version or release of z/OS, the dynamic system symbols that you can use might be different. To determine the symbols that are valid at your site, refer to the *MVS Initialization and Tuning Reference* for your z/OS version and release.

Note: System symbols do not have a short form.

System symbols

&DAY

The day of the month based on Coordinated Universal Time (UTC). Values are two decimal digits in the range 01 through 31. Use &LDAY for the local day.

&HHMMSS

The time of day. Equivalent to &HR.&MIN.&SEC. Use &LHHMMSS for the local time.

&HR

The hour of the day based on UTC. Values are two decimal digits in the range of 00 through 23. Use &LHR for the local hour.

&JDAY

The Julian day of the year based on UTC. Values are three decimal digits in the range of 001 through 366.

&MIN

The minute of the hour based on UTC. Values are two decimal digits in the range of 00 through 59.

&MON

The month of the year based on UTC. Values are two decimal digits in the range of 01 through 12.

&SEC

The second of the minute based on UTC. Values are two decimal digits in the range of 00 through 59.

&WDAY

The day of the week based on UTC. Values are SUN, MON, TUE, WED, THU, FRI, and SAT.

&YR2

The year based on UTC. Values are shown in two decimal digits in the range of 00 through 99.

&YR4

The year based on UTC. Values are shown in two decimal digits in the range of 0000 through 9999.

&YYMMDD

The date based on UTC. Equivalent to &YR2. &MON.&DAY. Use &LYYMMDD for the local date.

Note: A dynamic system symbol named &JOBNAME also exists. However, the product symbol &JOBNAME supersedes it.

In an archive mask, a dynamic system symbol for a numeric value such as a date or time should be preceded by a non-numeric character to ensure that valid data set names are generated, for example, D&LYYMMDD and T&LHHMMSS.

Examples of symbols used to construct data set names

The following examples illustrate how symbols can be used to construct archive data set names:

- The archive data set names will be based on the job name and job number:

```
OMTEST.&JOBNAME..&JOBNUMB
```

- The archive data set names will be unique because the date and &N product symbol are included:

```
OMTEST.&JOBNAME..D&LYYMMDD..T&LHHMMSS..&N
```

Managing archive attributes

Once you have created an archive attribute, you can edit or delete it from the Archive Attributes list panel.

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **A**, Archive Attributes, and press Enter.
3. Specify search criteria, or leave the fields blank, and press Enter.
The resulting list is filtered by your search criteria.
4. In the **CMD** column, type the appropriate line command:
 - E (Edit) next to the name of an archive attribute to edit its details. For information about the fields on the details panel, select Extended help from the Help drop-down menu.
 - D (Delete) next to the name of an archive attribute to delete it.
5. Press F3 (Exit).
6. Depending on your user preferences, a confirmation panel may be displayed. Type YES and then press Enter to save your changes.

Searching for archive attributes

You can filter the list of archive attributes on the Archive Attributes panel or search for a specific archive attribute. If you want Output Manager to apply the search criteria to the Archive Attributes panel the next time you display it, you can save the criteria to your ISPF profile.

To search for archive attributes:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **A**, Archive Attributes, and press Enter.
The search panel is displayed.
3. In the **Archive Attribute name** field, type the user-defined name for an archive attribute. You can specify a value up to 24 characters long. The following wildcards are permitted: the asterisk (*) or percent sign (%) for zero or more trailing characters, or the question mark (?) or underscore (_) for a single character anywhere in the name. If you specify a wildcard pattern, Output Manager will find all archive attributes that have names matching the pattern.
4. In the **Archive Mask** field, type the user-defined archive mask. These masks can include variables and literal values. You can specify a value up to 44 characters long. The following wildcards are permitted: the asterisk (*) or percent sign (%) for zero or more trailing characters, or the question mark (?) or underscore (_) for a single character anywhere in the name. If you specify a wildcard pattern, Output Manager will find all archive attributes that have masks matching the pattern.
5. In the **Save Criteria?** field, type **Yes** if you want to save the search criteria that you specified to your ISPF profile. Output Manager will then use the saved search criteria to filter the list of archive attributes from session to session, until you change the criteria. If you want to use the search criteria temporarily (for a one-time search), accept the default value of **No**. Output Manager will filter the current list of archive attributes and then clear the search criteria and revert to the last-saved values (if any) when you exit the Archive Attributes panel.
6. Press Enter.

The Archive Attributes panel lists only the archive attributes that match your search criteria.

Chapter 4. Selecting output off of the spool with selector rules

Output Manager uses the following types of rules to select and archive the SYSOUT data sets for reports:

- *Selector rules* specify criteria for selecting output off the spool, controlling archive processing, defining what to do with the output on the spool when archive processing ends, and how archive names are generated.
- *Subselector rules* supplement selector rules. You can use subselector rules to create subsets of the SYSOUT that is selected based on a selector rule. Each subset can have a different set of attributes, as defined by a subselector rule. Note that any values defined in the selector rule are inherited by the associated subselector rule.

The creation of selector rules is required. However, the creation of subselector rules is optional.

- [“Creating a selector rule” on page 44](#)
- [“Creating a subselector rule” on page 52](#)

Additionally, you have the option to issue a WTO (Write To Operator) message or highlight text when a Text Processing Language (TPL) rule matches a string in a SYSOUT record captured by a selector rule or subselector rule. To do so, create a new TPL rule and assign it to a selector or subselector rule for a captured SYSOUT. For more information, see [“Issuing a WTO message or highlighting text when a specified text string is found in a SYSOUT record” on page 62](#).

Activating selector rules

The Output Manager policy is the set of selector rules, subselector rules, and report selection rules that are currently defined and saved on your system. After making changes to rules, you must activate the policy in one of the following ways:

- Type `ACTIVATE` on the command line of the Selector Rules panel and press Enter to activate the current policy from within the Output Manager interface.
- Issue the console command `F itomstc,POL ACT`
- Ensure that `BJT#IN03` has the `POLICY ACTIVATE` command, and then recycle the Output Manager started task.
- From the Policy Administration panel (A.PA), type `ACT` on the command line and `*` in the Subsystem and Type fields, then press Enter.

Considerations when defining SYSOUT selection rules

Before you begin defining SYSOUT selection rules, consider the following points:

- You should not use more than 20 selector rules concurrently to select SYSOUT. Instead, use subselector rules to refine the selection process. For more information about subselector rules, see [“Notes on subselector rules” on page 59](#).
- The order in which subselector rules are listed is important. Each time a SYSOUT is produced by a job, JES first scans the list of selector rules to determine if any match the SYSOUT. If subselector rules are defined for the matching selector rule, Output Manager then scans the list of subselector rules from top to bottom, in the order defined by the administrator. If a matching subselector rule is found, Output Manager uses that subselector rule instead of the selector rule. If multiple subselector rules would match, Output Manager uses the *first* matching subselector rule. In this manner, a SYSOUT can be associated with only a single selector rule or subselector rule. If no selector or subselector rules match a SYSOUT, the SYSOUT is not captured. For more information on defining subselector rules, see [“Notes on subselector rules” on page 59](#).

- In each selector rule and subselector rule, you specify an archive name rule for generating archive names for the SYSOUTs that are captured based on that rule. By default, an archive name is the name of the job that produces the SYSOUT. Alternatively, Output Manager can use a writer name that you specify in the JCL for the job, a concatenation of the writer name and the job name, a name generated by TPL rules, or a user-defined value that is returned from the optional user exit BJT@UX01. To define the archive name rule, set the **Archive Name Rule Source** and **Escape Char** fields. Based on your settings, Output Manager generates the archive names and displays them in the **Archive Name** column of the Archived Reports panel. These names are intended to help users identify their archived reports.

Note: Archive names are different from archive data set names. Output Manager generates archive data set names based on an archive mask that you specify in the set of archive attributes that is linked to a selector rule. The archive data set names must be unique, whereas the archive names may or may not be unique.

Creating a selector rule

A selector rule specifies the search criteria used to capture SYSOUT.

Tip: Alternatively, if you want to create a new selector rule based on an existing rule, specify the C (Copy) line command for an existing rule on the Selector Rules panel, and then T (paste) to paste the copied rule from the Clipboard.

To create a selector rule:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **S**, Selector Rules, and press Enter.
3. Specify search criteria, or leave the fields blank, and press Enter.

The resulting list is filtered by your search criteria.

Note: If the Selector Rules panel lists no rules, either none are defined on your Output Manager system or none matched your saved search criteria.

4. Type ADD on the command line and press Enter.

The Selector Rule panel is displayed.

Tip: Once selector rules have been defined, you can type I (Insert) in the **CMD** column and press Enter to display the Selector Rules panel.

5. (Required) In the **Selector Name** field, type a name for this selector rule and press Enter. This name can be up to 16 characters long.
6. (Required) From the **Link** drop-down menu, select option **1**, Choose an archive attribute. The search for Archive Attributes pop-up is displayed.
7. Specify search criteria, or leave the fields blank, and press Enter. The resulting list is filtered by your search criteria.
8. In the Archive Attribute Selection window, type S (Select) next to the name of the archive attribute that contains the attributes of the data set in which the data will be stored, and press Enter.

Note: If no archive attributes have been defined, you can finish defining this selector rule, create an archive attribute, and then edit this selector rule to link it to the new archive attribute. For more information on creating archive attributes, see [Chapter 3, “Allocate data sets to be used for archiving SYSOUT with archive attributes,”](#) on page 33.

9. In the **Status** field, type Enabled.

A selector rule cannot be enabled until it is linked to an archive attribute.

10. Specify information in the following fields, as needed.

Tip: You can specify the following wildcards in all fields unless otherwise noted: the question mark (?) for a single character or the asterisk (*) for zero or more trailing characters. Specifying both characters (?*) indicates that the field consists of at least one character, and can be useful when you want to identify sysout where the specified field is non-blank.

Selection criteria:

The following fields identify additional JCL parameters that you can use as SYSOUT selection criteria. Most of these parameters can occur in a DD SYSOUT statement or an OUTPUT statement.

SYSOUT Class

Specify the output class that you want to associate with the selected SYSOUT. If you do not specify a Sysout Class, this Selector rule will process output from ALL classes.

Only the following characters are valid: the letters A through Z or the numbers 0 through 9. You can specify multiple classes, if necessary; however, one class is recommended. If you specify multiple classes, type them in a string up to 36 characters in length with no intervening spaces or characters, for example, RA (not R A or R , A). Wildcards are *not* permitted.

Destination

Type the name of the JES SYSOUT destination. This name can be up to 17 characters in length.

Writer

Type the name of the external writer that processes the SYSOUT data set instead of JES. This name can be up to eight characters in length.

Forms

In this field, you can type the name of a form that is associated with the report, up to eight characters in length. You can specify additional forms on the Advanced Selection panel.

Job Type

Specify one of the following values to indicate the type of job to which the selector rule applies: **All** (all jobs), **Batch** (batch jobs only), **Appc** (jobs that are associated with a specific application), **TSO** (jobs that are processed on TSO systems), or **STC** (jobs that are related to the started task). The default value is **All**.

JES Queue

Specify one of the following values to indicate the jobs in the JES queue to be selected for archiving: **All** (all jobs in the JES queue), **External** (only the jobs that are assigned to a special, external writer, which may or may not be a printer), **Write** (jobs that are ready to be written to a printer and for which you can specify JES or SDSF commands to HOLD a data set and thereby control job selection), or **Hold** (jobs that are held on the JES queue but are not ready to be written). The default value is **Write**.

11. To specify more specific selection criteria, type an **S** (Select) in the **Advanced Selection Criteria** field and press Enter. You can specify the following options on the Advanced Selection panel:

Job Name

Type the name of the job that produces the SYSOUT. This name can be up to eight characters in length.

User ID

Type the RACF user ID for the job that produces the SYSOUT. This ID can be up to eight characters in length.

FCB

Type the name of the forms control buffer (FCB) that JES uses to print the SYSOUT data set. This name can be up to four characters in length.

UCS

Specify the universal character set (UCS) that JES uses when printing the SYSOUT data set. This value can be up to four characters in length.

Flash

Type the name of the forms overlay frame to be inserted into the printer before printing the SYSOUT data set on a 3800 printer; this value can be up to four characters in length. Alternatively, specify **NONE** to suppress flashing for the SYSOUT data set.

Forms 2-8

In each of these fields, you can type the name of a form that is associated with the report. Each value can be up to eight characters in length.

Prmode 1-4

In each of these fields, you can specify a printer process mode (Prmode). Each value can be up to eight characters in length.

For example, to specify a Prmode value of "TESTMODE" as selection criteria, your JCL should include: `//DS18 OUTPUT PRMODE=TESTMODE //SYSPRINT DD SYSOUT=A, OUTPUT=(*.DS18)`

12. Press F3 to return to the Selector Rule panel.
13. To specify processing options, type an **S** (Select) in the **Processing Options** field and press Enter. You can specify the following options:

Combine Sysout

Specify whether or not to combine multiple SYSOUTs from a job into a single archive. Type either **Yes** (combine the SYSOUTs into a single archive file) or **No** (place each SYSOUT in a separate archive file).

You must specify **Yes** if you specify **U** (for user exit) in the **Archive Name Rule Source** field when defining an archive name for this selector rule.

If you specify **Yes**, the following restrictions apply:

- Output Manager might not be able to capture reports of the type "custom" from the combined SYSOUTs. Therefore, if you plan to define custom reports, you should specify **No** in this field.
- The first sysout data set that matches a subselector having the Combine Sysout set to Yes (or not matching any subselector, but having the selector have Combine Sysout set to Yes) causes that sysout data set and all subsequent sysout data sets in the job that match that subselector to be combined together into the same archive data set.



Attention: The order that sysout data sets are given to Output Manager may not be the same order as these data sets appear in JCL when the data sets have differing OUTPUT attributes, such as CLASS or WRITER.

Every sysout data set receives selector and subselector processing. If YES is specified in the Combine Sysout field of a selector rule, all of the sysout data sets that share that selector are combined together. All sysout data sets that do not have a subselector are combined together (if the selector has Combine Sysout set to Yes). Each data set matching a subselector with Combine Sysout set to No is processed separately; each data set matching a subselector is processed separately if the selector has Combine Sysout set to No.

- You must specify **No** in the **Auto Calculate** field for the associated set of archive attributes. Otherwise, Output Manager calculates the space for the archive file based only on the size of the first SYSOUT data set that is received from JES; this space is likely to be insufficient.
- You cannot specify **W** in the **Source** field under "Archive Name rule source" to have Output Manager generate archive names based on a writer name. You must specify **J** (for job name) or **U** (for user exit) instead.
- You should not enable the capture and use of the "dynamic printing parameters" for printing reports and archives. If you do, the dynamic printing parameters will be captured only from the first SYSOUT in the archive file.

Exists

Indicate what Output Manager should do if the archive already exists by specifying one of the following valid values:

- **Replace:** Replace the data in the archive data set with the newly captured sysout data.
- **Leave:** Leave the old data in the archive data set and send the new sysout data to error processing, as defined by the ERROR processing options (Disposition, Class, Destination, Form, Writer) for the selector.
- **Extend:** Write the new data at the end of the old archive data set. The default value is **Extend**.

Note: If you specify **Replace** in this field, ensure that the archive data set for the captured SYSOUT will have a unique data set name. To do so, specify an archive mask that includes the &N

variable in the set of archive attributes that is linked to this selector rule. Otherwise, data might be lost.

Line Limit

Specify the maximum number of lines that can be written to the archive. The default value is 0, which indicates that there is no limit on the number of lines.

Note: If you are defining a selector rule that captures reports, specify 0 to capture the entire report. Line limit is primarily used to minimize the amount of data collected for application program dump data sets.

Page length

Indicates the maximum page length that can be written to the archive.

Archive Name Rule Source

Indicate how the archive name for a selected SYSOUT (an archived report) is generated. An archive name can be the name of the job that produced the SYSOUT, an output writer name that you specify in the JCL for the job, a concatenation of the job name and the writer name, or text that a user exit extracts from comments in the JCL. Choose a method that generates archive names that are meaningful to your archived report users. Valid values are:

- **J** - To use the job name.
- **W** - To use the writer name that you specified in a DD SYSOUT statement or in an OUTPUT statement of the JCL. If you specify a value in the **Escape Char** field that matches the first character of the writer name in the JCL, the archive name will be a concatenation of the job name and the first part of the writer name, up to a total of 12 characters. If you specify **W** but no writer name is defined in the JCL, the archive name will be composed of the job name only.
Tip: If you specify **W**, you should include the &N variable in the Archive Mask value of the associated set of archive attributes to ensure that unique archive data set names will be generated.
- **U** - To specify the "archive name" based on comment cards in the JCL. Use the optional user exit BJT@UX01 to extract a user-defined value from comments that are embedded in the JCL and use that value as the archive name. If you specify **U**, you must set the **Combine Sysout** field to **Yes**. A sample user exit is provided in the SBJTSAMP member BJT@UX01. See ["Generating archive names from a user exit" on page 51](#).
- **R** - To use the name of the rule to determine the archive name rule. When R is specified, the archive name is determined by the name of the selector or selector rule name. This allows the Archive Name to be set for reports in a way that is more descriptive than using job name. This is useful when searching for archives, or when viewing a list of archives, if the VARCHIVE configuration parameter is set to ALL.

Escape Char

If you specified **W** in the **Source** field and want Output Manager to generate an archive name that is a concatenation of the job name and the first part of a writer name, type the escape character that begins the writer name. This value can be any character that is valid for a writer name in JCL, including the symbols \$, #, and @. The default value is \$.

Output Manager matches the escape character against the first character of the writer name. If a match is found, Output Manager generates a concatenated name up to 15 characters in length, for example, JOBNAME1 WRITER01 creates JOBNAME1WRIT. If a match is not found, the concatenation does not occur, and the archive name is composed of only the writer name.

Note: If default escape character (\$) matches a writer name but you do not want the archive name to be a concatenation of the job name and writer name, you must change the default escape character to another character.

Disposition

Indicate what Output Manager should do with the SYSOUT on the JES spool when data is archived. You can specify one of the following valid values: **Delete** (purge the output off of the spool), **Keep** (keep the output on the spool and do not alter its queue), **Hold** (keep the output on the spool and place it in the hold queue), **Syshold** (keep the output on the spool and place it in

the syshold queue), or **Release** (keep the output on the spool and place it in the write queue). The default value is **Delete**.

Class

Indicates the output class to requeue output to:

- Normal: Indicates the output class to requeue output to when it is not deleted and the archive completed normally.
- Error: Indicates the output class to requeue output to when it is not deleted and the archive created failed.
- Line limit: Indicates the output class to requeue to when it is not deleted and the archive exceeded the specified line count.

Destination

Indicates the output destination to requeue output to:

- Normal: Indicates the output destination to requeue output to when it is not deleted and the archive completed normally.
- Error: Indicates the output destination to requeue output to when it is not deleted and the archive created failed.
- Line limit: Indicates the output destination to requeue to when it is not deleted and the archive exceeded the specified line count.

Form

Indicates the forms overlay used when printing the SYSOUT. Valid values are NAME (specifies the name of a forms overlay, up to 8 characters), STD (standard forms overlay based on the overlay that was specified during JES3 initialization,

Note: STD only applies to JES3 systems), and NONE (no flashing for the SYSOUT data set).

Writer

Indicates the output writer to requeue output to:

- Normal: Indicates the output writer to requeue output to when it is not deleted and the archive completed normally.
- Error: Indicates the output writer to requeue output to when it is not deleted and the archive created failed.
- Line limit: Indicates the output writer to requeue to when it is not deleted and the archive exceeded the specified line count.

14. Press F3 to return to the Selector Rule panel.

15. To specify Text Processing Language (TPL) rules to associate with this selector rule, type an **S** (Select) in the **TPL rules** field and press Enter. TPL rules can optionally be used to issue WTO (Writer to Operator) messages, set the condition code to a user defined value based on the text, set the archive name, or text highlighting when criteria is found in the SYSOUT. You can specify a TPL rule on the TPL Rule panel.

a) Type ADD on the command line

b) Enter all or part of a TPL rule name in the Search for TPL rules pop-up, or leave the fields blank to return the entire list of TPL rules, then press Enter.

c) Type S to select a TPL rule and press Enter.

Tip: Once TPL rules have been defined, you can type I (Insert) in the CMD column and press Enter to display the TPL Rules panel.

16. When you are finished, press F3 (Exit).

Depending on how you set your preferences, you may be prompted to type YES and press Enter to save your changes.

17. Press F3 (Exit).

18. Type ACT (activate) on the Selector Rules command line and press Enter to activate the selector rule.

Note: After creating selector rules, you must activate them by using the `ACTIVATE` primary command.

Managing selector rules

Once you have created a selector rule, you can edit or delete it from the Selector Rules list panel.

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **S**, Selector Rules, and press Enter.
3. Specify search criteria, or leave the fields blank, and press Enter.

The resulting list is filtered by your search criteria.

4. In the **CMD** column, type the appropriate line command:
 - E (Edit) next to the name of a selector to edit its details. For information about the fields on the details panel, select Extended help from the Help drop-down menu.
 - D (Delete) next to the name of a selector rule to delete it.
5. Press F3 (Exit).
6. Depending on your user preferences, a confirmation panel may be displayed. Type YES and then press Enter to save your changes.

Searching for selector rules

From the Selector Rules panel, you can search for a specific selector rule or filter the list of rules.

Optionally, you can save your search criteria to your ISPF profile. If you save your search criteria, Output Manager will apply these criteria to the Selector Rules panel from session to session, until you change them.

Some search fields support wildcards. Output Manager supports the following wildcard characters in these fields for selector rules: a trailing asterisk (*) for zero or more ending characters, or a question mark (?) or an underscore (_) for a single character anywhere in a value. If you specify a wildcard pattern, Output Manager will find all selector rules that match that pattern.

To search for selector rules:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **S**, Selector Rules, and press Enter.

The search panel is displayed.
3. In the **Selector Name** field, type the user-defined name for a selector rule. You can specify a value up to 16 characters long. Wildcards are permitted.
4. In the **Status** field, type Enabled if you want to list only the selector rules that have been enabled for use by Output Manager. Type Disabled if you want to list only the selector rules that are unavailable for use. Type Skip to list only selector rules that have a Status value of Skip. If you leave this blank, Output Manager will list skipped, enabled, and disabled selector rules. Wildcards are *not* permitted.
5. In the **Job Name** field, type the name of a job that produces report output and is specified in a selector rule. Wildcards are permitted.
6. In the **SYSOUT Class** field, type a valid one-character designation for a SYSOUT class. Output Manager will search for the selector rules and subselector rules that contain this value in their **SYSOUT Class** field as the only value or as part of a concatenated, multi-class value. For example, if you specify class "A" as search criteria, the search results could include selector rules that specify class "A" only and that specify class "A" as part of a multi-class value such as "RA." Valid values are the letters A through Z and the numbers 0 through 9. Wildcards are *not* permitted.
7. In the **Save Criteria?** field, type **Yes** if you want to save the search criteria that you specified to your ISPF profile. Output Manager will then use the saved search criteria to filter the list of selector rules from session to session, until you change these criteria. If you want to use the search criteria temporarily (for a one-time search), accept the default value of **No**. Output Manager will filter the current list of selector rules and then clear the search criteria and revert to the last-saved values (if any) when you exit the Selector Rules panel.

8. Press Enter.

The Selector Rules panel lists only the selector rules that match your search criteria.

Linking a selector rule to archive attributes

You must link each selector rule to a set of archive attributes for the archive data set for the selected SYSOUT to be properly allocated and retained.

To link a selector rule to archive attributes:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **S**, Selector Rules, and press Enter.
3. Specify search criteria, or leave the fields blank, and press Enter.

The resulting list is filtered by your search criteria.

4. In the **CMD** column, type E (Edit) next to a selector rule and press Enter. The Selector Rule panel is displayed.

5. From the **Links** pull-down menu, choose option **1**, Choose an Archive Attribute.

The Search for Archive Attribute panel is displayed.

6. Enter search criteria or leave the fields blank to return an unfiltered list of archive attributes, then press Enter.

The Archive Attribute Selection panel is displayed.

7. You can use the following line commands in the Archive Attribute Selection window:

Select (Line command S)

To select an archive attribute for linking to the selected rule.

Add (Line command A)

To add a new archive attribute and subsequently select it for linking to the selected rule.

View (Line command V)

To view an archive attribute.

Edit (Line command E)

To edit an archive attribute.

8. If no archive attributes have been defined on your Output Manager system, Output Manager prompts you to create one. Type the A (Add) line command in the **CMD** column. For further instructions, see ["Creating a set of archive attributes"](#) on page 33.
9. If archive attributes have been defined, type S (Select) next to the name of the archive attributes that you want to use and press Enter. The Selector Rules panel is redisplayed and the archive attribute that you selected is displayed in the **Archive Attribute** column.
10. Press F3 (Exit).

Depending on how you set your preferences, you may be prompted to type YES and press Enter to save your changes.

"Combine SYSOUT" restrictions

When a selector rule's **Combine Sysout** field is set to **Yes**, multiple SYSOUTs from a job will be combined into a single archive.

The following restrictions apply:

- Output Manager might not be able to create custom reports from the combined SYSOUTs. If you plan to define custom reports, you should set the **Combine Sysout** field to **No** in the associated selector rule. Otherwise, the custom report might not be captured.
- You must set the **Auto Calculate** field to **No** for the associated set of archive attributes. If autocalculation is enabled, Output Manager calculates the space for the archive based only on the size of the first SYSOUT received from JES. This calculated space is likely to be insufficient for all of the combined SYSOUTs.

- You cannot have Output Manager generate an archive name based on a writer name that is specified in the JCL for the job. The archive name must be based on the job name or on the comments that a user exit extracts from the JESJCL data set instead.
- If an error such as a B37 abend occurs while Output Manager is capturing and archiving combined SYSOUTs, the set of combined SYSOUTs is divided into two groups: the SYSOUTs that were successfully archived prior to the error and the SYSOUTs that were not archived. If you specified a class, destination, form, or writer in the **Error** field of the selector rule, the class, destination, form, and writer for the non-archived SYSOUTs as well as the archived SYSOUTs is set to the specified error class, destination, form, and writer. To reprocess the SYOUTs that were placed into the error queue, you must reset the SYSOUTs to what was originally specified in the JCL for the job by using the JES2 \$TO command as follows:
 - If the original job had SYSOUT=R DEST=DEST1,FORM=FORM1, WRITER=WRITER1. The error capture had a SYSOUT=X, DEST=ERRDEST, FORM=ERRFORM, and WRITER=ERRWRITE, the JES2 command is:

```
$TO J0123456,/JM=JOBNAME,/Q=X,/DEST=ERRDEST,/F=ERRFORM,
/W=ERRWRITE,DEST=DEST1,F=FORM1,W=WRITER1,Q=R
```

- If the original job had SYSOUT = R no destination, no form, no writer. The error capture had a SYSOUT=X, DEST=ERRDEST, FORM=ERRFORM, and WRITER=ERRWRITE the JES2 command is:

```
$TO Q123456,/JM=JOBNAME,/Q=X,/DEST=ERRDEST,/F=ERRFORM,
/W=ERRWRITE,DEST=LOCAL,F=STD,W=****,Q=R
```

You may need to issue the JES2 command: \$AJ123456, depending on the settings specified in the selector or subselector definition.

Generating archive names from a user exit

Output Manager generates logical archive names and displays them in the **Archive Name** column of the Archived Reports panel to help users identify their archived reports. You can use a user exit for the archive name to extract a user-defined value from comments that are embedded in the JESJCL data set for a job.

A sample user exit is provided in the SBJTSAMP member BJT@UX01. The JCL for assembling and link editing this sample exit is provided in the SBJTSAMP member BJTRXASM.

The SBJTLOAD member BJTRX001 operates the same way as J (Job) in the source field of a selector or subselector rule.

To generate archive names from a user exit:

1. Allocate a new, empty library. The attributes must be similar to the SBJTLOAD attributes and must be APF-authorized.
2. Customize SBJTSAMP member BJT@UX01 according to the modification instructions at the top of the member.
3. Edit SBJTSAMP member BJTRXASM according to the modification instructions at the top of the member. Specify the data set specified in step 1 as output, and the data set specified in step 2 as input.
4. Submit SBJTSAMP member BJTRXASM.
5. Edit the Output Manager started task proc and add the library specified in step 1 to the top of the STEPLIB concatenation
6. Recycle the Output Manager started task

The sample user exit assumes that the JESJCL data set will contain comments that specify the text string >> TWS OCCURRENCE --> followed by a space and then a logical archive name of up to 32 characters in length. The archive name cannot include the following wildcards: an asterisk (*), question mark (?), or percent sign (%). In general, this limitation applies to text that is extracted by a user exit.

Customers who use Tivoli Workload Scheduler (TWS) to manage their production environment may want to easily correlate the joblogs captured by Output Manager with the names used in TWS in order to see the TWS Application ID, Operation number, and Input Arrival. The following JCL, when submitted by TWS, will insert the values into a comment record:

```
//TWSDE020 JOB ACCT,TWS,CLASS=A,MSGCLASS=Q
//*%OPC SCAN
//*>< TWS OCCURRENCE --> &OADID &OOPNO &OYMD1.&OHMM
```

When the joblog is processed by Output Manager, the comment cards contain the values for the TWS variables:

```
//TWSDE020 JOB ACCT,TWS,CLASS=A,MSGCLASS=Q
//*>OPC SCAN
//*>< TWS OCCURRENCE --> DEVELOPMENT 020 1305160600
```

The sample user exit locates the search string and uses the next 32 characters as the Output Manager Archive Name. The resulting archive appears in Output Manager with both the Job name (TWSDE020) and the TWS Application ID, Operation number, and Input Arrival (DEVELOPMENT 020 1305160600) as illustrated below.

Cmd	Archive name	Job name	Job ID	Archive Time
----	DEVELOPMENT 020 1305160600	TWSDE020	J0191291	2013 05/21 11:12:53

During selector processing, the sample user exit parses every comment card and issues a return code of zero if a valid archive name is found. If multiple comment cards specify valid archive names, Output Manager uses the last valid archive name for which the return code is zero. If no valid archive name is found in any comment card, Output Manager uses the job name as the logical archive name.

If you are an experienced assembler programmer, you can tailor the user exit, as needed, for your site. For example, to use a text string other than ">< TWS OCCURRENCE -->" to identify an archive name within the JCL comments or change the logic for processing comments. The BJT@UX01 member includes comments to help you customize the exit.

Important: Do not rearrange any of the IN_ and OUT_ labels in the PARMS DSECT. Output Manager expects the labels to be in their original order.

In addition to defining your user exit and specifying JCL comments with archive names, you must edit the selector rule or subselector rule for the SYSOUT to be archived.

1. Specify U (User exit) in the **Source** field of the selector or subselector field.
2. Specify YES in the **Combine Sysout** field of the selector or subselector field.
3. Specify SYSOUT selection criteria to capture the JES data sets (including the JESJCL data set). It is recommended that you specify ALL in the **JES Queue** field to do so.

Creating a subselector rule

You can define one or more subselector rules for a selector rule. Subselector rules enable report administrators to assign different archive attributes to subsets of the SYSOUT that is selected by a single selector rule.

To create a subselector rule:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **S**, Selector Rules, and press Enter.
3. Specify search criteria, or leave the fields blank, and press Enter.
The resulting list is filtered by your search criteria.
4. In the **CMD** column, type SS (Subselector rules) next to the selector rule for which you want to create a subselector rule, and press Enter.
5. Specify search criteria, or leave the fields blank, and press Enter.
The resulting list is filtered by your search criteria.

Note: The Parent Selector Name field specifies which selector rule is associated with the displayed list of subselector rules. In addition, the Job Type, Jobname, User Id, and SYSOUT Class fields are inherited from the parent selector rule.

6. Type ADD on the command line to add a subselector rule if there are no preexisting subselector rules.

Note: If you are adding an additional subselector rule to a list of pre-existing subselector rules, you can use the I (Insert) line command in the CMD column to specify the location of the new rule in the list of subselectors. The new rule will be located immediately after the existing rule that you issued the i (insert) command next to.

The Sub Selection Rule panel is displayed.

Note: Some fields in the Sub Selection Rule panel may be read-only. Because subselector rules inherit the values in their parent selector rules, any fields with single values defined in a selector rule are read-only in the associated subselector rule. The values of the parent selector rule are displayed in the **From parent** fields. Subselector rules can be used to refine selection criteria specified in the parent selector rule. They cannot have broader selection criteria or conflicting selection criteria. Any selection criteria left blank in a subselector implies that this subselector rule will process all output matching the parent's selection criteria for the field in question.

7. (Required) In the **Rule Name** field, type a name for the subselector rule. This name can be up to 16 characters in length.
8. Specify information in the following fields, as needed.

Tip: You can specify the following wildcards in all fields unless otherwise noted: the question mark (?) for a single character or the asterisk (*) for zero or more trailing characters. Specifying both characters (?*) indicates that the field consists of at least one character, and can be useful when you want to identify sysout where the specified field is non-blank.

Selection criteria:

The following fields identify additional JCL parameters that you can use as SYSOUT selection criteria. Most of these parameters can occur in a DD SYSOUT statement or an OUTPUT statement.

SYSOUT Class

Specify the output class that you want to associate with the selected SYSOUT. If you do not specify a Sysout Class, this subselector rule will process output from all classes specified in its parent selector rule.

Only the following characters are valid: the letters A through Z or the numbers 0 through 9. You can specify multiple classes, if necessary; however, one class is recommended. If you specify multiple classes, type them in a string up to 36 characters in length with no intervening spaces or characters, for example, RA (not R A or R , A). Wildcards are *not* permitted.

Job Type

If the selector has Job Type set to All, you can specify one of the following values to indicate the type of job to which the subselector rule applies: **All** (all jobs), **Batch** (batch jobs only), **Appc** (jobs that are associated with a specific application), **TSO** (jobs that are processed on TSO systems), or **STC** (jobs that are related to the started task). The default value is **All**.

Job Name

If the selector Job Name contains a wild card, you may specify a more qualified Job Name.

Destination

Type the name of the JES SYSOUT destination. This name can be up to 17 characters in length.

Forms

In this field, you can type the name of a form that is associated with the report, up to eight characters in length. You can specify additional forms on the Advanced Selection panel.

Writer

Type the name of the external writer that processes the SYSOUT data set instead of JES. This name can be up to eight characters in length.

Archive Name

If this field is non-blank, the archive name is constructed using the Jobname and Writer of the SYSOUT according to the Archive Name Rule Source of the subselector (either Job, Writer, User exit, or name), archive name prefix, and rule name. This newly constructed archive name is matched against the Archive Name pattern of the subselector. This field can contain a value up to 32 characters long.

Note: If you specify **U** (user exit) as the **Archive Name Rule Source** in a subselector rule, then the **Archive Name** field must be blank.

9. To specify more specific selection criteria, type an **S** (Select) in the **Advanced Selection Criteria** field and press Enter. You can specify the following options on the Advanced Selection panel:

JES Queue

If All was specified on the selector, specify one of the following values to indicate the jobs in the JES queue to be selected for archiving: **All** (all jobs in the JES queue), **External** (only the jobs that are assigned to a special, external writer, which may or may not be a printer), **Write** (jobs that are ready to be written to a printer and for which you can specify JES or SDSF commands to HOLD a data set and thereby control job selection), or **Hold** (jobs that are held on the JES queue but are not ready to be written). The default value is **Write**.

User ID

Type the RACF user ID for the job that produces the SYSOUT. This ID can be up to eight characters in length.

Prmode

You can specify a printer process mode (Prmode). The value can be up to eight characters in length.

For example, to specify a Prmode value of "TESTMODE" as selection criteria, your JCL should include: `//DS18 OUTPUT PRMODE=TESTMODE //SYSPRINT DD SYSOUT=A,OUTPUT=(*.DS18)`

FCB

Type the name of the forms control buffer (FCB) that JES uses to print the SYSOUT data set. This name can be up to four characters in length.

UCS

Specify the universal character set (UCS) that JES uses when printing the SYSOUT data set. This value can be up to four characters in length.

Flash

Type the name of the forms overlay frame to be inserted into the printer before printing the SYSOUT data set on a 3800 printer; this value can be up to four characters in length. Alternatively, specify **NONE** to suppress flashing for the SYSOUT data set.

Account 1-8

Specify accounting information in the selection in up to eight fields, eight characters in length.

Programmer name

Type the programmer name, up to 20 characters in length.

Condition code

Specify a condition code to select job output based on completion status. For condition code syntax, see [“Enable job selection according to completion status \(COND CODE syntax\)” on page 58](#).

10. Press F3 to return to the Subselector Rule panel.
11. To specify processing options, type an **S** (Select) in the **Processing Options** field and press Enter. You can specify the following options:

Combine Sysout

Specify whether or not to combine multiple SYSOUTs from a job into a single archive. Type either **Yes** (combine the SYSOUTs into a single archive file) or **No** (place each SYSOUT in a separate archive file).

You must specify **Yes** if you specify **U** (for user exit) in the **Archive Name Rule Source** field when defining a logical archive name for this subselector rule.

If you specify **Yes**, the following restrictions apply:

- Output Manager might not be able to capture reports of the type "custom" from the combined SYSOUTs. Therefore, if you plan to define custom reports, you should specify **No** in this field.
- The first sysout data set that matches a subselector having the Combine Sysout set to Yes (or not matching any subselector, but having the selector have Combine Sysout set to Yes) causes that sysout data set and all subsequent sysout data sets in the job that match that subselector to be combined together into the same archive data set.



Attention: The order that sysout data sets are given to Output Manager may not be the same order as these data sets appear in JCL when the data sets have differing OUTPUT attributes, such as CLASS or WRITER.

Every sysout data set receives selector and subselector processing. If YES is specified in the Combine Sysout field of a selector rule, all of the sysout data sets that share that selector are combined together. All sysout data sets that do not have a subselector are combined together (if the selector has Combine Sysout set to Yes). Each data set matching a subselector with Combine Sysout set to No is processed separately; each data set matching a subselector is processed separately if the selector has Combine Sysout set to No.

- You must specify **No** in the **Auto Calculate** field for the associated set of archive attributes. Otherwise, Output Manager calculates the space for the archive file based only on the size of the first SYSOUT data set that is received from JES; this space is likely to be insufficient.
- You cannot specify **W** in the **Source** field under "Archive Name rule source" to have Output Manager generate archive names based on a writer name. You must specify **J** (for job name) or **U** (for user exit) instead.
- You should not enable the capture and use of the "dynamic printing parameters" for printing reports. If you do, the dynamic printing parameters will be captured only from the first SYSOUT in the archive file.

Exists

Indicate what Output Manager should do if the archive already exists by specifying one of the following valid values:

- **Replace:** Replace the data in the archive data set with the newly captured sysout data.
- **Leave:** Leave the old data in the archive data set and send the new sysout data to error processing, as defined by the ERROR processing options (Disposition, Class, Destination, Form, Writer) for the subselector.
- **Extend** Write the new data at the end of the old archive data set. The default value is **Extend**.

Note: If you specify **Replace** in this field, ensure that the archive data set for the captured SYSOUT will have a unique data set name. To do so, specify an archive mask that includes the &N variable in the set of archive attributes that is linked to this subselector rule. Otherwise, data might be lost.

Line Limit

Specify the maximum number of lines that can be written to the archive. The default value is 0, which indicates that there is no limit on the number of lines.

Page length

Specify a numeric value between 0-9999 to indicate the auto-pagination page length. A value of 0 indicates that no auto-pagination is in effect. A value between 1 and 9999 indicates the number of records per page.

Archive Name Rule Source

Indicate how the logical archive name for a selected SYSOUT (an archived report) is generated. A logical archive name can be the name of the job that produced the SYSOUT, an output writer name that you specify in the JCL for the job, a concatenation of the job name and the writer name,

or text that a user exit extracts from comments in the JCL. Choose a method that generates archive names that are meaningful to your archived report users. Valid values are:

- **J** - To use the job name
- **W** - To use the writer name that you specified in a DD SYSOUT statement or in an OUTPUT statement of the JCL. If you also specify a value in the **Escape Char** field that matches the first character of the writer name in the JCL, the archive name will be a concatenation of the job name and the first part of the writer name, up to a total of 15 characters. If you specify **W** but no writer name is defined in the JCL, the archive name will be composed of the job name only.
Tip: If you specify **W**, you should include the &N variable in the Archive Mask value of the associated set of archive attributes to ensure that unique archive data set names will be generated.
- **U** - To use the optional user exit BJT@UX01 to extract a user-defined value from comments that are embedded in the JCL and use that value as the archive name. If you specify **U**, you must set the **Combine Sysout** field to **Yes**. A sample user exit is provided in the SBJTSAMP member BJT@UX01. See [“Generating archive names from a user exit” on page 51](#),
- **R** - To use the name of the rule to determine the archive name. When R is specified, the archive name is determined by the name of the selector or subselector rule name. This allows the Archive Name to be set for reports in a way that is more descriptive than using job name. This is useful when searching for archives, or when viewing a list of archives, if "SET VARCHIVE ALL" is used.

Escape Char

If you specified **W** in the **Source** field and want Output Manager to generate a logical archive name that is a concatenation of the job name and the first part of a writer name, type the escape character that begins the writer name. This value can be any character that is valid for a writer name in JCL, including the symbols \$, #, and @. The default value is \$.

Output Manager matches the escape character against the first character of the writer name. If a match is found, Output Manager generates a concatenated name up to 12 characters in length, for example, JOBNAME1 WRITER01 creates JOBNAME1WRIT. If a match is not found, the concatenation does not occur, and the archive name is composed of only the writer name.

Note: If default escape character (\$) matches a writer name but you do not want the archive name to be a concatenation of the job name and writer name, you must change the default escape character to another character.

Disposition

Indicate what Output Manager should do with the SYSOUT on the JES spool when data is archived. You can specify one of the following valid values: **Delete** (purge the output off of the spool), **Keep** (keep the output on the spool and do not alter its queue), **Hold** (keep the output on the spool and place it in the hold queue), **Syshold** (keep the output on the spool and place it in the syshold queue), or **Release** (keep the output on the spool and place it in the write queue). The default value is **Delete**.

Class

Indicates the output class to requeue output to:

- Normal: Indicates the output class to requeue output to when it is not deleted and the archive completed normally.
- Error: Indicates the output class to requeue output to when it is not deleted and the archive created failed.
- Line limit: Indicates the output class to requeue to when it is not deleted and the archive exceeded the specified line count.

Destination

Indicates the output destination to requeue output to:

- Normal: Indicates the output destination to requeue output to when it is not deleted and the archive completed normally.

- Error: Indicates the output destination to requeue output to when it is not deleted and the archive created failed.
- Line limit: Indicates the output destination to requeue to when it is not deleted and the archive exceeded the specified line count.

Form

Indicates the forms overlay used when printing the SYSOUT. Valid values are xxxx (specifies the name of a forms overlay, up to 8 characters), STD (standard forms overlay based on the overlay that was specified during JES3 initialization).

Note: STD only applies to JES3 systems), and NONE (no flashing for the SYSOUT data set).

Writer

Indicates the output writer to requeue output to:

- Normal: Indicates the output writer to requeue output to when it is not deleted and the archive completed normally.
- Error: Indicates the output writer to requeue output to when it is not deleted and the archive created failed.
- Line limit: Indicates the output writer to requeue to when it is not deleted and the archive exceeded the specified line count.

12. Press F3 to return to the Subselector Rule panel.

13. (Optional) To specify Text Processing Language (TPL) rules to associate with this subselector rule, type an **S** (Select) in the **TPL rules** field and press Enter. TPL rules can optionally be used to issue WTO (Writer to Operator) messages, set the condition code to a user defined value based on the text, set the archive name, or text highlighting when criteria is found in the SYSOUT. You can specify a TPL rule on the TPL Rule panel.

a) Type ADD on the command line.

b) Enter all or part of a TPL Rule name in the Search for TPL rules pop-up or leave blank for the entire list of TPL rules and press Enter.

c) Type S next to the TPL rule you want to select, and press Enter.

Tip: Once TPL rules have been defined, you can type I (Insert) In the CMD column and press Enter to display the TPL Rules panel.

14. When you are finished entering information, press F3 (Exit).

Depending on how you set your preferences, you may be prompted to type YES and press Enter to save your changes.

Selecting job output based on completion status using a **CONDITION CODE** option on a subselector rule

You can enable job selection according to completion status using a subselector rule.

1. Navigate to the Subselector Rules panel:

a) From the Output Manager main menu, choose **A (Administrative Functions) > S (Selector Rules)**.

b) Type SS (SubSelector) next to the selector rule that you want to add or edit the subselector rules for.

c) Specify search criteria, or leave the fields blank, and press Enter.

2. Type ADD on the command line to add a subselector rule.

3. (Required) In the **Rule Name** field, type a name for the subselector rule. This name can be up to 16 characters in length.

4. Specify selection criteria as needed.

5. Type **S** (Select) in the **Advanced Selection Criteria** field and press Enter.

6. In the **Condition Code** field of the Advanced Selection panel, specify a condition code rule.

The condition code must have the following syntax:

```
(condition type) (comparison operator) (value)
```

For more information, see [“Enable job selection according to completion status \(COND CODE syntax\)” on page 58.](#)

7. Press F3 to return to the Subselector Rule panel.
8. Press F3 to return to the Selector Rule panel.
9. Press F3 (Exit).
10. Type ACT (activate) on the Selector Rules command line and press Enter to activate the selector rule.

Note: After creating selector rules, you must activate them by using the ACTIVATE primary command.

Enable job selection according to completion status (COND CODE syntax)

You can configure a COND CODE option on subselectors to select job output based on the completion status. The syntax depends on the condition type (return code or abend code).

The syntax for condition code is:

```
(condition type) (comparison operator) (value)
```

COND CODE examples:

COND CODE value	What is captured
R <= 16	Capture if job return code is less than or equal to 16.
A = UXXXX	Capture if any user abend occurs.
A = S0CX	Capture if there are any S0Cn abend codes.
A = S0C4	Capture if a 0C4 system ABEND occurs.
A != SX37	Capture the output if it did not ABEND with a code ending with 37.
A = SX37 OR A =U201X	Capture if any X37 system ABENDs occur, OR if a user ABEND with a value of 2010 to 2019 occurs.

Syntax for RETURN CODE condition types

To select jobs based on return code, use the following syntax:

```
R (comparison operator) (return code value)
```

Where:

- **(comparison operator)** is one of the following:
 - = (Equals): Select jobs with an exact return code.
 - != (Not): Select jobs with a return that is NOT the value specified.
 - < (Less than): Select jobs with a return code that is less than the specified value.
 - <= (Less than or equal to): Select jobs with a return code that matches or is less than the specified value.
 - > (Greater than): Select jobs with a return code that is greater than the specified value.
 - >= (Greater than or equal to): Select jobs with a return code that matches or is greater than the specified value.

- (**return code value**) is 1-4 digits long.

Example

R <= 16 Capture if Job return code <= 16

Syntax for ABEND CODE condition types

To select jobs based on system or user ABEND code:

```
A (comparison operator) (abend pattern)
```

Where:

- (**abend pattern**) specifies the type of abend (system or user) and the ABEND code:
 - **Snnn**: System ABEND, where n is 3 characters made up of any hexadecimal digit 0-9, A-F, or X as a wildcard.
 - **Unnnn**: User ABEND, where n is 4 characters made up of decimal digits 0-9, or X as a wildcard. e
- The following comparison operators can be used for ABEND code:
 - **=** (Equals): Select jobs with an exact ABEND code.
 - **!=** (Not): Select jobs with an ABEND code that is NOT the value specified.

Tip: You can use an OR operator between two ABEND code conditions.

Notes on subselector rules

You can define one or more subselector rules for a selector rule. Subselector rules enable report administrators to assign different archive attributes to subsets of the SYSOUT that is selected by a single selector rule.

The fields specified in the selector rule are passed to JES by means of the SAPI interface. JES returns SYSOUT data sets to Output Manager one at a time. When Output Manager is ready to create a new archive file for a SYSOUT data set, it examines the subselector rules that are defined for the selector rule from top to bottom to determine if any match the SYSOUT. As soon as a matching subselector rule is found, Output Manager stops the matching process. If no matching subselector rule is found, the control field values from the selector rule are used.

Because the order of subselector rules on the Sub Selection Rules panel list is important, ensure that your most specific subselector rules appear at the top of the list. Subselector rules should be listed in specific-to-general order. This way, when Output Manager scans the list of subselector rules from top to bottom to find a match, it will evaluate the more specific subselector rules first. This arrangement prevents a more general rule from being selected before a more specific rule can be evaluated. For example, assume that you need to create three subselector rules that contain the following selection criteria:

- **Subselector1** - Job name is ABC.
- **Subselector2** - Job name is ABC, and DD name is DDD.
- **Subselector3** - Job name ABC, DD name is DDD, and Step name is A23.

You would arrange these subselector rules, using the (M) Move and (A) After line commands, in the following order:

1. **Subselector3** - Job name ABC, DD name is DDD, and Step name is A23.
2. **Subselector2** - Job name is ABC, and DD name is DDD.
3. **Subselector1** - Job name is ABC.

Subselector rules are used to specify a subset of results of a selector rule for all non-blank fields in a parent selector. Therefore, the values of the equivalent fields in the subselector must be derivatives of the values in the parent. This enhancement enforces this rule, preventing inaccurately defined subselector rules. Values specified in the parent selector rule are initially displayed in the subselector rule (except in

the case of multiple values specified in the selector for FORM or PRMODE, in this case the subselector must be shown as blank). If an invalid value is specified in a subselector rule, an error message is displayed.

A subselector field is non-editable only in the case where only one value can match the selector. This is the case when no wildcards are used, when Job Type or JES Queue is not "All", when the jobclass or sysout class is only one character long, and when only one value is specified for FORM or PRMODE and that one value does not use wildcards.

When you specify a wildcard pattern in a parent selector (with "*" or "?") the value specified in the subselector must match a subset of the values matched by the parent selector's pattern for that field. For example, if the Destination value of the parent selector is DEST*, valid Destination values for the related subselector rules must begin with the character string DEST, but can be more specific, such as DEST1, DEST2, etc.

If one or more values are specified in the PRMODE or FORM fields of the selector rule, leave the FORM or PRMODE field of the subselector blank in order to match all values that the parent selector would match. If the parent selector includes wildcards in these fields, the subselector values must be compatible with (a subset of) the selector values.

Because multiple values are allowed in the FORM and PRMODE fields of parent selectors, if more than one pattern is specified in the parent selector you must leave the FORM or PRMODE field of the subselector blank in order to match all values that the parent selector would match. If only one FORM value or only one PRMODE value is specified in the parent selector, the FORM or PRMODE value specified in the subselector must be a derivative of the parent FORM or PRMODE value, respectively.

If the parent selector specifies a set of classes in the SYSOUT CLASS field, the subselector can contain any subset of the values specified in the selector. For example, if the selector specifies ABC, valid values in the subselector include: A, B, C, AB, AC, BC, or ABC.

If "ALL" is specified as the job type or jes queue of the parent selector, any value is valid for the subselector.

In addition, you can replace any wildcard in the selector's pattern for a field with anything more specific. That is, you can replace any "?" (question mark) with any character except "*", and you can replace any "*" (asterisk) character in the selector's pattern for a field with any pattern, or you can just remove any "*" in the selector's pattern. You can do this with some, all, or none of the wildcards in the selector's pattern.

Note: A subselector rule includes some fields that a selector rule does not provide, for example, **Step Name**, **DD Name**, **Programmer Name**, Job Accounting fields, **Job Class**, and **Account**. Fields that are read-only in the subselector are the fields that are fixed in its parent selector.

Managing subselector rules

Once you have created a subselector rule, you can edit or delete it from the Sub Selector Rules list panel.

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **S**, Selector Rules, and press Enter.
3. Specify search criteria, or leave the fields blank, and press Enter.
The resulting list is filtered by your search criteria.
4. In the CMD column, type SS (Subselector Rules) next to the selector rule that contains the subselector rule that you want to edit, and press Enter.
5. Specify search criteria, or leave the fields blank, and press Enter.
The resulting list is filtered by your search criteria.
6. In the **CMD** column, type the appropriate line command:
 - E (Edit) next to the name of a selector to edit its details. For information about the fields on the details panel, select Extended help from the Help drop-down menu.
 - D (Delete) next to the name of a selector rule to delete it.
7. Press F3 (Exit).

8. Depending on your user preferences, a confirmation panel may be displayed. Type YES and then press Enter to save your changes.

Searching for subselector rules

From the Selector Rules panel, you can search for a specific selector rule or filter the list of rules. You must specify a value in at least one of the search fields to perform a search.

Optionally, you can save your search criteria to your ISPF profile. If you save your search criteria, Output Manager will apply these criteria to the Selector Rules panel from session to session, until you change them.

Some search fields support wildcards. Output Manager supports the following wildcard characters in these fields: the percent sign (%) for a single character or the asterisk (*) for zero or more trailing characters anywhere in a value. If you specify a wildcard pattern, Output Manager will find all subselector rules that match that pattern.

To search for subselector rules:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **S**, Selector Rules, and press Enter.
3. Specify search criteria, or leave the fields blank, and press Enter.
The resulting list is filtered by your search criteria.
4. In the CMD column, type SS (Subselector Rules) next to the selector rule that contains the subselector rule that you want to edit, and press Enter.
The search panel is displayed.
5. In the **Selector Name** field, type the user-defined name for a selector rule. You can specify a value up to 16 characters long. Wildcards are permitted.
6. In the **Status** field, type Enabled if you want to list only the subselector rules that have been enabled for use by Output Manager. Type Disabled if you want to list only the subselector rules that are unavailable for use. Type Skip to list only subselector rules that have a Status value of Skip. If you leave this blank, Output Manager will list both enabled and disabled subselector rules. Wildcards are *not* permitted.
7. In the **Job Name** field, type the name of a job that produces report output and is specified in a selector rule. Wildcards are permitted.
8. In the **Job Class** field, type the Job Class of a subselector rule. You can specify valid Job Class values, which include numeric and/or alphabetic characters 0-9, A-Z, or s (STC), or t (TSU), or leave blank to return subselector rules with all Job Class values.
9. In the **Save Criteria?** field, type **Yes** if you want to save the search criteria that you specified to your ISPF profile. Output Manager will then use the saved search criteria to filter the list of selector rules from session to session, until you change these criteria. If you want to use the search criteria temporarily (for a one-time search), accept the default value of **No**. Output Manager will filter the current list of selector rules and then clear the search criteria and revert to the last-saved values (if any) when you exit the Selector Rules panel.
10. Press Enter.
The Sub Selection Rules panel lists only the subselector rules that match your search criteria.

Rearranging the order of the list of Subselector rules

The order of subselector rules on the Sub Selection Rules panel is important. Subselector rules should be listed in specific-to-general order. If a specific rule occurs after a generic rule, the more specific rule will not be processed. Therefore, ensure that your most specific subselector rules appear at the top of the list. When Output Manager scans the list of subselector rules from top to bottom to find a match, it will evaluate the more specific subselector rules first.

To rearrange the order of subselector rules in the Subselector Rules list panel:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.

2. From the Administrative Functions menu, choose option **S**, Selector Rules, and press Enter.
3. Specify search criteria, or leave the fields blank, and press Enter.
The resulting list is filtered by your search criteria.
4. In the **CMD** column, type SS (Subselector rules) next to the selector rule that contains the subselector rule that you want to edit, and press Enter.
5. Specify search criteria, or leave the fields blank, and press Enter.
The resulting list is filtered by your search criteria.
6. In the **CMD** column, type M (Move) next to the subselector rule that you want to move, and press Enter.
A message appears stating that the move operation is pending.
7. In the **CMD** column, type A (After) next to the subselector rule that you want to precede the rule you are moving, and press Enter. The moved rule appears in the list after the cursor.
8. Press F3 (Exit).

Depending on how you set your preferences, you may be prompted to type YES and press Enter to save your changes.

Issuing a WTO message or highlighting text when a specified text string is found in a SYSOUT record

You can issue a WTO (Write To Operator) message, or automatically highlight text, when a Text Processing Language (TPL) rule matches a string in a SYSOUT record captured by a selector rule or subselector rule. A TPL rule defines a "match-action" operation, where "match" is a regular expression that defines the text string to be searched for, and "action" is the writing of a specified output string to the operator. A set of TPL Rules is linked to an Output Manager selector rule or subselector rule to perform all text processing for a captured archive.

Important: ICSF must be installed and enabled to run the MD5 hashing service (CSNBOWH) required by TPL. If ICSF is not installed, the message "BJT1103E: TPL requires ICSF installed" is returned. If you do not plan to use TPL rules, you can ignore this message. If you do plan to use TPL rules, you must install and activate ICSF.

First you create a new TPL rule and then you assign it to a selector or subselector rule for a captured SYSOUT.

Each selector/subselector can be linked to more than one TPL rule, each rule can be linked to more than one selector/subselector, and each TPL rule can trigger more than one action. However, only one TPL rule can match a single line of a record: one rule will issue the WTO for that line, and processing continues on to the next line (unless the STOP action is specified, in which case TPL processing stops after the first TPL action is complete).

Note:

- In order to prevent issuing WTOs for past events, TPL Rules are not processed for ISV recalls.
- Exercise caution when implementing TPL rules. Ensure that you are not wasting resources by including any rules that match every line of your SYSOUTs, or by linking TPL rules to an unrelated selector. Creating rules that match every line will cause Output Manager to attempt to write WTO messages to the console for every line. Linking a TPL rule to an unrelated selector (for example, linking a TPL rule that looks for errors in inventory reports to a selector that captures SYSOUT for accounting reports), will waste resources because the inventory report errors never show up in the accounting reports.

Note: For more information on using regular expressions in the TPL search string, see section [“Regular expressions in TPL search strings”](#) on page 66.

Creating TPL rules

Authorized Administrators can create TPL rules from the Text Processing Language Rule Administration option, available from the Administrative Functions menu in ISPF.

1. Navigate to the **TPL Rule** panel (ISPF A.T).

2. Specify search criteria, or leave the fields blank, and press Enter.
The resulting list is filtered by your search criteria.
3. Type ADD on the command line and press Enter.
The **TPL Rules Details** panel is displayed.
4. Required: In the **Rule Name** field, type a unique name for the TPL Rule.
This name can be up to 64 characters in length.
5. In the **Status** field, specify whether the TPL rule is ENABLED (active) or DISABLED (inactive).
6. In the **TPL Rule** field, type the variables and literal values that you want to use as the TPL rule.
The following syntax must be used:

```
WHEN <location range> MATCH "search expression"
THEN <ACTION>
```

Where <location range> is the input lines on which the search expression must match, "search expression" is a text- matching regular expression, and <ACTION> is the action (either WTO "output string", HIGHLIGHT, or STOP) to be performed when the search expression criteria is matched.

Note: For more information on TPL Rule syntax, see “TPL rule syntax” on page 64. For more information on supported regular expressions, see “Regular expressions in TPL search strings” on page 66.

7. When you are finished, press F3 (Exit).
An exit confirmation pop-up window is displayed. Press Enter to save the TPL Rule. The **TPL Rule** panel is redisplayed. A TPL rule is active as soon as it is saved and linked. A Policy Activate is not necessary.

Note: If your TPL rule contains a syntax error, an error message is displayed and you cannot save the rule until it has valid syntax. The error message will contain information to help you resolve the invalid syntax. For example, an invalid semicolon outside of the WTO output string at position 48 would trigger the error message "Syntax problems: Syntax error: unrecognized or extraneous input near position 48".

Linking a TPL Rule to a selector rule or subselector rule

Administrators can link a TPL Rule definition to one or more selectors.

1. Navigate to the Selector Rule panel (ISPF A.S) or the Subselector Rule panel (ISPF A.S, and then type SS (subselector) in the CMD column of the parent selector rule and press Enter), depending on which type of rule you want to link a TPL rule to.
2. In the CMD column, type L (Link/unlink TPL rule) next to the selector rule or subselector rule that you want to link a TPL rule to, and press Enter. The TPL Rule List panel is displayed.

Note: If any TPL rules are linked to this selector, they are listed on this panel. You can use the D (delete) line command to remove a TPL rule from this list. Doing so will delete the rule from the list of linked TPL rules, but will not delete the TPL rule from Output Manager.
3. To add a rule to the linked TPL rule list, type ADD on the command line or type I (Insert) in the CMD column, and press Enter. The Search for TPL Rule panel is displayed.
TPL rules should only be linked to the selector and subselector rules that they apply to.
4. Specify search criteria for the TPL Rule to be linked, and press Enter. The TPL Rules panel is displayed with a list of TPL Rules that match the search criteria.
5. Type S (Select) in the CMD column next to the TPL Rule to be linked, and press PF3 to return to the Selector Rule Details panel or the Subselector Rule Details panel. The linked rules are displayed in the list.

Tip: You can link more than one TPL rule to a selector. However, each TPL rule may only be linked once to any given selector.

TPL rule syntax

Basic TPL Rule syntax, suitable for most situations is:

```
WHEN MATCH "search expression" THEN <ACTION>
```

Complete TPL rule syntax, including optional parameters is:

```
WHEN <location range> MATCH "search expression"  
THEN BEGIN  
  <ACTION>;  
  <ACTION>;  
END
```

Where "search expression", <location range>, and <ACTION> are:

- "search expression" is a regular expression enclosed in quotes. Output Manager supports POSIX-compliant regular expressions in the text-matching search string of TPL rules. For more information on creating regular expressions for the TPL search string, see ["Regular expressions in TPL search strings" on page 66](#).
- <location range> is an optional parameter that specifies the input lines on which the search expression must match. Valid values may include: BEFORE LINE <line>, BEFORE PAGE <page>, AFTER LINE <line>, and AFTER PAGE <page>. You can specify multiple location values, but each location type may only be specified once. For example: WHEN BEFORE LINE 120.

Note: It is not recommended to use location range values for selectors that process MSGCLASS SYSOUT. The order that SAPI delivers these data sets to Output Manager cannot be determined in advance.

- <ACTION>: is the action to be performed when the search expression criteria is matched. Valid values include WTO, STOP, HIGHLIGHT, SET ARCNAME, and SET COND.

Note: You can only reset the condition code when a match is found in NON-JES2 datasets.

- **WTO (ROUTE=*n*, DESCRIPTOR=*n*) "output string"**: When the search expression is matched, issue a Write To Operator (WTO) message. "Output string" is the text of the WTO, up to 126 characters long, to be written to the operator. This string must be enclosed in quotes and can include any combination of the following:

- ROUTE and DESCRIPTOR: Optionally, you can specify the route code and descriptor code for the WTO. The defaults are 0. If you specify ROUTE and DESCRIPTOR, you must use the following format:

```
WTO (ROUTE=nn, DESCRIPTOR=nn) "output string"
```

Note: In order to specify the ROUTE and DESCRIPTOR options, you must have a detailed knowledge of MVS system messages. See the "Routing codes" and "Descriptor codes" sections of the *MVS System Messages* InfoCenter for more information. At the time of publication, these sections can be found at https://www.ibm.com/support/knowledgecenter/en/SSLTBW_2.1.0/com.ibm.zos.v2r1.ieam600/route.htm, and https://www.ibm.com/support/knowledgecenter/en/SSLTBW_2.1.0/com.ibm.zos.v2r1.ieam600/desc.htm.

- *output string*: Any text included in the quotes of the output string not prefaced by the & (ampersand) symbol will be used as literal text to be written to the operator. Note: Because the primary purpose of WTOs is to drive system automation processes, it is recommended that the first word of the WTO output string be a unique message ID. Discuss installation-specific standards with your automation team.
- &0 (ampersand zero): the text that was matched by the entire search expression)
- &(integer): the text of a fragment of the matched search expression, where integer is the number of a marked subexpression of the search expression, &1 being the first fragment enclosed in parentheses, &2 being the second, etc.

- JES variables associated with the job that generated the SYSOUT that the selector or subselector matched: &JOBNAME, &JOBID, &STEPNAME, &DEST, &WRITER.
- &DSNAME: the name of the ITOM archive data set name that the data is being written to. For example: "msgnnnx MSGCLASS FLAG DETECTED, JOB:&JOBNAME, JESNUM:&JOBID"
- **STOP:** When the search expression matches a SYSOUT, Output Manager stops TPL processing for that SYSOUT, after the matched TPL rule ends. No TPL rules linked to this selector will execute for the remaining records in this SYSOUT data set. For example, to find only the first occurrence of "foo", include the STOP action:

```
WHEN MATCH "FOO" THEN BEGIN WTO "FOUND FOO";
  STOP;
END
```

To find all occurrences of "foo", do not include the STOP action:

```
WHEN MATCH "FOO" THEN BEGIN WTO "FOUND FOO"
```

- **HIGHLIGHT (COLOR="RED | PINK | BLUE | TURQUOISE | GREEN | YELLOW | WHITE", STYLE="USCORE|REVERSE", INTENSITY="HIGH|LOW") "&n":** When the search expression criteria is matched, highlight the matching text. The format of the highlight is determined by the COLOR, STYLE, and INTENSITY options. The text &n parameter specifies which part of the matching text is highlighted.
 - COLOR: Specifies the color of the highlight. Color values include RED, PINK, BLUE, TURQUOISE, GREEN, YELLOW, or WHITE, and must be surrounded by quotation marks. Alternatively, you can specify the RGB value of a color, or RGB values in hex. For example, HIGHLIGHT (COLOR="#FF0000" or COLOR="RED").
 - STYLE: Optional stylistic changes to the highlighted text. Valid values include USCORE (underscore) and REVERSE (reverses the highlight color with the text color), and must be surrounded by quotation marks.

Note: When REVERSE is specified, Output Manager selects the color of the text by determining which color (either black or white) provides the most contrast with the specified highlight color. If the highlight is a light color, such as yellow, the font color is black. If the highlight is a dark color, such as black, the font color is white.
 - INTENSITY: Optional stylistic change that modifies the intensity of the color of the highlighted text. Valid values are HIGH and LOW, and must be surrounded by quotation marks. HIGH uses more saturated colors (values of #FF for each RGB component). LOW uses muted colors (#80 for each component.)
 - &n: Specifies which part of the matching text to highlight. If &0 (ampersand zero) is specified, highlight the text that was matched by the entire search expression. If &(n) is specified, highlight only the text of a fragment of the matched search expression, where integer is the number of a marked subexpression of the search expression, &1 being the first fragment enclosed in parentheses, &2 being the second, etc.

The following examples would match the line of text "HELLO ABC WORLD", but the words highlighted differ based on the &n option:

```
WHEN MATCH ". * ABC" THEN HIGHLIGHT (COLOR="RED", STYLE="USCORE",
  INTENSITY="HIGH") "&0"
```

would highlight "HELLO ABC", but WORLD would not be highlighted.

```
WHEN MATCH ". * (ABC)" THEN HIGHLIGHT (COLOR="RED", STYLE="USCORE",
  INTENSITY="HIGH") "&1"
```

would highlight ABC, but HELLO and WORLD would not be highlighted.

TPL rule syntax examples

The following is an example of a simple TPL rule that will match a "floating" string anywhere on a line, WTO an output message, and then STOP TPL processing for that SYSOUT.

Note: Because the STOP command reduces CPU usage for TPL processing, this is the recommended syntax for most TPL rules.

```
WHEN MATCH ".* string"
THEN BEGIN WTO "output";
STOP;
END
```

The following is an example of a TPL rule that issues multiple WTOs:

```
WHEN MATCH "search expression"
THEN BEGIN
  WTO "output string 1";
  WTO "output string 2";
  STOP;
END
```

The following is an example of a TPL rule that uses a location range for the MATCH statement:

```
WHEN BEFORE LINE 5 AFTER PAGE 1 MATCH "search expression"
THEN WTO "output"
```

The following are an example of SET ARCNAME and SET COND:

```
WHEN
  BEFORE LINE 100
  MATCH ".*REASON=(\\d{8})"
THEN
  BEGIN
    SET ARCNAME = "ABEND";
    STOP;
  END
```

```
WHEN
  BEFORE LINE 100
  MATCH ".*REASON=(\\d{8})"
THEN
  BEGIN
    SET COND = "000000";
    STOP;
  END
```

Regular expressions in TPL search strings

The regular expression defines the pattern to be searched for in selected SYSOUTs (SYSOUT that is matched by a selector or subselector rule).

Output Manager supports most POSIX-compliant regular expressions in the text-matching search string of TPL rules. The following section covers the basic character class definitions and special characters used in such regular expressions, and includes examples on how regular expressions can be used in the TPL search string value.

Note: This section is meant as a high-level guideline, it is not meant as a guide in writing regular expressions, nor does it include an exhaustive list of regular expression special characters. For more information, refer to the UNIX® System Services Command Reference manual.

Several regular expressions can be strung together to form a larger, more exclusive regular expression. Use parentheses and square brackets to define the scope and precedence of the smaller regular expression segments.

The following special characters can be used to build text-matching regular expressions for Output Manager TPL search strings:

- `.` (dot character) Matches any single character. Within POSIX bracket expressions, the dot character matches a literal dot. For example, `a.c` matches "abc", etc.
- `*` (asterisk) A quantifying special character used to specify that the preceding element can occur zero or more times. For example, `ac*` will match "accounts", "actual", and "advertising".
- `?` (question mark) A quantifying special character used to specify that the preceding element can occur zero or one times. For example, `accounts?` will match both "account" and "accounts".
- `+` (plus sign) A quantifying special character used to specify that the preceding element can occur one or more times. For example, `ac+` will match both "accounts" and "actual", but will not match "advertising".
- `|` (vertical bar, hex 6A or 4F equivalent) specifies the boolean "OR", used to signify alternative characters, strings, and expressions. Matches either the expression before or the expression after the operator.
- `[]` (square brackets) Specifies a POSIX Character Class Definition.

Note: Square brackets (hex AD and BD in EBCDIC-1047, and hex BA and BB in EBCDIC-37) are supported only in code pages 1047 and 37.

The following is a list of supported POSIX character classes that you can use in your search expression:

- `[:alnum:]` Match any alphanumeric character (alphabetic or digit).
- `[:alpha:]` Match any alphabetic character.
- `[:digit:]` Match any digit character (0 to 9). (PERL equivalent: `\d`)
- `[:lower:]` Match any lowercase alphabetic character.
- `[:upper:]` Match any uppercase alphabetic character.
- `[:space:]` Match whitespace characters (PERL equivalent: `\s`)
- `[:word:]` Matches alphanumeric characters plus "_". (PERL equivalent: `\w`)
- `[:xdigit:]` Match hexadecimal digits.

Restriction: The following character class definitions are NOT supported: `[:blank:]`, `[:cntrl:]`, `[:graph:]`, `[:print:]`, and `[:punct:]`.

- `()` (parenthesis) Defines a marked subexpression used to group parts of the expression together to define the scope and precedence of the operators in the regular expression.
- `{m,n}` Matches the preceding element at least `m` and not more than `n` times. For example, `a{3,5}` matches only "aaa", "aaaa", and "aaaaa".
- `\` (backslash) - This escape character specifies that the special character following it is to be matched literally, not be used as a special character. For example, `\.` only matches a dot character, and `\\` matches a literal `\` character.

Restriction: The `$`, and `\n` regular expression special characters are NOT supported.

The search pattern will be used to match the beginning of the input line unless otherwise specified. To specify that the search string should be a "floating match", and match a pattern anywhere on the line, use `.*` before the string. For example: `.*ABC` means "zero or more of any character, followed by ABC", and will match "ABC" anywhere on a line.

Regular expression examples

The following patterns are given as examples, along with descriptions of what they match:

- `abc` Matches the three letters abc in order.
- `a.c` Matches any string that begins with the letter a, followed by any one character, followed by the letter c.
- `abc|def` Matches "abc" or "def"
- `ab*c` Matches "ac", "abc", "abbc", "abbbc"
- `ab+c` Matches "abc", "abbc", "abbbc", and so on, but not "ac".

- `a(b*|c*)d` Matches any string that begins with the letter "a", is followed by either zero or more of the letter "b" or zero or more of the letter "c", and is followed by the letter "d".

TPL rule examples

Descriptions of Output Manager TPL rule examples.

The following expression would WTO the message "TPL FOUND JCL ERROR" when a report matched the search string. This search string matches text that contains any number of characters, followed by a space, followed by the characters "IEF", and either the number "452" or the number "453", followed by the letter I. For example, "3 IEF453I" would be matched.

```
WHEN MATCH ".* IEF(452|453)I .*" THEN WTO "TPL FOUND JCL ERROR"
```

This is a simple example that looks for the string "IEF344I" anywhere on any line of the SYSOUT, and when matched, issues a WTO with literal text "BJTPL001E", the job name, the job ID, the step name, and then the literal text " - ALLOCATION FAILURE":

```
WHEN MATCH ".* IEF344I" THEN WTO "BJTPL001E &JOBNAME &JOBID
&STEPNAME - ALLOCATION FAILURE"
```

The following expression would WTO the message "msgnnnx TPL FOUND JCL ERROR" when a report matched the search string. This search string matches text that contains any number of characters, followed by a space, followed by the characters "IEF45", and either the number "2" or the number "3", followed by the letter I. For example, "some text IEF453I" would be matched. After the match, TPL processing stops for this data set.

```
WHEN MATCH ".* IEF45(2|3)I" THEN BEGIN WTO " msgnnnx TPL
FOUND JCL ERROR";
STOP;
END
```

The following example matches IEF452I or IEF453I, writes the WTO and then stops TPL processing for the rest of the SYSOUT.

```
WHEN MATCH ".* IEF(452|453)I"
THEN BEGIN
  WTO "BJTPL009W &JOBNAME &JOBID - JCL ERROR";
  STOP;
END
```

The following example will match the string "SYSTEM COMPLETION CODE=" when preceded by at least four spaces and followed by three alphanumeric characters. Output Manager will then issue the WTO and stop TPL processing for the data set. The &1 variable in WTO output string will be substituted by the three-character ABEND code:

```
WHEN MATCH ".*    SYSTEM COMPLETION CODE=([:a1num:]{3}) "
THEN BEGIN
  WTO "BJTPL010 &JOBNAME ABENDED WITH SYSTEM CODE &1";
  STOP;
END
```

The following example matches each line that contains a 3-digit number, and then highlights only one occurrence of nnn (3 digits) on the line in underscored purple:

```
WHEN Match ".* ([:digit:]{3})" then
  begin
    HIGHLIGHT (COLOR="#800080",STYLE="USCORE") "&1";
  end
```

Specifying TPL rule special characters in different code pages

Special characters used in the regular expressions of Output Manager TPL rules must be specified such that the code points are consistent with the IBM EBCDIC Code Page 37 (Brazil, Canada, Netherlands,

Portugal, United States). When writing regular expressions for TPL rules in another code page, you must specify the hex value that corresponds to the correct special characters.

If your terminal emulator does not use the code set 37 or 1047, you need to enter the EBCDIC character from your code set that results in the hexadecimal value that corresponds to the character specified in the following table:

<i>Table 4. Code page 37 hexadecimal values for TPL special characters</i>	
TPL Special Character	Hex in Code Page 37
.	4B
*	5C
?	6F
+	4E
	4F
[BA
]	BB
(4D
)	5D
{	C0
}	D0
\	E0
@	7C
#	7B
\$	5B

For example, if you want to type a reverse slash (\) but your code tables do not translate the \ character to a hexadecimal E0, you must enter the character that results in E0.

Refer to the IBM Host Code Page Reference for the equivalent hexadecimal values. At the time of publication, this InfoCenter can be found at https://www.ibm.com/support/knowledgecenter/en/SSEQ5Y_12.0.0/com.ibm.pcomm.doc/reference/html/hcp_referencet002.htm.

Tip: The Output Manager TPL Rule editing panel supports entering data in hexadecimal values. To do so, enter the ISPF primary command HEX ON while in the TPL Rule editing panel. Enter the primary command HEX OFF before leaving the TPL rule editing panel to turn hexadecimal data entry off.

Examples

The following is an example of a TPL rule in code page 37:

```
when
  before line 100
  match "ABC (\\d{3}) (\\d{10})"
then
begin
  WTO "HI &1 &2";
end
```

In Italian, code page 1144, the TPL rule is as follows:

```
when
  before line 100
  match "ABC (ççdà3è) (ççdà10è) "
then
begin
  WTO "HI &1 &2";
end
```

Managing TPL rules

Editing and copying existing TPL rules

Authorized Administrators can copy and edit existing TPL rules from the Text Processing Language Rule Administration option, available from the Administrative Functions menu in ISPF.

1. Navigate to the TPL Rule panel (ISPF A.T).
2. In the CMD column, type one of the following commands next to the desired TPL Rule:
 - E (Edit) to edit an existing TPL Rule, and press Enter. The TPL Rule Details panel is displayed, where you can modify the TPL Rule.
 - C (Copy) to copy an existing TPL Rule, and press Enter. The rule is copied to the Output Manager Clipboard. Type T (pasTe) in the CMD column, and press Enter again. The copied TPL Rule definition is displayed in the TPL Rules Details panel, where you can modify it and change the Rule Name.
3. In the Rule Name field, specify a unique name for the rule.
4. When you are finished, press F3 (Exit). Depending on how you set your preferences, you may be prompted to type YES and press Enter to save your changes.

Deleting existing TPL rules

Authorized Administrators can copy and edit existing TPL rules from the Text Processing Language Rule Administration option, available from the Administrative Functions menu in ISPF.

1. Navigate to the TPL Rule panel (ISPF A.T).
2. Enter the search criteria and press ENTER to search for the TPL rule to be deleted.
3. In the CMD column, D (Delete) to delete an existing TPL Rule, and press Enter.
A confirmation panel is displayed. Press Enter to delete.
4. When you are finished, press F3 (Exit). Depending on how you set your preferences, you may be prompted to type YES and press Enter to save your changes.

Chapter 5. Setting up reports

Before Output Manager can turn your SYSOUT into deliverable reports, you have to tell it how to format the reports.

Report formatting is done using report layouts, report definitions, and report selector rules:

- **Report layout:** Describes the location of particular fields located in the report content. A layout provides information about the physical arrangement of the report, as produced by an application. The layout must specify the locations of any condition entry fields or index fields within the report SYSOUT.
- **Report selector rule:** Indicates how to handle the selected areas of the SYSOUT by specifying the source (which job generates this report). When a SYSOUT matches the job selection criteria in a report selection rule, Output Manager reads into memory all of the report definitions that are associated with the report selection rule by means of a common layout name or report name or both.
- **Report definition:** Assigns names to reports and specifies optional field match criteria and indexing. Output Manager compares each page of a SYSOUT to the criteria in the report definitions and layouts (if present) to determine if a page is part of a defined report. The following results can occur:
 - If one or more pages match the condition entries in a custom report definition, and the condition entry type specifies to include those pages, the pages are included in a custom report.
 - If one or more pages match the condition entries in a custom report definition, and the condition entry type specifies to *exclude* those pages, the pages are not included in the custom report.
 - If one or more pages contain all of the fields that were defined for an index and at least the first index field has a nonblank value, a field index (index record) that points to that set of report pages is generated.
 - If one or more pages do *not* match any condition entries in any of the custom report definitions, Output Manager generates an undefined report that contains all of the unused pages from the SYSOUT.

Step 1: Describe the physical layout of the report using report layouts

A *report layout* defines the physical arrangement of a report, as it was originally produced by an application. A layout is composed of three levels of definition: pages, areas, and fields.

Pages can contain one or more areas, and areas can contain one or more fields.

- A *page* represents a unique page style within a SYSOUT. It groups areas and fields but does not specify the geometrical positioning of these elements. You must include at least one page in a layout. If a SYSOUT contains multiple page styles, you can define a separate page for each one. For example, you might define a "letter" page for form letters and an "invoice" page for the bills that are sent to customers.
- An *area* is a rectangular region on a page that contains report fields. You must specify one or more areas and indicate the position of each one. An area can be as small as a single line or as large as an entire page. For example, you could define "Area 1" for the report title and define "Area 2" for the subtitle.
- A *field* defines the position of a report field within an area. You must specify one or more fields. Some fields contain constant data that is used for identification purposes only (for example, a report ID). Other fields contain data that is used to identify the pages in a custom report or indexed report. Ensure that you define a layout field for each condition-entry field and each index field in a report definition.

Output Manager supports two methods of defining the position of an area or a field in a layout. You can either:

- Specify the exact coordinates and size (starting row, starting column, width, and height) of the area or field, as it occurred in the original SYSOUT.

- Define the area or field in relative to a previously defined area or field, called a *relative area* or *relative field*. Relative positioning is intended to provide a short cut to defining fields in a layout.

Note: When calculating column number, use the number of the column on the paper (with the exception of output produced with TRC=YES or OPTCD=J). When calculating starting row, remember that it is impacted by the started task setting IGNORE_BLANK_LINES.

If you use relative positioning, note that the *relative area* or *relative field* must already be defined by using exact coordinates in the layout. You can then define another area or field based on its relationship (diagonal, below, adjacent) to the defined relative area or relative field. You can refine the relative positioning by also specifying one or more of the exact coordinates for the new field: a starting row or column, a width, or a height. For example, assume that you specify "AREA1" at row 1, column 1 with a height of 2. Then, you add "AREA2" relative to "AREA1" using **Below** as the relative relationship and also specify a starting row of 5 and a width of 6 for the new area, "AREA2" would start at row 5, column 1 and be six columns in width.

Creating a report layout

Creating a report layout is the first step in the greater task of setting up reports.

When creating a report layout, you must define:

- At least one report page.
- One or more areas on each page. An area can encompass an entire page.
- PAGE and AREA are automatically defined, but a defined FIELD is not required.

Before You Begin: Become familiar with your report SYSOUT, as it is initially produced by an application. You need this knowledge to properly specify the position and size of an area or field within a layout.

To create a report layout:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **L**, Report Layouts, and press Enter.
3. Specify search criteria, or leave the fields blank, and press Enter.

The resulting list is filtered by your search criteria.

Note: If the Layouts panel lists no layouts, either none are defined on your Output Manager system or none matched your saved search criteria.

4. Type ADD on the command line and press Enter.

The Layout detail panel is displayed.

Tip: Once a report layout has been defined, you can type I (Insert) in the **CMD** column and press Enter to display the Layout panel.

5. (Required) In the **Layout Name** field, type a name for the layout. This name can be up to 64 characters in length.
6. In the **Print Control** field, specify one of the following options for the type of print control to use for printing a report based on this layout:
 - **DCB** - To use the spacing that is assigned to the report by the application that produces it (default)
 - **ASA** - To use ANSI-standard spacing
 - **Machine** - To use the machine carriage control
7. In the **Line Count** field, type the number of lines that can appear on each page of a report based on this layout. You can specify a value from 0 through 2500. This value determines the page boundaries. If you accept the default value of 0, the page boundaries are controlled by the print control character. (Usually, this default behavior is sufficient.) If no print control character exists in the report, you must specify a value greater than 0 to set the page boundaries.
8. (Optional) In the **Description** field, type a description of the layout. This value can be up to 60 characters in length.

9. Define pages, areas, and fields for the layout by specifying the appropriate line commands in the **CMD** column, as follows:

- **To create a page:**

- In the **CMD** column, type IP (Insert Page) and press Enter. A new line is added to table, with PAGE displayed in the Type column.
- In the **Name** field, type a name for the page, and press Enter. This name can be up to 24 characters in length.

- **To create an area:**

- In the **CMD** column, type IA (Insert Area) next to the page that you just created (the page for which you want to define the area), and press Enter. A new line is added to table, with AREA displayed in the Type column.
- In the **Name** field, type a name for the area. This name can be up to 24 characters in length.
- If you want to specify the position of the area relative to a previously defined area, complete both of the following fields:
 - In the **Relative** field, type the name of the previously defined area to which you want to relate the new area. This relative area must be defined in the layout by using exact coordinates.
 - In the **Relative position** field, specify one of the following options to indicate where the new area is located in relation to the relative area: **Adjacent** (starts in the next column to the right, on the same row), **Below** (starts in the same column, on the next row down), or **Diagonal** (starts in the next column to the right and in the next row).

For example, assume that you are defining "AREA2" based on the relative area "AREA1." AREA1 was previously defined at row 1, column 1 with a height of 2. If you specify Below as the relative relationship, AREA2 will start at row 3, column 1.

You can refine the relative positioning by also specifying a starting row or column, a width, or a height for the new area, as appropriate.

Note: If you do not specify a relationship value, the upper-left corner of the new area (starting row and column) will be the same as that of the relative area.

- If you want to specify the position of the area by entering the exact coordinates, complete all of the following fields:
 - In the **Row** field, type a number from 1 through 999 to indicate the starting row (top) of this area.
 - In the **Column** field, type a number from 1 through 999 to indicate the starting column (left boundary) of the area.
 - In the **Width** field, type a number from 1 through 999 to define the horizontal width of the area. This value is the maximum number of columns that the area spans. If you accept the default value of 0, no width limit exists other than the limit imposed by the page size.
 - In the **Height** field, type a number from 1 through 999 to define the vertical height of the area. This value is the maximum number of rows that the area spans. If you accept the default value of 0, no height limit exists other than the limit imposed by the page size.

Note: If you accept the default value of 0 in all of these fields, the area will encompass the entire page.

- **To create a field:**

- In the **CMD** column, type I (Insert) next to the area that you just created (the area in which you want to define a field) , and press Enter. A new line is added to table, with FIELD displayed in the Type column.
- In the **Name** field, type the name of the field. This name can be up to 24 characters in length.

Notes:

- Each field name within a layout must be unique. You cannot duplicate a field name within one layout.
 - When editing an existing field name, ensure that the existing field name is not used in custom report conditions or indexed report index fields.
- c. If you want to specify the position of the field relative to a previously defined field, complete both of the following fields:
- In the **Relative** field, type the name of the previously defined field to which you want to relate the new field. This relative field must be defined in the layout by using exact coordinates.
 - In the **Relative position** field, specify one of the following options to indicate where the new field is located in relation to the relative field: **Adjacent** (starts in the next column to the right, on the same row), **Below** (starts in the same column, on the next row down), or **Diagonal** (starts in the next column to the right and in the next row).
- You can refine the relative positioning by also specifying a starting row or column, a width, or a height, as appropriate.
- d. If you want to specify the position of the field by specifying the exact coordinates. Scroll right using the PF11 key to display the following fields:
- In the **Row** field, type a number from 1 through 999 to indicate the top row where the field starts. The default value is 1.
 - In the **Column** field, type a number from 1 through 999 to indicate the left-most column where the field starts. The default value is 1.
 - In the **Width** field, type a number from 1 through 999 to define the horizontal width of the field. This value is the maximum number of columns that the field spans. If you accept the default value of 0, no width limit exists other than the limit imposed by the area.
 - In the **Height** field, type a number from 1 through 999 to indicate the vertical height of the field. This value is the maximum number of rows that the field spans, and determines relative field positioning. If you accept the default value of 0, no height limit exists other than the limit imposed by the area.
 - (Optional) In the **Repeat** field, type the number of times to repeat the field on the layout. Specify a value in this field if you want matching to look at consecutive lines on the page.

10. Press F3 (Exit).

11. Depending on how you set your preferences, you may be prompted to type YES and press Enter to save your changes.

Next, create a report selection rule and a report definition and link them to this report layout.

Managing report layouts

Once you have created a report layout, you can edit or delete it from the Report Layouts list panel.

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **L**, Report Layouts, and press Enter.
3. Specify search criteria, or leave the fields blank, and press Enter.

The resulting list is filtered by your search criteria.

4. In the **CMD** column, type the appropriate line command:

- E (Edit) next to the name of a layout to edit its details. For information about the fields on the details panel, select Extended help from the Help drop-down menu.
- D (Delete) next to the name of a layout to delete it.

5. Press F3 (Exit).

6. Depending on your user preferences, a confirmation panel may be displayed. Type YES and then press Enter to save your changes.

Searching for report layouts

From the Layouts panel, you can search for a specific layout or filter the list of layouts. You must specify a value in at least one of the search fields to perform a search. Optionally, you can save your search criteria to your ISPF profile. If you save your search criteria, Output Manager will apply these criteria to the Layouts panel from session to session, until you change them.

Both search fields support the following wildcard characters: a trailing asterisk (*) or percent sign (%) for zero or more ending characters, or a question mark (?) or an underscore (_) for a single character anywhere in a value. If you specify a wildcard pattern, Output Manager will find all layouts that match that pattern.

To search for report layouts:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **L**, Report Layouts, and press Enter. The search panel is displayed.
3. In the **Layout Name** field, type the name of a defined layout. This value can be up to 64 characters in length. Wildcards are permitted.
4. In the **Description** field, type the user-defined description for a layout. This value can be up to 60 characters in length. Wildcards are permitted.
5. In the **Save Criteria?** field, type **Yes** if you want to save the search criteria that you specified to your ISPF profile. Output Manager will then use the saved search criteria to filter the list of layouts from session to session, until you change these criteria. If you want to use the search criteria temporarily (for a one-time search), accept the default value of **No**. Output Manager will filter the current list of layouts and then clear the search criteria and revert to the last-saved values (if any) when you exit the Layouts panel.
6. Press Enter.

The Layouts panel lists only the layouts that match your search criteria.

Step 2: Determine which selected SYSOUTs are candidates for processing into reports using report selection rules

Report selection rules specify job selection criteria that determine whether SYSOUT from a specific job, job step, proc step, DD, writer, or form is a candidate for processing into a basic report, custom report, or indexed report. Specifying criteria to determine which selected SYSOUTs are candidates for processing into reports

Specify criteria (a job name, DD name, and one of the following: step name, proc step, or step number) against which selected SYSOUTs are matched to determine if they are candidates for processing into basic or custom reports. In addition to match criteria, report selection rules also contain a report name and optional layout name for matching the archived SYSOUTs to report definitions to produce virtual basic and custom reports for viewing or printing.

The creation of report selection rules is optional. However, you must create report selection rules in order to define reports.

To create a basic report, you need to define a report selection rule. Output Manager can dynamically generate a report definition for the basic report; in this case, the report name in the report definition is the same as the report name in the report selection rule.

To create a custom report or an indexed report, you must create a report selection rule, a report definition, and a layout. You should link the same layout to both the report selection rule and the report definition.

Output Manager associates the report selection rule with a report definition by means of a common report name or (if specified) a common layout.

Specifying criteria to determine which selected SYSOUTs are candidates for processing into reports

Creating a report selection rule

Creating a report selection rule is step 2 in the greater task of setting up reports.

To create a report selection rule:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Function menu, choose option **R**, Report Selection Rules, and press Enter.
3. Specify search criteria, or leave the fields blank, and press Enter.

Note: If the Report Rules panel lists no rules, either none are defined on your Output Manager system or none matched your saved search criteria.

4. Type ADD on the command line and press Enter.

The Report Rule Detail panel is displayed.

Tip: Once a report rule has been defined, you can type I (Insert) In the **CMD** column and press Enter to display the Report Rule panel.

The order in which report selector rules are listed is important. If multiple report selector rules would match, Output Manager uses the first matching report selector rule.

5. In the **Status** field, indicate whether the report selection rule is available for use by specifying one of the following values: **Enabled** (the rule is available) or **Disabled** (the rule is currently unavailable). The default value is **Enabled**.
6. The **Layout Name** field displays the name of a layout that is currently linked to the report selection rule. To link a layout, chose the option **1**, Choose a Layout, from the **Link** pull-down menu. Then select the layout that you want to use.

Note: If no report layouts are defined, you can continue to create this report selection rule, and save it. Create your report layout, and then edit this report selection rule to link it to the new layout. For more information, see [“Creating a report layout” on page 72](#).

7. In the **Match Name** field, indicate whether Output Manager should match both the **Layout Name** value and the **Report Name** value against the corresponding fields in report definitions when capturing basic reports based on SYSOUT from the named job.

This field applies only when a layout name is specified. Match Name is only intended for the capture of basic reports, do not use Match name for any other type of report. If a layout name is not specified, this field is ignored.

- Specify **Yes** if you want Output Manager to match both the layout name and report name against existing report definitions. The report definitions that contain the same layout name and report name and that are of the type “Basic” will be used to capture basic reports. If no report definitions include both of these names, Output Manager will dynamically generate a report definition for a basic report, which includes the layout name and report name that are specified in this report selection rule. Do not use this feature if the layout has any other type of report.
- Specify **No** if you want Output Manager to match only the layout name against existing report definitions. All report definitions that contain the same layout name will be used to capture basic reports. If no report definitions include the specified layout, Output Manager dynamically generates a report definition for a basic report, which includes the report name and layout name that are specified in this report selection rule.

The default value is **No** if you specified a layout name.

8. (Required) In the **Report Name** field, type the name of the basic report that will contain the SYSOUT from the job that is specified in this report selection rule. This name can be up to 64 characters in length. If you already defined a report definition for this report, use the report name that is specified in the report definition. If no report definition for the report exists, Output Manager will dynamically generate one that includes the report name from this report selection rule.
9. To specify job selection criteria, you must:
 - a) Specify the job name:

Job Name

(Required) Type the name of the job that produces the SYSOUT on which the specified basic report is based. This name can be up to eight characters in length.

b) Specify at least one of the following values (step name, proc step, or step number):

Step Name

Type the name of the job step that is associated with the report output. This name can be up to eight characters in length.

Proc Step

Type the name of the procedure step associated with the report output. This name can be up to eight characters in length.

Step Number

Type the number of the procedure step associated with the report output. This value can be up to eight numeric characters in length.

c) AND specify at least one of the following values (DD name, writer name, or form name):

DD Name

Type the DD name that is associated with the report output. This name can be up to eight characters in length.

Writer Name

Type the external writer name that is associated with the report output. This name can be up to eight characters in length.

Form Name

Type the form name that is associated with the report output. This is the name of the form on which the report data set is to be printed or punched. This name can be up to eight characters long and is composed of alphanumeric characters or national characters (\$, #, @).

10. When you are finished, press F3 (Exit).

If you set the **Level Exit** field to **Prompt** (the default value) in the Report Rules Preferences window, an exit confirmation pop-up window is displayed. Press Enter to continue.

The Report Rules panel is redisplayed and lists the new report selection rule.

11. Press F3 (Exit).

If you set the **Dialog Exit** field to **Prompt** (the default value) in the Report Rules Preferences window, a save prompt is displayed. Press Enter to save the report selection rule.

Managing report selection rules

Once you have created a report selection rule, you can edit or delete it from the Report Rules list panel.

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **R**, Report Selection Rules, and press Enter.
3. Specify search criteria, or leave the fields blank, and press Enter.

The resulting list is filtered by your search criteria.

4. In the **CMD** column, type the appropriate line command:

- E (Edit) next to the name of a report selection rule to edit its details. For information about the fields on the details panel, select Extended help from the Help drop-down menu.
- D (Delete) next to the name of a report selection rule to delete it.

5. Press F3 (Exit).

6. Depending on your user preferences, a confirmation panel may be displayed. Type YES and then press Enter to save your changes.

Searching for report selection rules

From the Report Rules panel, you can search for a specific report selection rule or filter the list of rules. You must specify a value in at least one of the search fields to perform a search.

Optionally, you can save your search criteria to your ISPF profile. If you save your search criteria, Output Manager will apply these criteria to the Report Rules panel from session to session, until you change them.

Most search fields support wildcards. Output Manager supports the following wildcard characters in these fields: a trailing asterisk (*) or percent sign (%) for zero or more ending characters, or a question mark (?) or an underscore (_) for a single character anywhere in a value. If you specify a wildcard pattern, Output Manager will find all report selection rules that match that pattern.

To search for report selection rules:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **R**, Report Selection Rules, and press Enter. The search panel is displayed.
3. In the **Report Name** field, type the report name that was specified in a report selection rule. You can specify a value up to 64 characters long. Wildcards are permitted.
4. In the **Status** field, type Enabled if you want to list only the report selection rules that have been enabled for use by Output Manager, or type Disabled if you want to list only the report selection rules that are unavailable for use. If you leave this blank, Output Manager will list both enabled and disabled report selection rules. Wildcards are *not* permitted.
5. In the **Layout Name** field, type the name of the layout that is linked to a report selection rule. You can specify a value up to 64 characters long. Wildcards are permitted.
6. In the **Job Name** field, type the name of a job that produces report output and is specified in a report selection rule. Wildcards are permitted.
7. In the **DD Name** field, type the DD name for SYSOUT data that is specified in a report selection rule. Wildcards are permitted.
8. In the **Writer** field, type the writer name for SYSOUT data that is specified in a report selection rule. Wildcards are permitted.
9. In the **Form** field, type the form name for SYSOUT data that is specified in a report selection rule. Wildcards are permitted.
10. In the **Save Criteria?** field, type **Yes** if you want to save the search criteria that you specified to your ISPF profile. Output Manager will then use the saved search criteria to filter the list of report selection rules from session to session, until you change these criteria. If you want to use the search criteria temporarily (for a one-time search), accept the default value of **No**. Output Manager will filter the current list of report selection rules and then clear the search criteria and revert to the last-saved values (if any) when you exit the Report Rules panel.
11. Press Enter.

The Report Rules panel lists only the report selection rules that match your search criteria.

Linking a report selection rule to a report layout

Optionally, you can link a report selection rule to a layout. For a custom report, you should link the report selection rule and the custom report definition to the same layout.

To link a report selection rule to a report layout:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **R**, Report Selection Rules, and press Enter.
3. Specify search criteria, or leave the fields blank, and press Enter. The resulting list is filtered by your search criteria.
4. Type **E** next to the report selection rule to be edited.
5. From the **LINK** drop-down list, select option 1. **Choose a layout**.
6. In the **CMD** column, type S (Select) next to the layout that you want to use and press Enter.

The Report Rules panel is displayed.

7. Verify that the name of the selected report layout is displayed in the **Layout Name** column.
8. Press F3 (Exit).

Depending on how you set your preferences, you may be prompted to type YES and press Enter to save your changes.

Accessing the reports related to a report selection rule

You can use the following line commands on the Report Rules panel to access the report definitions that are associated with a report selection rule:

- RD – Use this command to display a list of the report definitions that have the same layout as the report selection rule on the Report Definitions panel. You can then use the R (Reports) line command to view the captured reports for a specific report definition.

Step 3: Define reports using report definitions

Creating a report definition is step 3 in the greater task of setting up reports. A *report definition* provides criteria for generating a custom report, a basic report, or indexed report pages from an archived SYSOUT, as follows:

- If a report definition specifies *condition entries* (field-operator-value conditions), Output Manager creates a custom report that contains a filtered subset of the SYSOUT that matches the conditions.
- If a report definition specifies an *index* that is composed of one to eight report fields, Output Manager creates *field indexes* (index records) that point directly to the report pages that contain all of the specified index fields.
- If a report definition specifies both condition entries and an index, Output Manager processes the condition entries first and only generates field indexes for pages that are included in the custom report.
- If a report definition contains neither condition entries nor an index, Output Manager creates a basic report that contains the all of the contents of the SYSOUT.

A report definition for a custom report or indexed report works in conjunction with a layout. A layout provides information about the physical arrangement of the report, as produced by an application. The layout must specify the locations of any condition entry fields or index fields within the report SYSOUT.

Output Manager can automatically generate a report definition for a basic report based on the SYSOUT selection rules (selector rule and report selection rule). A generated report definition contains no condition entries or index fields and has the description "Dynamically created by Output Manager" in the interface. You can link a distribution list, report banner page, or PRSET member to a dynamically created report definition, if necessary.

Usually, report administrators define more than one custom report per basic report. This practice enables them to create reports that are tailored to the needs of their report users. For example, if each branch of a bank requires a custom report that contains summary transaction data for only that branch, the report administrator would create a separate custom report definition for each branch.

Important: Output Manager might not be able to produce custom reports from SYSOUTs that are combined into a single archive. Therefore, if you plan to create custom reports, set the **Combine Sysout** field to **No** in the selector rule.

When a SYSOUT matches the job selection criteria in a report selection rule, Output Manager reads into memory all of the report definitions that are associated with the report selection rule by means of a common layout name or report name or both. Output Manager also reads into memory any layouts that are linked to the report definitions.

Output Manager then compares each page of a SYSOUT to the criteria in the report definitions and layouts (if present) to determine if a page is part of a defined report. The following results can occur:

- If one or more pages match the condition entries in a custom report definition, and the condition entry type specifies to include those pages, the pages are included in a custom report.

- If one or more pages match the condition entries in a custom report definition, and the condition entry type specifies to *exclude* those pages, the pages are not included in the custom report.
- If one or more pages contain all of the fields that were defined for an index and at least the first index field has a nonblank value, a field index (index record) that points to that set of report pages is generated.
- If one or more pages do *not* match any condition entries in any of the custom report definitions, Output Manager generates an undefined report that contains all of the unused pages from the SYSOUT.

Types of reports

An understanding of Output Manager reports — what they are, how they are created, and how they are best managed — is critical to successfully implementing Output Manager at your site. Output Manager recognizes the following types of reports:

Basic reports

Basic reports contain an entire SYSOUT that an application produced and that Output Manager captured. The SYSOUT comprises the complete contents of an Output Manager archive. To create a basic report, report administrators must at least define a *report selection rule*. Output Manager can then dynamically generate a basic report definition for a captured SYSOUT. Alternatively, report administrators can manually define a basic report definition. The report definition must have the same report name as the report selection rule. Also, if a layout was specified for the report selection rule, the report definition should be linked to that same layout. When a report definition does not contain any condition entries (field-operator-value conditions) or index fields, it is a basic report.

Note: To perform the automatic printing or reprinting of basic reports, an administrator must specify a distribution list for the basic report as follows:

- Link the basic report definition that was dynamically generated or that you created to a distribution list. The Hardcopy option must be set to Yes for one or more recipients on the distribution list.
- For a reprint operation, Output Manager prompts you to select a distribution list when you specify the R line command from the ISPF Captured Reports panel (option V.R) or Archived Reports panel (option V.A).

Custom reports

Custom reports are reports that contain a subset of the SYSOUT (one or more pages that are in the SYSOUT).

Report end-users can view or print custom reports from the ISPF Captured Reports panel (option V.R) or from ITOMweb.

Note: To identify the pages to include in a custom report, report administrators must create a report definition that specifies condition entries (field-operator-value conditions) and a layout. Output Manager matches these condition entries against the SYSOUT. Usually, report administrators create several custom report definitions for a SYSOUT to subdivide a large basic report into smaller custom reports that are tailored to report end-users' needs. Also, report administrators can link a custom report definition to a distribution list to automatically distribute the report. They can specify whether to print hardcopies of the report for all recipients on the distribution list or for selected recipients.

Template reports and derived reports

Template reports are an advanced implementation of custom reports. Proactively defining custom reports requires you to know in advance the values of the fields that you want to capture. If you do not know in advance which field values you want to capture, you can create template reports. When a template report is used, report definitions are dynamically generated based on the content of fields or variables in the report name. These dynamically generated report definitions are referred to as *derived reports*. However, unlike typical custom reports, the criteria specified for Templates (and therefore the associated derived reports) cannot be changed after they have been generated.

Template reports automatically create content-defined report definitions (derived reports) with report names or distribution lists derived from values specified in the template report fields. When you define a template report definition, you construct the dynamic fields (report name, dynamic

distribution, or both) out of static text, layout field names, and Output Manager variable names (such as Job Name or User ID). You can also specify additional field condition criteria, just as you do in custom reports. Report definitions that are automatically created by a template report are displayed as custom report definitions in the Report Definitions panel (ISPF A.C), with YES in the Derived column.

Template reports can be used in conjunction with Output Manager translations to automatically change the text of matched variables in the dynamic report name or dynamic distribution.

Template RID is required to process the custom report. The report definition is skipped if the RID is a non-blank value and Template RID is specified.

Indexed reports

Indexed reports are reports that contain indexed report pages. Both basic and custom reports can be indexed.

To set up an indexed report, report administrators must define an index, which is composed of up to eight index fields, in a report definition.

When processing a report, Output Manager compares the captured SYSOUT to the index fields to determine if any report page or pages contain 1) all of the defined index fields and 2) a non-blank value for any index field. If these criteria are met, Output Manager creates a *field index* (an index record) that points to the indexed report page or pages. To view or print these report pages, you must drill down to the Field Indexes panel from either a report definition or a specific indexed report instance.

Undefined reports

Undefined reports are generated by Output Manager when an archived SYSOUT contains pages that do not match the criteria in any custom report definition that is associated with that SYSOUT. If a report is captured but some SYSOUT pages are not included, those pages can be collected in an undefined report. Undefined reports are helpful in locating errors in report specifications and identifying unreported data.

An undefined report contains all of the pages that will *not* be included in a custom report. That is, it is a collection of unused pages from the archived SYSOUT. The default name for an undefined report is the report name that is specified in the report selection rule.

Creating a custom report definition with condition entries

To define a custom report, you must create a report definition that specifies one or more condition entries (field-operator-value conditions).

You can specify either PAGE condition entries or BEGIN and END condition entries. The condition entries define the page or set of pages in a SYSOUT data set that comprise the custom report. The fields that you specify in the condition entries must be specified in the layout that is linked to the report definition.

To create a custom report definition based on condition entries:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **C**, Custom Reports, and press Enter.
3. Specify search criteria, or leave the fields blank, and press Enter.

The resulting list is filtered by your search criteria.

Note: If the Report Definitions panel lists no report definitions, either none are defined on your Output Manager system or none matched your saved search criteria.

4. Type ADD on the command line and press Enter.

The Report panel is displayed.

Tip: Once a report definition has been defined, you can type I (Insert) in the **CMD** column and press Enter to display the Report panel.

5. Define the custom report:

- a) (Required) In the **Report name** field, type a logical name for the custom report. This name can be up to 64 characters long.

You must specify a name before enabling the report definition.

Note: It is not recommended to use special characters (asterisk (*), ampersand (&), percent sign (%), underscore (_), or space) in report names. These characters are all converted to an underscore when checked with RACF. Using these characters in report names can cause problems with the RACF security profiles for report names.

- b) (Optional) In **Description** field, type an optional description for the report. This description can be up to 60 characters long.
- c) In the **Status** field, accept the default value of **Enabled** to make the report definition available for use by Output Manager, or type **Disabled** if you do not want the report definition to be available for use yet.
- d) In the **Print Model** field, specify the "model" for determining which set of printer attributes to use for printing the report instances that are based on this report definition.

Type one of the following valid values:

- **Classic** - Use the sets of printer attributes that are linked to the recipient IDs on the distribution list that is assigned to this report definition.
 - **Report** - Use the set of printer attributes that is linked to this report definition. Output Manager takes the Class, Copies, and Dest values from these sets of printer attributes (along with any other printing parameters that are specified). You can override these Class, Copies, and Dest values for individual recipients on the distribution list; to do so, specify the C (set print Configuration) line command for a recipient on the Distribution List panel. This is the default value.
- e) In the **Dynamic Print** field, indicate whether you want to capture and use the "dynamic printing parameters" (CLASS, DEST, FCB, FORMDEF, FORMS, OPTCD=J, PAGEDEF, PRMODE, TRC, and UCS) for printing the report instances that are based on this report definition.

Output Manager can capture values for these printing parameters from the SYSOUT data sets and from the set of printer attributes that is linked to one of the following objects (in order of priority): 1) the distribution list or 2) the report definition. The parameters from these two sources are stored in the BJTDAT table and are merged for use when a report is printed. If duplicate values exist for a parameter, the value in the applicable set of printer attributes takes precedence. Type one of the following valid values:

- **No** - Do not dynamically capture and use the "dynamic printing parameters." Instead, obtain all printing parameters, including the "dynamic printing parameters," from the printing-related definitions that you create, including the recipient IDs that are on the distribution list and any applicable set of printer attributes. (The **Print Model** setting affects which of these definitions are used.) This value is the default value.
- **Report** - Dynamically capture the values for the "dynamic printing parameters" and use them for printing reports. If the BJTDAT table does not contain values for some dynamic printing parameters, these values can be provided by the static, printing-related definitions (the recipient IDs or applicable set of printer attributes). If you specify **Report**, you should set the **Combine Sysout** field in the associated selector rule to **No**; otherwise, the dynamic printing parameters will be taken only from the first SYSOUT in an archive file.

Note: If ARCHIVES, REPORTS, or ALL is specified in, the **DYNAMIC_PRINTER_ATTRIBUTE_CAPTURE** or the **DYNAMIC_PRINTER_ATTRIBUTE_USE** configuration parameters, Output Manager captures all of the dynamic printing parameters, (across all archives, all reports, or all archives and reports, respectively) even if the **Dynamic Print** field is set to **No** for that object type. These configuration parameters are specified in the Policy Administration panels (ISPF A.PA).

For more information about dynamic printing, see [Chapter 6, "Print configuration," on page 103.](#)

6. Set up links to the custom report:

- a) Required: **Link a report layout**: From the **Links** pull-down menu, choose option **1, Choose a Layout**. In the **CMD** column, type S (Select) next to the name of the layout that you want to use, and press Enter.
- b) (Optional) **Link a distribution list** to the report definition. From the **Links** pull-down menu, choose option **2, Choose a Distribution List**, and specify the S (Select) line command next to the distribution list that you want to use.
- Tip:** You must specify a distribution list if you want Output Manager to automatically distribute the report during the automatic printing of non-bundled report instances.
- c) (Optional) **Link a banner page**: From the **Links** pull-down menu, choose option **3, Choose a Banner Page**, and specify S (Select) line command next to the banner definition for the banner that you want to appear in printed report output.
- Note:** (Optional) If you selected a banner page, you can specify special instructions to be inserted into the banner during print processing. Choose option **1, Edit Instructions**, from the **Special Instructions** pull-down menu. Then type the instructions that you want to include in the banner (for example, special routing instructions). Press Enter and then press F3.
- d) (Optional) **Link a PRSET member**: From the **Links** pull-down menu, choose option **4, Choose a PRSET Member**, and type the name of the existing PRSET member that contains the binary characters that you want to use to control the physical printing of this report (for example, AFP structured fields). You can leave this field blank to select one from a list.
- Tip:** You can type ADD in the command line to add a PRSET member that is not listed. You will be prompted to enter an existing member name, and the data set where the member is located.
- e) (Optional) **Link printer attributes**: From the **Links** pull-down menu, choose option **5, Choose a Printer Attribute**, specify search criteria, and then select the printer attribute by typing S (select) in the CMD column and pressing Enter.
- Tip:** You can add a new printer attribute by typing ADD on the command line or an I (Insert) in the CMD column to open a new Printer Attribute panel.
- f) **Link a WTO context**: From the **Links** pull-down menu, choose option **16, WTO Context** and select the contexts in which you want Output Manager to issue a WTO message.
- For more information, see [“Issuing a WTO message when a report is captured or printed” on page 85.](#)
7. To define report condition entries, type ADD on the command line.
The Report Condition Entry pop-up is displayed.
8. In the **Condition Type** section, select the condition type by typing the corresponding numbers in the type fields:
- Select one of the following:
- **(1) BEGIN** - Defines a condition that identifies the beginning of a set of pages within a SYSOUT data set. Usually, a BEGIN condition entry is specified with an END condition entry; however, an END condition entry is not required. There are three types of BEGIN conditions:
 - **Inclusive:** When an *inclusive* BEGIN condition is matched on a page of the SYSOUT, the matched page is included in the report. Subsequent matches are also included in the report.
 - **Exclusive:** When an *exclusive* BEGIN condition matches on a page of the SYSOUT, the first matching page is excluded. The report begins on the next page (the page following the matched page is included in the report).
 - **One:** When this type of BEGIN condition matches a page of the SYSOUT, the *first* matched page is included in the report.
 - **(2) END** - Defines a condition that identifies the end of a set of pages within a SYSOUT data set. You cannot specify an END condition entry until you first specify a BEGIN condition entry. There are three types of END conditions:

- **Inclusive:** When an *inclusive* END condition is matched on a page of the SYSOUT, that page is included in the report. Processing continues, and all subsequent matches of the inclusive END condition are also included in the report.
- **Exclusive:** When an *exclusive* END condition is matched on a page of the SYSOUT, the first matched page is excluded from the report. The report ends on the previous page (the page preceding the matched page is included in the report, but the matched page is not).
- **One:** When this type of END condition matches a page of the SYSOUT, the *first* matched page is included in the report. Any subsequent matches are not included in the report.
- **(3) EXCLUDE** - Defines a condition against which SYSOUT pages are matched to determine if they are eligible for inclusion in the custom report. Pages that satisfy this condition will NOT be included in the report. Any page of the SYSOUT that matches this condition is removed from the report.

Note: EXCLUDE conditions are processed last, regardless of the order they are listed in on the Report panel.

Select one of the following:

- **Include:** Include the matched page of the report.
 - **Exclude:** Exclude the matched page of the report. For BEGIN conditions, the report will start on the next page. For END conditions, the report will end on the previous page.
 - **One:** Include the first matched page in the report, and exclude any subsequent matches.
9. Type S in the blank field next to the **Field Name** column to select the field to be used for the condition.
10. You can define from one to eight conditions that must be met for a page to be included in the report. Specify one condition per line. You can expand a field by pressing F4.

Note: If you specify more than one condition on this panel, the conditions will be related to one another by means of the **AND** connector (all must be true).

For each condition, complete the following fields:

Field

(Required) Type an S (select) and press Enter in the blank field to select the name of a field that you want to include in the custom report. This field must be defined in the layout that is linked to this report definition and must occur in the SYSOUT.

Op (operator)

(Required) Type a comparative operator that will qualify any match between the "value" that you specify in the condition entry and the actual value for the specified field in the SYSOUT. Valid operators are: **EQ** (equal to), **GT** (greater than), **GE** (greater than or equal to), **LT** (less than), **LE** (less than or equal to), and **NE** (not equal to).

Value

(Required) Type a value for the specified field to be matched against the actual values for the field in the SYSOUT by using the designated operator. This matching selects the pages to include in the custom report.

Case

Indicate whether or not the specified "Value" string is case-sensitive. When Y (YES) is specified, the string must match Report content exactly. If N (NO) is specified, Output Manager will convert the Report content to uppercase before the value string comparison is tested. The default is Y.

Var

(Optional) If the location of the field within the SYSOUT can vary horizontally from the location that is defined in the layout, you can specify a horizontal variance. In general, this variance is the number of columns to the right of the defined starting column in which the field begins. Valid values are from 0 through 99.

- If you accept the default value of 0, Output Manager will look for the beginning of the field only at the starting column that is defined in the layout.

- If you specify a number from 1 through 98, Output Manager will look for the field at the defined starting column and in each column to the right of the defined starting column (within the same row), up to the number of columns that you specify. For example, if you specify 5, Output Manager looks for the field at the defined starting column and in the five columns to the right of that starting column.
 - If you specify 99, Output Manager will look for the field at the defined starting column and in all columns to the right, up to the end of the row.
11. When you are finished defining conditions, press F3 (Exit). If an exit confirmation prompt is displayed, press Enter. The Report panel is redisplayed. Your condition entries are listed at the bottom of the panel.
 12. To add another condition entry, type I (Insert) in the CMD column, and press Enter.
The Report Condition Entry pop-up window is redisplayed. Specify the additional condition or conditions and press F3 (Exit) to return to the Report panel.

Note: If you specified multiple conditions on the Report Condition Entry panel, the new conditions are related to one another by the **AND** connector, but they are related to the previous set of condition entries by the **OR** connector (one set or the other must be true).

Important:

The order that the BEGIN and END conditions are listed on the Report panel is significant. You can have several BEGIN conditions listed, followed by several END conditions, and this "group" of conditions will be associated with one another by means of an *OR* connector. However, if an additional BEGIN condition appears after the END conditions, that BEGIN condition starts a new "group". Multiple BEGIN/END groups are linked by means of an *AND* connector, and all groups are run in parallel. Within a BEGIN/END group, the condition that matches a page is the condition that determines whether or not that page is included in the report. If a page is matched in more than one BEGIN/END group, it is included in the report.

13. When you are finished, press F3 (Exit). If an exit confirmation pop-up window is displayed, press Enter to save the custom report definition.

Issuing a WTO message when a report is captured or printed

Output Manager can issue a WTO message when a report is printed from automatic, bundle, ad hoc, batch, and ITOMWeb print requests.

These report-level WTO messages can be leveraged to assist in the interaction of system automation and job scheduling systems to enable job schedule management based on internal ITOM events.

Note: The WTO_DESCRIPTOR_CODE and ROUTE_CODE are defined in the Output Manager Policy Administration panels.

The WTO message is issued when the print job is completed, and includes the following details:

- When the report was captured.
- If the report was printed.
- How the report was printed (via bundle, automatic, ISPF, Batch or ITOMWeb).
- The number of pages and lines.
- The name of the archive.
- User data, as specified on the WTO Contexts panel.
- The name of the job.
- The return code from the job that was captured.
- The return code from the job that was captured.
- The return code is MAXRC or the LASTRC (non-zero).

The format of the WTO message is:

```
Captured (or) Printed Report: (report name)
Bundle, Automatic, ISPF, Batch (or) ITOMweb (n) pages (m) lines
Archive: (archive name)
User Data: (User data) Job: (job name) RC: Sxxx Unnnn rrrr
```

Note: For template reports, the settings that you configure for the template are passed along to each new derived report. The settings are not applied to existing derived reports. You must manually update any derived reports that already exist.

Adding index fields to a report definition

To define an indexed report, you must specify an index in a report definition.

The index is composed of one to eight index fields. Each field must be defined in the layout that is linked to the report definition and must occur in the archived SYSOUT. When capturing an indexed report, Output Manager examines the SYSOUT to determine if any pages 1) contain *all* of the index fields and 2) contain a nonblank value for at least the first index field. If so, Output Manager builds *field indexes* (index records) that point to these pages. Report users can then search for the field indexes that point to the report pages that they are interested in, based on specific index values. A report for which an index is specified will have the type "basic" unless condition entries are specified in the same definition. If an index is specified for a custom report, the resulting index is built against the full report contents, not just the values matching the Custom report conditions. (The index values and condition entries are processed separately.)

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **C**, Custom Reports, and press Enter.
3. Specify search criteria, or leave the fields blank, and press Enter.
The resulting list is filtered by your search criteria.
4. Locate the report definition that you are adding index fields to, and type **E** (Edit) in the CMD column and press Enter.
5. To define an index, type ADDINDEX at the command line and press Enter, or choose option **2**, New Index, from the **File** pull-down menu.
The Report Index Entry pop-up window is displayed.
6. Select from one to eight index field names consecutively, starting in the **Field 1 Name** field. You must specify at least the first index field to generate *field indexes* that point to indexed report pages. Do not leave any blank lines between your entries.
7. When you finish, press F3 (Exit).
If an exit confirmation prompt is displayed, press Enter.
The index information is saved to memory, and the Report panel is redisplayed. The bottom of the panel lists all of the index fields that you defined, connected by the *and* connector, for example:
8. Press F3 (Exit).
If an exit confirmation prompt is displayed, press Enter.
The indexed report definition is saved to the database.

Creating or editing an undefined report definition

Use the ADDU line command on the Report Definitions panel to create an undefined report. If an undefined report already exists for a layout, the undefined report will be displayed for editing.

1. Navigate to the Report Definitions panel:
 - a) From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
 - b) From the Administrative Functions menu, choose option **C**, Custom Reports, and press Enter.
 - c) Specify search criteria, or leave the fields blank, and press Enter.
The resulting list is filtered by your search criteria.

2. On the Report Definitions panel, type ADDU (Add Undefined Report) on the command line, or use the IU (Insert Undefined Report) line command in the CMD column.
The Search for Distribution Lists panel is displayed.
3. Specify search criteria for your distribution list in the Search for Distribution List panel, and press Enter.
The Distribution List Selection is displayed.
4. Type S in the CMD column next to the distribution list to be used, and press Enter.
The distribution list is selected.
5. Specify search criteria for the layout you wish to use, and press Enter.
The Layout Selection panel is displayed.
6. Type S in the CMD column next to the layout to be used, and press Enter.
The layout is selected. The Undefined Report panel is displayed. If an undefined report already exists for this layout, the undefined report will be displayed for editing.
7. Edit the default/existing values for the undefined report. The following fields can be changed on this panel:
 - **Status:** Indicates whether the undefined report definition will be used (Enabled) or bypassed (Disabled).

Note: An undefined report can be enabled only if at least one custom report is enabled for the shared layout and **Match Name** is set to NO in at least one Report Selection Rule associated with the layout.
 - **Report name:** The name of the undefined report.
 - **Description:** (optional) Type up to 60 characters to describe this undefined report.
 - **Print Model:** Specify the "model" for determining which set of printer attributes to use for printing the report instances that are based on this report definition.
 - Classic - Use the sets of printer attributes that are linked to the recipient IDs on the distribution list that is assigned to this report definition.
 - Report - Use the set of printer attributes that is linked to this report definition. Output Manager takes the Class, Copies, and Dest values from these sets of printer attributes (along with any other printing parameters that are specified). You can override these Class, Copies, and Dest values for individual recipients on the distribution list; to do so, specify the C (set print Configuration) line command for a recipient on the Distribution List panel. This is the default value.
 - **Dynamic Print:** Indicate whether you want to capture and use the "dynamic printing parameters" (CLASS, DEST, FCB, FORMDEF, FORMS, OPTCD=J, PAGEDEF, PRMODE, TRC, and UCS) for printing the report instances that are based on this report definition. Output Manager can capture values for these printing parameters from the SYSOUT data sets and from the set of printer attributes that is linked to one of the following objects (in order of priority): 1) the distribution list or 2) the report definition. The parameters from these two sources are stored in the BJTDAT table and are merged for use when a report is printed. If duplicate values exist for a parameter, the value in the applicable set of printer attributes takes precedence. Type one of the following valid values:
 - No - Do not dynamically capture and use the "dynamic printing parameters." Instead, obtain all printing parameters, including the "dynamic printing parameters," from the printing-related definitions that you create, including the recipient IDs that are on the distribution list and any applicable set of printer attributes. (The Print Model setting affects which of these definitions are used.) This value is the default value.
 - Report - Dynamically capture the values for the "dynamic printing parameters" and use them for printing reports. If the BJTDAT table does not contain values for some dynamic printing parameters, these values can be provided by the static, printing-related definitions (the recipient IDs or applicable set of printer attributes). If you specify Report, you should set the Combine Sysout field in the associated selector rule to NO; otherwise, the dynamic printing parameters will be taken only from the first SYSOUT in an archive file.
 - **Layout:** The layout that this undefined report is assigned to.

- **Distribution:** When a distribution list is assigned to this report the distribution list name displays in this field. Distribution list can be assigned using the LINK pull-down menu.
 - **Banner Page:** When a banner page is assigned to this report, the name of the banner page displays in this field. Banner page can be assigned using the LINK pull-down.
 - **PRSET member:** When a PRSET member is assigned to this report the name of the PRSET member displays in this field. PRSET member can be assigned using the LINK pull-down menu.
 - **Print Attr:** When a printer attribute is assigned to this report the name of the printer attribute is displayed in this field. Printer attribute can be assigned using the LINK pull-down menu.
8. Optional: You can add, edit, or remove the following options using the LINK drop-down menu:
- To link a banner page definition to the undefined report, choose option 2, Choose a Banner Page, from the Links pull-down menu. Then, in the Banners window, specify the S (Select) line command next to the banner definition for the banner that you want to appear in printed output.
 - (Optional) To specify a PRSET member, perform the following steps:
 - a. From the **Links** pull-down menu, choose option 4, Choose a PRSET Member. The PRSET Member pop-up window is displayed.
 - b. In the **PRSET name** field, type the name of the existing PRSET member that contains the binary characters that you want to use to control the physical printing of this report (for example, AFP structured fields). You can leave this field blank to select one from a list.

Tip: You can type ADD in the command line to add a PRSET member that is not listed. You will be prompted to enter an existing member name, and the data set where the member is located.
 - c. Press Enter to return to the Report panel. The member name is displayed in the **PRSET member** field.
 - To link a set of printer attributes to the report definition, choose option 5, Choose a Printer Attribute, from the **Links** pull-down menu. Specify search criteria, and then select the printer attribute by typing S (select) in the CMD column and pressing Enter.

Tip: You can add a new printer attribute by typing ADD on the command line or an I (Insert) in the CMD column to open a new Printer Attribute panel.
9. When you are finished, press F3 (Exit). If an exit confirmation pop-up window is displayed, press Enter to save the undefined report definition.

Configuring the undefined distribution list from the report selection rule

Undefined report information (layout, banner, printer attribute, distribution list, and whether the undefined report is enabled or disabled), is specified in the report selection rule.

To configure the undefined distribution list

1. Navigate to the Report Rule panel:
 - a) From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
 - b) From the Administrative Functions menu, choose option **R**, Report Selection Rules, and press Enter. The Report Rules panel is displayed.
 - c) Type E (edit) in the CMD column next to the report selection rule that you want to configure to collect unreported pages, and press Enter. The Report Rule panel is displayed.
2. From the LINK drop-down list, select the LAYOUT that the undefined report will be associated with. An undefined report **MUST** be associated with a layout, and each layout can only have one undefined report definition.

Note: If an enabled custom report exists for this layout, the undefined report will automatically be enabled. If no custom report is enabled for this layout, the undefined report will be disabled. An undefined report can only be enabled if at least one custom report is enabled for the layout and at least one Report Selection Rule associated with the layout has Match Name set to NO (if Match Name = YES, custom report processing is unavailable).

3. Optional: You can add or edit a printer attribute, and distribution list to your undefined report to control how the undefined report is distributed. To do so, select the appropriate option from the LINK drop-down menu and follow the search selection prompts. Press PF3 to return to the Report Rule panel.
4. Type SAVE on the command line and press Enter.
5. From the LINK drop-down list, select Choose Undef. Dist. List and then specify search criteria to select a distribution list.

Enabling and disabling undefined reports

Undefined reports are usually enabled and disabled automatically by Output Manager as a result of other user operations, but can also be enabled and disabled from the LINKs drop-down menu of the Report Rules panel

Undefined reports are usually enabled and disabled automatically by Output Manager as a result of other user operations, for example:

- When a user adds an undefined report to a Report Selector Rule using a link to an undefined distribution list, an undefined report will be automatically created (if one doesn't already exist). That new undefined report will be initialized with default values, and will be enabled if at least one custom report linked to the layout is enabled.
- When a user removes a layout from the last enabled Report Selection Rule, the undefined report for that layout will be automatically disabled.
- When a user disables the last enabled custom report for a layout, or removes the layout from report and it is not linked to any enabled reports, the undefined report will be automatically disabled.
- When a user changes Match Name to NO in all Report Selector Rules using the layout, the undefined report for that layout is automatically disabled.

Additionally, Undefined reports can be enabled and disabled from the LINKs drop-down menu of the Report Rules panel. A report administrator can change the status of an enabled undefined report to "disabled" at any time, disabling the Undefined Report for all report selectors that use that layout. However, undefined reports can only be enabled if at least one custom report is enabled for the layout and at least one Report Selection Rule associated with the layout has Match Name set to NO (if Match Name = YES, custom report processing is unavailable).

To enable an undefined report:

1. Navigate to the Report Rule panel:
 - a) From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
 - b) From the Administrative Functions menu, choose option **R**, Report Selection Rules, and press Enter. The Report Rules panel is displayed.
 - c) Type E (edit) in the CMD column next to the report selection rule that you want to enable or disable, and press Enter. The Report Rule panel is displayed.
2. From the LINK drop-down list, select the appropriate option: 7. Enable, or 8. Disable and press Enter.

Note: An undefined report can only be enabled if at least one custom report is enabled for the layout and at least one Report Selection Rule associated with the layout must have Match Name set to NO (if Match Name = YES, custom report processing is unavailable).
3. Press PF3 and type YES to save your changes. When the undefined report is enabled and the report selection rule is triggered to collect data for custom reports, any unreported pages will be included in an undefined report. When the undefined report is disabled, unreported pages will not be collected.

Creating a template report

To define a template report, you must link it to a layout and specify one or more dynamic fields (report name, dynamic distribution, or both). If you do not know in advance what the values of the fields that you want to capture will be, create Template reports.

Template reports automatically create content-defined report definitions (derived reports) with report names or distribution lists that are derived from values specified in the template report fields. When you define a template report definition, you construct the dynamic fields (report name, dynamic distribution, or both) out of static text, layout field names, and Output Manager variable names (such as Job Name or User ID). You can also specify additional field condition criteria, just as you do in custom reports. Report definitions that are automatically created by a template report are displayed as custom report definitions in the Report Definitions panel (ISPF A.C), with YES in the Derived column.

To create a template report definition:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **C**, Custom Reports, and press Enter.
3. Specify search criteria, or leave the fields blank, and press Enter.

The resulting list is filtered by your search criteria.

4. Type ADDT on the command line and press Enter to add a template report.

The Search for Layouts panel is displayed.

5. Select a layout to link template report to.

a) Specify search criteria to locate the layout, and press Enter.

b) In the **CMD** column, type S (Select) next to the name of the layout that you want to use, and press Enter.

The layout name is displayed in the **Layout** field.

6. Specify one or both dynamic fields.

A template report must have at least one dynamic template value. You must specify an Output Manager variable, or a layout field name in the **Report name** field, (the report name that will be automatically created for each derived report definition), the **Dynamic dist** field (the distribution list that will be automatically created or matched for each derived report definition and used in lieu of the distribution list linked in the Default Dist field), or both.

For more information on constructing values in these dynamic template fields, see [“Syntax and rules for constructing dynamic values in template reports” on page 93](#)

Note: The dynamic fields of a template report can be used in conjunction with Output Manager translations to substitute source values in the sysout with specified translation values. You can use translations to exert control over your dynamically created derived report names and distribution lists. For more information, see [“Translating data with substituted values using Output Manager translations” on page 98](#).

7. Specify additional report definition fields:

a) In the **Status** field, accept the initial value of **Enabled** to make the template report definition available for use by Output Manager, or type **Disabled** if you do not want the report definition to be available for use yet.

Important: If a template report is disabled, its associated derived report definitions will not be captured. It is not recommended to disable template reports.

b) In **Description** field, type an optional description for the template report. This description will be used for all reports derived from this template, and can be up to 60 characters long.

c) Optional: In the **Print Model** field, type **Classic** or **Report** to specify the "model" for determining which set of printer attributes to use for printing the report instances that are based on this report definition.

For more information on Print Model, refer to the help panel.

- d) In the **Dynamic Print** field, indicate whether you want to capture and use the "dynamic printing parameters" (CLASS, DEST, FCB, FORMDEF, FORMS, OPTCD=J, PAGEDEF, PRMODE, TRC, and UCS) for printing the report instances that are based on this report definition. Valid values include **No** and **Report**. For more information on Dynamic Print values, refer to the help panel.
- e) The **Default dist** field displays the name of the linked distribution list to use when a dynamic distribution list is not used (either no field content matched a distribution list name, or no fields were specified in the **Dynamic Dist** field). To link a default distribution list to the template report:
- i) From the **Link** pull-down menu, choose option **2**, Choose a Distribution List.
 - ii) In the Distribution List Selection window, specify the S (Select) line command next to the distribution list that you want to use as a default
- f) Optional: To link a banner page definition to the template report, choose option **3**, Choose a Banner Page, from the **Link** pull-down menu. Then, in the Banners window, specify the S (Select) line command next to the banner definition for the banner that you want to appear in printed report output.
- g) Optional: If you selected a banner page, you can specify special instructions to be inserted into the banner during print processing. Choose option **1**, Edit Instructions, from the **Special Instructions** pull-down menu. Then type the instructions that you want to include in the banner (for example, special routing instructions). Press Enter and then press F3.
- h) Optional: To specify a PRSET member, choose option **4**, Choose a PRSET member, from the **Link** pull-down menu.
- Specify search criteria in the Search for PRSET panel and press Enter. Then, in the PRSET Member Selection panel, specify the S (Select) line command next to the name of the existing PRSET member that contains the binary characters that you want to use to control the physical printing of this report (for example, AFP structured fields). Press Enter to return to the Report panel. The member name is displayed in the **PRSET member** field.
- Tip:** You can type ADD in the command line to add a PRSET member that is not listed. You will be prompted to enter an existing member name, and the data set where the member is located.
- i) Optional: To link a set of printer attributes to the template report, choose option **5**, Choose a Printer Attribute, from the **Links** pull-down menu. Specify search criteria, and then select the printer attribute by typing S (select) in the CMD column and pressing Enter.
- Tip:** You can add a new printer attribute by typing ADD on the command line or an I (Insert) in the CMD column to open a new Printer Attribute panel.
8. Define report condition entries for the template report. Any report condition entries specified will be used to derive custom reports; derived reports are only created when the conditions are met.
- a) To define report condition entries for the template report, type ADD on the command line.
The Report Condition Entry pop-up is displayed.
 - b) In the **Condition Type** section, select the condition type by typing the corresponding numbers in the type fields:

In the **Condition type** field, select one of the following:
 - **(1) Include** - If the field condition is matched, include it in the derived report.
 - **(2) Exclude** - Defines a condition against which SYSOUT pages are matched to determine if they are eligible for inclusion in the derived report. Pages that satisfy this condition will NOT be included in the report. Any page of the SYSOUT that matches this condition is removed from the report.
 - **(3) Condition** - Defines a condition against which SYSOUT pages are matched to determine if they are eligible for inclusion in the derived report.
 - **(4) Begin** - Defines a condition that identifies the beginning of a set of pages within a SYSOUT data set to include in the derived reports. Usually, a BEGIN condition entry is specified with an END condition entry; however, an END condition entry is not required.

- **(5) End** - Defines a condition that identifies the end of a set of pages within a SYSOUT data set. You cannot specify an END condition entry until you first specify a BEGIN condition entry.

Select one of the following:

- **Include:** Include the matched page of the report.
 - **Exclude:** Exclude the matched page of the report. For BEGIN conditions, the report will start on the next page. For END conditions, the report will end on the previous page.
 - **One:** Include the first matched page in the report, and exclude any subsequent matches.
- c) Type S in the blank field next to the **Field Name** column to select the field to be used for the condition.
- d) You can define from one to eight conditions that must be met for a page to be included in the report. Specify one condition per line. You can expand a field by pressing F4.

Note: If you specify more than one condition on this panel, the conditions will be related to one another by means of the **AND** connector (all must be true).

For each condition, complete the following fields:

Field

(Required) Type an S (select) and press Enter in the blank field to select the name of a field that you want to include in the derived report. This field must be defined in the layout that is linked to this report definition and must occur in the SYSOUT.

Op (operator)

(Required) Type a comparative operator that will qualify any match between the "value" that you specify in the condition entry and the actual value for the specified field in the SYSOUT. Valid operators are: **EQ** (equal to), **GT** (greater than), **GE** (greater than or equal to), **LT** (less than), **LE** (less than or equal to), and **NE** (not equal to).

Value

(Required) Type a value for the specified field to be matched against the actual values for the field in the SYSOUT by using the designated operator. This matching selects the pages to include in the derived report.

Case

Indicate whether or not the specified "Value" string is case-sensitive. When Y (YES) is specified, the string must match Report content exactly. If N (NO) is specified, Output Manager will convert the Report content to uppercase before the value string comparison is tested. The default is Y.

Var

(Optional) If the location of the field within the SYSOUT can vary horizontally from the location that is defined in the layout, you can specify a horizontal variance. In general, this variance is the number of columns to the right of the defined starting column in which the field begins. Valid values are from 0 through 99.

- If you accept the default value of 0, Output Manager will look for the beginning of the field only at the starting column that is defined in the layout.
 - If you specify a number from 1 through 98, Output Manager will look for the field at the defined starting column and in each column to the right of the defined starting column (within the same row), up to the number of columns that you specify. For example, if you specify 5, Output Manager looks for the field at the defined starting column and in the five columns to the right of that starting column.
 - If you specify 99, Output Manager will look for the field at the defined starting column and in all columns to the right, up to the end of the row.
- e) When you are finished defining conditions, press F3 (Exit). If an exit confirmation prompt is displayed, press Enter. The Template Report panel is redisplayed. Your condition entries are listed at the bottom of the panel.
- f) To add another condition entry, type I (Insert) in the CMD column, and press Enter.

The Report Condition Entry pop-up window is redisplayed. Specify the additional condition or conditions and press F3 (Exit) to return to the Report panel.

9. When you are finished, press F3 (Exit). If an exit confirmation pop-up window is displayed, press Enter to save the template report definition.

Important: Once a derived report has been captured for a template, the template cannot be edited. Template reports must be unaltered and enabled in order continue capturing existing derived reports. If you need to modify an existing template report, you can copy the template and modify the copy. To suppress a derived report from creating new instances of a custom report, disable the derived report. It is highly recommended to test template reports before putting them into production.

Syntax and rules for constructing dynamic values in template reports

When constructing dynamic values in template reports, you must adhere to the following rules and syntax.

The **Report name** field and the **Dynamic dist** field are dynamic values. These fields can consist of fixed text, Output Manager variables, and layout field values:

- **Fixed text:** Type alphanumeric characters to include in the dynamic value. The fixed text "XYZ" is used in the examples in this section.
- **Output Manager variables:** Introduce Output Manager variables with an ampersand (&) character, and end with a period. Variables must end with a period (.) When an Output Manager variable is specified, it is automatically replaced by the value of the variable. For example, when &JN is specified, the jobname is displayed. Valid values include: &JN or &JOBNAME, &DD or &DDNAME, &FORM, &USERID, and &WR or &WRITER.

You can restrict the size of an Output Manager variable using a substring expression:

(<begin position>:<length>)

For example, (2:3) would start at the second character of the variable, and include the next three characters. If the job name is ABCDEFG, and the variable &JOBNAME(2:3) is specified, it will result in the displayed string would be "BCD".

- **Layout field values:** Introduce layout field values with either a percent sign (%) for fixed-width variables, or a tilde character (~, hex value A1) for variable-width values. Layout field values must end with a period (.). When a layout field variable is specified, it is automatically replaced by the value of the field. For example, if the layout has a BRANCH field, and %BRANCH is specified, the branch name is displayed.
 - **Fixed-width** values must be preceded by a percent sign (%) , and followed by a period (.) character. Fixed width field specifications will not eliminate trailing spaces in field values and the report name will always use the actual value, including leading and trailing spaces present in the report data for the field.
 - **Variable-width** values must be preceded by a tilde character (~, hex value A1) , and followed by a period (.) character. Variable-width variables suppress trailing spaces from field values, but not leading or embedded spaces. Characters to the right of the field will be shifted left by the number of trailing spaces suppressed.

The sum of the size of the fixed text, the sizes of the associated layout fields, and the length of any Output Manager variables must be less than or equal to 64. You can specify up to 8 variables in each dynamic field (Report name and Dynamic dist).

Example of dynamic values in template reports

In the following example, the template report would be linked to a layout that includes a BRANCH field and a MANAGER field.

Report name: XYZ.%BRANCH.&JN(2:3) .

Dyn Dist: %MANAGER .

A unique custom report would be derived for each value of the BRANCH field, with the branch name in the custom report name, followed by the second, third, and fourth characters of the job name that produced the report. The distribution list of each derived report would be equal to the value of the MANAGER field for each branch.

Managing report definitions

Once you have created a report definition, you can edit or delete it from the Report Definitions list panel.

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **C**, Report Definitions, and press Enter.
3. Specify search criteria, or leave the fields blank, and press Enter.

The resulting list is filtered by your search criteria.

4. In the **CMD** column, type the appropriate line command:
 - E (Edit) next to the name of a report definition to edit its details. For information about the fields on the details panel, select Extended help from the Help drop-down menu.
 - D (Delete) next to the name of a report definition to delete it.
5. Press F3 (Exit).
6. Depending on your user preferences, a confirmation panel may be displayed. Type YES and then press Enter to save your changes.

Searching for report definitions

From the Report Definitions panel, you can search for a specific report definition or filter the list of report definitions.

You must specify a value in at least one of the search fields to perform a search. Optionally, you can save your search criteria to your ISPF profile. If you save your search criteria, Output Manager will apply these criteria to the Report Definitions panel from session to session, until you change them.

Most search fields support wildcards. Output Manager supports the following wildcard characters in these fields: a trailing asterisk (*) or percent sign (%) for zero or more ending characters, or a question mark (?) or an underscore (_) for a single character anywhere in a value. If you specify a wildcard pattern, Output Manager will find all report definitions that match that pattern.

To search for report definitions:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **C**, Custom Reports, and press Enter. The Report Definitions panel is displayed.
3. From the **Search** pull-down menu, choose option **1**, Enter Search Criteria, and press Enter. The Search for Report Definitions pop-up window is displayed.
4. In the **Report Name** field, type a report name that is specified in a report definition. This value can be up to 64 characters in length. Wildcards are permitted.
5. In the **Report Type** field, select the types of reports to be included in the results: Basic, Custom, Undefined.
6. In the **Indexed** field, specify whether or not you want to include indexed reports in the search results by typing YES or NO.
7. In the **Status** field, type **Enabled** if you want to find only the report definitions that are available for use by Output Manager, or type **Disabled** if you want to list only the report definitions that are unavailable for use. If you leave this blank, Output Manager will list both enabled and disabled report definitions. Wildcards are *not* permitted.
8. In the **Description** field, type a user-defined description for a report that is specified in a report definition. This value can be up to 60 characters in length. Wildcards are permitted.
9. In the **Distribution** field, type a specific or generic (using wildcards) distribution list name to return only the report definitions that are included in that distribution list.

10. In the **Layout** field, type a specific or generic (using wildcards) layout name to return only the report definitions that share a specified layout.
11. In the **Save Criteria?** field, type **Yes** if you want to save the search criteria that you specified to your ISPF profile. Output Manager will then use the saved search criteria to filter the list of report definitions from session to session, until you change these criteria. If you want to use the search criteria temporarily (for a one-time search), accept the default value of **No**. Output Manager will filter the current list of report definitions and then clear the search criteria and revert to the last-saved values (if any) when you exit the Report Definitions panel.
12. Press Enter.
The Report Definitions panel lists only the report definitions that match your search criteria.

Linking a report definition to a layout

If a report definition is for a custom report or an indexed report, you must link the report definition to a layout that defines the condition-entry fields or the index fields. If a report definition is for a basic report, a layout is not required.

To link a report definition to a layout:

1. From the Output Manager main menu, choose **A**, Administrative Functions.
2. From the Administrative Functions menu, choose option **C**, Custom Reports. The Report Definitions panel is displayed.
3. In the **CMD** column, type E (Edit) next to the report definition to which you want to link a layout. The Report panel is displayed.
4. From the **Links** pull-down menu, choose option **1**, Choose a Layout. The Layout Selection pop-up window is displayed.
5. In the **CMD** column, type S (Select) next to the layout that you want to use, and press Enter. A forward slash (/) is displayed next to the selected layout.
6. Press F3 (Exit) to return to the Report panel. The **Layout** field displays the name of the report layout that you selected, indicating that this layout is linked to the report definition.

For information about creating layouts, see [“Creating a report layout” on page 72](#).

Linking a report definition to a distribution list

You must link a report definition for a basic or custom report to a distribution list to automatically distribute the report during automatic printing or reprint operations. If necessary, you can link a dynamically-generated report definition for a basic report to a distribution list. The distribution list specifies the recipient IDs for the persons or locations to receive the report. (You cannot link a report directly to a recipient ID.)

1. From the Output Manager main menu, choose **A**, Administrative Functions.
2. From the Administrative Functions menu, choose option **C**, Custom Reports. The Report Definitions panel is displayed.
3. In the **CMD** column, type E (Edit) next to the report to which you want to link a distribution list. The Report panel is displayed.
4. From the **Links** pull-down menu, choose option **2**, Choose a Distribution List, and press Enter. The Distribution List Selection pop-up window is displayed.
5. In the **CMD** column, type S (Select) next to the distribution list that you want to use, and press Enter. A forward slash (/) is displayed next to the selected list.
6. Press F3 (Exit).

The Report panel is redisplayed. The **Distribution** field displays the name of the distribution list that you selected.

For information about creating recipient IDs and distribution lists, refer to [“Recipient IDs” on page 104](#) and to [“Distribution lists” on page 109](#).

Linking a report definition to a banner page

You can optionally link a report definition to a banner definition. A banner that is linked to a report definition is referred to as a *report banner*.

The banner definition identifies an existing PDS member that contains the banner content (for example, delivery instructions) to be inserted into the report output. The banner contents will be printed at the beginning or end of the report or in both locations, depending on the banner type (heading, trailing, or both) that is specified in the banner definition. If the report is part of a bundle of reports, the banner will appear at the beginning or end of the report within the bundle output.

Before you begin: Ensure that the content for the report banner resides in a PDS member, that a banner definition exists, and that the banner information has been loaded into the BJTBAN table. For information about these tasks, see [Chapter 6, “Print configuration,” on page 103](#).

To link a report definition to a banner page:

1. From the Output Manager main menu, choose **A**, Administrative Functions.
2. From the Administrative Functions menu, choose option **C**, Custom Reports. The Report Definitions panel is displayed.
3. In the **CMD** column, type E (Edit) next to the report definition to which you want to link a banner page. The Report panel is displayed.
4. From the **Links** pull-down menu, choose option **3**, Choose a Banner Page, and press Enter. The Banners pop-up window is displayed.
5. In the **CMD** column, type S (Select) next to the banner page that you want to use, and press Enter. A forward slash (/) is displayed next to the selected banner page. Ensure that the banner contents resides in the specified member and that the member is valid.
6. Press F3 (Exit).
The Report panel is redisplayed. The **Banner Page** field displays the name of the banner page that you selected.

For information about creating banner pages, see [“Banner pages” on page 124](#). For information about adding special instructions to the banner, see [“Adding special instructions to a report banner” on page 96](#).

Adding special instructions to a report banner

If you linked a banner page to a report definition, you can optionally specify special instructions to be added to the banner page during print processing. For example, you might want to add report routing instructions for the print room operator. These instructions are stored as part of the report definition, not in the banner member.

Important: To indicate where the instructions are to be inserted in the banner, you must specify the `INSTnnnn` variable in the banner member. For more information, see [“Banner page variables” on page 127](#).

To add special instructions to a report banner:

1. From the Output Manager main menu, choose **A**, Administrative Functions.
2. From the Administrative Functions menu, choose option **C**, Custom Reports. The Report Definitions panel is displayed.
3. In the **CMD** column, type S (Select) next to the report definition for which you want to specify special instructions and press Enter. The Report panel is displayed.
4. From the **Special Instructions** pull-down menu, choose option **1**, Edit Instructions. The Special Instructions window is displayed.
5. On the lines provided, type up to 13 lines of special instructions that you want to add to the report banner. Each line can contain up to 128 characters, including spaces. Do not include any variables.
6. Press F3 (Exit).

The instructions are saved to memory, and the Report panel is redisplayed. The instructions will be saved to the Output Manager database when you exit the Report panel in a manner that saves changes.

Linking a report definition to a PRSET member

You can optionally link a report definition to a PRSET member. A PRSET member contains a set of binary characters for controlling the printing or formatting of a report on a physical printer. For example, if your printer supports Advanced Function Printing (AFP), you might want to create a PRSET member that contains AFP structured fields that begin with the hexadecimal character "5A."

The binary characters in the PRSET member will be inserted when the report is printed. These characters will be displayed after the report banner page (if one is present) and before the report data.

To link a report definition to a PRSET member:

1. From the Output Manager main menu, choose **A**, Administrative Functions.
2. From the Administrative Functions menu, choose option **C**, Custom Reports. The Report Definitions panel is displayed.
3. In the **CMD** column, type E (Edit) next to the report to which you want to link a PRSET member. The Report panel is displayed.
4. From the **Links** pull-down menu, choose option **4**, Choose a PRSET Member, and press Enter. The PRSET Member pop-up window is displayed.
5. In the CMD column, type S (Select) next to the PRSET member that you want to use, and press Enter. A forward slash (/) is displayed next to the selected PRSET member.
6. Press Enter. The Report panel is redisplayed. The **PRSET member** field displays the name of the member that you specified.

Linking a report definition to printer attributes

Optionally, you can link a report definition to a set of printer attributes. This set of printer attributes will be used for printing report instances only if the **Print Model** field is set to **Report** in the report definition.

If you also set the **Dynamic Print** field to **Report**, this set of printer attributes might also provide values for the "dynamic printing parameters" that are stored in the BJTDAT table. (The BJTDAT table will also contain any "dynamic printing parameters" that were captured from the SYSOUT.) However, if a set of printer attributes is also linked to the distribution list for the report, that set of printer attributes will take precedence over the one that is linked to report definition with regard to the "dynamic printing parameters" only.

To link a report definition to a set of printer attributes:

1. From the Output Manager main menu, choose **A**, Administrative Functions.
2. From the Administrative Functions menu, choose option **C**, Custom Reports. The Report Definitions panel is displayed.
3. In the **CMD** column, type S (Select) next to the report definition to which you want to link a set of printer attributes. The Report panel is displayed.
4. From the **Links** pull-down menu, choose option **5**, Choose a Printer Attribute, and press Enter. The Printer Attribute Selection pop-up window is displayed.
5. In the **CMD** column, type S (Select) next to the set of printer attributes that you want to use, and press Enter. The Report panel is redisplayed. The **Print Attr** field displays the name of the set of printer attributes that you selected.

Accessing the reports based on a report definition

From the list of report definitions, you can access the captured report instances that are based on a specific report definition. You can then view, print, or reprint a report instance.

To access reports based on a report definition:

1. From the Output Manager main menu, choose option **A** (Administrative Functions).
2. From the Administrative Functions menu, choose option **C**, Custom Reports. The Report Definitions panel is displayed.
3. In the **CMD** column, type R (Reports) next to the report definition for which you want to list report instances.

The Captured Reports panel is displayed and lists any report instances that were captured based on that definition.

Tip: To view only indexed reports, type N (iNdexes) instead of R (Reports) next a report definition for which the **Index** column displays the value **Yes**.

4. In the **CMD** column, specify the appropriate line command to view, print, or reprint a captured report instance.
5. Press F3 (Exit) to return to the Report Definitions panel.

Translating data with substituted values using Output Manager translations

Output Manager can process values (source values) within a SYSOUT into specified substituted values (replacement values) using translations. When translations are used in conjunction with the dynamic fields of a template report, you can distribute reports based on report content, and substitute the report content to new, translated, values in order to identify distribution lists.

If a report being processed is a template report, and the distribution list to be used is obtained dynamically from report content (when a variable is specified in the **Dynamic dist** field), Output Manager checks the defined translations. If the translation is enabled, it will be used to determine report conditions and the distribution list name. If the translation is disabled, processing continues without translating any data.

Translation implementation overview

1. **Define pairs of translation values.** Translation value pairs include a source value (the data to be substituted), and a replacement value (the data that the source value is substituted with).
2. **Define a named translation.** A named translation defines a list of translation values (source and replacement values) that are candidates for translation, and determines whether the translation is in effect (enabled).
3. **Link the named translation to a template report** using report context based on the layout fields referenced in the template report's dynamic distribution list and report name. This contextual specification provides the report ID and field name that is to be translated. For more information on template reports, see [“Creating a template report” on page 90](#).

For example, you can create a translation that dictates that Output Manager automatically creates a distribution list based on the value in layout field F7. If the value in layout field F7 is "HR" or "HUMAN_RESOURCES", you can have Output Manager use the specified distribution list name, such as "Human Resources Hard Copy"

Sample translation scenario

The following example uses translations to distribute a report based on branch location and manager. In this example, you would define a report with a manager and city as the criteria.

- When Output Manger finds "Bob" in the manager field, you want that report sent to the Berkeley branch.
- When Output Manager finds "Nancy" in the manager field, you want that report sent to the Nashua branch.

To achieve this, you would do the following:

1. Create two distribution lists, one for each region: BERKELEY, and NASHUA.
2. Create a layout, and define the Manager field and the City field.
3. Create a report selector that captures the job name and step name.
4. Create a template report with the following specifications:
 - Link the template report to the layout created in step 2.
 - Specify a dynamic report name. If you want the name of report to be based on job name, writer name, you would specify "&JN.&WRITER."
 - In the **Dynamic dist** field, specify %MANAGER. This will use a distribution list based on the Manager field of the layout.
5. Create a translation:
 - a. Define two translation values:
 - Source: BOB. Replacement: BERKELEY
 - Source: NANCY. Replacement: NASHUA
 - b. Create a named translation:
 - Add the two translation values (BOB>BERKELEY and NANCY>NASHUA) to the named translation.
 - Enable the translation.
6. Link the template report (created in step 4) to the named translation (created in step 5b). You can use the LINK menu from the Template Report panel, or the LINK menu from the named translation definition.

In this scenario, when the template report is processed, Output Manager creates a distribution list for each manager name in the MANAGER layout field. However, because the translation substitutes the manager name BOB with the branch name BERKELEY, Bob's reports are sent to the BERKELEY distribution list. When the manager name NANCY is found, those reports are sent to the NASHUA distribution list. All manager names other than BOB and NANCY are sent to a distribution list for the manager name.

In this scenario, when the template report is processed, the translation substitutes the manager name BOB with the branch name BERKELEY, so Bob's reports are sent to the BERKELEY distribution list. When the manager name NANCY is found, those reports are sent to the NASHUA distribution list. All manager names other than BOB and NANCY are sent to a distribution list for the manager name.

Translation security

The user must have ALTER access to be able to create or delete named translations or translation values, UPDATE access or better to be able to update named translations or translation values, and READ access or better to be able to view named translations or translation values.

If the user does not have read access or better to the BJT . <DB_QUALIFIER> . ADM . XLAT profile in the FACILITY or XFACILIT (depending on the configuration) RACF Class, the system will deny access and display an error message.

Translation considerations

Notes:

- The actual report content is not changed. If any fields in a translation specification are used for index definition, the index values stored will be the untranslated values. The translated values are only used for determining the distribution list name.
- Values that are found that do not match any source values for a named translation will not be translated.
- Wildcards are allowed when specifying source values

- If a translated variable results in the name of an existing distribution list, the existing distribution list is used. For example, if you specify %BRANCH in the **Dynamic dist** field of a template report, and you link that template to a translation that translates "Ash" to "ASHBRANCH", but a distribution list named ASHBRANCH already exists, the original, existing, ASHBRANCH distribution list is used.
- Distribution lists are not created dynamically. Translations only determine of the name of which pre-existing distribution list is used.

Creating translations

Authorized Administrators can create translations from the Translations Administration option, available from the Administrative Functions menu in ISPF. First, you specify source and replacement translation values, then add those translation values to a named translation.

1. Specify a source/replacement value pair:
 - a) Navigate to the **Translation Values** panel (ISPF A.TR.V).
 - b) Type ADD on the command line and press Enter.
The **Create a Translation Value** panel is displayed.
 - c) In the **Source** field, type the source value that is to be substituted. When this value is found in a report and if translation is in effect for that report, the source value will be processed as the value specified in the **Replacement value** field. A single wildcard character (?) is accepted. Leading spaces will be respected. The **Source** field is case-sensitive.
 - d) In the **Replacement value** field, type the value that the source value is to be substituted with. The **Replacement value** field is case-sensitive.
 - e) When you are finished, press F3 (Exit).
An exit confirmation pop-up window is displayed. Press Enter to save the translation values.
2. Navigate to the **Translations** panel (ISPF A.TR.N).
3. Specify search criteria, or leave the fields blank, and press Enter.
The resulting list is filtered by your search criteria.
4. Type ADD on the command line and press Enter.
The **Named Translation** panel is displayed.
5. In the **Name** field, specify a name for the translation.
This name must be unique.
6. In the **Status** field, type Enabled or Disabled. When Enabled is specified, this translation will be
If a translation is linked to a template report with a dynamically defined field (Name or Dynamic dist), and the translation is enabled, the translation will be used to determine report conditions and the distribution list name. If the translation is disabled, processing continues without translating any data.
7. Add a translation value to the named translation:
 - a) Type ADD on the command line of the **Named Translations** panel, and press Enter.
The **Search for Translation Values** panel is displayed.
 - b) Specify search criteria, or leave the fields blank, and press Enter.
The resulting list is filtered by your search criteria.
 - c) Type S in the CMD column next to the source translation value that you created in step 1, and then press Enter.
The translation value is added to the table at the bottom of the Named Translation pane.
8. When you are finished, press F3 (Exit).
An exit confirmation pop-up window is displayed. Press Enter to save the translation.

Linking a translation to a template report

Administrators can link a translation definition to one or more template reports using report context based on the layout fields referenced in the template report's dynamic distribution list and report name. This contextual specification provides the report ID and field name that is to be translated.

1. Navigate to the **Report Translation Context** panel in one of the following ways:
 - **From the Translation definition:**
 - a. Navigate to the **Translations** panel (ISPF A.TR.N).
 - b. Specify search criteria, or leave the fields blank, and press Enter.
 - c. Locate the translation definition you are looking for, and type E in the CMD column next to it, and press Enter. The **Named Translation** panel is displayed.
 - d. From the LINK drop-down menu, select option 1. Link Report Contexts. The Report Translation Context panel is displayed.
 - **From the Template report definition:**
 - a. Navigate to the **Report Definitions** panel (ISPF A.C).
 - b. Specify search criteria, or leave the fields blank, and press Enter.
 - c. Locate the template report that you want to link the translation to, and type E (edit) in the CMD column next to it.

Tip: You can limit your search to template reports in the search criteria panel, or refer to the Type column of the Report Definitions panel.
 - d. On the **Template Report** panel, use the LINK drop-down menu to select option 16. Link Translations. The Report Translation Context panel is displayed.
2. On the Report Translation Context panel, type ADD on the command line and press Enter.
3. Specify search criteria, or leave the fields blank, and press Enter.

The resulting list is filtered by your search criteria. The Report Contexts Selection panel is displayed according to your search criteria, listing the Report Name and Field name of the reports eligible for this translation.
4. Type S (Select) in the CMD column next to the report context to be linked, and press Enter.

The template report and translation are now linked.

Managing translations

Tip: When viewing the Named Translation panel, you can use the XTN line command to view a list of the translation definitions that use that translation value.

Editing and copying existing translations

Authorized Administrators can copy and edit existing translations from the Named Translations panel, available from the Administrative Functions menu in ISPF.

1. Navigate to the Translation Values panel (ISPF A.TR.V).
2. Enter the search criteria and press ENTER to search for the translation.
3. In the CMD column, type one of the following commands next to the desired translation:
 - E (Edit) to edit an existing translation, and press Enter. The Translation Details panel is displayed, where you can modify the translation values.
 - C (Copy) to copy an existing translation, and press Enter. The translation is copied to the Output Manager Clipboard. Type T (pasTe) in the CMD column, and press Enter again to paste the translation. The copied translation is displayed in the Translation Details panel, where you can modify it.
4. When you are finished, press F3 (Exit). Depending on how you set your preferences, you may be prompted to type YES and press Enter to save your changes.

Deleting existing translations

Authorized Administrators can copy and edit existing translations from the Named Translations panel, available from the Administrative Functions menu in ISPF.

1. Navigate to the Named Translations panel (ISPF A.TR.N).
2. Enter the search criteria and press ENTER to search for the translation.
3. In the CMD column, D (Delete) to delete an existing translation, and press Enter.
A confirmation panel is displayed. Press Enter to delete.
4. When you are finished, press F3 (Exit). Depending on how you set your preferences, you may be prompted to type YES and press Enter to save your changes.

Chapter 6. Print configuration

Output Manager provides many options for the flexible configuration of report printing.

As a report administrator, you should assess your site's printing needs and determine how to configure Output Manager printing options to best meet these needs.

After you complete printing setup, you can print a report for your own use from the ISPF interface or ITOMweb. For printing instructions, see the *IBM Tivoli Output Manager for z/OS User's Guide*. Also, from the ISPF interface only, you can configure printing such that Output Manager performs the automatic printing and distribution of reports as they are captured. You can also reprint a report for all recipients on a distribution list. For reprinting instructions, see [Chapter 7, "Reprinting reports," on page 141](#).

For report bundles, you must create a batch print job. For more information, see [Chapter 9, "Report bundling," on page 153](#).

Types of printing

Output Manager supports the following general types of printing:

Ad-hoc printing

From the ISPF interface, you can specify the P (Print) line command to print a captured report (basic or custom report), an archived report, or a set of indexed report pages (field index) for your own use. A job is submitted to perform the print. Usually, the report output is then sent to a printer and removed from the spool. The jobname for the output will be based on your TSO user ID.

Automatic printing

You can configure Output Manager to print and distribute basic reports and custom reports immediately after the SYSOUT is generated, archived, and the defined reports or field indexes are captured from that SYSOUT. Output Manager automatically distributes these reports in "real time" to the recipients that are on the distribution list to which the report definition is linked. Automatic printing does not apply to archived reports.

Reprinting

Administrators can specify a reprint line command for a captured report (basic or custom report), or a field index value to perform a print run for some or all recipients on the selected distribution list. For each recipient for whom the report is to be reprinted, a separate job is submitted to print the report output to the JES spool. For the reprint request to succeed, you must link the report definition to a distribution list or select a distribution list when you issue the reprint command. You can add recipients to the distribution list temporarily for the duration of this reprint request. Additionally, you can change certain printing options for recipients who have the Hardcopy option set to Yes. You can also change the Hardcopy option for one or more recipients on the distribution list so that recipients either receive a printed copy of the report or not.

Note: All changes to printing options are temporary for this reprint request only and do not affect any of the underlying administrative objects.

Printing-related definitions

You can control how reports are printed and distributed by creating the following definitions from the Output Manager ISPF interface:

- Recipient IDs - Provide information about how to process reports for a specific person or location. Required for automatic printing and reprint requests.
- Distribution lists - Identify a group of recipients to receive a report or a set of indexed report pages (a field index). Required for automatic printing and reprint requests.
- (Optional) Sets of printer attributes - Provide information for printing hardcopies of individual reports. Optional for all types of printing.

- (Optional) Banner pages - Provide additional information that can be included in the printed output for individual reports and for report bundles. Optional for all types of printing.

For your printing-related definitions to be used, you must associate them with certain other Output Manager definitions. For example, for a basic or custom report, you would add recipient IDs to a distribution list, and link the report definition to the distribution list.

Which printing-related definitions you need to create and how you link them to other definitions will depend on how you set two key print control fields in report definitions (for basic and custom reports) and in sets of archive attributes (for archives). These print control fields are the **Print Model** field and the **Dynamic Print** field. For more information, see [“Key print control fields” on page 134](#).

For report bundles, you must define the recipient IDs that will serve as the basis for the bundle recipients in the bundle definitions. Optionally, you can define banner pages for the bundle as a whole, a specific bundle recipient, or a specific bundle report. If you associate distribution lists or sets of printer attributes with bundle reports, Output Manager will ignore these definitions while the bundle window is open (the period after bundle activation, while Output Manager is actively collecting reports for the bundle). However, when the bundle is inactive (after bundle deactivation and before reactivation), Output Manager will use the distribution lists and sets of printer attributes for the automatic printing or reprinting of any individual report instances that are captured. Therefore, if you intend to print and distribute reports both as part of a bundle and individually, you should define the distribution lists and sets of printer attributes that you want to use for printing the reports individually.

For more information about creating printing-related definitions, refer to the following topics:

- [“Recipient IDs” on page 104](#)
- [“Distribution lists” on page 109](#)
- [“Printer attributes” on page 115](#)
- [“Banner pages” on page 124](#)

Recipient IDs

A *recipient ID* contains information about how to process reports for a specific person, group, or location. You define a recipient ID from the Output Manager ISPF interface. The recipient ID is saved as a record in the Output Manager recipient table (BJTDID).

To use a recipient ID for printing and distributing single reports, you must add it to a distribution list. (A report cannot be sent directly to a recipient ID.) You can add the same recipient ID to multiple distribution lists, if appropriate. The information in a recipient ID corresponds to z/OS JCL parameters. These parameters are passed to the OUTPUT JCL statement when Output Manager builds jobs for generating and printing reports for a distribution list.

For detailed information about the JCL parameters that correspond to these recipient fields, refer to the *z/OS MVS JCL Reference Manual*.

Recipient IDs are also used to define report bundles. When you create a bundle definition, you must add recipient IDs to the bundle and then add reports to each of these "bundle recipients." (For more information about defining bundles, see Chapter 9, “Report bundling,” on page 153.) When a recipient ID is used in a report bundle, Output Manager ignores any report behavior parameters that are specified in the recipient ID.

Creating a recipient ID

You can create a recipient ID to specify printing parameters that pertain to the recipient only or to use as a "bundle recipient."

To create a recipient ID:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **J**, Recipient IDs, and press Enter.
3. Specify search criteria, or leave the fields blank, and press Enter.

The resulting list is filtered by your search criteria.

4. Type ADD on the command line and press Enter.

The Recipient Details panel is displayed.

Tip: Once a recipient ID has been defined, you can type I (Insert) in the **CMD** column and press Enter to display the Recipient Details panel.

5. In the **Name** field, type the name of the recipient. (Required)
6. Specify information in the other fields on this panel, as needed.

Tip: These fields correspond to JCL parameters for the output statement. For more information about the parameters, refer to the *z/OS MVS JCL Reference Manual*.

Name

(Required) The name of the recipient (a person or location). This name can be up to 60 characters in length. Corresponds to the NAME parameter.

User ID

Type up to eight (8) characters for the MVS user ID, RACF Group ID, or wildcarded MVS User ID for the recipient(s). If you specify an MVS User ID, you can include one wildcard (*) as the right-most character. You must specify a recipient user ID if that user is to be able to view or print reports for a report that a recipient is to receive.

Note: If you specify a RACF group name in this field, RACF groups must have an MVS group ID, and everyone in the RACF group must have the same permissions. RACF groups in distribution lists are for online viewing only.

This field can be left blank when the Recipient record is to be used for one or more of the following cases:

- Bundle delivery details in a Report Bundle definition
- To define an Access ID that will be used to group report access rights
- When the Recipient record is used only for the purposes of hardcopy printing or email distribution

If left blank, this recipient is not associated with any MVS user, and can only be used in distribution lists in which the Hardcopy option is set to YES for this recipient, or if report email is configured for this recipient.

Access ID

The Access ID is used to determine which reports a user has access to. This ID is similar to a User ID, but unlike the User ID, the Access ID can be assigned by the report administrator.

If allowed by the Access Mask associated with the Access ID, the user may have the ability to change their Access ID during their session. This ID can be changed by the user ONLY IF allowed by the associated Access Mask.

Access Mask

The access mask, which is derived from the access ID, determines whether or not a user can change their Access ID during a session. To allow a user to change their Access ID, specify an Access ID with a trailing asterisk (*) wildcard. To prevent a user from changing their Access ID, specify a fully-qualified Access Mask.

Example of an Access Mask with a wildcard:

```
ACCID = XYZ1
```

```
ACCMASK = XYZ*
```

In this example, the user's initial Access ID is XYZ1, but the user has permission to change their Access ID to any value beginning with XYZ. According to the mask, valid values for this user's Access ID include XYZ1, XYZ2, XYZ3, etc.

Example of a fully-qualified Access Mask:

```
ACCID = XYZ1
```

ACCMASK = XYZ1

In this example, the user's Access ID is XYZ1, and the user is not able to change this to any other value.

Department

The name of the recipient's department. This name can be up to 60 characters in length. Corresponds to the DEPT parameter.

Room

The identifier for the recipient's room or office. This value can be up to 60 characters in length. Corresponds to the ROOM parameter.

Building

An identifier for the building in which the recipient is located. This value can be up to 60 characters in length. Corresponds to the BUILDING parameter.

Address

The recipient's mailing address. This value can be up to four lines long, each line containing from 1 to 60 characters. Corresponds to the ADDRESS parameter.

Output Manager uses any Dest, Class, and Copies values that you specify in a recipient ID only if you set the **Print Model** field to **Classic**. You also must either set the **Dynamic Print** field to **No**, or if you enable the use of the "dynamic printing parameters," ensure that your jobs do not include the Class and Dest parameters.

Dest

The destination for a SYSOUT data set. This destination can be a remote or local terminal, a node, a node and remote workstation, a local device or group of devices, or a node and user ID. Corresponds to the DEST parameter.

Class

The output class to which a SYSOUT data set is assigned. This value must be one alphanumeric character. Corresponds to the CLASS parameter.

Groupid

The group ID of the output group to which the report data sets belong. This ID can be up to eight characters in length. The data sets in an output group are processed together at the same location and time. They should have similar characteristics, for example, the same output class, destination, process mode, and external writer name. Corresponds to the GROUPID parameter.

Limitation: The GROUPID parameter is supported only on JES2 systems.

Copies

The number of copies of a report to print. This value must be a number from 0 to 255. Corresponds to the COPIES parameter.

Duplex

The duplex mode in which a report is to be printed. Valid values are:

- **No** - The report is printed on one side of the paper only (not duplexed).
- **Normal** - The report is printed on both sides the paper (duplexed) and is bound along the long edge of the paper.
- **Tumble** - The report is duplexed and is bound along the short edge of the paper.

Corresponds to the DUPLEX parameter.

Burst

Whether the printed report pages are separated by a trimmer-stacker device or left in a continuous fanfold. Valid values are: **Yes** (the output is "burst" onto separate sheets) and **No** (the output is left in a continuous fanfold of sheets). Corresponds to the BURST parameter. This option applies only to data sets that are printed on a 3800 Printing Subsystem that has a burster-trimmer-stacker.

Label

Whether to print a security label with the report. A security label presents the security level and categories as defined to RACF. Valid values are: **Yes** (print a security label) and **No** (do not print a security label).

Sys Area

Whether the system should reserve an area on each page of printed output for the security label. Valid values are: **Yes** (reserve an area for the security label) and **No** (do not reserve an area for the security label). Corresponds to the SYSAREA parameter.

Note: When a system area is reserved for a security label, the system shifts the printed output on each page. You cannot print output data in the system area.

Attr Usage

The printing scenario in which the linked set of printer attributes (specified in the **Print Attr** field) is to be used for the recipient. Valid values are: **Reprint, Print, Real, None, All, Requested, Custom,** and **Mixed**. For descriptions of these options, see [“Creating a set of printer attributes”](#) on page 116.

Print Attr

The name of the set of printer attributes that is linked to the recipient ID, if any. You can link a set of printer attributes to the recipient from the **Links** menu. If you do so, you must also specify a value in the **Attr Usage** field.

Rept Title

A title to include on the separator pages of the printed report for this recipient (for example, "Annual Report"). This value can be up to 60 characters in length. Corresponds to the TITLE parameter.

7. Press F3 (Exit). An exit confirmation window is displayed.
8. Press Enter to save the recipient ID.

Using a RACF group as a recipient for a distribution list

You can specify a RACF group as a recipient in a Output Manager distribution list to allow an entire RACF group to view reports online.

Specifying RACF groups as recipients allows sites with high turnover or large groups to grant report-view-access to an entire group rather than individually for each user ID. When a new employee is added to (or removed from) a RACF group that has access to a report, the report-viewing privileges for that employee are automatically updated.

RACF groups as recipients in distribution lists are for online viewing only. RACF groups must have an MVS group ID, and everyone in the RACF group must have the same permissions.

To add a RACF group to a distribution list

1. Create a recipient ID for the RACF group. In the **User** field of the Recipient Details panel, type up to eight (8) characters for the MVS user ID, RACF Group ID, or wildcarded MVS User ID for the recipient(s).
2. Create your distribution list. When the Recipient Selection panel pops up, select the recipient ID that you created for the RACF group.

Managing recipient IDs

Once you have created a recipient ID, you can edit or delete it from the recipient IDs list panel.

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **J**, Recipient IDs, and press Enter.
3. Specify search criteria, or leave the fields blank, and press Enter.
The resulting list is filtered by your search criteria.
4. In the **CMD** column, type the appropriate line command:

- E (Edit) next to the name of a recipient ID to edit its details. For information about the fields on the details panel, select Extended help from the Help drop-down menu.
 - D (Delete) next to the name of a recipient ID to delete it.
5. Press F3 (Exit).
 6. Depending on your user preferences, a confirmation panel may be displayed. Type YES and then press Enter to save your changes.

Searching for recipient IDs

From the Recipient IDs panel, you can search for a specific recipient ID or filter the list of recipient IDs.

You must specify a value in at least one of the search fields to perform a search. Optionally, you can save your search criteria to your ISPF profile. If you save your search criteria, Output Manager will apply these criteria to the Recipient IDs panel from session to session, until you change the criteria.

All of the search fields support the following wildcard characters: a trailing asterisk (*) or percent sign (%) for zero or more ending characters, or a question mark (?) or an underscore (_) for a single character anywhere in a value. If you specify a wildcard pattern, Output Manager will find all recipient IDs that match that pattern.

To search for recipient IDs:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **J**, Recipient IDs, and press Enter. The search panel is displayed.
3. In the **Recipient Name** field, type the recipient name that is specified in the **Name** field of a recipient ID. You can specify a value up to 60 characters long. Wildcards are permitted.
4. In the **User ID** field, type the TSO user ID of a defined recipient. Wildcards are permitted.
5. In the **Printer Attributes** field, type the user-defined name for a set of printer attributes that is linked to one or more recipient IDs. You can specify a value up to 32 characters long. Wildcards are permitted.
6. In the **Save Criteria?** field, type **Yes** if you want to save the search criteria that you specified to your ISPF profile. Output Manager will then use the saved search criteria to filter the list of recipient IDs from session to session, until you change these criteria. If you want to use the search criteria temporarily (for a one-time search), accept the default value of **No**. Output Manager will filter the current list of recipient IDs and then clear the search criteria and revert to the last-saved values (if any) when you exit the Recipient IDs panel.
7. Press Enter.

The Recipient IDs panel lists only the recipients that match your search criteria.

Linking a recipient ID to printer attributes

Optionally, you can link a recipient ID to a set of printer attributes to specify the printing parameters that you want to use for printing reports for only that recipient. For this set of printer attributes to be used for printing, the **Print Model** field must be set to **Classic** in the report definition (for a basic or custom report) or in the set of archive attributes (for an archived report).

If you link a report selection rule to a set of printer attributes, that set of printer attributes will be used only for reprint requests that users make by using the R line command for a basic or custom report based on the report selection rule.

To link a recipient ID to printer attributes:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **J**, Recipient IDs, and press Enter.
3. Specify search criteria, or leave the fields blank, and press Enter.

The resulting list is filtered by your search criteria.

4. In the **CMD** column, type S (Select) next to the recipient ID for which you want to specify a set of printer attributes.
5. On the Recipient Details panel, place the cursor on the **Links** pull-down menu and press Enter.
6. From the **Links** menu, choose option **1**, Choose a Printer Attribute, and press Enter.
The Printer Attribute Selection pop-up window is displayed.
7. In the **CMD** column, type S (Select) next to the name of the printer attributes that you want to link to the recipient and press Enter.
The Recipient Details panel is redisplayed. A message confirms that the set of printer attributes has been assigned to the recipient.
8. Press F3 (Exit). An exit confirmation pop-up window is displayed.
9. Press Enter.

Distribution lists

A *distribution list* identifies a group of recipients who have access to view reports. Distribution lists are required for emailing, viewing, and distributing reports.

Reports must be associated with a distribution list, and distribution lists are required to identify recipients who have access to reports. Distribution lists can be nested within other distribution lists.

Output Manager ignores distribution lists when distributing reports as part of a report bundle.

To have Output Manager use a distribution list, you must link a report definition to the list. (You cannot send a report directly to a recipient ID.) Note that you can link a report definition to only one distribution list. For instructions, see [“Linking a report definition to a distribution list”](#) on page 95. If appropriate, you can associate the same distribution list with multiple report definitions.

Tip:

You can specify a RACF group in an Output Manager distribution list to allow an entire RACF group to view reports. This allows sites with high turnover or large groups to grant report-view-access to an entire group rather than individually for each user ID. When a new employee is added to (or removed from) a RACF group that has access to a report, the report-viewing privileges for that employee are automatically updated.

Creating a distribution list

To create a distribution list:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **D**, Distribution Lists, and press Enter.
3. Specify search criteria, or leave the fields blank, and press Enter.
The resulting list is filtered by your search criteria.
4. Type ADD on the command line and press Enter.
5. In the **Dist. List Name** field, type a descriptive name for the new distribution list. This name can be up to 60 characters long.
6. To add recipient IDs, RACF groups, or a nested distribution list to this distribution list, type ADD on the command line and press Enter.
The Search for Recipient IDs/Distribution lists pop-up panel is displayed.
7. Specify search criteria, or leave the fields blank, and press Enter.
8. To add recipients to the new distribution list, type S (Select) in the **CMD** column, next to the recipient or distribution list name, and press Enter.

If no recipient IDs have been defined on your Output Manager system, a pop-up message window is displayed that says no recipients have been found. Press Enter to continue.

Tip: If you want to view or edit a recipient ID before adding it to the distribution list, use the V (View) or E (Edit) line commands.

9. Press F3 (Exit).

The Distribution List panel is displayed. It lists all of the recipients that you added to the distribution list.

10. Optionally, you can specify any of the following information:

- If you want to link the distribution list to a set of printer attributes, choose option **1**, Choose a printer attribute, from the **Link** menu. For more information, see [“Linking a distribution list to printer attributes” on page 113](#). Output Manager can obtain "dynamic printing parameters" from this set of printer attributes if the **Dynamic Print** field is set to **Report** in a report definition that is linked to this distribution list.
- If you want a recipient to be distributed the report via email, or if you want to set the hardcopy value, issue the C (Configure print and email) line command for the recipient and then specify email distribution options for the recipient. For more information, see and [“Setting Class, Copies, Dest, and PRSET for a recipient on a distribution list” on page 111](#).

11. When you are finished, press F3 (Exit). An exit confirmation pop-up window is displayed.

12. Press Enter to save the distribution list.

Adding recipient IDs and nested distribution lists to a distribution list

You can add recipient IDs to a distribution list, or add nested distribution lists to a distribution list

To add recipients to a distribution list:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **D**, Distribution Lists, and press Enter. The Distribution Lists panel is displayed.
3. In the **CMD** column, type S (Select) next to the distribution list to which you want to add recipients.

If the distribution list does not yet have any recipients, the Recipient Selection pop-up window is displayed. Skip to Step 5.

If the distribution list already contains recipients, the Distribution List panel is displayed. Continue to Step 4.

4. On the Distribution List panel, type I (Insert) in the **CMD** column and press Enter. The Recipient and Distribution List Selection pop-up window is displayed. If both Recipients and Distribution lists are left blank, Recipients are displayed. Distribution lists are only displayed when Recipients are blank and Distribution list is not blank.
5. In the Recipients Selection window, type S (Select) in the **CMD** column next to a recipient or distribution list that you want to add to the distribution list, and press Enter. Repeat this step to select additional recipients, if necessary.

The Distribution List panel lists the new recipient members.

Tip: A distribution list can contain up to 100 nested distribution lists.

6. Press F3 (Exit). An exit confirmation pop-up window is displayed.
7. Press Enter to add the recipients.

Setting the hardcopy option for a recipient

To set the hardcopy option for a recipient:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **D**, Distribution Lists, and press Enter. The Distribution Lists panel is displayed.
3. In the **CMD** column, type S (Select) next to the distribution list that contains the recipient for whom you want to edit the hardcopy option, and press Enter. The Distribution List panel is displayed.
4. In the **CMD** column, type H (set Hardcopy) next to the recipient for whom you want to set the hardcopy option, and press Enter.

- The Set Hardcopy pop-up window is displayed.
- At the command line, type the number that corresponds to one of the following options:
 - 1 - Set hardcopy to Yes**
Prints hardcopies of reports for the recipient.
 - 2 - Set hardcopy to No**
Displays online copies of reports for the recipient.
- Then press Enter. The hardcopy option is updated, and the Distribution List panel is redisplayed.
- Press F3 (Exit). An exit confirmation pop-up window is displayed.
 - Press Enter.

Setting Class, Copies, Dest, and PRSET for a recipient on a distribution list

Optionally, you can specify values for the Class, Copies, and Dest parameters for a recipient on a distribution list. Output Manager will use these values for the recipient only when printing reports that are linked to the distribution list. You can also specify a PRSET member to control the formatting or printing of a report on a physical printer.

These values will override any Class, Copies, and Dest values that are specified in the set of printer attributes that is associated with the report definition (if any). For this override to occur, you must have set the **Print Model** field to **Report** in the report definition (for a basic, custom, or indexed report) or in the set of archive attributes (for an archived report). This applies to parent distribution lists only; it will not affect nested distribution lists.

To set the Class, Copies, Dest, and PRSET values for a recipient on a distribution list

- From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
- From the Administrative Functions menu, choose option **D**, Distribution Lists, and press Enter. The Distribution Lists panel is displayed.
- In the **CMD** column, type S (Select) next to the distribution list that contains the recipient for which you want to specify a Class, Copies, or Dest value, and press Enter.
- On the Distribution List panel, type the C (Configure print and email) line command next to the recipient name, and press Enter.
- In the Configure Print and Email window, specify a value in any of the following fields for the recipient:

Class

The output class to which a SYSOUT data set is assigned. This value must be one alphanumeric character. Corresponds to the CLASS parameter.

Copies

The number of copies of a report to print. This value must be a number from 0 to 255. If you accept the default value of 0, the report will be distributed but will not be printed. Corresponds to the COPIES parameter.

Dest

The destination for a SYSOUT data set. This destination can be a remote or local terminal, a node, a node and remote workstation, a local device or group of devices, or a node and user ID. Corresponds to the DEST parameter.

PRSET

The name of the PRSET member to use for the print job. To choose, change, or remove the PRSET member, use the LINK drop-down menu. A PRSET member contains a set of printer commands that you can use for controlling the formatting or printing of a report on a physical printer, for example, AFP structured fields.

- Press Enter. The Distribution List panel is redisplayed.
- Press F3.

Setting email distribution options for a recipient on a distribution list

Optionally, you can choose to distribute the report via email for a recipient on a distribution list when the report is printed. You can specify email distribution options on the Configure Print and Email panel.

The email address associated with a recipient must be specified in the Recipient Details panel. For more information, see [“Creating a recipient ID” on page 104](#).

To specify email distribution options for a recipient on a distribution list

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **D**, Distribution Lists, and press Enter. The Distribution Lists panel is displayed.
3. In the **CMD** column, type S (Select) next to the distribution list that contains the recipient for which you want to specify email distribution options and press Enter.
4. On the Distribution List panel, type the C (Configure print and email) line command next to the recipient name, and press Enter.

5. In the **Email** field of the Set Print Configuration panel, type YES or NO to specify whether or not to send the recipient an email distribution of the report. If you specify YES, when the report is printed an email will be sent to the recipient according to the email options you specify on this panel at the email address specified in the Recipient Details panel.

If an email address is not defined for the recipient (in the Recipient Details panel), an error message is displayed.

6. The options specified in the **In Message Body** section of the Configure Print and Email panel determine what will be included in the body of the email message when the Email option is set to YES and the report is printed. In this section, specify a value in any of the following fields for the recipient:

As URL

Specify YES or NO to determine whether or not to include a link to the report in the body of the email.

As Message text

Specify YES or NO to determine whether or not the report itself is included in the body of the email.

- **Text Type:** Specify the text type to be used when the report is included in the email (when the As Message text field is set to YES). The only valid value is PLAIN.
- **Formatted view:** The name of the formatted view used when the text of the report is to be included in the body of the email. To choose, view, or delete this formatted view, use the Formatted View for Message Text options of the LINK menu.

7. The options in the **In Attachment** section of the Configure Print and Email panel determine if the email includes an attachment of the report when the Email option is set to YES. In this section of the Configure Print and Email panel, specify a value in any of the following fields for the recipient:

As attachment

Specify YES or NO to determine whether or not the report is included as an attachment to the email.

- **Attachment Type:** Specify the type of attachment to be included with the email. Valid values include:
 - TEXT: A .txt file of the report is included as an attachment to the email.
 - PDF: A PDF version of the report is included as an attachment to the email.
- **Formatted view:** The name of the formatted view used when the text of the report is to be included as an attachment to the email. To choose, view, or delete this formatted view, use the Formatted View for Attachment Text options of the LINK menu.

8. Press Enter. The Distribution List panel is redisplayed.
9. Press F3.

Linking a distribution list to printer attributes

Optionally, you can link a distribution list to a set of printer attributes. This set of printer attributes will provide values only for the "dynamic printing parameters" that are stored in the BJTDAT table. (The BJTDAT table will also contain any "dynamic printing parameters" that were captured from the SYSOUT.)

For this set of printer attributes to be used, the **Dynamic Print** field must be set to **Report** in a report definition that is linked to the distribution list.

To link a distribution list to a set of printer attributes:

1. From the Output Manager main menu, choose **A**, Administrative Functions.
2. From the Administrative Functions menu, choose option **D**, Distribution Lists. The Distribution Lists panel is displayed.
3. In the **CMD** column, type S (Select) next to the distribution list to which you want to link a set of printer attributes. The Distribution List panel is displayed.
4. From the **Link** pull-down menu, choose option **1**, Choose a printer attribute, and press Enter.
The Printer Attribute Selection pop-up window is displayed:
5. In the **CMD** column, type S (Select) next to the set of printer attributes that you want to use, and press Enter.

The Distribution List panel is redisplayed. The **Print Attr** field displays the name of the set of printer attributes that you selected.

Linking a recipient in a distribution list to a set of printer attributes

Optionally, you can link each recipient in a distribution list to a set of printer attributes. This set of printer attributes is used to physically print the basic and custom reports for each recipient in a distribution list, and will override the default printer associated with the report definition.

You can override the printer assigned to a report definition for each recipient in a distribution list. When a report is printed to a distribution list, instead of using one printer (the report printer) for all of the recipients in the distribution list, each recipient in the distribution list can be assigned a unique printer. Therefore, the same report, printed to a single distribution list, can be printed differently for each user. If a printer is not assigned to a recipient, the report printer will be used.

This set of printer attributes is used to reprint the basic and custom reports for a recipient in a distribution list. The set of printer attributes is used only for reprint requests and automatic printing; it is not used for local printing commands (for print requests made by using the P line command), and only for reports that have print model set to REPORT (not 'CLASSIC').

To link a recipient in a distribution list to a set of printer attributes:

1. From the Output Manager main menu, choose **A**, Administrative Functions.
2. From the Administrative Functions menu, choose option **D**, Distribution Lists. The Distribution Lists panel is displayed.
3. In the **CMD** column, type S (Select) next to the Distribution list that contains the recipient you want to link to a set of printer attributes and press Enter. The Distribution List panel for that distribution list is displayed. The Distribution List panel is displayed.
4. In the **CMD** column, type C (Configure print and email) next to the recipient, and press Enter.
The Configure Print and Email panel is displayed.
5. From the Link pull-down menu, choose option **1**, **Choose a printer attribute**.
The Search for Printer Attributes panel is displayed.
6. Specify printer attribute search criteria, and press Enter.
The Printer Attribute Selection pop-up window is displayed.
7. In the **CMD** column, type S (Select) next to the name of the set of printer attributes that you want to use and press Enter.

The Set Print Configuration panel is redisplayed, with the selected printer attribute displayed in the Print Attr field.

Note: You can view or delete a linked printer attribute using options 2 and 3 of the LINK menu.

8. Press Enter to save the changes to the Set Configuration panel and return to the Distribution List panel.

Managing distribution lists

Once you have created a distribution list, you can edit or delete it from the Distribution Lists list panel.

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **D**, Distribution lists, and press Enter.
3. Specify search criteria, or leave the fields blank, and press Enter.

The resulting list is filtered by your search criteria.

4. In the **CMD** column, type the appropriate line command:

- E (Edit) next to the name of a distribution list to edit its details. For information about the fields on the details panel, select Extended help from the Help drop-down menu.
- D (Delete) next to the name of a distribution list to delete it.

5. Press F3 (Exit).

6. Depending on your user preferences, a confirmation panel may be displayed. Type YES and then press Enter to save your changes.

Searching for distribution lists

From the Distribution Lists panel, you can search for a specific distribution list or filter the list of distribution lists.

To do so, you must specify a description that has been defined for a distribution list as your search criteria. If you save this search criteria, Output Manager will apply it to the Distribution Lists panel from session to session, until you specify a different search value.

To search for distribution lists:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **D**, Distribution Lists, and press Enter. The search panel is displayed.
3. In the **List Description** field, type the user-defined description for a distribution list. This value can be up to 60 characters long. You can include the following wildcard characters: a trailing asterisk (*) or percent sign (%) for zero or more ending characters, or a question mark (?) or an underscore (_) for a single character anywhere in the description. If you specify a wildcard pattern (for example, Emp*), Output Manager finds all distribution lists that have descriptions matching that pattern.
4. In the **Save Criteria?** field, type **Yes** if you want to save your search criteria to your ISPF profile. Output Manager will then use the saved search criteria to filter the list of distribution lists from session to session, until you change these criteria. If you want to use your search criteria temporarily (for a one-time search), type **No**. Output Manager will filter the current list of distribution lists and then clear the search criteria when you exit the Distribution Lists panel. The default value is **Yes** if you have not previously saved search criteria for this panel, or **No** if you have saved search criteria.
5. Press Enter.

The Distribution Lists panel lists only the distribution lists that match your search criterion.

Removing recipients or nested distribution lists from a distribution list

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **D**, Distribution Lists, and press Enter. The Distribution Lists panel is displayed.

3. In the **CMD** column, type S (Select) next to the distribution list from which you want to remove recipients. The Distribution List panel is displayed.
4. In the **CMD** column, type D (Delete) next to the recipient or distribution list to be deleted from the distribution list and press Enter.

Tip: If you remove all recipients from a distribution list and then want to add new recipients, you must exit the Distribution List panel, confirm the removals, re-select the distribution list, and then add recipients.

5. Press F3 (Exit). An exit confirmation pop-up window is displayed.
6. Press Enter to confirm the deletions.

Printer attributes

You can define an optional set of printer attributes to control how hardcopies of individual reports are printed.

Also, if you plan to capture and use "dynamic printing parameters," you can define a set of printer attributes that contributes values for these parameters. In this case, the values for the dynamic printing parameters from the set of printer attributes will be merged with and take precedence over those from the SYSOUT data sets.

Note: For report bundles, the printing of the bundle output is controlled by how you code the BUNDLOUT DD statement in the print job, not by printer attributes. For more information about printing report bundles, see Chapter 9, "Report bundling," on page 153.

Printer attributes correspond to z/OS JCL parameters that are passed to the OUTPUT JCL statement when Output Manager builds the job for printing an individual report.

Output Manager categorizes printer attributes, as follows:

- General attributes, such as the name of the set of printer attributes, the Forms Control Block (FCB) name, and the form name
- Attributes for printing on a 3800-series printer
- Print Services Facility (PSF) attributes
- Miscellaneous attributes, such as checkpoint settings, margins, retry limits, and the external writer name

Which definition should you link printer attributes to?

To use a set of printer attributes, you must associate it with another Output Manager administrative definition.

The type of definition to which you link a set of printer attributes affects how that set of printer attributes is used. You can associate a set of printer attributes with any of the following types of definitions:

- **Recipient ID** - Link a recipient ID to a set of printer attributes to specify printing parameters for the reports that the recipient is to receive. For this set of printer attributes to be used, the **Print Model** field must be set to **Classic** in the report definition (for a basic or custom report) or in the set of archive attributes (for an archived report). Also, the recipient ID must be included on the distribution list for the report. The type of printing for which this set of printer attributes is used (for example, automatic printing or user-initiated print or reprint requests) depends on how you set the **Attr Usage** field in the recipient ID. For more information, see ["Creating a set of printer attributes"](#) on page 116 and ["Linking a recipient ID to printer attributes"](#) on page 108.
- **Report definition** - Link a report definition to a set of printer attributes to specify printing parameters for the report instances that are based on the report definition. These printing attributes will be used for printing reports for all recipients on the distribution list and will apply to all types of printing (automatic printing and user-initiated print and reprint requests). For this set of printer attributes to be used, the **Print Model** field must be set to **Report** in the report definition (for a basic or custom reports) or in the set of archive attributes (for an archived report). Also, this set of printer attributes can provide values for the "dynamic printing parameters" if no set of printer attributes is associated with the distribution list.

In addition, if USE_DISTRIBUTION_LIST_PRINTER configuration parameter (specified in the Policy Administration panels) is set to NO, you can link a report definition to a set of a printer attributes if you want Output Manager to capture values for the "report-level dynamic printing attributes" from this set of printer attributes and merge them with those that were captured from the SYSOUT data sets. For this set of printer attributes to be used, the **Dynamic Print** field must be set to **Report** in the report definition for the basic or custom report. For more information, see [“Capture of dynamic printing parameters”](#) on page 136, and [“Which printing parameter values are used”](#) on page 136.

- **Distribution list** - If USE_DISTRIBUTION_LIST_PRINTER configuration parameter (specified in the Policy Administration panels) is set to YES, you can link a distribution list to a set of printer attributes if you want Output Manager to capture values for the "report-level dynamic printing parameters" from this set of printer attributes and merge them with those that were captured from the SYSOUT data sets. For this set of printer attributes to be used, the **Dynamic Print** field must be set to **Report** in the report definition for the basic or custom report. If you do not associate a set of printer attributes with the distribution list, Output Manager will capture values for the "dynamic printing parameters" from the set of printer attributes that is associated with the report definition. For more information, see [“Linking a distribution list to printer attributes”](#) on page 113, or more information, see [“Which printing parameter values are used”](#) on page 136, and [“Capture of dynamic printing parameters”](#) on page 136.

Creating a set of printer attributes

A set of printer attributes provides parameters for physically printing reports on a printer.

It also can provide values for the "dynamic printing parameters" under certain printing configurations (see [“Which printing parameter values are used”](#) on page 136).

To create a set of printer attributes:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **K**, Printer Attributes, and press Enter.
3. Specify search criteria, or leave the fields blank, and press Enter.

The resulting list is filtered by your search criteria.

If no printer attributes have been defined, Output Manager first displays a pop-up window that indicates no printer attributes have been found. Press Enter and skip to Step 4.

4. Type ADD on the command line and press Enter.

The Printer Attribute Details panel is displayed.

Tip: Once a printer attribute has been defined, you can type I (Insert) in the **CMD** column and press Enter to display the Printer Attribute Details panel.

Fields:

Note: For detailed information about the printer parameters that correspond to these fields, refer to the *z/OS MVS JCL Reference Manual*. If a character field is left blank, or if a numerical field is zero (0), Output Manager ignores the field.

Name

(Required) A user-defined name for the set of printer attributes. This name can be up to 32 characters long.

Class

The one-character output class for the SYSOUT data set. This value can be a letter from A through Z or a number from 0 through 9. If you do not know the class to use, ask your system administrator. Corresponds to the CLASS parameter.

Destination

The destination for the SYSOUT data set. A destination can be a remote or local terminal, a node, a node and a remote work station, a node and a user ID, or a local device or group of devices. Corresponds to the DEST parameter.

Copies

The number of copies to print. You can specify a number from 0 through 255 (on JES2). The default value of 0 indicates that no copies should be physically printed. Corresponds to the COPIES parameter.

Page Def

The name of a member that contains statements to direct the PSF how to print a data set on a page-mode printer. The data set can hold SYSOUT from the spool or be allocated directly to a printer. These statements can indicate:

- The logical page length and width
- Fonts
- Page segments
- Multiple page types or formats
- Lines within a page
- Multiple logical pages on a physical page

This member must be in the library that is named in the cataloged procedure for initializing the PSF or in a library that is specified in the USERLIB parameter. Corresponds to the PAGEDEF parameter.

Format Def

The name of a member that contains statements to direct the Print Services Facility (PSF) how to print a SYSOUT data set on a page-mode printer such as the 3800 Printing Subsystem Model 3. These statements can indicate:

- Overlay forms to use during printing
- The location on a page where the overlays are to be placed
- Suppressions that can be activated for specific page formats

This member must be in the library that is named in the cataloged procedure for initializing the PSF or in a library that is specified in the USERLIB parameter. Corresponds to the FORMDEF parameter.

Form

The name of the form on which the SYSOUT data set is to be printed or punched. This name can be up to eight characters long and is composed of alphanumeric characters or national characters (\$, #, @). Corresponds to the FORMS parameter.

UCS

The universal character set (UCS) that JES is to use when printing the SYSOUT data set. This value can be up to four characters long and is composed of alphanumeric or national (\$, #, @) characters. Corresponds to the UCS parameter.

FCB

The Forms Control Block (FCB) name that JES uses to print a SYSOUT data set. This name can be up to four characters long and is composed of alphanumeric or national (\$, #, @) characters. Corresponds to the FCB parameter.

PRMODE

Indicates the printing process mode to be used for printing the SYSOUT data set. Corresponds to the PRMODE parameter.

TRC (Table Ref Chr)

Whether the logical records for the SYSOUT data set contain table reference character (TRC) codes. A TRC code indicates which font in the **Char Arg Tbl** field to use for printing a record. Valid values are **Yes** (includes TRC codes) and **No** (does not include TRC codes). Corresponds to the TRC parameter.

Writer

The name of the external writer that is to process the SYSOUT data set instead of JES. This name can be up to eight characters in length. Corresponds to the WRITER parameter.

Priority

The print priority. This value must be a number from 0 (lowest priority) to 255 (highest priority). The greater the priority value, the sooner a report data set will be printed. Corresponds to the PRTY parameter.

Line Count

The maximum number of lines that JES2 will print on each output page. This value must be a number from 0 to 255. Corresponds to the LINECT parameter.

Note: This field applies only to JES2 systems.

Flash

The name of the forms overlay frame to be inserted into the printer before printing the SYSOUT data set on a 3800 printer. You can specify the name of a specific forms overlay frame. This name can be up to four characters in length and can be composed of alphanumeric characters and national characters (\$, #, @). Alternatively, you can specify NONE to suppress flashing for the SYSOUT data set. Corresponds to the FLASH parameter.

Copy Group

Specifies how many copies of each page are to be printed, with a maximum of eight group-values. Each group-value is 1 through 3 decimal numbers, with a valid range from 1 through 255. The default for these fields is 0. The sum of the CopyGroup fields must not exceed 255. Corresponds to the COPYG parameter: COPYG=(group-value[,group-value]...). For more information, see the JCL Reference manual. The default for these fields is 0.

Input Tray

A number that identifies the input tray. Valid values are from 0 through 255. The default value is 0 (blank). Corresponds to the INTRAY parameter.

Output Bin

A number that identifies the output bin where the SYSOUT data set will be sent. Valid values are from 0 through 65535. The default value is 0 (blank). Corresponds to the OUTBIN parameter.

5. Type S (select) next to **PSF related fields** and press Enter to specify the following fields:

PSF Notify ID

The user IDs of the persons to be notified when the output is printed. You can specify up to four user IDs, for a total of 17 characters. If you specify multiple user IDs, you must include a node name in parentheses before each user ID, for example, *node1.myid*. Corresponds to the NOTIFY parameter.

FSS Data

The functional subsystem (FSS) data. This data is passed from a spooling product to a functional subsystem application (FSA) or other de-spooler. This value can be up to 127 characters in length. Corresponds to the FSSDATA parameter.

Color Map

Indicates the name of the data set, COLORMAP, that contains color translation information.

Fiche Setup

The name of the fiche setup. This name can be up to eight characters long.

Err Blocking

An option that indicates how to handle the following types of errors: *print-positioning errors* (occur when the printed data goes beyond the physical limits of the page, or beyond the overlay or logical page that is associated with this print job) and *invalid-character errors* (occur when a text character is not part of a font set). These errors can be either reported normally or blocked. Valid values are:

- **Block** causes both print-positioning errors and invalid-character errors to *not* be reported to PSF.
- **Char Blk** causes invalid-character errors to be blocked and print-positioning errors to be reported.
- **Pos Blk** causes positioning errors to be blocked and invalid-character errors to be reported.
- **Unblock** causes both print-positioning errors and invalid-character errors to be reported.

Print Errors

On the first line, indicate whether all error messages should be printed at the end of the output data set. Specify **Yes** to print all messages, or specify **No** to print only the messages that force an early termination of the print job. On the second line, type a number from 0 to 999 to indicate the maximum number of error messages that can be issued before Output Manager cancels the printing of the current data set. A value of 0 indicates an infinite number of messages. This message count includes *all* error messages that are generated by PSF, even if you specified **No** on the first line.

Error disp

Indicates what to do if an error occurs during printing that forces the termination of the print job. Default: Performs the standard action that is taken when an early termination error occurs. Quit: Releases the data set back to JES as complete even if an early termination error occurs during printing. Hold: Keeps the data set on the spool until a system operator releases it.

Remote Queue

The name of the remote queue for the printer. This name can be up to 125 characters long.

User Libs

The names of the libraries that contain the AFP resources to be used by the printer when processing SYSOUT data sets. The system searches these libraries before using any system-defined resources. You can specify up to eight library names, each up to 44 characters long (a maximum of 352 characters). Corresponds to the USERLIB parameter.

Note: If you also complete the **Format Def** and **Page Def** fields, the system will search the user libraries for page definitions and format definitions before continuing to the system libraries.

User Data

User-defined keywords and values, or a text string. You can specify up to 16 keywords, each up to 60 characters in length (or a maximum of 928 characters). Corresponds to the USERDATA parameter.

Press PF3 to return to the Printer Attributes panel.

6. Type S (Select) in the **3800 Printer related fields** field and press Enter to specify attributes related to 3800 printing.

Front Overlay

The name of the front overlay to be included on the front side of each printed sheet for the data set. This name can be up to eight characters long.

Back Overlay

The name of the back overlay to be included on the back side of each printed sheet for the data set. This name can be up to eight characters long.

Form Length

The page length that can be printed without reconfiguring the printer or changing the page length units (inches or centimeters). On the first entry line, specify a number from 0 through 9999. On the second entry line, specify the unit of measure: **CM** (centimeters) or **IN** (inches). For example, if you specify 11 IN, a page of length 11 inches could be sent to the printer.

Front Offset

The X-Y coordinates for the front-side offset. The front-side offset affects only the front side of each page of output. Valid values are from 0 to 9999 on each entry line. (The first line is for the X coordinate.)

Back Offset

The X-Y coordinates for the back-side offset. The back-side offset affects only the back side of each page of output. Valid values are from 0 to 9999 on each entry line. (The first line is for the X coordinate.)

Press PF3 to return to the Printer Attributes panel.

7. Type S (Select) in the **Miscellaneous Fields** field and press Enter to specify more optional attributes:.

Checkpoint Lines

The maximum number of lines per logical page. JES uses this value, along with the CKPTPAGE parameter, to determine when to take checkpoints while printing the SYSOUT data set or transmitting the SNA data set. This value must be a number from 0 to 32767. Corresponds to the CKPTLINE parameter.

Checkpoint Pages

The number of logical pages that can be printed or that can be transmitted as an SNA chain to an SNA workstation before JES takes a checkpoint. This value must be a number from 0 to 32767. The default value is 0 (blank). Corresponds to the CKPTPAGE parameter.

Checkpoint Secnd

The number of seconds that must elapse between checkpoints during the printing of a SYSOUT data set. This value must be a number from 0 to 32767. The default value is 0 (blank). Corresponds to the CKPTSEC parameter.

Compact Table

The name of the compact table for JES to use when sending the SYSOUT data set to an SNA remote terminal. This name can be up to eight alphanumeric characters in length. Corresponds to the COMPACT parameter.

Control

The printer control that defines the line spacing for the output. Valid values are:

- **Double** prints the output with double-spacing.
- **Program** causes each logical record to start with a carriage control character.
- **Single** prints the output with single spacing.
- **Triple** prints the output with triple-spacing.

Corresponds to the CONTROL parameter.

Retain Success

The duration for which to retain the data set after it has been successfully transmitted. Specify a time interval in the format HHHH:MM:SS (hours, minutes, and seconds), or specify FOREVER to retain the data set indefinitely. For example, to release the data set to JES two hours after a successful transmission, type 0002:00:00. Corresponds to the RETAINS parameter.

Retain Failed

The duration for which to retain the data set after its transmission has failed. Specify a time interval in the format HHHH:MM:SS (hours, minutes, and seconds), or specify FOREVER to retain the data set indefinitely. For example, if you want to release the data set to JES three hours after the last transmission fails, type 0003:00:00. Corresponds to the RETAINF parameter.

Retry Limit

The maximum number of times to reattempt transmitting a data set before the limits that are specified in the **Retain Success** and **Retain Failed** fields take effect. This value must be a number from 0 to 32767. Corresponds to the RETRYL parameter.

Note: If the retries are unsuccessful, the value in the **Retain failed** field is used to determine what to do next.

Retry Time

The duration for which to wait between each attempt to transmit a data set. Specify a time interval in the format HHHH:MM:SS (hours, minutes, seconds). Corresponds to the RETRYT parameter.

Port Number

The TCP/IP port number for the FSS connection to the printer. This value must be a number from 1 through 65535.

Resolution

The resolution to use for formatting the print data set. Valid values are: **P240** (240 pixels per inch) and **P300** (300 pixels per inch).

Norm Disp

The disposition of the SYSOUT data set after the job is completed normally. Valid values are:

- **HOLD** holds the SYSOUT data set until a user or operator releases it, thereby changing its disposition to WRITE. If a held output is not released, the user or operator can purge it.

Note: In an NJE environment, the system does not hold the data set until it reaches its ultimate destination node.

- **KEEP** prints the SYSOUT data set and then changes its disposition to LEAVE.
- **LEAVE** changes the disposition of the SYSOUT data set to KEEP after the user or operator releases it. If the LEAVE output is not released, the system hold it until the user or operator purges it.
- **PURGE** deletes the SYSOUT data set without printing it.
- **WRITE** prints the SYSOUT data set and then purges it. Unless a SYSOUT is held by the system or operator, it will always be printed.

Cond Disp

The disposition of the SYSOUT data set after the job is completed abnormally or fails. Valid values are the same as those for **Norm Disp** above.

Left Margin

The left margin for a 3211 printer. This value must be a number from 0 through 99. The value of 1 creates flush-left, full-width lines.

If you specify this value, you cannot also specify a value in the **Right margin** field. These fields are mutually exclusive.

Right Margin

The right margin for a 3211 printer. This value must be a number from 0 through 99. The value of 1 creates flush-right, full-width lines.

If you specify this value, you cannot also specify a value in the **Left margin** field. These fields are mutually exclusive.

Overflow

Indicates whether or not a JES overflow check is to be performed. Yes: Printer ejects when an end-of-forms indicator is encountered. No: Does not check for overflow.

Threshold

Indicates the maximum size of the SYSOUT data for the JES3 THRESHLD option. Valid values are between 1 and 99999999.

8. Type **S** (Select) in the **PDF Attribute fields** field and press Enter to specify more optional attributes.

Orientation

Specifies the Orientation of the PDF attached to the email. Valid values are **L** (Landscape) / **P** (Portrait). Default is **Landscape**.

Page Size

Indicates the page size of the PDF attached to the email in terms of Width by Height. Valid values are **integers** if the unit is **MM** or **decimal** if the unit is **INCH**. The default values are: Width=11.0 Inch and Height=8.50 Inch.

There are two ways to add or change **Page size** from the **Link** panel:

- Type **1** in the **Choose a predefined page size** panel and press Enter to specify more optional attributes:

This offers a list of predefined width and height which are standard and can be chosen by typing **S** (select) or **/**.

- Type **2** in the **Choose a custom page size** panel and press Enter to specify more optional attributes.

Page Units

Page unit can be entered as **I** (Inch) or **M** (MM), Default is **Inch**.

Page Height

Specify integer values if unit is **MM**, ranging between 25-2500.

Specify decimal values if unit is **INCH**, ranging between 1.0 – 100.00.

Default value is **8.5 Inch**.

Page Width

Specify integer values if unit is **MM**, ranging between 25-2500.

Specify decimal values if unit is **INCH**, ranging between 1.0 – 100.00.

Default value is **11.0 Inch**.

Top Margin

Indicates the Top Margin of PDF in units. To add or change the **Top Margin** go to the **Link** panel

Type **3** in the **Choose margin size** panel and press Enter to specify more optional attributes.

Top Margin

- Specify integer values if unit is **MM**.
- Specify decimal values if unit is **INCH**.

Default value is **1.0 Inch**.

Bottom Margin

Indicates the Bottom Margin of PDF in units. To add or change the **Bottom Margin** go to the **Link** panel

Type **3** in the **Choose margin size** panel and press Enter to specify more optional attributes.

Bottom Margin

- Specify integer values if unit is **MM**.
- Specify decimal values if unit is **INCH**.

Default value is **1.0 Inch**.

Left Margin

Indicates the Left Margin of PDF in units. To add or change the **Left Margin** go to the **Link** panel

Type **3** in the **Choose margin size** panel and press Enter to specify more optional attributes.

Left Margin

- Specify integer values if unit is **MM**.
- Specify decimal values if unit is **INCH**.

Default value is **1.0 Inch**.

Right Margin

Indicates the Right Margin of PDF in units. To add or change the **Right Margin** go to the **Link** panel

Type **3** in the **Choose margin size** panel and press Enter to specify more optional attributes.

Right Margin

- Specify integer values if unit is **MM**.
- Specify decimal values if unit is **INCH**.

Default value is **1.0 Inch**.

Font

Indicates the font of the PDF to be emailed. To add or change **Font** go to the **Link** panel:

Type **4** in the **Choose a font** panel and press Enter to specify more optional attributes.

This offers a list of fonts that can be chosen by typing **S** (select) or **/** and press Enter.

Default value is **Lucida Console**.

Font Size

Specify the font of the pdf to be emailed. Should be a valid integer. Default value is **8**.

Fit to page

Indicates if user wants to fit the text to the available page size. Valid values are **Y** or **N**. Default value is **N**.

Wrap Long Lines

Indicates if user wants to wrap the text to the new line or not. Valid values are **Y** or **N**. Default value is **N**.

9. (Required) In the **Name** field, specify a name for this set of printer attributes.
10. Specify values in any of the other fields, as needed.
11. Press F3 (Exit). An exit confirmation pop-up window is displayed.
12. Press Enter to save your entries and exit.
13. Activate the policy.

Managing printer attributes

Once you have created a printer attribute, you can edit or delete it from the Printer Attributes list panel.

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **K**, Printer attributes, and press Enter.
3. Specify search criteria, or leave the fields blank, and press Enter.
The resulting list is filtered by your search criteria.
4. In the **CMD** column, type the appropriate line command:
 - E (Edit) next to the name of a printer attribute to edit its details. For information about the fields on the details panel, select Extended help from the Help drop-down menu.
 - D (Delete) next to the name of a printer attribute to delete it.
5. Press F3 (Exit).
6. Depending on your user preferences, a confirmation panel may be displayed. Type YES and then press Enter to save your changes.

Searching for printer attributes

You can filter the list of printer attributes on the Printer Attributes panel or search for a specific set of printer attributes. If you want Output Manager to apply the search criteria to the Printer Attributes panel the next time you display it, you can save the criteria to your ISPF profile.

To search for printer attributes:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **K**, Printer Attributes, and press Enter.
The search panel is displayed.
3. In the **Print Attribute name** field, type the user-defined name for an printer attribute. You can specify a value up to 16 characters long. The following wildcards are permitted: the asterisk (*) or percent sign (%) for zero or more trailing characters, or the question mark (?) or underscore (_) for a single character anywhere in the name. If you specify a wildcard pattern, Output Manager will find all printer attributes that have names matching the pattern.
4. In the **Class** field, type the user-defined one-character output class for the SYSOUT data set. This value can be a letter from A to Z or number from 0 through 9, and corresponds to the JCL CLASS parameter. The following wildcards are permitted: the asterisk (*) or percent sign (%) for zero or more trailing characters, or the question mark (?) or underscore (_) for a single character anywhere in the name. If you specify a wildcard pattern, Output Manager will find all printer attributes that have classes matching the pattern.

5. In the **Destination** field, type the user-defined destination for the SYSOUT data set. A destination can be a remote or local terminal, a node, a node and a remote work station, a node and userid, or a local device or group of devices, and corresponds to the JCL DEST parameter. The following wildcards are permitted: the asterisk (*) or percent sign (%) for zero or more trailing characters, or the question mark (?) or underscore (_) for a single character anywhere in the name. If you specify a wildcard pattern, Output Manager will find all printer attributes that have destinations matching the pattern.
6. In the **Form** field, type the user-defined Forms Control Block (FCB) that JES is to use when printing the SYSOUT data set. This name can be up to eight characters long. The following wildcards are permitted: the asterisk (*) or percent sign (%) for zero or more trailing characters, or the question mark (?) or underscore (_) for a single character anywhere in the name. If you specify a wildcard pattern, Output Manager will find all printer attributes that have forms matching the pattern.
7. In the **Writer** field, type the user-defined Forms Control Block (FCB) that JES is to use when printing the SYSOUT data set. This name can be up to eight characters long. The following wildcards are permitted: the asterisk (*) or percent sign (%) for zero or more trailing characters, or the question mark (?) or underscore (_) for a single character anywhere in the name. If you specify a wildcard pattern, Output Manager will find all printer attributes that have writers matching the pattern.
8. In the **Formdef** field, type the user-defined name of the library member that contains statements to direct how the Print Services Facility (PSF) should print reports on a page-mode printer, such as a 3800 Printing Subsystem Model 3. The statements can indicate the overlay forms to use and the suppressions for specified page formats. Corresponds to the JCL FORMDEF parameter. The following wildcards are permitted: the asterisk (*) or percent sign (%) for zero or more trailing characters, or the question mark (?) or underscore (_) for a single character anywhere in the name. If you specify a wildcard pattern, Output Manager will find all printer attributes that have formdefs matching the pattern.
9. In the **Pagedef** field, type the user-defined name of the library member that contains statements to direct how the PSF should print a data set on a page-mode printer. The data set can be SYSOUT from the spool or a data set that is allocated directly to the printer. The statements can indicate the logical page length and width, fonts, page segments, page types or formats, lines within a page, and logical pages on a physical page. Corresponds to the PADGEDEF parameter. The following wildcards are permitted: the asterisk (*) or percent sign (%) for zero or more trailing characters, or the question mark (?) or underscore (_) for a single character anywhere in the name. If you specify a wildcard pattern, Output Manager will find all printer attributes that have pagedefs matching the pattern.
10. In the **Save Criteria?** field, type **Yes** if you want to save the search criteria that you specified to your ISPF profile. Output Manager will then use the saved search criteria to filter the list of printer attributes from session to session, until you change the criteria. If you want to use the search criteria temporarily (for a one-time search), accept the default value of **No**. Output Manager will filter the current list of printer attributes and then clear the search criteria and revert to the last-saved values (if any) when you exit the Printer Attributes panel.
11. Press Enter.
The Printer Attributes panel lists only the printer attributes that match your search criteria.

Banner pages

Optionally, you can define banner pages to provide additional information in the printed output for individual reports and for report bundles. For example, you can define a banner that contains a description of a report, routing procedures, or special delivery instructions.

Output Manager supports the following types of banner pages:

- *Report banners*—A banner that is associated with a report definition for a custom or basic report. It is printed for each captured report instance that is based on the report definition, including reports that are part of a report bundle.
- *Bundle banners*—A banner that is associated with a bundle definition. It applies to the entire bundle of reports.
- *Bundle recipient banners*—A banner that is associated with a bundle recipient definition. It is printed for that recipient whenever the recipient is included in a bundle instance.

The contents of each banner page, regardless of its type, must reside in a partitioned data set (PDS or PDS-E) member. These libraries should be allocated as FBA with an LRECL of 133. The use of variable length records is not recommended as results may be unpredictable. A sample banner page member is provided in the SBJTSAMP member BJT@PRBN. A banner member can include the following optional items:

- Variables that represent information to be inserted into the banner during print processing. For descriptions of banner variables, see [“Banner page variables” on page 127](#). Some variables are available for report bundles only.
- The /BEGSEP and /ENDSEP tags divide the content in a banner member into a heading section (/BEGSEP) and a trailing section (/ENDSEP). The syntax is:

```
/BEGSEP
heading banner content
/ENDSEP
trailing banner content
```

If you specify **Both** in the **Banner type** field of the banner definition, include the /BEGSEP and /ENDSEP tags in the banner member. If you do not include the /BEGSEP and /ENDSEP tags, the content will be printed at the beginning and end of the component to which the banner applies (a report, bundle recipient, or bundle).

Start of Field and End of Field characters:

- A *Start of Field* character signifies that the text following the character is banner text. The Start of Field characters are also used to specify the font size of the banner text or to introduce a banner substitution variable:
 - To specify a font size, place a font size character (` , _ , or !) at the beginning of a line of banner text to specify the size of the font to be used for all banner text that follows that character. Start of Field characters that control font size include:
 - (`): A backward quote symbol is used for the smallest font size (x'79'). This symbol indicates that subsequent text is to be printed in 5x5 block letters with a single space between each block letter.
 - (_): An underscore character is used for medium font size (x'6D'). This symbol indicates that subsequent text is to be printed in 7x7 block letters with two spaces between each block letter.
 - (!): An exclamation mark is used for large text size (x'5A'). This symbol indicates that subsequent text is to be printed in 12x12 block letters with two spaces between each block letter.

These font size characters are always replaced with a single space.

- You can include variables in banner page members to automatically insert customized values or text into banner pages at print time. To introduce a substitution variable, place the ampersand character (&) before the variable. The "&" introducing a substitution variable identifies the print position where the substitution is to start. A field may include literal text as well as substitution variables.
- The *End of Field* character, the tilde (~) (x'A1') signifies the end of the banner text. The "~" is included in the field and indicates the last print position of the substitution variable or block lettering.

Multiple fields may be specified on a single line. If multiple font size specifications are used, all block lettering is performed as if all specifications are the same as the first specification encountered. All non-block letter text is repeated on each line. Therefore, it is possible to create boundary boxes in your banner.

Setting up a banner:

After you define a banner member, you must set up the banner in Output Manager by performing the following tasks from the ISPF interface:

1. Create a banner definition. You must specify a logical banner name, the name of the PDS that contains the banner member, the banner member name, and the banner type (heading, trailing, or both). Also, set the banner definition status to **Enabled** to make it available for use by Output Manager. For more information, see [“Defining a banner page” on page 126](#).

2. Link the banner definition to the appropriate object definition (a report definition, bundle definition, or bundle recipient definition). See [“Linking a report definition to a banner page”](#) on page 96, [“Linking a banner page to a bundle definition”](#) on page 162, or [“Linking a banner page to a bundle recipient”](#) on page 165.

Restriction: You cannot link different heading and trailing banners to a report, bundle, or bundle recipient definition. Only one banner page can be linked to an object definition.

Additionally, you can specify optional "special instructions" to be inserted into a banner during print processing. To do so, you must 1) define the special instructions as part of the report definition, bundle definition, or bundle recipient definition, and 2) include the &INSTnnnn variable in the banner member where the special instructions are to be placed. The special instructions are stored as part of the report definition, bundle definition, or bundle-recipient definition; they are not specified in the banner member or banner definition. For more information about special instructions, see [Chapter 5, “Setting up reports,”](#) on page 71 and [Chapter 9, “Report bundling,”](#) on page 153.

Defining a banner page

Use this procedure to define a banner page to Output Manager. You must have already created the banner page contents in a PDS member.

To define a banner page:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **B**, Banner Pages, and press Enter.
3. Specify search criteria, or leave the fields blank, and press Enter.

The resulting list is filtered by your search criteria. If no banner pages have been defined on your Output Manager system, a pop-up window is displayed that indicates no banner pages rows have been found. Press Enter.

4. Type ADD on the command line, and press Enter. The Create a Banner Page pop-up window is displayed.

Tip: Once a banner page has been defined, you can type I (Insert) In the **CMD** column and press Enter to display the Create a Banner Page panel.

5. Required: In the **Name** field, type a name for the banner page. This name can be up to 24 characters in length.
6. Required: In the **Member name** field, type the name of the existing PDS member that contains the banner page content. This name can be up to eight characters in length.
7. Required: In the **Data set name** field, type the name of the existing cataloged data set (a PDS) that contains the specified banner page member.
8. In the **Type** field, indicate the banner type (or where the banner information will be printed in the output). The banner position is relative to the item to which the banner applies. The banner can apply to any of the following items (depending on the type of definition to which the banner definition is linked): a report, an entire report bundle, or a bundle recipient. Valid values are:
 - **Heading** - Print the banner before the item to which it applies
 - **Trailing** - Print the banner after the item to which it applies
 - **Both** - Print the banner both before and after the item to which it applies
9. Press Enter to save your entries. The Banners panel is redisplayed and lists the new banner page.

Managing banner pages

Searching for banner pages

You can filter the list of banner pages on the Banners panel or search for a specific banner page. If you want Output Manager to apply the search criteria to the Banners panel the next time you display it, you can save the criteria to your ISPF profile.

To search for a banner page:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **B**, Banner Pages, and press Enter.
The search panel is displayed.
3. In the **Banner name** field, type the user-defined name for a banner page. You can specify a value up to 24 characters long. The following wildcards are permitted: the asterisk (*) or percent sign (%) for zero or more trailing characters, or the question mark (?) or underscore (_) for a single character anywhere in the name. If you specify a wildcard pattern, Output Manager will find all banner pages that have names matching the pattern.
4. In the **Save Criteria?** field, type **Yes** if you want to save the search criteria that you specified to your ISPF profile. Output Manager will then use the saved search criteria to filter the list of banner pages from session to session, until you change the criteria. If you want to use the search criteria temporarily (for a one-time search), accept the default value of **No**. Output Manager will filter the current list of banner pages then clear the search criteria and revert to the last-saved values (if any) when you exit the Banners panel.
5. Press Enter.
The Banners panel lists only the banner pages match your search criteria.

Editing a banner page member

Use this procedure to edit the contents of a banner page that resides in a PDS member.

To edit a banner page member:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **B**, Banner Pages, and press Enter.
3. Specify search criteria, or leave the fields blank, and press Enter.
The resulting list is filtered by your search criteria.
4. In the **CMD** column, type E (Edit Member) next to the name of the banner page for which you want to edit the banner contents in the associated PDS member, and press Enter. The banner contents is placed in an ISPF edit session.
5. Edit the banner page member, as needed.
6. Press F3 (Exit) to update the banner page member and re-display the Banners panel.

Banner page variables

You can include variables in banner page members to automatically insert customized values or text into banner pages at print time.

Output Manager supports variables for all banner types: report banners, bundle banners, and bundle-recipient banners.

The two primary types of banner variables are product-specific symbolic variables (also called *product variables*) and *user-defined variables*. The product variables are supplied by Output Manager and apply to reports, report bundles, and bundle recipients. The user-defined variables are configured by users according to their needs.

Adding variables to a banner page

To use variables in banner page members:

1. Create a banner page member.
2. Add valid banner variables to the banner page member, as needed. For example, to include the job number in a report banner, insert the &JOBID variable into the banner member contents. To include your company name, insert the &CNAME variable into the member.
3. Save the banner page member.
4. From the Output Manager ISPF interface, define the banner page.

Related concepts

[Pre-defined Output Manager variables](#)

Output Manager supplies product variables that can be used in banner members for reports, report bundles, and bundle recipients.

Related tasks

[User-defined variables](#)

You can define variables to insert customized text into your banners.

Related reference

[Examples of controlling the text size and position](#)

The following examples indicate how you can control whether banner text prints in small, medium, or large block letters.

User-defined variables

You can define variables to insert customized text into your banners.

To do so, you must first choose the variable names, then assign values to the variable in the User Variables panel (A.PA.U) of the Output Manager ISPF interface. Thereafter, you can specify your user-defined variables in banner page members.

Note: User-defined variables are not currently supported in banners printed from ITOMweb.

To define a user variable:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **PA**, Policy Administration, and press Enter.
3. From the Administrative Functions menu, choose option **U**, User Variables, and press Enter.
4. Type S (select) in the CMD line next to the subsystem name that you want to add the user variable to.
5. Type ADD on the command line of the User Variable Administration panel.
6. In the **Variable Name** field, type the name of the variable.
7. In the **Variable Value** field, type a value for the variable.

For example, you could define a variable named CNAME that specifies your company's name:

```
Variable Name . CNAME
Variable Value. My Company Name
```

8. Press Enter to save the variable.

Related concepts

[Pre-defined Output Manager variables](#)

Output Manager supplies product variables that can be used in banner members for reports, report bundles, and bundle recipients.

Related tasks

[Adding variables to a banner page](#)

To use variables in banner page members:

Related reference

[Examples of controlling the text size and position](#)

The following examples indicate how you can control whether banner text prints in small, medium, or large block letters.

Pre-defined Output Manager variables

Output Manager supplies product variables that can be used in banner members for reports, report bundles, and bundle recipients.

All variable names begin with an ampersand (&).

Related tasks

[Adding variables to a banner page](#)

To use variables in banner page members:

[User-defined variables](#)

You can define variables to insert customized text into your banners.

Related reference

[Examples of controlling the text size and position](#)

The following examples indicate how you can control whether banner text prints in small, medium, or large block letters.

Variables for report banners

You can use the following product variables in banner members for individual reports and for reports in a bundle. However, you cannot specify these variables in banner members for an entire report bundle or a bundle recipient.

&A11

Inserts the name of a recipient to receive the report.

&A12

Inserts the name of the department where the recipient is located.

&A13

Inserts the room number or name where the recipient is located.

&A14

Inserts the building number or name where the recipient is located.

&A15

Inserts the first line of the recipient's address.

&A16

Inserts the second line of the recipient's address.

&A17

Inserts the third line of the recipient's address.

&A18

Inserts the fourth line of the recipient's address.

&A19

Inserts the report title that is to be included in report output for the recipient.

&ACCTnn

Inserts the account name or number that was optionally specified for the job that generated the SYSOUT on which a report is based. The *nn* variable represents a value from 01 through 08. This value corresponds to one of the eight **Account** fields that you optionally specified in a subselector rule to capture the accounting information from a JOB statement.

&ARCBYTES

Inserts the number of bytes in the archive data set for the job output.

&ARCHID

Inserts the archival identifier name for the report. If the archive identifier name is not specified in the report definition, the report identifier name is used. You can use this variable only on the report banner page and bundle report banner page. Blanks are substituted on the bundle banner page and bundle distribution banner page.

&ARCLINES

Inserts the number of lines of data in the archive data set for the job output.

&ARCPAGES

Inserts the number of pages in the archive data set for the job output.

&BDSN

Inserts the name of the banner data set that contains the member with the banner information.

&CDATE

Inserts the date on which the archive for the report was created. This date includes a 2-digit year and has the format MM/DD/YY.

&CDATE4

Inserts the date on which the archive for the report was created. This date includes a 4-digit year and has the format MM/DD/YYYY.

&CDEST

Inserts the capture destination: the destination value when the sysout was captured

&ODEST

Inserts the output destination: the destination string used during printing.

&CLASS or &C

Inserts the SYSOUT class of the report.

&COPIES

Inserts the number of copies of the report. For non-bundled report banner pages, the number of copies to be distributed is inserted. For bundled reports, 0 is inserted. This variable does not work in banner pages for reports that contain control breaks.

&CTIME

Inserts the time at which the archive for report output was created. This time is in the format HH:MM:SS, with colons separating the hours, minutes, and seconds. For non-bundled report banner pages, the creation time is the same as the print time unless the report is archived. If the report is archived, the creation time corresponds to the time the report was archived. For bundled reports and distribution and bundle banner pages, the creation time is the same as the print time. For report banner pages, the creation date is the time the report bundle holding copy was created. This variable does not work in banner pages for reports that contain control breaks.

&CTIMEP

Inserts the time at which the archive for the report output was created. This time is in the format HH.MM.SS, with periods separating the hours, minutes, and seconds.

&DATE

Inserts the date on which the report was printed. This date includes a 2-digit year and has the format MM/DD/YY.

&DATE4

Inserts the date on which the report was printed. This date includes a 4-digit year and has the format MM/DD/YYYY.

&DDNAME or &DD

Inserts the DD name that is associated with the report.

&DESC

Inserts the user-defined description for the report. The description of a report or bundle is retrieved from the DESC field on either the Report or Bundle Definition Attributes panel, respectively.

&DEST

Inserts the SYSOUT destination of a report or bundle.

&JOBID or &JID

Inserts the subsystem job identifier of the job that generated the report output.

&JOBNAME or &JNAME

Inserts the name of the job that generated the report output.

&LINES

Inserts the number of lines in a report, in an entire bundle of reports, or in all reports for a distribution identifier.

&NAME

Inserts the name of the template banner page member that is used to create banner pages.

&OUTCLASS

Inserts the SYSOUT class that is associated with the job that produced the report output.

&PAGES

Inserts the number of pages in the report, in an entire bundle of reports, or in all reports for a distribution identifier.

&RACFUSER

Inserts the RACF user ID under which the report output was generated.

&STEPNAME

Inserts the name of the job step that generated the report output.

&SYSTEMID

Inserts the identifier for the MVS system that contains the JES spool from which the report output was captured.

&TIME

Inserts the time at which the report was printed. This time is in the format HH:MM:SS.

&TIMEP

Inserts the time at which the report was printed. This time is in the format HH.MM.SS.

Variables for banners in report bundles

You can use the following additional product variables for banners within report bundles.

These variables apply to bundles only. Some variables can be used for any banner in a bundle, whereas other variables can be used only for bundle-recipient and bundle-report banners.

Variables for any banner in a bundle

You can use the following product variables in banner members for any type of banner within a report bundle: bundle banners (banners that apply to an entire bundle), bundle-recipient banners, and bundle-report banners.

&BNAME

Inserts the bundle name that is specified in the bundle definition on which the bundle instance is based.

&BDEST

Inserts the bundle destination that is specified in the bundle definition on which the bundle instance is based. A bundle destination is a recipient ID that provides supplemental information for printing the bundle.

&BDDATE

Inserts the date on which the bundle instance was deactivated in the format MM/DD/YYYY.

&BDTIME

Inserts the time at which the bundle instance was deactivated in the format HH:MM:SS.

&BDATE

Inserts the date on which the bundle instance was printed in the format MM/DD/YYYY.

&BTIME

Inserts the time at which the bundle instance was printed in the format HH:MM:SS.

&INSTnnnn

Inserts a number from 0001 through 0013 that maps to the special instructions that you specified in the bundle definition, bundle-recipient definition, or report definition (from the **Special Instructions** menu). Refer to [“Adding special instructions to a bundle banner” on page 163](#), [“Adding special instructions to a bundle recipient banner” on page 166](#), or [“Adding special instructions to a report banner” on page 96](#) for details about creating the special instructions set for each banner type.

Variables for bundle-recipient and bundle-report banners only

You can use the following product variables in banner members only for bundle recipients and bundle reports:

&BRNAME

Inserts the recipient name that is specified in the bundle recipient definition. This name is from the recipient ID that is linked to the bundle recipient definition.

&BRDEPT

Inserts the name of the department for the recipient that is named in the bundle recipient definition. This department is specified in the recipient ID that is linked to the bundle recipient definition.

&BRROOM

Inserts the room number or name for the recipient that is named in the bundle recipient definition. This room is specified in the recipient ID that is linked to the bundle recipient definition.

&BRADDR1

Inserts the first line of the address for the recipient that is named in the bundle recipient definition. This address line is specified in the recipient ID that is linked to the bundle recipient definition.

&BRADDR2

Inserts the second line of the address for the recipient that is named in the bundle recipient definition. This address line is specified in the recipient ID that is linked to the bundle recipient definition.

&BRADDR3

Inserts the third line of the address for the recipient that is named in the bundle recipient definition. This address line is specified in the recipient ID that is linked to the bundle recipient definition.

&BRADDR4

Inserts the fourth line of the address for the recipient that is named in the bundle recipient definition. This address line is specified in the recipient ID that is linked to the bundle recipient definition.

&BRBUILD

Inserts the building name or number for the recipient that is named in the bundle recipient definition. This building is specified in the recipient ID that is linked to the bundle recipient definition.

Examples of controlling the text size and position

The following examples indicate how you can control whether banner text prints in small, medium, or large block letters.

Start of Field and End of Field characters:

- A *Start of Field* character signifies that the text following the character is banner text. The Start of Field characters are also used to specify the font size of the banner text or to introduce a banner substitution variable:
 - To specify a font size, place a font size character (` , _ , or !) at the beginning of a line of banner text to specify the size of the font to be used for all banner text that follows that character. Start of Field characters that control font size include:
 - (`): A backward quote symbol is used for the smallest font size (x'79'). This symbol indicates that subsequent text is to be printed in 5x5 block letters with a single space between each block letter.
 - (_): An underscore character is used for medium font size (x'6D'). This symbol indicates that subsequent text is to be printed in 7x7 block letters with two spaces between each block letter.
 - (!): An exclamation mark is used for large text size (x'5A'). This symbol indicates that subsequent text is to be printed in 12x12 block letters with two spaces between each block letter.

These font size characters are always replaced with a single space.

- You can include variables in banner page members to automatically insert customized values or text into banner pages at print time. To introduce a substitution variable, place the ampersand character (&) before the variable. The "&" introducing a substitution variable identifies the print position where the substitution is to start. A field may include literal text as well as substitution variables. For more information on banner variables, see [“Banner page variables” on page 127](#).
- The *End of Field* character, the tilde (~) (x'A1') signifies the end of the banner text. The "~" is included in the field and indicates the last print position of the substitution variable or block lettering.

Multiple fields may be specified on a single line. If multiple font size specifications are used, all block lettering is performed as if all specifications are the same as the first specification encountered. All non-block letter text is repeated on each line. Therefore, it is possible to create boundary boxes in your banner.

Example 1

A backward quote (`) indicates that small block lettering should be used for all banner text that follows:

```
`ABCDEFGHI  
`JKLMNOPQR  
`STUVWXYZ
```

Example 2

An underscore (_) indicates that medium block lettering should be used for all banner text that follows:

```
_ABCDEFGHI  
_JKLMNOPQR  
_STUVWXYZ
```

Example 3

An exclamation point (!) indicates that large block lettering should be used for all banner text that follows:

```
!ABCDEFGHI  
!JKLMNOPQR  
!STUVWXYZ
```

Example 4

This example shows how to print the text that will replace three user-defined variables (&PRODNAME, &CCITY, and CSTATEAB) in large block letters:

```
!&PRODNAME  
!&CCITY  
!&CSTATEAB
```

Example 5

This example shows how to print a specific text string in large block letters:

```
!TRANSACTION  
!SUMMARY
```

Example 6

This example shows how to print a specific text string and text that will replace two user-defined variables:

```
SUMMARY REPORT FOR LOCATION:  
&CCITY  
&CSTATEAB
```

Related concepts

[Pre-defined Output Manager variables](#)

Output Manager supplies product variables that can be used in banner members for reports, report bundles, and bundle recipients.

Related tasks

[Adding variables to a banner page](#)

To use variables in banner page members:

[User-defined variables](#)

You can define variables to insert customized text into your banners.

Key print control fields

Before you begin defining printing-related definitions, consider how the following key print control fields are set in report definitions (for basic, custom, and indexed reports) and in sets of archive attributes (for archived reports).

These settings can affect which printing-related definitions you need to define and the definitions to which you link them.

Print Model

Indicates the "model" for determining which set of printer attributes to use for printing archives or reports. Valid values are:

- **Classic** - Use the recipient IDs that are on the distribution list and the sets of printer attributes to which these recipient IDs are linked. These printing attributes can be used for all types of printing. If a report selection rule is linked to a set of printer attributes, use this set of printer attributes to provide default printing attributes only for reprint requests that users issue for the basic and custom reports that are based on the report selection rule.
- **Report** - This value is the default value. For basic and custom reports, use the set of printer attributes to which the report definition is linked. The Class, Copies, and Dest values come from the following hierarchy: the distribution list printer > recipient details > report printer.

Dynamic Print

Indicates whether Output Manager should dynamically capture values for the "dynamic printing parameters" and use them for printing archives or reports instead of any values that might be specified for these parameters in your static, printing-related definitions. Valid values are:

- **No** - Do not dynamically capture and use the "dynamic printing parameters." Instead, obtain all printing parameters, including the "dynamic printing parameters," from the static printing-related definitions that you created (that is, the recipient IDs and any applicable set of printer attributes). Which definitions are used depends on how you set the **Print Model** field. This value is the default value.
- **Yes** (in archive attributes) or **Report** (in report definitions) - Dynamically capture values for the "dynamic printing parameters" from the appropriate sources, store them in the BJTDAT table, and use them for printing archives or reports. For archived reports, the BJTDAT table stores parameter values that are captured from SYSOUT data sets only. For basic and custom reports, the BJTDAT table stores parameter values that are captured from both SYSOUT data sets and the set of printer attributes that is linked to either the distribution list or the report definition, depending on how you set the USE_DISTRIBUTION_LIST_PRINTER configuration parameter (specified in the Policy Administration panels). When the USE_DISTRIBUTION_LIST_PRINTER is set to YES,

Output Manager captures the set of printer attributes associated with the distribution list to which the report is linked. If the distribution list printer is not defined, Output Manager captures printing parameters from the report printer. When the USE_DISTRIBUTION_LIST_PRINTER is NO (recommended), Output Manager captures report-level dynamic printing parameters from the report printer. The value specified for USE_DISTRIBUTION_LIST_PRINTER determines the values from the report-level set of printer attributes take precedence over the values from the archived SYSOUT.

Dynamic printing parameters

If you set the **Dynamic Print** field to **Report** or **Yes** in report definitions or sets of archive attributes, Output Manager can capture values for certain printing parameters (called *dynamic printing parameters*) from the archived SYSOUT data sets and (for basic and custom reports only) or from a report-level set of printer attributes.

These parameter values are stored in the BJTDAT table. They will be used for all types of printing (user-initiated print and reprint requests and automatic printing). They will take precedence over any values for these parameters that might be specified in recipient IDs or sets of printer attributes. The sources for the dynamic printing parameters are controlled by the option specified for the USE_DISTRIBUTION_LIST_PRINTER configuration parameter (specified in the Policy Administration panels).

The following JCL parameters comprise the "dynamic printing parameters":

- CLASS
- DEST
- FCB
- FORMS
- FORMDEF
- OPTCD=J (Only the value J is supported.)
- PAGEDEF
- PRMODE
- TRC
- UCS

All of these parameters, except OPTCD=J, can be taken from a SYSOUT data set or from a set of printer attributes. OPTCD=J can be taken only from the SYSOUT. OPTCD=J is a DCB subparameter that is used when a data set is printed to an AFP printer; it indicates that the logical record for each output data line contains a table reference characters (TRC). For detailed descriptions of all of these parameters, see the *IBM MVS JCL Reference*.

If **Dynamic Print** is set to **Yes** or **Report**, the final set of "dynamic printing parameters" generated from the data in the BJTDAT table override any values for the same parameters that you specified in static printing-related definitions (that is, recipient IDs or other sets of printer attributes). However, if the BJTDAT table does not contain a value for a "dynamic printing parameter," the value for that parameter can be taken from your static printing-related definitions. Also, if your printing-related definitions specify other printing parameters (outside the set of dynamic printing parameters), these parameters can also be used for printing. (Which definitions apply depends on how you set the **Print Model** field.)

You can force the capture (or both the capture and use) of the dynamic printing parameters by specifying the DYNAMIC_PRINTER_ATTRIBUTE_CAPTURE or DYNAMIC_PRINTER_ATTRIBUTE_USE parameter with the appropriate option in the SBJTSAMP member BJT#IN05. The default option for these commands is DEFINED, which causes Output Manager to use the **Dynamic Print** settings in the archive attributes and report definitions for determining whether to capture and use the "dynamic printing parameters." If you specify the DYNAMIC_PRINTER_ATTRIBUTE_CAPTURE or DYNAMIC_PRINTER_ATTRIBUTE_USE parameter with the option ARCHIVES, REPORTS, or ALL, Output Manager will capture (or capture and use) the dynamic printing parameters for all archived reports, all captured reports (basic reports, custom

reports, and field indexes), or all archived and captured reports, even if the **Dynamic Print** field is set to **No** in the archive attributes or report definitions for these objects. For more information about these commands, see the *IBM Tivoli Output Manager for z/OS Installation and Customization Guide*.

Capture of dynamic printing parameters

There are two levels of attributes that can be captured dynamically: report-level dynamic attributes (RDAT), and archive-level dynamic attributes (ADAT).

Report-level dynamic print attributes take precedence over archive-level print attributes, but reports can inherit the attributes from the associated archive attributes. If a printing attribute value is absent for a report, the report inherits the value for that attribute from the archive attribute associated with that report. These attributes are combined for each report to define a final set of printing parameters, and are stored in the BJTDAT table.

Archive-level dynamic attributes

For archived reports, Output Manager captures values for the "dynamic printing parameters" from the archived SYSOUT data sets only.

The parameters must have been specified in the JCL for the job that produced the SYSOUT. If you plan to use "dynamic printing parameters," you should become familiar with the JCL for the jobs that produce report SYSOUT at your site.

Archive-level print attributes are captured from SYSOUT. When SYSOUT is captured from JES, Output Manager creates an archive based on the parameters defined on the Archive Attribute panel. If DYNPRNT is set to YES in the associated archive attribute, Output Manager extracts print attributes from the SYSOUT. These dynamic attributes captured from SYSOUT are referred to as archive-level attributes, or ADAT, and are recorded in the BJTDAT table.

Report-level dynamic attributes

For basic and custom reports, Output Manager captures values for the "dynamic printing parameters" from both the SYSOUT data sets and a printer.

If DYNPRNT is set to NO in the Report Definition, Output Manager does not capture dynamic attributes for that report. However, if DYNPRNT is set to REPORT in the Report Definition, Output Manager captures dynamic attributes. These dynamic attributes are referred to as report-level dynamic attributes.

The printer used to capture the report-level dynamic printing parameters is controlled by configuration parameter USE_DISTRIBUTION_LIST_PRINTER (specified in the Policy Administration panels). When the USE_DISTRIBUTION_LIST_PRINTER parameter is set to YES, Output Manager captures the set of printer attributes to which the distribution list for the report is linked. If the distribution list printer is not defined, Output Manager captures printing parameters from the report printer. When the USE_DISTRIBUTION_LIST_PRINTER parameter is NO (recommended), Output Manager captures report-level dynamic printing parameters from the report printer. Whether the USE_DISTRIBUTION_LIST_PRINTER set to YES or NO determines if the values from the report-level set of printer attributes take precedence over the values from the archived SYSOUT.

Which printing parameter values are used

The final set of printing parameters used depends on how you set the PRNTMOD and DYNPRNT setting for each report.

The following sections detail which print parameters are used for each configuration.

When PRNTMOD is set to CLASSIC and DYNPRNT is set to YES/REPORT

The print attributes used when Print model is set to **CLASSIC** and dynamic print is set to **Yes** (in archive attributes), or **Report** (in report definitions), Output Manager uses the recipient IDs on the distribution list

that is selected for a reprint request and any sets of printer attributes to which these recipient IDs are linked.

The **Attr Usage** setting in the recipient IDs can affect when these sets of printer attributes are used. (The automatic printing of archived reports is not supported.) For basic and custom reports, if the report selection rule for the report is linked to a set of printer attributes, this set of printer attributes will provide default values for reprint requests only. **Note:** If the distribution list is linked to a set of printer attributes, Output Manager captures only the "dynamic printing parameters" from this set of printer attributes.

The "dynamic printing parameters" for archives are captured from the SYSOUT data sets and stored in the BJTDAT table. The "dynamic printing parameters" for basic and custom reports are captured and stored in the BJTDAT table. Output Manager captures values from the SYSOUT data sets and from the set of printer attributes that is linked to either (in order of priority): 1) the distribution list or 2) the report definition. These values are dynamically merged when a report is printed; the values from the set of printer attributes take precedence. The final set of "dynamic printing parameters" override any values for these same parameters that are specified in the static printing-related definitions (the sets of printer attributes or recipient IDs). The BJTDAT values take precedence over any values for the same parameters that are specified in the static printing-related definitions you create, that is, the applicable recipient IDs and sets of printer attributes. However, if the BJTDAT table does not contain a value for a dynamic printing parameter, the value for that parameter can be taken from the static printing-related definitions.

When Print model is set to **CLASSIC** and dynamic print is set to **Yes** (in archive attributes) or **Report** (in report definitions), the final set of dynamic printer attributes used for the CLASS and DEST parameters are merged from the recipient IDs on the distribution list and the values in the BJTDAT table for RDAT (report-level dynamic attributes) and ADAT (archive-level dynamic attributes) according to the following hierarchy:

1. RDAT
2. ADAT
3. Recipient Details

Output Manager first looks for the values of the CLASS and DEST parameters in the BJTDAT table, looking first for RDAT values, and then filling in any empty values with ADAT values. Output Manager then looks for any values not found in the BJTDAT table in the recipient IDs on the distribution list linked to the report or archive.

The COPIES value is taken from the recipient IDs only.

Note: The source for the RDAT values stored in the BJTDAT table depend on how you have set the SET RDATDSTH start up command. For more information on which values are used for RDAT and ADAT, see ["Capture of dynamic printing parameters"](#) on page 136.

Note: You cannot override printer attributes from the Print Override panel when PRNTMOD is set to CLASSIC.

When PRNTMOD is set to CLASSIC and DYNPRNT is set to NO

When Print model is set to **CLASSIC**, and DYNPRNT is set to **No**, dynamic print parameters are not captured.

The final set of printer attributes used are captured from the recipient IDs on the distribution list that is selected for a report or a reprint request and any sets of printer attributes to which these recipient IDs are linked. The **Attr Usage** setting in the recipient IDs can affect when these sets of printer attributes are used. (The automatic printing of archived reports is not supported.)

Note: You cannot override printer attributes from the Print Override panel when PRNTMOD is set to CLASSIC.

CLASS, COPIES, and DEST values are taken only from the recipient IDs that are on the distribution list (not from the applicable sets of printer attributes).

When PRNTMOD is set to REPORT, and DYNPRNT is set to YES/REPORT

When Print model is set to **REPORT**, and DYNPRNT is set to **Yes** (in archive attributes) or **Report** (in report definitions), all non-dynamic print parameters (including CC, CHARS, PRTY, BURST, FLASH, MODIFY, and COPYG) are retrieved from the report printer.

Note: If Print model is set to **REPORT** and dynamic print is set to **Yes** (in archive attributes) or **Report** (in report definitions), print parameters can be overridden at print time from the Print Override panel (in ISPF) or the Print Settings screen (in ITOMweb). For more information, see the *"IBM Tivoli Output Manager User's Guide"*.

The values for the dynamic print attributes PAGEDEF, FORMDEF, TRC, FORM, UCS, FCB, OPTCD, and PRMODE (not CLASS, COPIES, and DEST) are retrieved from the BJTDAT table only. The values in the BJTDAT table include RDAT and ADAT values, which are combined in a hierarchy to create a final set of dynamic printer attributes. The value used for each of these dynamic print attributes is determined by the following hierarchy:

1. RDAT
2. ADAT

This hierarchy implies that any value not present in RDAT is retrieved from ADAT. In other words, report-level dynamic print attributes (RDAT) take precedence over archive-level print attributes (ADAT). If a print attribute value is absent for a report, the report inherits the value for that attribute from the archive attribute associated with that report. Any values missing in RDAT will be filled in with the values from ADAT, resulting in the final set of merged dynamic printer attributes. If the attribute does not have a value in RDAT or ADAT, it is left blank.

Note: The source for the RDAT values stored in the BJTDAT table depend on how you have set the SET RDATDSTH start up command. For more information on which values are used for RDAT and ADAT, see ["Capture of dynamic printing parameters"](#) on page 136.

The final set of merged dynamic printer attributes for the CLASS and DEST parameters are merged from a different hierarchy than the other dynamic printer attributes. The sources of the CLASS and DEST values come from the following hierarchy:

1. the distribution list printer
2. recipient IDs
3. RDAT
4. ADAT

Output Manager first looks for the values of the CLASS and DEST parameters in the printer associated with the distribution list linked to the report or archive. If this printer does not have values for these parameters, Output Manager looks in the Recipient Details panel of the recipient IDs on the distribution list that is selected for a report or a reprint request and any sets of printer attributes to which these recipient IDs are linked. Any values found in the CLASS and DEST fields are merged and used. However, if neither the distribution list printer nor the recipient IDs contain values for all three of these parameters, Output Manager continues to look for the undefined values from the BJTDAT table, looking first for RDAT values, and then filling in blanks with ADAT values. Note that the print attribute values associated with the report printer are not used.

Note: The CLASS and DEST fields are always blank by default on the Print Override panel.

The final value for the print attribute COPIES (when Print model is set to **REPORT**, and DYNPRNT is set to **Yes** or **REPORT**) is merged from a different hierarchy than the other print attributes. The value for the COPIES parameter is determined by the following hierarchy:

1. distribution list printer
2. recipient IDs
3. report printer

Output Manager first looks for the value of the COPIES parameter in the printer associated with the distribution list linked to the report or archive. If the associated printer does not have a value for this

parameter, Output Manager looks in the Recipient Details of the recipient IDs on the distribution list. If the recipient IDs do not have a value for this parameter, Output Manager looks in the associated report printer. The first location in the hierarchy to have a COPIES value is used.

Note: The COPIES field is always set to zero by default on the Print Override panel.

All other print attributes are retrieved from the following location hierarchy

1. recipient IDs
2. report printer

Output Manager first looks for the values in the Recipient Details panel of the recipient IDs on the distribution list associated with a report or archive. Any values not found on the Recipient Details panel are then retrieved from the printer associated with the report.

When PRNTMOD is set to REPORT and DYNPRNT is set to NO

If Print model is set to **REPORT**, and dynamic print is set to **NO**, dynamic print attributes are not used. The print attribute values used are retrieved from the report printer.

Note: When Print model is set to **REPORT**, print parameters can be overridden at print time from the Print Override panel (in ISPF) or the Print Settings screen (in ITOMweb). For more information, see the *IBM Tivoli Output Manager for z/OS User's Guide*.

The values used for the CLASS, COPIES, and DEST parameters are retrieved from a different source than the other printer attributes. The sources for the values of the CLASS, COPIES, and DEST parameters are retrieved from the following hierarchy:

1. the distribution list printer
2. recipient IDs
3. report printer

Output Manager uses the first value it finds in the hierarchy for each parameter. For example, Output Manager first looks for the values of the CLASS, COPIES, and DEST parameters in the printer associated with the distribution list linked to the report or archive. If the associated printer contains values for all of these parameters, Output Manager uses these values.

However, if all or some of these parameters are not defined in the printer associated with the distribution list, Output Manager will continue down the hierarchy to the Recipient Details of the recipient IDs on the distribution list to look for values for the parameters that do not yet have values. Any values found so far in the CLASS, COPIES, and DEST fields are used. However, if neither the distribution list printer nor the Recipient IDs contain values for any of these parameters, Output Manager continues to look for the undefined values in the report printer.

Note: The CLASS and DEST fields are always blank by default on the Print Override panel. The COPIES field is always set to zero by default.

All other print attributes used, including CC, CHARS, PRTY, BURST, FLASH, MODIFY, and COPYG, are retrieved from the report printer.

Chapter 7. Reprinting reports

From the ISPF interface, you can reprint a basic or custom report, a field index (a set of indexed report pages), or an archived report for a distribution list by using the reprint line command.

Usually, you use a reprint command when you want to reproduce an entire print run of a report for all recipients on the distribution list. You might need to reprint a report because the initial print run failed or the printed reports were lost or damaged. Any changes that you make to a distribution list for a reprint request pertain only to that reprint request and are not saved. You cannot reprint from ITOMweb. For information about reprinting report bundles, see [Chapter 9, “Report bundling,” on page 153](#).

The ISPF interface supports the following reprint line commands:

R - Reprint

Reprints and distributes the report by using the currently assigned distribution list.

For a report to be reprinted, you must set the Hardcopy option for one or more recipients on the distribution list to **Yes**, or set the Hardcopy option for the distribution list as a whole to **Yes** so that it can be used as the default value for recipients.

You can also reprint an entire bundle instance, or part of a closed bundle instance. For more information, see

Note: To reprint a bundle of reports, you use the ISPF interface. For more information, see [“Reprinting an entire bundle instance” on page 180](#) and [“Reprinting part of a closed bundle instance” on page 181](#).

Reprinting a report using the currently assigned distribution list

You can use the R (Reprint) line command to reprint a basic or custom report or a field index (set of indexed report pages) and distribute it by using the distribution list that is currently assigned to the report definition.

1. From the Output Manager main menu, choose option **V**, View Reports, and press Enter.
2. From the View Selection menu, access the panel that lists the report or field index that you want to reprint, as follows:
 - Choose **R**, Reports, to display the Captured Reports panel.
 - Choose **I**, List Indexes, to display the Indexed Report Definitions panel. Then select a report definition to display the Field Indexes panel. This panel lists the field indexes (sets of indexed report pages) that were captured based on the report definition.
3. In the **CMD** column, type R (Reprint) next to the report or field index that you want to reprint. Then press Enter.
4. If you are reprinting a captured report that is not associated with a distribution list, the Distribution List Selection pop-up window is displayed.

You must select a distribution list. On the Distribution List panel, you can add or remove recipients; change the Hardcopy setting in the **Prt** column for any recipient; and if the **Print Model** field is set to **Report**, specify Class, Copies, and Dest values for any recipient. When you are finished, press F3.

Note: The Hardcopy option must be set to **Yes** for at least one recipient on the distribution list for the report to be printed.

The Print Confirmation panel is displayed, unless you set preferences to not display it for reprint requests.

5. To change the Hardcopy setting for a recipient, type either the H (Hardcopy) next to the recipient, in the **CMD** column.
6. When you are finished, press F3. The report or field index is queued for printing.

Chapter 8. Batch Report Print Program (BJTBATCH)

BJTBATCH allows you to output one or more instances of, or list the attributes of, archives or reports to data sets in batch.

Using BJTBATCH, you can:

- Request a report to be sent to a data set via a batch utility
- Request an archive to be sent to a data set via a batch utility
- Specify control card commands to output one or more page ranges of one or more instances of one or more reports or archives to output files. Each selection may be written to individual files or written to one or more combined files.
- Select and reprint archived SYSOUTs from the Output Manager repository, for greater analytic capability of the reports.
- List the attributes of the specified archive(s) or report(s).

Note: BJTBATCH will not recall archives or reports based on archives that are MIGRATED=V for any report specification.

Sample BJTBATCH JCL is included in SBJTSAMP member BJT@BTCH. Use this SBJTSAMP member as the basis for your BJTBATCH job streams. The output parameters are specified in the JCL job stream. The Db2 connection parameters, selection criteria, and processing rules are specified in the control statements.

Note: The user submitting the batch job must have READ access to the underlying Output Manager archive data sets and they also must have an OMVS segment in their RACF profile.

BJTBATCH JCL job stream

The BJTBATCH job stream specifies the job parameters and output files. The output files defined by the BJTPRINT DD definition in the JCL job stream are used if no DD control statements follow the report definition in the control card.

Sample job stream:

```
//JOBNAME JOB <Job parameters>
//STEP01 EXEC PGM=BJTBATCH
//BJTIN DD *
<control statements>
/*
//BJTPRINT DD <default output data set parameters>
//[DDNAME01] DD <output file #1 data set parameters>
//[DDNAME02] DD <output file #2 data set parameters> ...
//SYSPRINT DD SYSOUT=*
//
```

Specification of the BJTPRINT DD is optional. It will be used for all output that is not explicitly assigned to an output DD Name in the control statements.

BJTBATCH control statements

Control statements are used to specify the connection options, and to define the reports to be output.

There are two sections of the control statements control card:

- **Options** section: In this section you specify the Db2 parameters of the Output Manager database, including Db2 subsystem ID, table owner/schema, and plan name.
- **Select** section: In this section you specify the report selection and processing rules. You can select one or more Output Manager report name or sections of reports to be output. You can optionally specify the instance, ddname, etc of the report to be selected. The selected report(s) will be output to the file

specified in the dd control card following the selection criteria, or to the file defined by the BJTPRINT DD definition in the JCL job stream if no dd control statements follow the report definition.

Both of these sections are required. You must specify both the Options section and the Select section once, and only once, per invocation of BJTBATCH.

Control statements syntax and structure

The control statements must have the following structure and syntax:

```
Options:
Db2ssid(<Db2 Sub System Identifier>)
db2plan(<Db2 Plan name>)
Select:
Runmode(output)
Report(<report_name>)
Report_type(<report_name>)
Instance(<instance>)
Format(NoCC)
Pages(a:b c d:e)
Instance(<instance>)
Pages(:f)
dd(<output_DD_Name>)
* This is a comment
-- This is also a comment
Report(<report_name>)
pages(h:i)
dd(<output_dd_name>)
report(<report_name>)
dd(<output_dd_name>)
report(<report_name>)
archive(<archive_name>)
dd(<output_dd_name>)
archive(<archive_name>)
banner(<dsn_name>)
```

Notes on control statements:

- All control statement names may be specified in lower, mixed, or uppercase.
- All parameters will be upper-cased as appropriate for processing.
- All parameters are processed exactly as specified. The parentheses are required.
- All control statements are echoed to SYSPRINT for user verification.
- Each control statement in the output is prefixed with a BJTPxxxI information message code.
- Control statement default values are only effective if they are not specified. They are not used in the case of a parameter having an error, unless the specification explicitly calls for this.
- Any control statement syntax error will result in processing being terminated. However, all control statements are validated for syntactical correctness and where possible semantic correctness before any report processing takes place. The reason is that BJTBATCH will be part of a Job stream with subsequent processing of the output and continuing in the face of errors will most likely result in unnecessary resource usage and Job resubmissions.

The following Table shows the Syntactical and Semantic rules for the control statements.

<i>Table 5. Control statement syntactical and semantic rules</i>	
Control statement name	Syntax and semantic rules
*	An asterisk as the first non-whitespace character indicates the text following on this line is a comment and should be ignored for processing purposes.
--	Two hyphens as the first non-whitespace characters indicates the text following on this line is a comment and should be ignored for processing purposes.

Table 5. Control statement syntactical and semantic rules (continued)

Control statement name	Syntax and semantic rules
options:	Defines the options section. Indicates that what follows is the general options for this execution. Must be the first non-comment control statement. May only be specified once per invocation of BJTBatch.
db2ssid	Name of a valid Db2 Subsystem, May only be specified in the OPTIONS: section. Must be specified in the OPTIONS: section. May only be specified once per invocation of BJTBatch.
db2plan	Valid name of the Db2 Plan to use. Usually, this is the same plan that is used for ITOMweb. Refer to the value specified in SBJTSAMP member BJT@PRBI for ?BJTPLANX?. This statement may only be specified in the OPTIONS: section, and may only be specified once per invocation of BJTBatch. Must be specified in OPTIONS: section.
verbose	This option is only to be used at the request of technical support for troubleshooting purposes.
select:	Defines the Select section. Indicates that what follows is report or archive selection and processing rules. This statement may only be specified once per invocation of BJTBatch.
runmode	Specifies the runmode of BJTBatch. Valid values include OUTPUT (generate an output file containing the required data), or LIST (generate an output file containing report or archive metadata only).
report	A valid Output Manager report name. May be specified more than once. If no instance, pages and dd control statements are specified, the entire current instance of the report will be output to file specified in the next dd control card, or to the file defined by the BJTPRINT DD definition in JCL if no dd control statements follow this report definition. At least one archive or report statement must be specified. Report Name can be mixed case, leading and trailing blanks are ignored: REPORT(ABC) is treated the same as specifying REPORT(ABC). However, this parameter is case sensitive and must be specified exactly as defined in the Output Manager Report Definition.
report_type	<p>The parameter is a string that identifies the report type. This parameter modifies the prior report statement by providing additional filtering so that only the reports of the requested name and type are considered.</p> <p>Report_type (* BASIC CUSTOM UNDEFINED)</p> <p>Note:</p> <p>The default value is * that is all report types. With the default value if there are basic custom and undefined reports of the same name then each will be an instance and it is not possible for the user to specify which report matches instance 0, -1, etc.</p> <p>With content defined reports, it is possible to have multiple custom reports of the same name. In this case, it may not be possible for a user to specify exactly which report is to be selected.</p> <p>Template reports have no history associated with them directly and hence cannot be specified as a report type.</p>

Table 5. Control statement syntactical and semantic rules (continued)

Control statement name	Syntax and semantic rules
archive	A valid Output Manager archive name. This control statement may be specified more than once. Use the INSTANCE, PAGES, and DD control statements to further define the output. If no instance, pages, or DD control statements are specified, the entire current instance of the archive will be output to the file specified in the next DD control card, or to the file defined by the BJTPRINT DD definition in the JCL if no DD control statements follow this report definition. At least one REPORT or ARCHIVE statement must be specified.

Table 5. Control statement syntactical and semantic rules (continued)

Control statement name	Syntax and semantic rules
instance	<p>Modifies prior archive or report specification with an instance specification. Valid values are a single instance specification or a range of instance specifications.</p> <p>A single instance specification may be:</p> <ul style="list-style-type: none"> • * – all instances • 0 – current instance • n – nth prior instance <p>A date or time specifications can have either of the following forms:</p> <ul style="list-style-type: none"> • T-<n>-hh.mm.ss, where <n> is the number of days before today • CCYY-MM-DD-hh.mm.ss <p>A range of instance specifications is specified as: <i>Lower_instance_value:Upper_instance_value</i>, where:</p> <ul style="list-style-type: none"> • Lower_instance_value can be specified as a negative number, 0, or a date or time specification. • Upper_instance_value can be specified as a negative number, 0, or a date or time specification. <p>If the Lower_instance_value is algebraically larger than the Upper_instance_value then the order of processing the output is from most recent to the oldest that is descending, otherwise it will be lower to upper that is ascending. If instance (*) is specified the order of processing is from most recent to the oldest that is descending.</p> <pre style="background-color: #f0f0f0; padding: 5px;">Instance (-9: -2) Instance (-3: -6) Instance (-3:0) Instance (2014-10-01-05.00.30:2014-10-13-17.30.45) Instance (T-0: T-0-17.30)</pre> <p>This control statement is optional. More than one instance control statement can be specified for a report or archive.</p> <p>Note:</p> <p>If only a single value is provided as a date or time specification, then the first instance that has a date or time of capture that is greater than or equal to the specified date or time is used that is less than midnight on the specified day.</p> <p>When a date or time is specified, you can omit seconds, minutes, and hours.</p> <p>In Runmode (list) or if more than one archive or report is implied with a wild card specification and more than one instance is selected, then all instances are listed for each archive, report before the data is output for the next archive or report, that is the report or archive name is more significant than the instance.</p>

Table 5. Control statement syntactical and semantic rules (continued)

Control statement name	Syntax and semantic rules
pages	<p>Modifies prior report/instance specification with page information. Valid values are a space separated list of page definitions or a range of pages using a colon.</p> <p>If a page definition is empty or not specified, all pages are included.</p> <p>A page definition consists of either page_number or [lower]:[upper] where page_number, lower and upper are specified as unsigned integer values where upper is >= lower and <= last page in report or archive. If lower is omitted, the default is 1. If upper is omitted, the default is the last page. If page_number is specified, it must have a value such that page_number >= 1 and <= last page in report or archive. Omitting this statement is equivalent to specifying pages() i.e. print the entire instance. Multiple pages control statements can be specified, Page ranges can overlap. If pages are requested are out of range for the report or archive, then a warning is output and processing attempts to continue. If all pages are outside the range for the report then an error message is output. Page ranges will be sorted and collapsed for any single instance request.</p>
format	<p>The format of the output file. Valid values include: UnformattedView (the report or archive data is written exactly as is), NoCC (the first byte of each record is assumed to be a printer control byte and is to be stripped from the output stream), or <i>formatted_view_name</i> (formatting is specified in a formatted view). Format can only be specified once per report instance specification, and must follow the INSTANCE specification, if INSTANCE is used. This control statement is invalid for RUNMODE(LIST).</p>
dd	<p>Specify output DD name for prior report/instance/pages specifications. The DD Name must be 1-8 characters in length and be a valid DD name specified in the JCL for the Job Step. At least one report, instance, or pages specification must precede this control statement, i.e. if there are no control statements that generate output between two successive DD statements, then an error condition exists. Default is the value specified in the next DD control statement, or BJTPRINT if there are no succeeding DD control statements.</p> <p>Note: The DD statement in the JCL must either specify SYSOUT or if a data set is specified, the DCB must be specified with the RECFM parameter taking a value of VBA or VBM. Additionally, the first parameter of the DISP parameter must be MOD.</p>
banner	<p>Specifies the banner placement for the BJTBATCH command. You can have the banner only for the header (H), both header and trailer (B), or just the trailer (T).</p> <p>banner(<dsn_name>) H B T</p> <p>For example, BANNER(TSJDG.HM.BANNERS(ZAN@RPT) H)</p>

Batch printing to data sets using the BJTBATCH program

1. Modify the sample BJT@BTCH JCL in SBJTSAMP.
2. Specify job parameters and output files in the job stream:

- a) (Optional) In the BJTPRINT DD, specify the output data set. This will be used for all output that is not explicitly assigned to an output DD Name in the control statements.
- b) In DDNAME01, specify the first output file if needed.
- c) In DDNAME02, specify the second output file if needed.

Note: BJTbatch automatically computes the DCB attributes of the output DD based on the DCB attributes of the archives and reports being selected for output to the specified DD. BJTbatch will use the RECFM of the first object being output to the DD, and will select the maximum LRECL and BLKSIZE for all archives or reports being output (the values of 136 and 104 being used for report and archive listings respectively). If the output only contains the results of RUNMODE LIST operations, then the output RECFM is VBA.

If the output data set already exists, BJTbatch will not change the LRECL of the output data set. You will receive a BJTP053E error if the LRECL is not large enough to hold the largest LRECL of the objects being output in this run of BJTbatch. In this case, you should specify DCB attributes in the JCL that will support the LRECL given in the error message.

If you attempt to output a mix of archives and reports that have ASA control and machine control to the same output DD, a warning message will be emitted and processing will continue.

3. Control statements are specified in the BJTIN DD data set and must be input as text.

If the data set is not defined as an instream data set, it must have the following DCB characteristics: RECFM=FB, LRECL=80, BLKSIZE=<multiple of 80>. Control statements must be specified in character positions 1-72 of each record. Comment lines beginning with an asterisk '*' or two dashes '--' are allowed.

- a) Specify the **OPTIONS** section control statements in the BJTIN DD data set. The OPTIONS section identifies the database to work with, and specifies the general options for this execution of the BJTbatch program. The following control statements must be included in the OPTIONS section:
 - **DB2SSID:** The name of the Db2 subsystem ID. This control statement can only be specified once per invocation of BJTbatch, and must be 4 characters long.
 - **DB2PLAN:** The name of the Db2 plan to use. This control statement can only be specified once per invocation of BJTbatch.
- b) Specify the **SELECT** section control statements. The SELECT section defines the report selection and processing rules. This section may only be specified once per invocation of BJTbatch:
 - **RUNMODE:** Specifies the runmode of BJTbatch. Valid values include:
 - OUTPUT: Generate an output file containing the required data. This value is the default.

Note: RUNMODE OUTPUT is not supported for MIGRATED = "V".

 - LIST: Generate an output file containing report or archive metadata only. The report or archive is not included.

If the RUNMODE control statement is not included, OUTPUT is the default. This control statement applies to all subsequent report or archive specifications until RUNMODE is specified again.

- **REPORT:** A valid Output Manager report name. This control statement may be specified more than once. Use the INSTANCE, PAGES, and DD control statements to further define the output. If no instance, pages and DD control statements are specified, the entire current instance of the report will be output to the file specified in the next DD control card, or to the file defined by the BJTPRINT DD definition in the JCL if no DD control statements follow this report definition. At least one REPORT or ARCHIVE statement must be specified.
- **ARCHIVE:** A valid Output Manager archive name. This control statement may be specified more than once. Use the INSTANCE, PAGES, and DD control statements to further define the output. If no instance, pages and DD control statements are specified, the entire current instance of the archive will be output to the file specified in the next DD control card, or to the file defined by the BJTPRINT DD definition in the JCL if no DD control statements follow this report definition. At least one REPORT or ARCHIVE statement must be specified.

- **INSTANCE:** This optional control statement can be used to define the instance of the report or archive specified in the REPORT or ARCHIVE control statement. Multiple instances of a report or archive are allowed. If this control statement is not used, the current instance (0) of the report/archive will be used. Valid values include:

- * – all instances of the report or archive (Note: BJTBatch will not recall reports based on archives that are MIGRATED=V for any report specification)
- 0 – current instance
- -m:-n – The *m*th through *n*th instances.

You can specify a range of instances using the colon (:) character between the first instance number (*m*) and the second instance number (*n*). The instances are always processed first to last, but the "*m*" and "*n*" values in the INSTANCE statement control whether the instances are presented in ascending or descending order in the output.

If the "*m*" instance number is algebraically larger than the "*n*" instance number, then the order of processing the output is descending order; if the "*m*" is algebraically smaller than the "*n*" instance number, the order of processing will be ascending order. If all instances (*) are specified, output is presented in descending order. For example:

- Instance(-9:-2) begins nine instances prior to the current instance, and ends two instances prior to the current instance, in ascending order (oldest to most recent).
- Instance(-3:-6) begins three instances prior to the current instance, and ends six instances prior to the current instance, in descending order (most recent to oldest).
- Instance(-3:0) begins three instances ago and ends at the current instance, in ascending order (oldest to most recent).

- **PAGES:** This optional control statement can be used to define the pages, range of pages, or multiple ranges of pages of the report specified in the REPORT control statement or the archive specified in the ARCHIVE control statement. You can specify individual pages with a space between each page number, (for example 1 3 5 7), or a range of pages using a colon (for example, specifying 1:5 prints pages 1 through 5, inclusive). When specifying a range of pages, the first number must be smaller than the second number.

Multiple PAGES control statements are allowed, and multiple page ranges are allowed to overlap. A page number must be greater than 1 and less than the last page number in the report or archive. If this control statement is not used, all pages will be included. This control statement is invalid for RUNMODE(LIST).

- **FORMAT:** Specify the format of the output file. Valid values include:
 - UnformattedView: The report or archive data is written exactly as is. This is the default value.
 - NoCC: The first byte of each record is assumed to be a printer control byte and is to be stripped from the output stream.
 - *formatted_view_name*: If the name of a formatted view is specified, formatting is as specified in that formatted view.

FORMAT can only be specified once per report instance specification, and must follow the INSTANCE specification, if INSTANCE is used. This control statement is invalid for RUNMODE(LIST).

- **DD:** This control statement specifies the output DD name for the REPORT, INSTANCE, and PAGES control statements. This DD name must be a valid DD name specified in the JCL for the Job step and must be 1-8 characters in length. At least one archive or report, and optional instance or pages specification, must precede this control statement. The default is the value specified in the next DD control statement, or BJTPRINT if there are no succeeding DD control statements.

Note: The DD statement in the JCL must specify either SYSOUT or a data set. Additionally, the first parameter of the DISP parameter must be MOD if the output is to a data set. You cannot specify the DD Name of SYSPRINT for an output DD specification.

4. Submit the job.

The requested reports are output to the data set(s) specified in the DD control statements, or the BJTPRINT DD if DD control statements are omitted. Informational and error messages can be found in SYSPRINT.

BJTBATCH examples

The following example will extract the report named "Bank Report", and output the entire current instance of the report to MDDECRB.BATCH.REPORT:

```
//BATCHEXT JOB , ,CLASS=A,MSGCLASS=X
//STEP01 EXEC PGM=BJTBATCH
//BJTIN DD *
OPTIONS:
DB2SSID(R81A)
DB2PLAN(BJT3804)
DB2OWNER(BJT3907)
SELECT: REPORT(Bank Report)
/*
//BJTPRINT DD DISP=(MOD,CATLG,CATLG),
// DSN='MDDECRB.BATCH.REPORT',
// SPACE=(TRKS,(15,15),RLSE),
// UNIT=SYSDA
//SYSPRINT DD SYSOUT=*
//
```

The following example will extract the report named "Bank Report", and output pages 1 through 5 of the current instance of the report to MDDECRB.BATCH.BANK.REPORT.C1, pages 2 through 9 of the current instance of the report to MDDECRB.BATCH.BANK.REPORT.C2, and page 10 of all instances of the report to MDDECRB.BATCH.BANK.REPORT.C10:

```
//BATCHEXT JOB , ,CLASS=A,MSGCLASS=X
//STEP01 EXEC PGM=BJTBATCH
//BJTIN DD *
Options: DB2SSID(R81A)
db2plan(bjt4920)
DB2OWNER(BJT3907)
Select:
REPORT(Bank Report)
pages(:5)
DD(REPORT1)
pages(2:9)
DD(REPORT2)
instance(*)
pages(10)
DD(REPORT3)
/*
//REPORT1 DD DISP=(MOD,CATLG,CATLG),
// DSN='MDDECRB.BATCH.BANK.REPORT.C1',
// SPACE=(TRKS,(15,15),RLSE),
//REPORT2 DD DISP=(MOD,CATLG,CATLG),
// DSN='MDDECRB.BATCH.BANK.REPORT.C2',
// SPACE=(TRKS,(15,15),RLSE),
//REPORT3 DD DISP=(MOD,CATLG,CATLG),
// DSN='MDDECRB.BATCH.BANK.REPORT.C10',
// SPACE=(TRKS,(15,15),RLSE),
// UNIT=SYSDA
//SYSPRINT DD SYSOUT=*
//
```

Extract the report named "Customer Report" and output pages 1 through 7 of the current instance of the report to MDDECRB.BATCH.CUST.REPORT.C1, and page 105 through 107 of all instances of the report to MDDECRB.BATCH.CUST.REPORT.C105.

```
//BATCHEXT JOB , ,CLASS=A,MSGCLASS=X
//STEP01 EXEC PGM=BJTBATCH
//BJTIN DD *
Options:
DB2SSID(R81A)
DB2Plan(BJT5902)
DB2OWNER(BJT3907)
Select:
REPORT(Customer Report)
pages(2:7 1:3)
```

```

DD(REPORT1)
instance(*)
pages(105:107)
/*
//REPORT1 DD DISP=(MOD,CATLG,CATLG),
//      DSN='MDDECRB.BATCH.BANK.REPORT.C1,
//      SPACE=(TRKS,(15,15),RLSE),
//BJTPRINT DD DISP=(MOD,CATLG,CATLG),
//      DSN='MDDECRB.BATCH.BANK.REPORT.C10,
//      SPACE=(TRKS,(15,15),RLSE),
//      UNIT=SYSDA
//SYSPRINT DD SYSOUT=*
//

```

Extract the report named "Customer Report", and output pages 1 through 3 and pages 2 through 7 of the current instance of the report to MDDECRB.BATCH.CUST.REPORT.C1, and page 105 through 107 of all instances of the report to MDDECRB.BATCH.CUST.REPORT.C105.

```

//BATCHEXT JOB , ,CLASS=A,MSGCLASS=X
//STEP01 EXEC PGM=BJTBATCH
//BJTIN DD *
Options:
DB2SSID(R81A)
DB2Plan(BJT5902)
DB2OWNER(BJT3907)
Select:
REPORT(Customer Report)
instance(0)
pages(1:3)
instance(0)
pages(2:7)
DD(REPORT1)
instance(*)
pages(105:107)
/*
//REPORT1 DD DISP=(MOD,CATLG,CATLG),
//      DSN='MDDECRB.BATCH.BANK.REPORT.C1,
//      SPACE=(TRKS,(15,15),RLSE),
//BJTPRINT DD DISP=(MOD,CATLG,CATLG),
//      DSN='MDDECRB.BATCH.BANK.REPORT.C10,
//      SPACE=(TRKS,(15,15),RLSE),
//      UNIT=SYSDA
//SYSPRINT DD SYSOUT=*
//

```

List the information for the current instance of the report named "Customer Report" to MDDECRB.BATCH.CUST.REPORT.C1, and all instances of the report to MDDECRB.BATCH.CUST.REPORT.C105:

```

//BATCHEXT JOB , ,CLASS=A,MSGCLASS=X
//STEP01 EXEC PGM=BJTBATCH
//BJTIN DD *
Options:
DB2SSID(R81A)
DB2Plan(BJT5902)
DB2OWNER(BJT3907)
Select:
RUNMODE(LIST)
REPORT(Customer Report)
DD(REPORT1)
instance(*)
/*
//REPORT1 DD DISP=(MOD,CATLG,CATLG),
//      DSN='MDDECRB.BATCH.BANK.REPORT.C1,
//      SPACE=(TRKS,(15,15),RLSE),
//BJTPRINT DD DISP=(MOD,CATLG,CATLG),
//      DSN='MDDECRB.BATCH.BANK.REPORT.C10,
//      SPACE=(TRKS,(15,15),RLSE),
//      UNIT=SYSDA
//SYSPRINT DD SYSOUT=*
//

```

Chapter 9. Report bundling

You can optionally define a bundle of basic and custom reports and print the bundle as a single output stream.

The reports in a bundle instance are arranged by recipient to facilitate report distribution. To implement a report bundle, you must create a bundle definition as well as the other Output Manager rules and definitions that are normally required to capture and archive SYSOUT, define reports and banner pages, and identify report recipients.

To print a bundle instance, you must also create a bundle print job. Depending on how you code the print job, you can print a bundle instance to any of the usual places to which output is written, for example, to a physical printer, a SYSOUT data set on the spool, or a DASD data set. Usually, bundles are physically printed on printers.

After you create all of the required definitions and the bundle print job, you initiate the collection of reports for a bundle instance by issuing the bundle activation command (BUNDLE ACT). To stop the collection of reports and print the reports that have been gathered up to this point, you issue the bundle deactivation command (BUNDLE DEACT). You can issue the activation and deactivation commands either by using the Modify operator command or by placing them in a batch job.

The time interval between bundle activation and deactivation is referred to as the *bundle window*. While the bundle window is *open* (after activation and before deactivation), Output Manager defers the automatic printing of any reports that are specified in the bundle definition. Instead, Output Manager records these reports in the bundle history table (BJTBHI). When the bundle window is *closed* (at deactivation), Output Manager accesses the data in the bundle history table to print the bundle instance. Occasionally, you will need to delete old entries from the bundle history table to prevent the table from becoming too large.

In the ISPF interface, the Bundle History panel lists the closed bundle instances that are recorded in the bundle history table. You can select a closed bundle instance to view a list of the bundle recipients and bundle reports that it includes. You can then reprint all or part of the bundle instance. For a reprint request, you can use the same print job that was used to print the bundle at deactivation time or use a different print job.

Occasionally, you may need to remove an unwanted report from an open bundle instance before the report is printed at bundle deactivation time. The Manage Active Bundles panel in the ISPF interface allows you to delete unwanted reports from open bundles. Deleting reports from an active bundle prevents the unwanted reports from being printed at bundle deactivation.

Note: Although it is recommended to deactivate all active bundles before shutting down Output Manager, any bundles left open when Output Manager is shut down will remain open when Output Manager starts up again.

Output Manager rules and definitions for bundling

From the ISPF interface, you must first create all of the Output Manager rules and definitions that are normally required for capturing SYSOUT and defining recipients and reports. Additionally, you must create a bundle definition, which defines the packages of reports for each recipient in the bundle.

For a single report bundle, the following Output Manager definitions are required:

- A set of archive attributes. See [“Creating a set of archive attributes”](#) on page 33.
- A selector rule. See [“Creating a selector rule”](#) on page 44.
- A report selection rule. See [“Creating a report selection rule”](#) on page 76.
- Report definitions, one for each basic or custom report in the bundle. See [“Step 3: Define reports using report definitions”](#) on page 79.

Note: Output Manager ignores any distribution lists that might be associated with the report definitions.

- Report layouts, one for each custom report in the bundle. See [“Creating a report layout” on page 72.](#)
- Recipient IDs, one for each bundle recipient. See [“Creating a recipient ID” on page 104.](#)

Note: Output Manager uses only the descriptive data at the top of the Recipient Details panel to identify a bundle recipient for the delivery of bundle reports.

- A bundle definition including the bundle recipients and the reports that each recipient is to receive. See [“Task flow for defining and printing a report bundle” on page 157.](#)

Optionally, you can include banner pages at various levels within a bundle. First, you must create the banner members, and define these members to Output Manager For more information, see [“Banner pages” on page 124.](#)

Levels of bundle definition

A *bundle definition* is composed of the following levels of information, listed in the order in which they are defined:

1. Basic information that applies to the bundle as a whole
2. A list of the bundle recipients to receive one or more reports in the bundle
3. For each bundle recipient, a list of the reports that the recipient is to receive

When you define a bundle, you first specify the basic bundle information at the top of the Bundle Detail panel, including a unique bundle name. After you save this information to the database, you can add one or more recipients to the bundle. After you save the basic information for a recipient at the top of the Bundle Recipient Detail panel, you can select the reports that the recipient is to receive.

At each level of the bundle definition you can specify a banner page. Depending on the level to which a banner is linked, the banner is referred to as a *bundle banner* (a banner that is linked to the basic bundle definition), a *bundle recipient banner* (a banner that is linked to a bundle recipient), or a *bundle report banner* (a banner that is linked to a bundle report definition). For more information, see [“Bundle banners” on page 154.](#)

Bundle banners

You can include an optional banner page at each level within a bundle as follows:

- *Bundle banner* - A bundle banner applies to the entire report bundle. You can link only one bundle banner to a bundle definition. This banner will be displayed at the beginning or end of the bundle or in both locations, depending on the banner type (heading, trailing, or both) that you specify in the banner definition
- *Bundle recipient banner* - A bundle recipient banner (or recipient banner) applies to an individual bundle recipient. You can link a single recipient banner to each bundle recipient. A recipient banner will be displayed at the beginning or end of the recipient's package of reports or in both locations.
- *Report banner* - A report banner applies to an individual report. To each bundle report, you can link a single report banner. A report banner will be displayed at the beginning or end of a bundle report or in both locations.

The banners for bundles are defined in the same manner as non-bundle banners. You must specify the banner contents in a PDS member, and define the banner member to Output Manager to make it available for use. You differentiate among these banner types by linking the banner definitions to different levels in the bundle definition and by specifying banner content that is appropriate for the level. For information about defining banners, see [“Banner pages” on page 124](#) in [Chapter 6, “Print configuration,” on page 103.](#)

In a banner member (the PDS member that contains the banner contents), you can include the following optional items:

- Variables that represent information to be inserted into the banner during print processing (for example, details from a recipient ID that aid in delivering bundle reports to the recipient). For descriptions of banner variables, see [“Banner page variables” on page 127.](#)

- The /BEGSEP and /ENDSEP tags. These tags enable you to divide the content in a banner member into a heading section and a trailing section. The syntax is:

```
/BEGSEP
heading banner content
/ENDSEP
trailing banner content
```

If you specify the banner type of **Both** in the banner definition but do not include these tags in the banner member, the same content will be printed at the beginning and end of the bundle component to which the banner applies.

You can also define optional special instructions to be inserted into a banner during print processing. These instructions are stored as part of the bundle definition, bundle recipient definition, or report definition. To indicate where the special instructions are to be inserted, you must specify the &INSTnnnn variable in the banner member.

When a bundle instance is printed or reprinted, Output Manager inserts the appropriate banner pages into the bundle output stream, regardless of whether the bundle is being printed to a printer or data set. For more information about the position of banners in bundle output, see [“Hierarchical structure of bundle output” on page 155](#).

Hierarchical structure of bundle output

The output for a report bundle can contain the following elements, in the order shown:

- **Bundle banner** (optional)

A bundle banner is printed at the beginning of the bundle if you defined a bundle banner page with the banner type of **Heading** or **Both** and linked that banner definition to the bundle definition from the Bundle Detail panel.

Note: You can associate only one banner member with a bundle definition. If you specify **Both** as the banner type the content for the heading and trailing banners will be the same unless you included the special /BEGSEP and /ENDSEP tags in the banner member to divide the content into different heading and trailing sections. This also applies to bundle recipient banners and report banners.

- **Bundle manifest**

Output Manager automatically prints a manifest for the bundle instance. The manifest lists all of the reports that were collected for the bundle instance, arranged by bundle recipient.

- **Bundle recipient packages.** Information for each bundle recipient. Bundle recipients and reports are included in the bundle output in the same order in which they are listed on the Bundle Detail panel and the Bundle Recipient Detail panel. If no reports are collected for a recipient, the recipient is not included in the bundle output.

- **Bundle recipient banner** (optional)

A bundle recipient banner is printed at the beginning of the information for a recipient if you defined a bundle-recipient banner page with the banner type of **Heading** or **Both** and linked that banner definition to the bundle-recipient definition.

- **Bundle recipient manifest**

Output Manager automatically prints a manifest for each bundle recipient. The manifest identifies the recipient and then lists the reports that were collected for the recipient.

- **Reports for the recipient.** For each report that a recipient is to receive, the following information can be displayed:

- **Report banner** (optional)

A report banner is printed before the report data and any optional PRSET characters if you defined a report banner with the banner type of **Heading** or **Both** and linked that banner definition to the report definition.

- **PRSET print-control characters** (optional)

If you specified a PRSET member in the report definition, the binary control characters that this member contains are inserted into the report output at this location. A PRSET member usually contains control characters for controlling how a report is physically printed on a printer. For example, if you use a printer that supports Advanced Function Printing (AFP), you can define a PRSET member that contains AFP structured fields. If you assign a PRSET member to a bundle report but do *not* physically print the bundle on a printer that supports the PRSET control characters, the characters are just inserted into the report output stream before the report data.

- **Report data**

The basic or custom report data is presented. If the SYSOUT for a report was not generated and archived, the report is not included in the bundle instance.

- **Report banner** (optional)

A report banner is printed after the report data if you defined a report banner with the banner type of **Trailing** or **Both** and linked that banner definition to the report definition for the report.

- **Bundle recipient banner** (optional)

A bundle recipient banner is printed after all of the reports for a recipient if you defined a bundle recipient banner page with the banner type of **Trailing** or **Both** and linked that banner definition to the bundle recipient definition.

• **Bundle banner** (optional)

A bundle banner is printed at the end of the bundle if you defined a bundle banner page with the banner type of **Trailing** or **Both** and linked that banner definition to the bundle definition.

Planning report bundles

Before you implement report bundles, complete these planning tasks:

- Identify the recipients and reports to include in each bundle that you want to define.
- Ensure that recipient IDs and report definitions have been defined for the bundle recipients and reports.
- Create any optional definitions that you want to link to a bundle, bundle recipient, or bundle report definition, for example, banners or PRSET members.
- Determine where the bundle output should be printed to. If you physically print the bundle instances to a printer, coordinate with your print room operators to ensure that adequate resources are available to print and distribute the bundle reports.
- If you want to issue the bundle activation and deactivation command by using batch jobs, coordinate with your production control manager to schedule these jobs as part of batch processing.
- Refer to SBJTSAMP member BJT@BUNP for an example of batch activation and deactivation of bundles.

About printing bundle instances

You must manually define a bundle print job for any bundles that you want to print. Then, in the bundle definitions, you specify the name of the PDS member that contains the bundle print job.

Only one print job can be specified in a bundle definition. You can specify the same print job member in multiple bundle definitions, or create and specify different print job members for different bundle definitions. For more information, see [“Creating a bundle print job” on page 158](#).

By default, when you deactivate a bundle instance, the Output Manager started task automatically submits the bundle print job that is specified in the bundle definition to print the entire bundle instance as a single output stream. The output is written to the location that you specified in the print job, for example, to a printer, a SYSOUT data set on the spool, or DASD data set. Usually, a bundle instance is physically printed on a printer.

If necessary, you can temporarily disable the automatic submission of the bundle print job at deactivation. For example, you might want to prevent printing because your printer is not working. To disable the automatic submission of the print job, you must set the **Submit print job at deactivation** option to **No** in the bundle definition.

If you do not specify the name of a bundle print job in the bundle definition, or if you disable the automatic submission of the print job at deactivation, the bundle instance will still be stored in the bundle history table (BJTBHI). You can "reprint" the bundle later from the Bundle History panel.

From the Bundle History panel, you can reprint a deactivated bundle instance in full or in part. If you do so, Output Manager uses the print job that you specified in the bundle definition by default. However, you can specify another print job when you confirm the reprint request. For example, if you are reprinting reports for a particular recipient, you might want to create a print job that prints the reports on a printer that is located near the recipient.

If you link an optional PRSET member to the report definition for a bundle report, Output Manager will insert the binary control characters from that member into the bundle output stream to control the physical printing and formatting of that bundle report. If the printer does not support the control characters, the control characters will just appear in the bundle output stream and not affect print processing.

Note: During bundle printing, Output Manager ignores any printing-related "report behaviors" (including a set of printer attributes) that are specified in a recipient ID for a bundle recipient.

About printing copies for each report in a bundle

Administrators can specify the number of copies of a report to print for each recipient in a bundle. Specifying copies for a report in a bundle affects both the initial print of the bundle and all subsequent bundle reprints.

When a bundle is printed or reprinted, a SYSOUT data set is created for each report to the JES spool. For each report, the number of copies of that report (the COPIES value) is determined by the following hierarchy:

- If the copies value for the bundle report definition is defined (nonzero), then it is used. You can view or edit this value by going to the Bundle Definitions panel (ISPF panel A.N.D), selecting a bundle definition, selecting a recipient, and then specifying the 'S' command (Set configuration) next to a report.
- If the copies value for the bundle report definition is NOT defined (zero), then the copies value is retrieved (if nonzero) from the Recipient Details on the distribution list (associated with the report when it was captured) that corresponds to the bundle recipient. You can view the copies value of the report's distribution list by going to the Distribution Lists panel (ISPF panel A.D), then selecting a Distribution List, and specifying the 'C' command (print Configuration) next to a recipient.
- If neither the bundle definition nor the report distribution list has a defined (or zero) copies value, then a default of ONE is used.

For more information on specifying a COPIES value to each report for a recipient, see [“Adding a report to a bundle recipient package”](#) on page 166.

Task flow for defining and printing a report bundle

To set up and print a report bundle, perform the required and optional tasks that are listed in [Table 6](#) on page 157 in the order shown.

Before you begin, ensure that you have already defined a selector rule, a report selection rule, the report definitions and layouts for the bundle reports, and the recipient IDs for the bundle recipients. Also, activate the "policy" to make the selector rule and report selection rule available for processing (for more information about the ACTIVATE command, see [“Useful commands for administrators”](#) on page 29).

<i>Table 6. Task flow for setting up and printing a report bundle</i>	
Task	Required/optional
1. Create a print job for the report bundle.	Required for bundle printing
2. Create a basic bundle definition.	Required

<i>Table 6. Task flow for setting up and printing a report bundle (continued)</i>	
Task	Required/optional
3. Link the bundle definition to a bundle banner page.	Optional
4. Add special instructions to the bundle banner.	Optional
5. Add details to the bundle definition.	Optional
6. Add bundle recipients to the bundle definition.	Required
7. Link a bundle recipient to a recipient banner page.	Optional
8. Add special instructions to a bundle recipient banner.	Optional
9. Add reports to a bundle recipient.	Required
10. Customize the sample batch job: Summary of batch job customization steps	Optional
11. Activate the bundle to open a bundle instance and begin the collection of reports.	Required
12. Deactivate the bundle instance to print the reports.	Required

Creating a bundle print job

You can create one or more bundle print jobs to print and reprint bundle instances.

Usually, you use the same print job that was specified in the bundle definition for reprint requests. However, you can create other bundle print jobs for reprint requests, if necessary. Output Manager provides two sample print jobs in the SBJTSAMP that you can use as a basis:

- BJT@PBN1 prints to a dynamically generated DD name and is used for dynamic printer attributes
- BJT@PBN2 prints to the DD name BJTPRINT. This DD name can be modified.

All of the bundle print jobs that you create must reside in the PDS that is specified by the PRINT_PDS configuration parameter. (For more information about this command, see the *IBM Tivoli Output Manager for z/OS Installation and Customization Guide*.) Otherwise, the started task bundle management functions will not be able to find the print job when processing a print request.

Sample bundle print jobs

Two sample bundle print jobs are provided in SBJTSAMP: BJT@PBN1 and BJT@PBN2. These print jobs print messages and the bundle output to the output class that is specified in a dynamically generated DD name.

You should customize the sample print job, as needed, to print your bundles.

BJT@PBN1

This sample bundle print job is to be used for printing reports with captured dynamic printer attributes. A single output element on the spool will contain multiple sysout data sets (reports). Modify the sample job according to the modification instructions in the comments.

Note:

- Output DD Names are dynamically created and allocated for BJT@PBN1.
- Reports can be grouped under one spool output element.

BJT@PBN2

This sample bundle print job is to be used for printing all reports using the BJTPRINT DD statement.

JCL statements

- **JOB** specifies the job name and some common keyword parameters. You can tailor the job card, as needed.
- **PRINT EXEC** invokes the bundle print program (BJTBATCH). Do *not* edit this statement.
- **STEPLIB DD** identifies your Output Manager load library. You must replace the ?BJTHLQ? variable with the high-level qualifier that you specified at installation.
- **SYSPRINT DD** specifies where the log messages from the print job should be written to.
- **BJTPRINT DD** identifies where the report bundle will be sent.

Summary of print job customization steps

Before you begin, consider where the bundle output should be written to based on the needs of your bundle recipients and your site's printing practices.

To customize the sample bundle print job:

1. Copy the sample bundle print job (SBJTSAMP member BJT@PBN1 or BJT@PBN2) to create a copy that you can customize. This action preserves the original sample print job intact.
2. (Required) In the STEPLIB DD statement, replace the ?BJTHLQ? variable with the high-level qualifier that you specified at installation.
3. Change ?BJTPLAN? to the plan name prefix of the Output Manager plan specified in BJT@PRBI.
4. Change ?DB2SSID? to the Db2 SSID of the Db2 subsystem that contains the Output Manager database tables.
5. Change ?SDSNEXIT? to the Db2 Exit library for your Db2 subsystem.
6. Change ?SDSNLOAD? to the Db2 LOAD library.
7. If necessary, tailor the SYSPRINT DD statement and the job card for your site.
8. Place your customized bundle print job in a member of the PDS that is specified by the PRINT_PDS configuration parameter in the Policy Administration panels.

Creating a basic bundle definition

To define a report bundle, you must first specify basic information that applies to the bundle as a whole and save it to the Output Manager database.

A unique bundle name is required. A print job member is required to print bundle instances at deactivation time.

Optionally, you can link the bundle definition to a bundle banner page. You must have previously created the banner member, defined the banner to Output Manager, and loaded the banner contents into the Output Manager database. (See [Chapter 6, “Print configuration,” on page 103.](#)) A banner page provides user-defined information that is inserted at the top or bottom of bundle instances or in both locations. It usually contains information that applies to the bundle as a whole.

Note: If you link an optional banner page to a bundle definition, you can optionally specify bundle delivery details to be added to the banner page during print processing. For example, you might want to include department, room, building, or address details for the entire bundle. The delivery details are specified in a bundle delivery recipient ID. The values for the banner page variables will reference the information in this bundle delivery recipient ID.

You must save the basic bundle information to the database before you can add bundle recipients or specify special instructions for the bundle banner page.

Before you begin: Ensure that you have created the bundle print job and the recipient IDs, report definitions, and banner pages to be associated with the bundle definition.

To create a basic bundle definition:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.

2. From the Administrative Functions menu, choose option **N**, Bundle Administration, and press Enter.
3. From the Bundle Administration menu, choose option **D**, Bundle Definitions, and press Enter.
4. Specify search criteria, or leave the fields blank, and press Enter.

The resulting list is filtered by your search criteria.

5. Type ADD at the command line and press Enter. Alternatively, you can choose option **1**, New bundle definition, from the **File** pull-down menu or specify the I (Insert) line command in the **CMD** column if this bundle definition is not the first one that you are creating.

The Bundle Detail panel is displayed.

6. (Required) In the **Bundle name** field, type a unique name for the bundle. This name can be up to 32 characters in length and can include blank spaces.
7. In the **Description** field, type an optional description for the bundle. This value can be up to 60 characters in length.
8. In the **Status** field, accept the default value of **Enabled** if you want the bundle definition to be available for activation to begin the collection of reports. Specify **Disabled** if you want the bundle definition to be unavailable for activation. Usually, the status is set to **Enabled**. However, you might want to specify **Disabled** to make the bundle definition temporarily unavailable for activation. For information about bundle activation, see [“Activating a bundle” on page 177](#).
9. (Optional) If you want to link **Bundle Delivery** details to the bundle definition, choose option **1**, Choose bundle delivery details, from the **Links** menu. A bundle delivery provides delivery parameters from an underlying Recipient ID that supplement an optional bundle banner page. If you link an optional bundle banner for the bundle definition, the destination details associated with the recipient ID defined in the **Bundle Delivery** field will be used for the bundle banner variables. For more information, see [“Adding bundle delivery information to a bundle banner” on page 163](#).
10. (Optional) If you want to link to a set of **Printer attributes** to the bundle definition, choose option **3**, Choose a printer attribute, from the **Links** pull-down menu.
11. (Optional) If you want to link a bundle **banner** page to the bundle definition, choose option **6**, Choose a banner page, from the **Links** menu. This banner page will apply to the entire bundle and be printed at the top or bottom of the bundle or in both locations. For more information, see [“Linking a banner page to a bundle definition” on page 162](#).
12. (Optional) Type a mask for naming the SYSOUT files that are dynamically allocated for each bundle report when the Dynamic print field is set to Report in the **DD name mask** field. This mask must be composed of three characters, beginning with a letter. Alphanumeric characters and national characters (#, \$, @) are allowed. Output Manager will add five numbers after these characters to generate a unique file name, for example, ABC00001.
13. In the **Print job member** field, type the name of the PDS member that contains the bundle print job to use for printing this bundle.

This member must exist in the PDS that is specified by PRINT_PDS configuration parameter in the Policy Administration panels. In the corresponding **Submit print job at deactivation** field, accept the default value of **Yes** to have Output Manager automatically submit the specified print job when you deactivate a bundle instance. Output Manager also uses this print job by default whenever you reprint a deactivated bundle instance from the Bundle History panel. You can override the default print job if necessary.

Note: Output Manager stores data for the bundle instances in the database. You can reprint the deactivated bundle instances later from the Bundle History panel.

14. Specify SAVE at the command line or choose option **2**, Save, from the **File** pull-down menu to save the basic bundle information to the database. You will not be able to add bundle recipients or specify special instructions for the banner page until you do so.

Next step: Add one or more bundle recipients to the bundle definition (see [“Adding a bundle recipient to a bundle definition” on page 164](#)). Alternatively, specify special instructions for the bundle banner page, if one is specified (see [“Adding special instructions to a bundle recipient banner” on page 166](#)).

Managing bundle definitions

Searching for bundle definitions

You can filter the list of bundle definitions on the Bundle Definitions panel or search for a specific bundle definition. If you want Output Manager to apply the search criteria to the Bundle Definitions panel the next time you display it, you can save the criteria to your ISPF profile.

To search for bundle definitions:

1. From the Output Manager main menu, specify options **A.N**, Administrative Functions > Bundle Administration.
2. From the Bundle Administration menu, choose option **D**, Bundle Definitions, and press Enter. The Bundle Definitions panel is displayed.
3. From the **Search** pull-down menu, choose option **1**, Enter search criteria.
The Search for Bundle Definitions window is displayed.
4. In the **Bundle name** field, type a unique name for the bundle. This user-defined value can be up to 32 characters in length. The following wildcards are permitted: the asterisk (*) or percent sign (%) for zero or more trailing characters, or the question mark (?) or underscore (_) for a single character anywhere in the name. If you specify a wildcard pattern, Output Manager will find all bundle definitions that have names matching the pattern.
5. In the **Save Criteria?** field, type **Yes** if you want to save the search criteria that you specified to your ISPF profile. Output Manager will then use the saved search criteria to filter the list of bundle definitions from session to session, until you change the criteria. If you want to use the search criteria temporarily (for a one-time search), accept the default value of **No**. Output Manager will filter the current list of bundle definitions and then clear the search criteria and revert to the last-saved values (if any) when you exit the Bundle Definitions panel.
6. Press Enter.
The Bundle Definitions panel lists only the bundle definitions that match your search criteria.

Editing a bundle definition

You can edit any of the bundle information at the top of the Bundle Detail panel. This information includes the bundle name, description, banner page, and print job member. The changes will take effect the next time you activate the bundle to open a new bundle instance. The changes do not apply to the bundle instance that is currently open.

To edit a bundle definition:

1. From the Output Manager main menu, specify options **A.N**, Administrative Functions > Bundle Administration.
2. From the Bundle Administration menu, specify option **D**, Bundle Definitions. The Bundle Definitions panel is displayed.
3. Type the E (Edit) or S (Select) line command next to the bundle definition that you want to edit, and press Enter.
4. Edit any of the following fields:

Bundle name

Type a unique name for the bundle, up to 32 characters in length.

Description

Type a description for the bundle, up to 60 characters in length.

Status

Specify **Enabled** to allow the bundle definition to be activated, or specify **Disabled** to prevent the bundle definition from being activated.

Bundle delivery

Use the **Links** menu to specify optional bundle delivery details that you want to be applied to the variables of an optional bundle banner page. If you linked a banner page to a bundle definition,

you can optionally specify bundle delivery details to be added to the banner page during print processing. Bundle delivery details are specified by a linked recipient ID.

Printer attr

(Optional) Displays the name of the set of printer attributes that is currently linked to this bundle definition (if any). To link a set of printer attributes, choose option **3** from the **Links** pull-down menu. If this field is blank, a set of printer attributes has not been linked to the bundle definition.

Banner

(Optional) Use the **Links** menu to specify an optional bundle banner page. This field displays the name of the bundle banner page that is linked to the bundle definition. You can link a banner page by choosing option **6** from the **Links** menu. The selected banner will be printed at the top or bottom of bundle output or in both locations, depending on how you defined the banner to Output Manager with option A.B.

DD name mask

Type a mask for naming the SYSOUT files that are dynamically allocated for each bundle report when the Dynamic print field is set to Report. This mask must be composed of three characters, beginning with a letter. Alphanumeric characters and national characters (#, \$, @) are allowed. Output Manager will add five numbers after these characters to generate a unique file name, for example, ABC00001.

Print job member

Type the name of the PDS member that contains the bundle print job that you want to use for printing bundle instances at deactivation.

Submit print job at deactivation

Type **Yes** to have Output Manager automatically submit the specified bundle print job when you deactivate a bundle instance, or type **No** to prevent the automatic submission of this print job.

5. Press Enter. If a confirmation prompt is displayed, press Enter again to confirm your changes.

Deleting a bundle definition

You can delete bundle definitions that you no longer use for producing report bundles. When the D (Delete) line command is specified for a bundle definition, the entire bundle definition, including all bundle recipients and bundle reports, is deleted from the database. However, the underlying recipient IDs and report definitions are not deleted.

To delete a bundle definition:

1. From the Output Manager main menu, specify options **A.N**, Administrative Functions > Bundle Administration.
2. From the Bundle Administration menu, specify option **D**, Bundle Definitions. The Bundle Definitions panel is displayed.
3. In the **CMD** column, type the D (Edit) line command next to each bundle definition that you want to delete, and press Enter. You can specify this command for multiple bundle definitions.
4. If a confirmation prompt is displayed, press Enter again. All of the selected bundle definitions, including their bundle recipients and bundle reports, are deleted from the database.

Linking a banner page to a bundle definition

You can link an optional banner page to a bundle definition from the Bundle Detail panel. This banner is referred to as the *bundle banner*.

The banner contents will be printed at the beginning or end of the entire bundle, or in both locations, depending on the banner type (heading, trailing, or both) that you specified in the Output Manager banner definition. Usually, a bundle banner presents information that applies to the bundle as a whole.

Before you begin: Ensure that the banner contents resides in a PDS member and has been loaded into the Output Manager database and that a banner definition exists. For information about these tasks, see Chapter 6, “Print configuration,” on page 103.

To link a bundle definition to a banner page:

1. From the Output Manager main menu, specify options **A.N**, Administrative Functions > Bundle Administration.
2. From the Bundle Administration menu, choose option **D**, Bundle Definitions, and press Enter. The Bundle Definitions panel is displayed.
3. Type the S (Select) line command next to the bundle definition to which you want to link a bundle banner page. The Bundle Detail panel is displayed.
4. From the **Links** pull-down menu, choose option **6**, Choose a banner.
The Select a Bundle Banner panel is displayed. This panel lists all banner pages that have been defined on your Output Manager system, including bundle banners, bundle recipient banners, and report banners.
5. Type the S (Select) line command next to the banner page that you want to use as the bundle banner, and press Enter.
The Bundle Detail panel is displayed, and the **Banner** field now displays the name of the selected banner page.

Adding special instructions to a bundle banner

If you linked a banner page to a bundle definition, you can optionally specify special instructions to be added to the banner page during print processing.

For example, you might want to add bundle delivery instructions for the print room operator. These instructions are stored as part of the bundle definition.

To indicate where the instructions are to be inserted in the banner, you must specify the `&INSTnnnn` variable in the banner member. For more information, see [“Banner page variables” on page 127](#).

To add special instructions to a bundle banner:

1. From the Output Manager main menu, specify options **A.N**, Administrative Functions > Bundle Administration.
2. From the Bundle Administration menu, choose option **D**, Bundle Definitions, and press Enter. The Bundle Definitions panel is displayed.
3. In the **CMD** column, type S (Select) next to the bundle definition for which you want to specify special instructions and press Enter. The Bundle Detail panel is displayed.
4. From the **Special Instructions** pull-down menu, choose option **1**, Edit instructions.
The Special Instructions for Bundle Banner window is displayed.
5. On the lines provided, type up to 13 lines of instructions to add to the bundle banner. Each line can contain up to 128 characters, including spaces. Do not include any variables.
6. Press F3 (Exit) to save the instructions to memory and return to the Bundle Detail panel. The instructions are saved to the Output Manager database when you exit the Bundle Detail panel in a manner that saves changes.

Adding bundle delivery information to a bundle banner

If you linked a banner page to a bundle definition, you can optionally specify bundle delivery details to be added to the banner page during print processing. For example, you might want to include department, room, building, or address details for the entire bundle. The delivery details are specified in a Recipient ID. You must first create a Recipient ID for the delivery location, for more information, see [“Creating a recipient ID” on page 104](#).

To add bundle delivery information to a bundle banner, you must first create a recipient ID for the delivery location. You can then link the bundle delivery recipient ID to the bundle definition on the Bundle Details panel. The values for the banner page variables will reference the information in this recipient ID. Banner page variables that use the values found in the Bundle Delivery recipient ID include: BRNAME, BRDEPT, BRROOM, BRBUILD, BRADDR1, BRADDR2, BRADDR3, and BRADDR4. For more information, see [“Banner page variables” on page 127](#).

To add bundle delivery details to a bundle banner:

1. Define a recipient ID that contains the bundle delivery details that you want to add to the bundle banner. For more information, see [“Creating a recipient ID” on page 104](#).
2. From the Output Manager main menu, specify options **A.N**, Administrative Functions > Bundle Administration.
3. From the Bundle Administration menu, choose option **D**, Bundle Definitions, and press Enter. The Bundle Definitions panel is displayed.
4. In the **CMD** column, type S (Select) next to the bundle definition for which you want to add bundle delivery details to, and press Enter.
The Bundle Detail panel is displayed.
5. From the **Links** pull-down menu, choose option **1**, (Choose bundle delivery details). The Search for Recipient IDs window is displayed.
6. Specify search criteria as described in [“Searching for recipient IDs” on page 108](#), and press Enter.
The Recipient Selection panel is displayed.
7. In the **CMD** column, type S (Select) next to the recipient ID that contains the bundle delivery details that you created in step 1, and press Enter.
8. Press F3 (Exit) to link the bundle delivery details of the Recipient ID to the bundle definition and return to the Bundle Detail panel. The **Bundle delivery** field now displays the name of the selected recipient ID.

Adding a bundle recipient to a bundle definition

A bundle definition must specify one or more bundle recipients, each with at least one report, in order to produce bundle instances.

A bundle recipient groups the reports in a bundle instance that are to be delivered to a particular person or location. You must add recipients to a bundle definition one at a time. You cannot add the same recipient to a bundle definition multiple times. However, you can specify the same recipient in different bundle definitions.

The order in which the recipients are listed on the Bundle Detail panel is the same order in which they will appear in bundle instances. You can use the M (Move) and A (After) line commands to change this order.

Before you begin: Ensure that you have defined the recipient ID that you will select as the bundle recipient. The recipient ID provides information that is used for delivering the recipient's package of reports.

To add a bundle recipient to a bundle definition:

1. From the Output Manager main menu, specify options **A.N**, Administrative Functions > Bundle Administration.
2. From the Bundle Administration menu, choose option **D**, Bundle Definitions.
3. Specify search criteria, or leave the fields blank, and press Enter.
The resulting list is filtered by your search criteria.
4. In the **CMD** column, type S (Select) next to the bundle definition to which you want to add bundle recipient, and press Enter. The Bundle Detail panel is displayed.
5. Type ADD on the Command line to add the first recipient.
The Select a Bundle Recipient panel is displayed.

Tip: Scroll right to view all columns of information, including Name, Department, Room, Address 1-4, and Building.

6. Type S (Select) next to the recipient that you want to add to the bundle, and press Enter.
7. Press Enter. The Bundle Recipient Detail panel is displayed so that you can add reports to the bundle recipient. specify an optional recipient banner page, and set the print configuration for the bundle recipient.

Note: For more information on defining the print configuration for a bundle recipient (optional), see [Setting Print Configuration for a bundle recipient](#).

8. When you are finished defining the bundle recipient, you must specify **SAVE** on the Bundle Recipient Detail panel to actually add the recipient to the bundle definition.

The recipient is listed at the bottom of the Bundle Detail panel.

If necessary, you can use the **M (Move)** and **A (After)** line commands to change the position of the recipient in the list order. Type **M** next to the recipient, and then type **A** on the line after which you want to insert the recipient.

Next step: Add one or more reports to the bundle recipient or select a recipient banner page. See “[Adding a report to a bundle recipient package](#)” on page 166. Alternatively, link a recipient banner page to the recipient. See “[Linking a banner page to a bundle recipient](#)” on page 165.

Managing bundle recipients

Searching for a bundle recipient

From the Select a Bundle Recipient panel, you can search for the bundle recipient that you want to add to the bundle definition.

If you want Output Manager to apply the search criteria to the Select a Bundle Recipient panel the next time you display it, you can save the search criteria to your ISPF profile.

Tip: If you defined a large number of recipients, Output Manager might not be able to display all recipient IDs on the panel at one time. In this situation, you might want to define and save search criteria that includes wildcards to filter the list. When you need to view another subset of recipient IDs, you will need to edit the search criteria.

To search for a bundle recipient:

1. Navigate to the Bundle Detail panel for the bundle definition for which you want to search for recipients.
Tip: On the Output Manager main menu, specify options **A.N**, Administrative Functions > Bundle Administration; from the Bundle Administration menu, choose option **D**, Bundle Definitions; and then select the bundle definition.
2. At the command line, type **ADD** and press Enter. The Select a Bundle Recipient panel is displayed.
3. In the **Name** field, type the name that is specified in a recipient ID for the bundle recipient that you want to add. This value can be up to 60 characters in length. The following wildcards are permitted: the asterisk (*) or percent sign (%) for zero or more trailing characters, or the question mark (?) or underscore (_) for a single character anywhere in the name. If you specify a wildcard pattern, Output Manager will find all recipient IDs that have names matching the pattern.
4. In the **Save Criteria?** field, type **Yes** if you want to save the search criteria that you specified to your ISPF profile. Output Manager will then use the saved search criteria to filter the list of recipient IDs from session to session, until you change these criteria. If you want to use the search criteria temporarily (for a one-time search), accept the default value of **No**. Output Manager will filter the current list of recipient IDs and then clear the search criteria and revert to the last-saved values (if any) when you exit the Select a Bundle Recipient panel.
5. Press Enter.

The Select a Bundle Recipient panel lists only the recipient IDs that match your search criteria.

Tip: After filtering the list, you can re-display all recipients by choosing option **2**, List all, from the **Search** menu on the Select a Bundle Recipient panel.

Linking a banner page to a bundle recipient

You can link an optional banner page to a bundle recipient from the Bundle Recipient Detail panel. This banner is referred to as a *bundle recipient banner* or *recipient banner*.

The banner will be used only for instances of the bundle recipient in bundles based on the current bundle definition. The banner will not be used for any occurrences of the recipient in other bundles.

The banner will be printed at the beginning or end of the recipient's package of reports within a bundle instance, or in both locations, depending on the banner type (heading, trailing, or both) that you specified

in the banner definition. Usually, a recipient banner presents information that pertains specifically to the bundle recipient.

Before you begin: Ensure that the banner contents reside in a PDS member and that a banner definition exists.

To link a banner page to a bundle recipient:

1. Navigate to the Bundle Detail panel for the bundle definition that includes the recipient to which you want to link a banner page.
2. Type the S (Select) line command next to the bundle recipient. The Bundle Recipient Detail panel is displayed.
3. From the **Links** pull-down menu, choose option **3**, Choose a banner page.
The Select a Recipient Banner panel is displayed. This panel lists all banner pages that have been defined on your Output Manager system, including bundle banners, bundle recipient banners, and report banners.
4. Type the S (Select) line command next to the banner page that you want to use as the recipient banner page, and press Enter.
The Bundle Recipient Detail panel is displayed and the **Recipient banner** field now displays the name of the banner page that you selected.

Adding special instructions to a bundle recipient banner

If you linked a banner page to a bundle recipient, you can optionally specify special instructions to be added to the banner page during print processing.

For example, you might want to add routing instructions for the print room operator. These instructions are stored as part of the bundle recipient definition within the current bundle definition.

To indicate where the instructions are to be inserted in the banner, you must specify the `&INSTnnnn` variable in the banner member. For more information, see [“Banner page variables” on page 127](#).

To add special instructions to a bundle recipient banner:

1. Navigate to the Bundle Detail panel for the bundle definition that includes the recipient for which you want to specify special instructions.
2. In the **CMD** column, type S (Select) next to the recipient and press Enter. The Bundle Recipient Detail panel is displayed.
3. From the **Special Instructions** pull-down menu, choose option **1**, Edit instructions.
The Special Instructions for Recipient Banner window is displayed.
4. On the lines provided, type up to 13 lines of instructions to add to the recipient banner. Each line can contain up to 128 characters, including spaces. Do not include any variables.
5. Press F3 (Exit) to save the instructions to memory and return to the Bundle Detail panel. The instructions are saved to the Output Manager database when you exit the Bundle Detail panel in a manner that saves changes.

Adding a report to a bundle recipient package

To define a bundle recipient's package of reports, you must add one or more reports to the bundle recipient definition. Optionally, you can specify the number of copies of a report the bundle recipient will receive.

You must add the reports one at a time. You can add the same report to different bundle recipients within a bundle, if appropriate. However, you cannot add the same report to any one bundle recipient multiple times. For a recipient to be included in a bundle instance, at least one of the reports that are specified for the recipient must be generated and captured.

The order in which the reports are listed on the Bundle Recipient Detail panel is the same order in which they will appear in the bundle recipient's package of reports within bundle instances. You can use the M (Move) and A (After) line commands to change this order.

Before you begin: Ensure that you have created the report definition for the report that you want to add to the bundle recipient.

To add a report to a bundle recipient:

1. Navigate to the Bundle Detail panel for the bundle definition that contains the bundle recipient to which you want to add a report.
2. In the **CMD** column, type S (Select) next to the bundle recipient to which you want to add a report, and press Enter. The Bundle Recipient Detail panel is displayed.
3. At the command line, type ADD.
4. Specify search criteria, or leave the fields blank, and press Enter.
The resulting list is filtered by your search criteria.
5. Type the S (Select) line command next to the report (report definition) that you want to add to the bundle recipient, and press Enter.

Ensure that you select a report definition for a basic or custom report. You can select a basic report definition that was dynamically generated. Do not select a report definition for an indexed report. Indexed report pages cannot be captured for a bundle.

Note: You can add a dynamically-generated report definition, if one exists, to a bundle recipient. Output Manager dynamically generates a report definition for a basic report if you specify a report selection rule and layout but no report definition.

6. Press Enter.

The Bundle Recipient Detail panel is redisplayed. The newly selected report appears at the bottom of the list of reports.

If necessary, you can use the M (Move) and A (After) line commands to change the position of the report in the list order. Type M next to the report that you want to move, and then type A on the line after which you want to insert the report.

7. Optional: You can use the Set print configuration command in the CMD column next to a report to specify the print configuration (including the number of copies of each report this bundle recipient will receive, and PRSET member to specify printer comments) for this recipient.
 - a) Type S (Set print configuration) next to the report that you wish to edit print configuration for, and press Enter.
The Set Print Configuration panel is displayed.
 - b) In the COPIES field, specify the number of copies of the report to print for the selected bundle recipient of the selected bundle. The copies value must be a number from 0 through 255.
 - c) The PRSET field displays the name of the PRSET member to use for the print job. Use the LINK drop-down menu to choose, change, or remove a PRSET member. PRSET members contains a set of printer commands that you can use for controlling the formatting or printing of a report on a physical printer, for example, AFP structured fields.
 - d) Press Enter. The Bundle Recipient Detail panel is displayed again.

Searching for a bundle report

From the Select a Bundle Report panel, you can search for a report definition that you want to add to a bundle recipient. If you want Output Manager to apply the search criteria to the Select a Bundle Report panel the next time you display it, you can save the search criteria to your ISPF profile.

Tip: If you defined a large number of reports, Output Manager might not be able to display all reports on the panel at one time. In this situation, you might want to define and save search criteria that includes wildcards to filter the list. When you need to view another subset of reports, you will need to edit the search criteria.

To search for a bundle recipient:

1. Navigate to the Bundle Detail panel for the bundle definition that contains the bundle recipient to which you want to add a report.

2. Type the S (Select) line command next to the bundle recipient and press Enter. The Bundle Recipient Detail panel is displayed.
3. Type ADD at the command line and press Enter. The Select a Bundle Report panel is displayed.
4. In the **Name** field, type the name of the report that is specified in the report definition. This value can be up to 24 characters in length. The following wildcards are permitted: the asterisk (*) or percent sign (%) for zero or more trailing characters, or the question mark (?) or underscore (_) for a single character anywhere in the name. If you specify a wildcard pattern, Output Manager will find all reports that have names matching the pattern.
5. In the **Save Criteria?** field, type **Yes** if you want to save the search criteria that you specified to your ISPF profile. Output Manager will then use the saved search criteria to filter the list of report definitions from session to session, until you change these criteria. If you want to use the search criteria temporarily (for a one-time search), accept the default value of **No**. Output Manager will filter the current list of report definitions and then clear the search criteria and revert to the last-saved values (if any) when you exit the Select a Bundle Report panel.
6. Press Enter.
The Select a Bundle Report panel lists only the defined reports that match your search criteria.

Viewing a list of bundles associated with a report

Use the XN command on the Report Definitions panel to displays all bundles that a report belongs to.

1. From the Output Manager main menu, choose option A, Administrative Functions, and press Enter.
The Administrative Functions panel is displayed.
2. From the Administrative Functions menu, choose option C, Custom Reports, and press Enter.
3. Specify search criteria, or leave the fields blank, and press Enter.
The resulting list is filtered by your search criteria.
4. Locate the report for which you want to display the associated bundle definitions of, and type **XN** in the CMD column and press Enter.
The List of Bundle Definitions for the report panel is displayed, and all bundle definitions associated with the report are listed in the Bundle Name column.

Setting the Print Configuration for a bundle recipient's report

You can use the Set print configuration command in the CMD column next to a report to specify the print configuration (including the number of copies of each report this bundle recipient will receive, and PRSET member to specify printer comments) for a bundle recipient.

1. Navigate to the Bundle Detail panel for the bundle definition that contains the bundle recipient for which you want to set the print configuration (**A (Administrative Functions) > N (Bundle Administration) > D (Bundle Definitions)** and S (Select) in the CMD column of the bundle definition.)
2. In the **CMD** column, type S (Select) next to the bundle recipient for which you want to set the print configuration, and press Enter. The Bundle Recipient Detail panel is displayed.
3. Type the S (Set print configuration) line command next to the report (report definition) that you want to set print configuration for, and press Enter.
The Set Print Configuration panel is displayed.
4. In the COPIES field, specify the number of copies of the report to print for the selected bundle recipient of the selected bundle.
Note: The COPIES value must be a number from 0 through 255. If you specify 0, the report will be distributed but will not be printed.
5. In the PRSET field, type the name of the PRSET member to use for the print job. A PRSET member contains a set of printer commands that you can use for controlling the formatting or printing of a report on a physical printer, for example, AFP structured fields. This PRSET member must exist in the PDS displayed in the **DSName** field.
6. Press Enter. The Bundle Recipient Detail panel is displayed again.

Changing the recipient ID for a bundle recipient definition

After you define a package of reports for a bundle recipient (a bundle recipient definition), you might want to change the underlying recipient ID to send those reports to another person or location. You can do so from the Bundle Recipient Detail panel.

To change the recipient ID for a bundle recipient definition:

1. Navigate to the Bundle Detail panel for the bundle definition that contains the bundle recipient for which you want to change the recipient ID.
2. In the **CMD** column, type S (Select) next to the bundle recipient and press Enter. The Bundle Recipient Detail panel is displayed.
3. From the **Links** pull-down menu, choose option **1**, Change the recipient.
The Select a Bundle Recipient panel is displayed.

Tip: If you are not sure that you selected the correct bundle recipient, you can choose option **2**, View the recipient, from the **Links** menu to view recipient details.

4. Type the S (Select) line command next to the recipient that you want to use, and press Enter. A forward slash (/) is displayed to indicate that the recipient is selected.
5. Press Enter. If a confirmation prompt is displayed, press Enter again to confirm your change.

Removing bundle reports from a bundle recipient

You can remove one or more bundle reports at a time from a bundle recipient definition if you no longer want the recipient to receive the reports.

Note: If you remove all reports from a bundle recipient, the recipient will not be included in bundle instances.

To remove bundle reports from a bundle recipient:

1. Navigate to the Bundle Detail panel for the bundle definition that contains the bundle recipient from which you want to remove reports.
2. In the **CMD** column, type the S (Select) line command next to the bundle recipient and press Enter. The Bundle Recipient Detail panel is displayed.
3. Type the D (Delete) line command next to each report that you want to remove, and press Enter.
4. If a confirmation prompt is displayed, press Enter again to confirm your deletions.
All of the selected bundle reports are deleted from the bundle recipient definition in the Output Manager database.

Note: These deletions affect the selected bundle recipient definition only. The deletions do not affect any occurrences of the bundle recipient in other bundle definitions or the underlying report definitions for the removed reports.

Removing bundle recipients from a bundle definition

You can remove one or more bundle recipients at a time from a bundle definition if you no longer want to include them in bundle instances.

To remove bundle recipients from a bundle definition:

1. Navigate to the Bundle Detail panel for the bundle definition from which you want to remove recipients.
2. Type the D (Delete) line command next to each bundle recipient that you want to remove, and press Enter.
3. If a confirmation prompt is displayed, press Enter again to confirm your deletions. All of the selected bundle recipients, including their bundle reports, are deleted from the bundle definition in the Output Manager database.

Note: These deletions affect the selected bundle definition only. The deletions do not affect other bundle definitions or the underlying recipient IDs for the removed bundle recipients.

Banner page variables

You can include variables in banner page members to automatically insert customized values or text into banner pages at print time.

Output Manager supports variables for all banner types: report banners, bundle banners, and bundle-recipient banners.

The two primary types of banner variables are product-specific symbolic variables (also called *product variables*) and *user-defined variables*. The product variables are supplied by Output Manager and apply to reports, report bundles, and bundle recipients. The user-defined variables are configured by users according to their needs.

Adding variables to a banner page

To use variables in banner page members:

1. Create a banner page member.
2. Add valid banner variables to the banner page member, as needed. For example, to include the job number in a report banner, insert the &JOBID variable into the banner member contents. To include your company name, insert the &CNAME variable into the member.
3. Save the banner page member.
4. From the Output Manager ISPF interface, define the banner page.

Related concepts

[Pre-defined Output Manager variables](#)

Output Manager supplies product variables that can be used in banner members for reports, report bundles, and bundle recipients.

Related tasks

[User-defined variables](#)

You can define variables to insert customized text into your banners.

Related reference

[Examples of controlling the text size and position](#)

The following examples indicate how you can control whether banner text prints in small, medium, or large block letters.

User-defined variables

You can define variables to insert customized text into your banners.

To do so, you must first choose the variable names, then assign values to the variable in the User Variables panel (A.PA.U) of the Output Manager ISPF interface. Thereafter, you can specify your user-defined variables in banner page members.

Note: User-defined variables are not currently supported in banners printed from ITOMweb.

To define a user variable:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **PA**, Policy Administration, and press Enter.
3. From the Administrative Functions menu, choose option **U**, User Variables, and press Enter.
4. Type S (select) in the CMD line next to the subsystem name that you want to add the user variable to.
5. Type ADD on the command line of the User Variable Administration panel.
6. In the **Variable Name** field, type the name of the variable.
7. In the **Variable Value** field, type a value for the variable.

For example, you could define a variable named CNAME that specifies your company's name:

```
Variable Name . CNAME
Variable Value. My Company Name
```

8. Press Enter to save the variable.

Related concepts

[Pre-defined Output Manager variables](#)

Output Manager supplies product variables that can be used in banner members for reports, report bundles, and bundle recipients.

Related tasks

[Adding variables to a banner page](#)

To use variables in banner page members:

Related reference

[Examples of controlling the text size and position](#)

The following examples indicate how you can control whether banner text prints in small, medium, or large block letters.

Pre-defined Output Manager variables

Output Manager supplies product variables that can be used in banner members for reports, report bundles, and bundle recipients.

All variable names begin with an ampersand (&).

Related tasks

[Adding variables to a banner page](#)

To use variables in banner page members:

[User-defined variables](#)

You can define variables to insert customized text into your banners.

Related reference

[Examples of controlling the text size and position](#)

The following examples indicate how you can control whether banner text prints in small, medium, or large block letters.

Variables for report banners

You can use the following product variables in banner members for individual reports and for reports in a bundle. However, you cannot specify these variables in banner members for an entire report bundle or a bundle recipient.

&A11

Inserts the name of a recipient to receive the report.

&A12

Inserts the name of the department where the recipient is located.

&A13

Inserts the room number or name where the recipient is located.

&A14

Inserts the building number or name where the recipient is located.

&A15

Inserts the first line of the recipient's address.

&A16

Inserts the second line of the recipient's address.

&A17

Inserts the third line of the recipient's address.

&A18

Inserts the fourth line of the recipient's address.

&A19

Inserts the report title that is to be included in report output for the recipient.

&ACCT nn

Inserts the account name or number that was optionally specified for the job that generated the SYSOUT on which a report is based. The nn variable represents a value from 01 through 08. This value corresponds to one of the eight **Account** fields that you optionally specified in a subselector rule to capture the accounting information from a JOB statement.

&ARCBYTES

Inserts the number of bytes in the archive data set for the job output.

&ARCHID

Inserts the archival identifier name for the report. If the archive identifier name is not specified in the report definition, the report identifier name is used. You can use this variable only on the report banner page and bundle report banner page. Blanks are substituted on the bundle banner page and bundle distribution banner page.

&ARCLINES

Inserts the number of lines of data in the archive data set for the job output.

&ARCPAGES

Inserts the number of pages in the archive data set for the job output.

&BDSN

Inserts the name of the banner data set that contains the member with the banner information.

&CDATE

Inserts the date on which the archive for the report was created. This date includes a 2-digit year and has the format MM/DD/YY.

&CDATE4

Inserts the date on which the archive for the report was created. This date includes a 4-digit year and has the format MM/DD/YYYY.

&CDEST

Inserts the capture destination: the destination value when the sysout was captured

&ODEST

Inserts the output destination: the destination string used during printing.

&CLASS or &C

Inserts the SYSOUT class of the report.

&COPIES

Inserts the number of copies of the report. For non-bundled report banner pages, the number of copies to be distributed is inserted. For bundled reports, 0 is inserted. This variable does not work in banner pages for reports that contain control breaks.

&CTIME

Inserts the time at which the archive for report output was created. This time is in the format HH:MM:SS, with colons separating the hours, minutes, and seconds. For non-bundled report banner pages, the creation time is the same as the print time unless the report is archived. If the report is archived, the creation time corresponds to the time the report was archived. For bundled reports and distribution and bundle banner pages, the creation time is the same as the print time. For report banner pages, the creation date is the time the report bundle holding copy was created. This variable does not work in banner pages for reports that contain control breaks.

&CTIMEP

Inserts the time at which the archive for the report output was created. This time is in the format HH.MM.SS, with periods separating the hours, minutes, and seconds.

&DATE

Inserts the date on which the report was printed. This date includes a 2-digit year and has the format MM/DD/YY.

&DATE4

Inserts the date on which the report was printed. This date includes a 4-digit year and has the format MM/DD/YYYY.

&DDNAME or &DD

Inserts the DD name that is associated with the report.

&DESC

Inserts the user-defined description for the report. The description of a report or bundle is retrieved from the DESC field on either the Report or Bundle Definition Attributes panel, respectively.

&DEST

Inserts the SYSOUT destination of a report or bundle.

&JOBID or &JID

Inserts the subsystem job identifier of the job that generated the report output.

&JOBNAME or &JNAME

Inserts the name of the job that generated the report output.

&LINES

Inserts the number of lines in a report, in an entire bundle of reports, or in all reports for a distribution identifier.

&NAME

Inserts the name of the template banner page member that is used to create banner pages.

&OUTCLASS

Inserts the SYSOUT class that is associated with the job that produced the report output.

&PAGES

Inserts the number of pages in the report, in an entire bundle of reports, or in all reports for a distribution identifier.

&RACFUSER

Inserts the RACF user ID under which the report output was generated.

&STEPNAME

Inserts the name of the job step that generated the report output.

&SYSTEMID

Inserts the identifier for the MVS system that contains the JES spool from which the report output was captured.

&TIME

Inserts the time at which the report was printed. This time is in the format HH:MM:SS.

&TIMEP

Inserts the time at which the report was printed. This time is in the format HH.MM.SS.

Variables for banners in report bundles

You can use the following additional product variables for banners within report bundles.

These variables apply to bundles only. Some variables can be used for any banner in a bundle, whereas other variables can be used only for bundle-recipient and bundle-report banners.

Variables for any banner in a bundle

You can use the following product variables in banner members for any type of banner within a report bundle: bundle banners (banners that apply to an entire bundle), bundle-recipient banners, and bundle-report banners.

&BNAME

Inserts the bundle name that is specified in the bundle definition on which the bundle instance is based.

&BDEST

Inserts the bundle destination that is specified in the bundle definition on which the bundle instance is based. A bundle destination is a recipient ID that provides supplemental information for printing the bundle.

&BDDATE

Inserts the date on which the bundle instance was deactivated in the format MM/DD/YYYY.

&BDTIME

Inserts the time at which the bundle instance was deactivated in the format HH:MM:SS.

&BDATE

Inserts the date on which the bundle instance was printed in the format MM/DD/YYYY.

&BTIME

Inserts the time at which the bundle instance was printed in the format HH:MM:SS.

&INSTnnnn

Inserts a number from 0001 through 0013 that maps to the special instructions that you specified in the bundle definition, bundle-recipient definition, or report definition (from the **Special Instructions** menu). Refer to “Adding special instructions to a bundle banner” on page 163, “Adding special instructions to a bundle recipient banner” on page 166, or “Adding special instructions to a report banner” on page 96 for details about creating the special instructions set for each banner type.

Variables for bundle-recipient and bundle-report banners only

You can use the following product variables in banner members only for bundle recipients and bundle reports:

&BRNAME

Inserts the recipient name that is specified in the bundle recipient definition. This name is from the recipient ID that is linked to the bundle recipient definition.

&BRDEPT

Inserts the name of the department for the recipient that is named in the bundle recipient definition. This department is specified in the recipient ID that is linked to the bundle recipient definition.

&BRROOM

Inserts the room number or name for the recipient that is named in the bundle recipient definition. This room is specified in the recipient ID that is linked to the bundle recipient definition.

&BRADDR1

Inserts the first line of the address for the recipient that is named in the bundle recipient definition. This address line is specified in the recipient ID that is linked to the bundle recipient definition.

&BRADDR2

Inserts the second line of the address for the recipient that is named in the bundle recipient definition. This address line is specified in the recipient ID that is linked to the bundle recipient definition.

&BRADDR3

Inserts the third line of the address for the recipient that is named in the bundle recipient definition. This address line is specified in the recipient ID that is linked to the bundle recipient definition.

&BRADDR4

Inserts the fourth line of the address for the recipient that is named in the bundle recipient definition. This address line is specified in the recipient ID that is linked to the bundle recipient definition.

&BRBUILD

Inserts the building name or number for the recipient that is named in the bundle recipient definition. This building is specified in the recipient ID that is linked to the bundle recipient definition.

Examples of controlling the text size and position

The following examples indicate how you can control whether banner text prints in small, medium, or large block letters.

Start of Field and End of Field characters:

- A *Start of Field* character signifies that the text following the character is banner text. The Start of Field characters are also used to specify the font size of the banner text or to introduce a banner substitution variable:

- To specify a font size, place a font size character (` , _ , or !) at the beginning of a line of banner text to specify the size of the font to be used for all banner text that follows that character. Start of Field characters that control font size include:
 - (`): A backward quote symbol is used for the smallest font size (x'79'). This symbol indicates that subsequent text is to be printed in 5x5 block letters with a single space between each block letter.
 - (_): An underscore character is used for medium font size (x'6D'). This symbol indicates that subsequent text is to be printed in 7x7 block letters with two spaces between each block letter.
 - (!): An exclamation mark is used for large text size (x'5A'). This symbol indicates that subsequent text is to be printed in 12x12 block letters with two spaces between each block letter.

These font size characters are always replaced with a single space.

- You can include variables in banner page members to automatically insert customized values or text into banner pages at print time. To introduce a substitution variable, place the ampersand character (&) before the variable. The "&" introducing a substitution variable identifies the print position where the substitution is to start. A field may include literal text as well as substitution variables. For more information on banner variables, see [“Banner page variables” on page 127](#).
- The *End of Field* character, the tilde (~) (x'A1') signifies the end of the banner text. The "~" is included in the field and indicates the last print position of the substitution variable or block lettering.

Multiple fields may be specified on a single line. If multiple font size specifications are used, all block lettering is performed as if all specifications are the same as the first specification encountered. All non-block letter text is repeated on each line. Therefore, it is possible to create boundary boxes in your banner.

Example 1

A backward quote (`) indicates that small block lettering should be used for all banner text that follows:

```
` ABCDEFGHI
  ` JKLMNOPQR
  ` STUVWXYZ
```

Example 2

An underscore (_) indicates that medium block lettering should be used for all banner text that follows:

```
_ ABCDEFGHI
  _ JKLMNOPQR
  _ STUVWXYZ
```

Example 3

An exclamation point (!) indicates that large block lettering should be used for all banner text that follows:

```
! ABCDEFGHI
  ! JKLMNOPQR
  ! STUVWXYZ
```

Example 4

This example shows how to print the text that will replace three user-defined variables (&PRODNAME, &CCITY, and CSTATEAB) in large block letters:

```
!&PRODNAME  
!&CCITY  
!&CSTATEAB
```

Example 5

This example shows how to print a specific text string in large block letters:

```
!TRANSACTION  
!SUMMARY
```

Example 6

This example shows how to print a specific text string and text that will replace two user-defined variables:

```
SUMMARY REPORT FOR LOCATION:  
&CCITY  
&CSTATEAB
```

Related concepts

[Pre-defined Output Manager variables](#)

Output Manager supplies product variables that can be used in banner members for reports, report bundles, and bundle recipients.

Related tasks

[Adding variables to a banner page](#)

To use variables in banner page members:

[User-defined variables](#)

You can define variables to insert customized text into your banners.

Sample batch job for bundle control commands

A sample batch job for issuing bundle control commands is provided in SBJTSAMP member BJT@BUNP to perform bundle administration. The sample job runs the batch program (BJTCBUNP) to issue bundle activation, deactivation, reactivation, and list commands.

You will need to customize this the BJT@BUNP batch job for your Output Manager installation and bundle control requirements. Follow the modification instructions in the comments of BJT@BUNP.

Specify an ACTION parameter to choose the action to be performed: ACT (activate), DEACT (deactivate), REACT (reactivate), or LIST.

ACTION=ACT BUNDLE=*bundle name*

Activates a bundle to open a bundle instance and begin the collection of reports. The *bundle name* variable represents a unique bundle name that is specified in a bundle definition.

Note: Use a wildcard (%) to activate all bundle instances.

ACTION=DEACT *bundle name*

Deactivates a specific bundle instance to stop the collection of reports and print the accumulated bundle contents. The *bundle name* variable represents a unique bundle name that is specified in a bundle definition.

Note: Use a wildcard (%) to deactivate and print all open bundle instances. Usually, you issue this command before you stop the Output Manager started task.

ACTION=REACT *bundle name*

Deactivate specified bundle(s), then activate specified bundles. Active bundles that have nothing to print are not processed and remain activated.

ACTION=LIST

List all activated bundles.

Summary of batch job customization steps

Customize the sample batch job (SBJTSAMP member BJT@BUNP) to create a batch job that issues your bundle control commands, as follows:

1. Copy the sample batch job (SBJTSAMP member BJT@BUNP) to create a copy for customization. This action preserves the original sample job intact.
2. Edit BJT@BUNP according to the modification instructions in the comments.
3. In the STEPLIB DD statement, review ?BJTHLQ?, ?BJTPLAN?, ?DB2SSID?, ?SDSNEXIT?, and ?SDSNLOAD? variables that you specified for your Output Manager installation are correct.
4. Ensure that the load module resides in an APF-authorized load library.

Activating a bundle

You activate a bundle to open a bundle instance and begin the collection of reports for that instance.

While the bundle instance is open, Output Manager defers the automatic printing of all reports that are listed in the bundle definition. Instead, Output Manager records all bundle report instances that are captured for the bundle instance in the database. If an application generates the same report multiple times during the bundle window, all instances of that report will be included in the bundle instance for each recipient that is to receive the report.

For a single bundle definition, only one bundle instance can be open at a time. If you attempt to activate a bundle definition that is already activated, Output Manager issues an error message.

While a bundle instance is open, any changes that you make to the bundle definition or the related administrative definitions will not affect the open bundle instance. The changes apply only after you deactivate the current bundle instance and then activate the bundle again to open a new bundle instance.

Note: At activation, Output Manager assigns a unique bundle ID to the bundle instance. This ID will be used by Output Manager later to identify a closed bundle instance for print or reprint processing.

To issue the bundle activation command, use either one of the following methods:

- If you created a batch job for issuing the BUNDLE ACT command for the bundle instance, run the batch job by itself or as a job step within another batch job. Before submitting the batch job for execution, ensure that it meets all of the syntax requirements for jobs that issue bundle control commands. For more information, see [“Summary of batch job customization steps”](#) on page 177.
- Issue the BUNDLE ACT command by using the Modify operator command. Use the following syntax:

```
MODIFY started_task_name,BUNDLE ACT bundle name
```

Where *started_task_name* is the name of the Output Manager started task that you are using and *bundle name* is the unique bundle name that you specified in the bundle definition.

Activating all bundles

Use SBJTSAMP member BJT@BUNP to activate all bundles:

1. Modify your customized copy of SBJTSAMP member BJT@BUNP to specify:

```
ACTION=ACT BUNDLE='%'
```

2. Submit BJT@BUNP.

Deactivating a bundle instance

You deactivate a bundle instance that is open to stop the collection of reports and print the accumulated reports.

To do so, you use the BUNDLE DEACT command. By default, when you issue this command, Output Manager automatically submits the bundle print job that you specified in the bundle definition. You can prevent the automatic submission of this print job by setting the **Submit print job at deactivation** option to **No** in the bundle definition. In this case, the bundle data remains in the database so that you can reprint it later from the Bundle History panel.

Output Manager writes the accumulated bundle reports, arranged by recipient, in a single output stream. In the output, the bundle recipients and their reports appear in the same order in which they are listed in the bundle definition.

In addition to the usual BUNDLE DEACT command, Output Manager provides the following deactivation commands that apply to all open bundle instances:

- BUNDLE DEACTALL deactivates and prints all open bundle instances. Usually, you issue this command prior to stopping the Output Manager started task.
- BUNDLE LIST lists the open bundle instances that will be deactivated and printed when you issue the BUNDLE DEACTALL command. No bundle instances are actually deactivated and printed. Use this command to check the bundle instances that will be processed by the BUNDLE DEACTALL command.
- BUNDLE REACT deactivates and prints the reports captured for the specified bundles and then activates the selected bundles to resume collection of reports in the bundle.

To issue any of the bundle deactivation commands, use either one of the following methods:

- If you created a batch job for issuing the bundle deactivation command, run the batch job by itself or as a job step within another batch job. Before submitting the batch job for execution, ensure that it meets all of the syntax requirements for jobs that issue bundle control commands. For more information, see [“Summary of batch job customization steps”](#) on page 177.
- Issue a bundle deactivation command by using the Modify operator command. Use the proper command syntax, as follows:

```
– MODIFY started_task_name,BUNDLE DEACT bundle name
```

Where *started_task_name* is the name of the Output Manager started task that you are using and *bundle name* is the unique bundle name that you specified in the bundle definition.

After deactivation, Output Manager resumes the individual automatic printing of the reports that are listed in the bundle definition until the bundle is activated again.

Deactivating all bundles

Use SBJTSAMP member BJT@BUNP to deactivate all bundles:

1. Modify your customized copy of SBJTSAMP member BJT@BUNP to specify:

```
ACTION=DEACT BUNDLE='%'
```

2. Submit BJT@BUNP.

Bundle history

The Bundle History panel lists all deactivated (or closed) bundle instances that are recorded in the Output Manager bundle history table (BJTBHI).

If you performed maintenance on this table to delete old entries, only the bundle instances that have accumulated since the last maintenance operation are listed. You can select a bundle instance to view the recipients and reports that were included in the bundle.

Also, you can reprint all or part of any closed bundle instance. You must first select the item or items to reprint by using the appropriate R (Reprint) line commands and then issue the REPRINT primary

command from the Bundle History panel. When you issue a REPRINT request, Output Manager submits the bundle print job that is specified in the bundle definition by default. However, you can override this print job with another bundle print job when you confirm the reprint operation.

Searching for closed bundle instances

You can filter the list of closed bundle instances on the Bundle History panel or search for a specific bundle instance.

You must specify a value in at least one search field to filter the listings. If you want Output Manager to apply the search criteria to the Bundle History panel the next time you display it, you can save the criteria to your ISPF profile.

To search for closed bundle instances:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **N**, Bundle Administration, and press Enter.
3. From the Bundle Administration menu, choose option **H**, Bundle History, and press Enter.
4. In the **Bundle name** field, type the bundle name, as specified in a bundle definition, for the bundle instance that you want to find. This value can be up to 32 characters in length. The following wildcards are permitted: the asterisk (*) or percent sign (%) for zero or more characters, or the question mark (?) or underscore (_) for a single character anywhere in the name. If you specify a wildcard pattern, Output Manager will find all closed bundle instances that have names matching the specified pattern.
5. In the **Deactivated before** field, type the date before which the bundle instances were deactivated with the BUNDLE DEACT or BUNDLE DEACTALL command. Use the format YYYY/MM/DD. Wildcards are not permitted.
6. In the **Deactivated after** field, type the date after which the bundle instances were deactivated with the BUNDLE DEACT or BUNDLE DEACTALL command. Use the format YYYY/MM/DD. Wildcards are not permitted.
7. In the **Save Criteria?** field, type **Yes** if you want to save the search criteria that you specified to your ISPF profile. Output Manager will then use the saved search criteria to filter the list of bundle definitions from session to session, until you change the criteria. If you want to use the search criteria temporarily (for a one-time search), accept the default value of **No**. Output Manager will filter the current list of bundle definitions and then clear the search criteria and revert to the last-saved values (if any) when you exit the Bundle Definitions panel.
8. Press Enter.

The Bundle History panel lists only the bundle instances that match your search criteria.

Viewing the contents of a closed bundle instance

From the Bundle History panel, you can drill down to lists of the bundle recipients and reports that were included in a closed bundle instance.

You might want to view this information, for example, to verify the bundle contents before reprinting the bundle or to investigate whether a bundle recipient should have received a report.

To view the recipients and reports in a closed bundle instance:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **N**, Bundle Administration, and press Enter.
3. From the Bundle Administration menu, choose option **H**, Bundle History, and press Enter.
4. Specify search criteria, or leave the fields blank, and press Enter.
The resulting list is filtered by your search criteria.
5. In the **CMD** column, type the S (Select) line command next to the name of the bundle instance that you want to view, and press Enter.

The Bundle Instance panel is displayed.

Note: The panel lists only the bundle recipients for which one or more reports were actually generated by an application and collected for the bundle. These recipients might be a subset of the recipients that are defined in the bundle definition.

6. To view the reports that were captured for a bundle recipient, type the S (Select) line command next to the recipient name, and press Enter.

The Bundle Recipient Instance panel is displayed. This panel lists the reports that are in the recipient's package of reports within this bundle instance.

Reprinting an entire bundle instance

You can reprint a closed bundle instance in its entirety from the Bundle History panel.

Output Manager reprints all of the reports that were collected for the recipients in the bundle prior to bundle deactivation. Any reports that were defined in the bundle definition but not produced and captured are not included in the reprint request.

To reprint an entire bundle instance:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **N**, Bundle Administration, and press Enter.
3. From the Bundle Administration menu, choose option **H**, Bundle History, and press Enter. The Bundle History panel is displayed.
4. In the **CMD** column, type R (Reprint) next to the closed bundle instance that you want to reprint, and press Enter.

Note: You can reprint only one bundle instance at time.

5. Press Enter to continue.

The Bundle Instance panel is displayed. The recipients of this bundle are listed in the bottom portion of the panel.

6. Use the R (Reprint) line command to select and deselect bundle recipients to be included in the bundle reprint. When a slash (/) is displayed in the Sel column of a bundle recipient, that recipient is included in the reprint.

7. Press PF3.

The Summary of Reprint Request panel is displayed.

8. Press Enter to continue.

The Confirm Reprint Request panel is displayed.

9. Optionally, you can specify a new value in the **Job name** field. The new job name value will override the job name value in the job card. If left blank, the jobname from the PDS member is used.

10. Optionally, you can specify a new value in the **Print job member** field if you want to use another bundle print job.

Type the name of the PDS member that contains the print job that you want to use. This member must reside in the PDS that is specified by the PRINT_PDS configuration parameter in the Policy Administration panels.

11. When you are ready to print the bundle, press Enter.

Output Manager submits the specified print job for execution.

If you do *not* want to print the selected bundle instance, specify CANCEL instead. The Bundle History panel is redisplayed; the bundle instance is still selected. You can 1) select another bundle instance for reprinting; 2) use the S (Select) line command to drill down to the recipients and reports in the bundle instance and select a subset of them for a partial reprint operation; or 3) exit the panel without printing a bundle instance.

Reprinting part of a closed bundle instance

You can reprint part of a closed bundle instance, for example, a package of reports for a selected recipient.

If you specify the R (Reprint bundle recipient) command for a bundle recipient, Output Manager selects all of the reports that were collected for that recipient for reprinting. If you specify the R (Reprint report) command for a bundle report, Output Manager selects that report for reprinting. You can select multiple recipients and reports for a reprint operation, as needed. When you return to the Bundle History panel, a plus sign (+) will be displayed next to the bundle instance to indicate that only part of it is selected for reprinting.

To reprint part of a closed bundle instance:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **N**, Bundle Administration, and press Enter.
3. From the Bundle Administration menu, choose option **H**, Bundle History, and press Enter. The Bundle History panel is displayed.
4. In the **CMD** column, type the S (Select) line command next to the bundle instance that you want to reprint partially, and press Enter. The Bundle Instance panel is displayed.
5. To reprint all reports for a bundle recipient, type R (Reprint bundle recipient) next to the recipient name, and press Enter. A forward slash (/) is displayed next to the recipient to indicate that the recipient's entire package of reports is selected for reprinting. The R line command acts as a toggle to select and deselect reports. You can select multiple recipients for a single reprint request.
6. To reprint a subset of reports for a bundle recipient, perform the following steps:
 - a. Type the S (Select) line command next to the recipient name, and press Enter. The Bundle Recipient Instance panel is displayed.
 - b. Type R (Reprint) next to one or more reports and press Enter. A forward slash (/) is displayed next to each selected report. The R line command acts as a toggle to select and deselect reports.
 - c. Press F3 to return to the Bundle Instance panel. A plus sign (+) is displayed next to the recipient name to indicate that only part of the recipient's package of reports is selected for reprinting.
7. When you are ready to print the selected reports, press PF3. The Summary of Reprint Request panel is displayed. It lists all of the bundle recipients and reports that you selected for the partial reprint request.
8. Press Enter to continue. The Confirm Reprint Request panel is displayed.
9. Optionally, you can change specify a job name or a print job member on the confirmation panel:
 - You can specify a new value in the **Job name** field. The new job name value will override the job name value in the job card. If left blank, the jobname from the PDS member is used.
 - You can specify a new value in the **Print job member** field if you want to use another bundle print job. Type the name of the PDS member that contains the print job that you want to use. This member must reside in the PDS that is specified by the PRINT_PDS configuration parameter in the Policy Administration panels.
10. When you are ready to print the bundle, press Enter. Output Manager submits the specified print job for execution.

If you do *not* want to print the selected bundle reports, specify CANCEL instead. The Bundle History panel is redisplayed; all of your reprint selections are retained. You can edit your reprint selections or exit the panel without printing any portion of the bundle instance.
11. Press Enter to return to the Bundle History panel.

Maintaining the bundle history table

The bundle history table (BJTBHI) records all closed bundle instances.

To prevent this table from becoming too large, you should delete the records for old bundle instances occasionally. If you do so, any bundle instances that you deleted will no longer be displayed on the Bundle History panel or be available for reprinting.

To delete records from the BJTBHI table, use the SQL statements in the SBJTSAMP member BJT@BNCL. This SQL deletes bundle instances that were deactivated prior to the date that is calculated by subtracting the number of days that you specify from the current date. For example, if the current date is 10/10/2013 and you specify 5 days for NN days in BJT@BNCL, the bundle instances that were deactivated prior to 10/5/2013 will be deleted. For further instructions, refer to the comments in this member.

Managing Active Bundles

You can manage reports in active bundles using the Open Bundle Reports List panel.

The Open Bundle Reports List panel lists activated (or open) bundle instances. You can delete unwanted reports from active bundle instances before bundle deactivation, preventing the unwanted reports from being initially printed upon bundle deactivation.

Searching for open bundle instances

You can filter the list of open bundle definitions on the Open Bundle Reports List panel or search for a specific activated bundle definition.

If you want Output Manager to apply the search criteria to the Open Bundle Reports List panel the next time you display it, you can save the criteria to your ISPF profile.

To search for open bundle definitions:

1. From the Output Manager main menu, specify options **A.N**, Administrative Functions > Bundle Administration.
2. From the Bundle Administration menu, choose option **M**, Manage Active Bundles, and press Enter. The Search for Bundle Definitions window is displayed.

Note: Additionally, you can access the search panel for open bundle reports from the Open Bundle Reports panel by choosing option **1**, Enter search criteria from the **Search** pull-down menu.

The Search for Bundle Definitions window is displayed.

3. In the **Report name** field, type a unique name for the report. This user-defined value can be up to 64 characters in length. The following wildcards are permitted: the asterisk (*) or percent sign (%) for zero or more trailing characters, or the question mark (?) or underscore (_) for a single character anywhere in the name. If you specify a wildcard pattern, Output Manager will find all report names that have names matching the pattern.
4. In the **Bundle name** field, type a unique name for the bundle. This user-defined value can be up to 32 characters in length. The following wildcards are permitted: the asterisk (*) or percent sign (%) for zero or more trailing characters, or the question mark (?) or underscore (_) for a single character anywhere in the name. If you specify a wildcard pattern, Output Manager will find all bundle definitions that have names matching the pattern.
5. In the **After date** field, type the date after which the bundle instances must have been activated with the BUNDLE ACT command. Use the format YYYY/MM/DD.
6. In the **Before date** field, type the date before which the bundle instances must have been activated with the BUNDLE ACT command. Use the format YYYY/MM/DD.
7. In the **After time** field, type the time after which the bundle instances must have been activated with the BUNDLE ACT command. Use the format HH:MM.
8. In the **Before time** field, type the time before which the bundle instances must have been activated with the BUNDLE ACT command. Use the format HH:MM.
9. Press Enter.

The Open Bundle Reports list panel lists only the open bundle definitions that match your search criteria.

Deleting unwanted reports from open bundle instances

You can delete part of an open bundle instance, for example, a package of reports for a selected recipient. If you specify the D (Delete report) command for a bundle report in the Open Bundle Report Lists panel, Output Manager deletes that report in the active bundle. You can delete multiple reports for several open bundle instances, as needed.

To delete a report from an open bundle instance:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **N**, Bundle Administration, and press Enter.
3. From the Bundle Administration menu, choose option **M**, Manage Active Bundles, and press Enter. The Search for Manage Active Bundles panel displays.
4. Specify search criteria, as described in [“Searching for open bundle instances” on page 182](#), or specify CANCEL in the report name field to bypass.
The Open Bundle Reports List panel is displayed.
5. In the **CMD** column, type the D (Delete) line command next to the report that you want to delete, and press Enter.
6. The Confirm Active Bundle Report Deletion window is displayed.
7. Press Enter to delete the report from the active bundle. The report is deleted from the open bundle instance.
8. Press Enter to return to the Open Bundle Reports List panel.

Deleting reports generated by a specific job from an active bundle

The SBJTSAMP member BJTBRJAB has JCL that allows you to delete all reports generated by a specific batch job from active bundles.

If a batch job fails or ABENDs, you can delete all of the reports generated by the batch job from all open bundles. If a deleted report is part of a bundle instance and you print that bundle instance, the report will not be included in the print of the bundle instance at deactivation time.

To delete reports for a specific job from an active bundle, you must first customize the sample JCL that Output Manager provides.

Users submitting the BJTBRJAB job (that runs BJTCCATS) require ALTER access to the BJT.<DB_QUALIFIER>.ADM.CSNC profile. *DB_QUALIFIER* is your database qualifier. This profile is defined in the JCL sample, BJT#RDEF in SBJTSAMP. The access list is defined in the JCL sample, BJT@RPER.

Sample JCL for deleting reports for a specific job from all active bundles

The following sample JCL is used for deleting reports for a specific job from all active bundles. This sample JCL is in the BJTBRJAB member of the HLQ.SBJTSAMP library (where HLQ is the high-level qualifier of the installed Output Manager product libraries).

```
BJTBRJAB JOB ,CLASS=A,MSGCLASS=X,
MSGLEVEL=(1,1),USER=&SYSUID,NOTIFY=&SYSUID
/*****
/* MODIFICATION INSTRUCTIONS: */
/*-----*/
/* - MODIFY the job card above to meet your installation */
/* requirements. */
/* */
/* - CHANGE ?BJTHLQ? to the high level qualifier of the Output */
/* Manager product libraries. */
/* */
/* - CHANGE ?BJTPLAN? to the plan name prefix of the Output Manager */
/* plan specified in BJT@PRBI. */
/* */
/* - CHANGE ?DB2SSID? to the DB2 SSID of the Db2 subsystem that */
/* contains the Output Manager database tables. */
/* */
/* - CHANGE ?JOBID? to the job ID for which you want to remove all */
/* reports associated with an active bundle. */
/* */
/* - CHANGE ?JOBNAME? to the jobname for which you want to remove */
/* all reports associated with an active bundle. */
/* */
/* - CHANGE ?SDSNEXIT? to the Db2 Exit library for your Db2 */
/* subsystem. */
/* */
/* - CHANGE ?SDSNLOAD? to the Db2 LOAD library. */
/* */
/* - Uncomment the line in STEPLIB referring to SBJTLPA */
/* if BJTDLL is not loaded into the DLPA. */
/* */
/*****
//RUNPROG EXEC PGM=BJTCCATS
//STEPLIB DD DISP=SHR,DSN=?BJTHLQ?.SBJTLOAD
/* DD DISP=SHR,DSN=?BJTHLQ?.SBJTLPA
// DD DISP=SHR,DSN=?SDSNEXIT?
// DD DISP=SHR,DSN=?SDSNLOAD?
//SYSOUT DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//SYSIN DD *
RUN = REPORTS_FOR_JOBID_IN_ACTIVE_BUNDLES
SSID = ?DB2SSID?
PLAN = ?BJTPLAN?X
JOBID = ?JOBID?
JOBNAME = ?JOBNAME?
DETAILED = NO
ALLOW_DELETE = YES Set this to NO for testing
/*
```

Figure 3. SBJTSAMP member BJTBRJAB

Batch report deletion keywords and syntax

Specify the keyword parameters that are appropriate for your site in the SYSIN DD statement. These keywords are not positional. They can start in any column.

For readability, specify each keyword on its own line using the following syntax:

```
KEYWORD = VALUE
```

You can enter zero or more spaces on either side of the equals (=) sign. If you need to comment out a line, place an asterisk (*) or a semicolon (;) in column 1.

Report deletion keywords

The underlined value for a keyword is the default value.

SSID

Specifies the subsystem ID of the Db2 subsystem that contains the Output Manager tables.

PLAN

Specifies the plan name you have chosen in place of ?BJTPLAN?. It should match the other uses of ?BJTPLAN? in BJT@PRBI and BJT@PRGR.

ALLOW_DELETE

Specifies what should happen to report names that have been identified as output from the specified JOBID and JOBNAME. Specify YES if you want the reports to be deleted from all active bundles. The default is No.

DETAIL

Specifies whether to print a detailed report of all actions taken during delete report processing. Valid values are: YES (prints a detailed report) and NO (does not print a detailed report).

JOBID

Specifies the JES job identifier of the specific batch job for which you want to delete the associated reports. All reports that are associated with the specified job identifier will be removed from all active bundles if ALLOW_DELETE is set to YES. JOBID is a required argument. There is no default value.

JOBNAME

Specifies the JES job name of the specific batch job for which you want to delete the associated reports. All reports that are associated with the specified job name will be removed from all active bundles if ALLOW_DELETE is set to YES. JOBNAME is a required argument. There is no default value.

Customizing the sample JCL

You must customize the SBJTSAMP member BJTBRJAB, which contains the JCL for deleting reports generated by a specific batch job.

To customize the JCL in the BJTBRJAB member:

1. Replace the following variables with the values that you set during product customization:

- ?BJTHLQ? - The high-level qualifier for your Output Manager product libraries
- ?SDNSLOAD?- The fully qualified name of your Db2 load library
- ?SDSNEXIT? - The fully qualified name of the Db2 Exit library for your Db2 subsystem.
- ?DB2SSID? - The subsystem ID of the Db2 subsystem that is contains Output Manager database
- ?BJTPLAN? - The plan name you used in BJT@PRBI for delete report processing or catalog synchronization.

For more information about these variables, see the *IBM Tivoli Output Manager for z/OS Installation and Customization Guide*.

2. Ensure that the job card is valid for your site.
3. In the SYSIN DD statement, specify the appropriate keyword parameters for your site using the syntax
KEYWORD = VALUE.

- a. (Required) Specify a JOBID and JOBNAME. If ALLOW_DELETE specifies YES, all reports generated by this job identifier and job name will be deleted from all active bundles.

- b. (Optional) If you want to print a detailed report of all actions taken during processing, specify
DETAIL = YES. If you do not want a printed detailed report, specify
DETAIL = NO.

If you do not include the DETAIL keyword, the default behavior is NO, and names of changed data sets are always shown.

For more information about these keywords, see [“Batch report deletion keywords and syntax”](#) on page 184.

4. When you are finished customizing the JCL, save the BJTBRJAB member.

Sample output of delete report processing

The following is a sample of the report list output of delete report processing.

The report list shows the report name, capture time, the report type, and the number of pages in the report. The JOBID in this example is J0134579. Any reports from the JOBID J0134579 that are included in any active bundles are listed in this output. In this example, ALLOW_DELETE has been set to NO, so the reports have not been deleted. If ALLOW_DELETE had been set to YES, the reports appearing in this list would have been deleted from the active bundles.

```
PARAM NAME=SSID VALUE=DSX1
PARAM NAME=PLAN VALUE BJTPLANX
PARAM NAME=JOBID VALUE=J0134579
PARAM NAME=DETAILED VALUE=YES
PARAM NAME=ALLOW_DELETE VALUE=NO
Logging with full detail
DELETE is NOT allowed
UPDATE is NOT allowed
DSNALI (CAF) established A4D1F6C0
DSNTIAR (error decoding) established A4D1F300
DB2 CONNECT cnxn = 0x24D19430
REPORTS_FOR_JOBID_IN_ACTIVE_BUNDLES BEGIN
SHOW_REPORTS_FOR_JOBID_IN_ACTIVE_BUNDLES SELECT_WRITE
BOSTON                2007-03-28-15.53.57.850254 Custom          11
BOSTON                2007-03-28-15.53.57.850254 Indexed           11
NEWTON                2007-03-28-15.53.57.912817 Custom            4
NEWTON                2007-03-28-15.53.57.912817 Indexed            4
SEATTLE               2007-03-28-15.53.57.941854 Custom            1
SHOW_REPORTS_FOR_JOBID_IN_ACTIVE_BUNDLES run_time=0.020951 clock_time=7.080111
SHOW_COUNT_OF_REPORTS_FOR_JOBID_IN_ACTIVE_BUNDLES SELECT_WRITE
4 rows would be removed from the bundle history table
SHOW_COUNT_OF_REPORTS_FOR_JOBID_IN_ACTIVE_BUNDLES run_time=0.004644
clock_time=0.064383
END
REPORTS_FOR_JOBID_IN_ACTIVE_BUNDLES run_time=0.025969 clock_time=7.245536
CAF Close status = 0
```

Figure 4. Sample delete report processing output

Chapter 10. General product administrative functions

The Output Manager ISPF interface provides "General product functions" that product administrators can use to configure the Output Manager system and issue messages to Output Manager users.

An Output Manager policy is the set of Output Manager selector rules subselector rules, and report selection rules defined for your Output Manager system. When a policy is activated, those rules are read into memory and are available for use by Output Manager.

Policy Administration

From the Policy Administration panel of the ISPF interface (A.PA), you can perform the following types of administrative functions: initialize policies for a subsystem, edit existing policies, view existing policies, delete existing policies, and manage user variables.

Changes to your Output Manager configuration should only be reserved for a maintenance window.

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **PA**, Policy Administration, and press Enter.
3. In the **Subsystem** field, specify the subsystem on which the policies are located. Use an asterisk (*) to specify the default subsystem. You can leave this field blank to select the subsystem from a list.
4. In the **Type** field, specify the type of policy. Valid values include STC (started task), ISPF, ITOMWeb, BJTBatch. You can specify an asterisk (*) to specify the non-specific (global) type.
5. Type E (Edit) on the command line to edit the policy, and press Enter.
The Policies panel is displayed.
6. On the Policies panel, type ADD on the command line and press Enter to add configuration parameters to the specified policy/type. A list of available parameters is presented on a pop-up panel. For a description of the available configuration parameters, view the Help for the Policies panel, or refer to the *IBM Tivoli Output Manager Installation and Customization Guide*.
Note: Type I (Insert) in the CMD column to insert a new parameter.
7. When you've completed specifying parameters, type SAVE on the command line and press Enter to return to the Policy Administration panel.
8. On the Policy Administration panel, type I (Initialize policies) and press Enter to apply your changes.

Viewing the properties of your Output Manager environment

Use the Environmental Details panel to view the properties of your Output Manager configuration. Some of the environment details displayed on this panel include Db2 subsystem ID, Db2 plan name, Db2 qualifier, Db2 database name, Db2 version (including whether Db2 is running in Conversion Mode, Enabling New Function Mode, or New Function Mode), Output Manager version, and Output Manager schema version.

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **O**, Output Manager Environment, and press Enter.
The Environmental Details panel is displayed. The fields on this panel are read-only and are for informational purposes only.

Specifying user messages

You can specify the following types of messages to be displayed to users whenever they start the Output Manager ISPF interface:

To set up user messages:

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the Administrative Functions menu, choose option **U**, User Messages, and press Enter. The User Messages panel is displayed.
3. In the **Subsystem** field, type the name of the Output Manager subsystem on which the message will apply. Use an asterisk (*) to apply to the default subsystem.
4. In the **Type** field, specify the type of policy. Valid values include STC, ITOMWeb, and ISPF. To specify the non-specific (global) type, use an asterisk (*).

Note: If you specify an asterisk in both the Subsystem field and the Type field, any changes made will apply to the default subsystem.

Tip: Type E (Create, change or delete) on the Command line with Subsystem and Type blank to select Subsystem from a list. After a Subsystem is selected, a list of types is presented as well.

5. On the lines provided, type a new message or edit the existing message text, as needed.
6. Press Enter twice to update the message.
7. Press F3 (Exit) to save your changes.

Resolving conflicts in selection rules with the Selector Rule Analysis Utility (BJT@ANLZ)

SBJTSAMP member BJT@ANLZ locates and assists in resolving conflicting selector rules, subselector rules, and report selector rules that are not being utilized due to job selection criteria and selector order. This utility can be used to assist the administrator in reducing and eliminating selection rule conflicts that prevent other selection rules from being processed.

BJT@ANLZ output data sets include a report of selection rule conflicts, and, if requested, also include flat files that can be used as input to the Output Manager Universal Batch Utility (UBU) to implement the reordering in the Output Manager database.

What causes conflicts between selection rules?

Conflicts between selection rules can occur when selection rules are duplicated, when selection criteria overlaps, and when the processing order causes a rule to be inaccessible.

Top-level selector rules:

When a top-level selector rule (parent selector rule) has the same or overlapping selection criteria as another top-level selector rule, it is unpredictable which rule will be selected to process the SYSOUT. If both of the top-level selector rules in this scenario have subselector rules, the SYSOUT may or may not be processed by the correct subselector or selector rule, depending on which selector Output Manager uses to capture the SYSOUT. Therefore, it is important that top-level selector rules are not duplicated, especially when they have different subselector rules.

Subselector rules and report selector rules:

When a subselector rule or report selector rule has the selection criteria that can process SYSOUT as another rule of that type, the duplicate rules are "blocked" by the first rule, and are prevented from being processed. Subselector rules and report selector rules are processed in the order as shown by the Order column (ROWNUM) displayed in the Output Manager administration panels. When two rules exist with the same selection criteria, the rule that appears higher in the list (with the lower ROWNUM value) will always be processed first; leaving the duplicate or more specific instances of the rule untouched or "blocked", and never used. Subselector rules and report selector rules should be ordered from the most-specific criteria to the least-specific.

For example, if subselector rule ABC has a Job Name selection criteria of "T*", meaning all jobs that begin with "T", it will block subselector DEF that has a Job Name selection criteria of "TJOB" if ABC is earlier (has a lower ROWNUM value) than DEF in the subselector processing order. If the user does not know that the rules are out of order, and therefore one or more rules are blocked, the archive attributes or layout (in the case of report selector rules) employed by the matched rule may be unexpected.

When a selector rule has many associated subselector rules, the possibility of duplicate or blocked subselector rules is greatly increased.

Why you want to run BJT@ANLZ

The Selector Analysis Utility helps you resolve these conflicts by analyzing UBU extractions from the BJTDDS table and providing a report of conflicting selectors and new UBU input files to help improve the processing order of subselector rules and report selector rules. When the recommended reordering suggestions in the UBU flat files are implemented, the number of blocked subselector and report selector rules decreases significantly.

Selector Analysis Utility output data sets:

RPTOUT

Will contain the analysis report of selection rules. If the specified data already exists, the RECFM value for that data set can be RECFM=FA, FBA, VA, or VBA, and the minimum LRECL value is 400. If the data set does not already exist, the RECFM, LRECL, and BLKSIZE are chosen by the Selector Analysis Utility.

DDSSOUT

Will contain the suggested reordering of subselector rules, to be used as UBU input. If the specified data set already exists, the RECFM value for that data set can be RECFM=F, FB, V, or VB, and the LRECL must be at least as large as the length of the records in the corresponding DDSSIN or DDSRIN data sets (plus 4 if RECFM=V*). If the data set does not already exist, the RECFM, LRECL, and BLKSIZE are chosen by the Selector Analysis Utility.

DDSROUT

Will contain the suggested reordering of report selector rules, to be used as UBU input. If the specified data set already exists, the RECFM value for that data set can be RECFM=F, FB, V, or VB, and the LRECL must be at least as large as the length of the records in the corresponding DDSSIN or DDSRIN data sets (plus 4 if RECFM=V*). If the data set does not already exist, the RECFM, LRECL, and BLKSIZE are chosen by the Selector Analysis Utility.

SYSTSPRT

The SYSTSPRT data set contains logging information. If the specified data set already exists, the RECFM value for that data set can be RECFM=F, FB, V, or VB, and the LRECL value must be at least 400. If the data set does not already exist, the RECFM, LRECL, and BLKSIZE are chosen by the Selector Analysis Utility.

Note: The reports generated by this program are subject to change and are not considered to be a programming interface.

BJT@ANLZ steps overview

1. Ensure that your selector rule configuration is not changed while the Selector Analysis Utility is running. You can either stop Output Manager, or set the BJTDDS table to read-only
2. Extract the selector rules and report selector rules using the Universal Batch Utility with the following options:

```
HORIZ_DELIM(-)
VERT_DELIM(|)
RUNMODE(EXTRACT)
PREP4CLON(YES)
OBJTYPE(SELECTOR_RULE) or OBJTYPE(REPORT_SELECTION_RULE)
FIELDS:
  ALL (no 'EXCEPT' clause)
      (no 'SELECT:' or 'SORT-BY:' sections)
```

3. Run the output of the UBU extraction through the Selector Analysis Utility to sort the rule groups, eliminate duplicate rules, and analyze the results for remaining conflicts by using ANALYZE(YES), EXCLUDE-DUPS(YES), and by specifying the selection criteria fields you want in order of importance in the ORDER-x-BY sections.

4. The output of the Selector Analysis Utility will show any remaining conflicts in the report. You can then edit the UBU-formatted output files to fix the conflicts by changing the selection criteria as needed.
5. Optional: If you make any manual changes to the selection rule order or selection criteria, it is recommended to run the Selector Analysis Utility a second time with ANALYZE(YES), EXCLUDE-DUPS(NO), and no ORDER-x-BY sections to verify your changes.
6. Use these files as input to Universal Batch Utility to make updates to the Output Manager Db2 database.
7. Reinstate access to the selector rule configuration. If you stopped Output Manager, restart it. If you made the BJTDDS table read-only, return it to its original state.

Running the Selector Analysis Utility

To run the Selector Analysis Utility, modify and submit SBJTSAMP member BJT@ANLZ. The Selector Analysis Utility is run against DDSSIN and DDSRIN data sets created with the Universal Batch Utility (UBU). These data set must be extracted by UBU with the following options:

```
HORIZ_DELIM(-)
VERT-DELIM(|)
RUNMODE(EXTRACT)
PREP4CLON(YES)
OBJTYPE(SELECTOR_RULE) or OBJTYPE(REPORT_SELECTION_RULE)
FIELDS:
  ALL      (no 'EXCEPT' clause)
           (no 'SELECT:' or 'SORT-BY:' sections)
```

The Selector Analysis Utility will analyze the selection rules for conflicts and make suggestions for reordering the selection rule processing order. Run the Selector Analysis Utility with your UBU files, use the Output Manager ISPF interface to make any simple changes, and then run the Selector Analysis Utility output through UBU to make major changes.

Note: For more information on the Universal Batch Utility (UBU), see the Output Manager Installation and Customization Guide.

1. Modify SBJTSAMP member BJT@ANLZ, replacing the following variables with your installation values:
 - Change all instances of the ?HLQ??.?SLQ? variables to your site's high-level qualifiers for workfiles.
 - Change ?BJTHLQ? to your site's high-level qualifier for the Output Manager product libraries.
2. Change ?BJTHLQ? to your site's high-level qualifier for the Output Manager product libraries.
 - INPUT-FROM(UBU): Specifies that you are using DDSSIN and DDSRIN flat files from the Universal Batch Utility as input.
 - ANALYZE(YES|NO): Specifies whether or not to look for conflicts. Specify YES to analyze selectors (default), specify NO to process selectors without analyzing for conflicts. If ANALYZE(NO) is specified, then ORDER-x-BY sections and fields must be specified. Use this combination to produce the suggested reordering in UBU form in DDSSOUT or DDSROUT without the overhead of doing the analysis.
 - EXCLUDE-DUPS (YES|NO): Specifies whether or not to exclude duplicate subselector rules and report selectors when creating the DDSSOUT and DDSROUT data sets. If YES is specified, rules with the same selection criteria and same archive attribute (for subselector rules) or the same selection criteria and layout (for report selector rules) will be removed from the output set that is written to the UBU file. Only the first enabled rule will be included in the output; if all of the rules are disabled, the first rule (according to the user-specified row order) is included. Specify YES to exclude duplicate subselector and report selector rules, specify NO to include all selection rules.

Note: EXCLUDE-DUPS does not affect parent selector rules.
3. Specify control statements in the SELECT section to specify what types of selection rules to process and analyze:
 - OBJTYPE: (Required) Specifies the type of selectors to process
 - SELECTOR_RULE: Process selector rules, and subselector rules

- REPORT_SELECTION_RULE: Process report selector rules only.
 - WHERE SELECTOR-NAME = 'main_selector_name': This option is valid only for OBJTYPE(SELECTOR_RULE). When specified, processes only subselector rules for the specified parent selector name. Single quotes are required, and the name may contain wildcards. If not specified, all parent selectors are processed.
4. Optional: Specify control statements in the ORDER-x-BY sections to specify the fields on which to give priority in the new processing order:
- - ORDER-SUBSELECTORS-BY section: This section lists the fields that should be given higher priority during sorting of the subselector records for processing order. List the fields in order from higher to lower priority. Fields not listed are given the lowest priority. All fields are processed, but the precedence of unspecified fields is undefined. If no fields are specified, no sorting will be done on the DDSSOUT file. The following field names are available for subselector rules: JOB TYPE, JOB NAME, JOB CLASS, PROC STEP NAME, STEP NAME, STEP NUMBER, DD NAME, PROGRAMMER NAME, USER ID, ACCOUNT 1, ACCOUNT 2, ACCOUNT 3, ACCOUNT 4, ACCOUNT 5, ACCOUNT 6, ACCOUNT 7, ACCOUNT 8, SYSOUT CLASS, DESTINATION, FORM, PRMODE, FCB, UCS, FLASH, WRITER, ARCHIVE NAME, JES QUEUE.
- Note:** If ORDER-SUBSELECTORS-BY is not specified, the UBU files will be created with duplicates removed (if requested), and ordered by the ROWNUM of the subselector within the parent selector rule.
- ORDER-REPORT-SELECTORS-BY section: This section lists the fields that should be given higher priority during sorting of the report selector records for processing order. List the fields in order from higher to lower priority. Fields not listed are given the lowest priority. If no fields are specified, no sorting will be done on the DDSROUT file. The following field names are available for report selectors: JOB NAME, STEP NAME, PROC STEP, STEP NUMBER, DD NAME, WRITER NAME, FORM NAME.
- Note:** If ORDER-REPORT-BY is not specified, the UBU files will be created with duplicates removed (if requested), ordered by the ROWNUM of the report selector.
5. SUBMIT BJT@ANLZ. The job will analyze selectors for conflicts and produce the following output:
- DDSSOUT, if specified, contains the suggested reordering for subselector rules. This file can be used as input to UBU to make changes to the database.
 - DDSROUT, if specified, contains the suggested reordering for report selector rules. This file can be used as input to UBU to make changes to the database.
 - The SYSTSPRT data set contains logging information.
 - The RPTOUT data set contains the selector analysis report.
- Note:** If the job ends with COND CODE greater than 4, the DDSSOUT and DDSROUT output files cannot be used as UBU input. Correct the problem and then resubmit before using the output as UBU input.

Analyzing the RPTOUT selector integrity report

The RPTOUT data set provides detailed information on the selection rules in the Output Manager Db2 tables. The type(s) of selection rules included in RPTOUT depend on the control statements you specified in the SELECT section of BJT@ANLZ.

RPTOUT columns include:

?

The "?" column indicates the reason that a selection rule should be investigated. Values include:

- N: (No, archive attributes or layouts are NOT the same). In this scenario, a rule is blocked but it has different selection criteria and archive attributes or layout. Manual investigation and action is critical to unblock the rule.
- D: (Duplicates: identical selection fields, archive attributes or layouts are NOT the same) The selection criteria is duplicated by a selection rule of the same type, but the duplicate has a different archive attribute or layout. This value is similar to N, but the selection criteria are the same.

- Y: (Yes, archive attributes or layouts are the same) Although the selection rules have different selection criteria, the processing order causes this rule to block another rule. A less-specific rule is preventing a more-specific rule from being processed. Because the rules have the same archive attributes or layouts, these conflicts are not critical, and the conflict can be solved by reordering the rules.
- I: (Identical) The selection criteria is duplicated by a selection rule of the same type, and they have the same archive attributes or layouts. One of these rules can be deleted since they are duplicates.

SELECTOR (A)

The name of the selector rule that is blocking another rule.

- T: Indicates the Status of selector in the SELECTOR (A) column, either E (Enabled), S (Skip), or D (Disabled).
- ROWNUM: Indicates the ROWNUM (processing order) of the selector in the SELECTOR (A) column.

COMPETES WITH SELECTOR (B) or BLOCKS SELECTOR(B)

The name of the selection rule that has selection criteria that overlaps the selection rule in the SELECTOR (A) column. Compare these two rules, and the values displayed in the COLUMNS INVOLVED column to determine what changes (if any) need to be made. The COMPETES WITH message is output for selector rules, and the BLOCKS message is output for subselector rules or report selector rules.

- T: The second instance of the T column indicates the status of selector in the SELECTOR (B) column, either E (Enabled), S (Skip), or D (Disabled).
- ROWNUM: The second instance of the ROWNUM column indicates the ROWNUM of the selector in the SELECTOR (B) column.

ARCHIVE ATTRIBUTE (A):

Indicates the name of the archive attribute linked to the selector in the SELECTOR (A) column.

ARCHIVE ATTRIBUTE (B):

Indicates the name of the archive attribute linked to the selector in the SELECTOR (B) column.

COLUMNS INVOLVED:

The values in this column indicate the columns in the BJTDDS Output Manager Db2 table that are involved in the conflict. If the field name is followed by an equal sign (=), then the two selection rules have identical values in that field. If it is followed by an (A), then the value in selector A is blocking the value in selector B.

Note: For subselector rules and report selector rules, modifying the processing order can reduce conflicts. Because parent selector rules do not have a processing order, the only way to resolve conflicts for parent selector rules is to change the selection criteria.

Analyzing top-level selectors

When conflicts are found between top-level selectors, the course of action should be determined by the selector status, as follows:

- If selector #1 is DISABLED, and selector #2 is ENABLED, DISABLED, or SKIP: No immediate action is required. However, before enabling the disabled selector rule, the conflict must be investigated.
- If selector #1 is SKIP, and selector #2 is ENABLED or SKIP: Carefully check the selector rules and associated child subselector rules to ensure that the result will be as intended. Most often, this scenario does not require immediate action.
- If both selector #1 and selector #2 are ENABLED: Immediately investigate the issue and determine the desired Action. In the current state, it is unpredictable which selector will be used to process SYSOUT if you have jobs on your system that can generate SYSOUT that will match both selectors.
 - If you can determine that there is some SYSOUT generated by some of your jobs that will match both selector rules, add additional selection criteria to one or both of the selector rules.
 - If you determine that there will be SYSOUT on your system that should be captured by Selector A and other SYSOUT should be captured by Selector B, carefully add subselector rules to ensure the SYSOUT is processed correctly.

- If you can determine that there will be SYSOUT on your system that will match both selectors, and you cannot add selection criteria to one or both of the selectors, start by deciding which selector should process any SYSOUT that matches both rules. Then, edit the selector rule that should not process the SYSOUT and add a STATUS=SKIP subselector at the top of the subselector list for that selector rule. This STATUS=Skip subselector should have the same selection criteria as the selector that will process the sysout. Setting the status to SKIP will cause the SYSOUT data set to be returned to the spool, allowing it to be matched by the other selector rule that has the same selection criteria.

Using the DDSSOUT and DDSROUT output as input to UBU

The reports that suggest reordering subselectors and report selectors are valid input to the Universal Batch Utility (UBU). For DDSSOUT, each selector rule and all of its subselector rules are grouped together in the recommended processing order. Review the new processing order before using the UBU file to reload your selector rules. Incorrect specification of the ORDER BY parameter may result in unintended consequences.

1. Review the DDSSOUT and/or DDSROUT data sets. The suggested order of subselector rules or report selector rules was determined by the ORDER-SUBSELECTORS-BY and/or ORDER-REPORT-SELECTORS-BY sections of BJT@ANLZ. The fields take precedence in the order specified.
2. If there are few changes needed, you can change the order of selection rules via the Output Manager ISPF interface using the M (move) and A (After) ISPF commands in the administration list panels. For report selector rules: ISPF A.R, for subselector rules: ISPF A.S followed by an SS line command next to a selector rule).
3. If there are too many changes to make manually in the ISPF interface, you can specify the DDSSOUT and/or DDSROUT data set as the input file for batch update in UBU. For more information on using UBU to make batch updates, refer to the IBM Tivoli Output Manager Installation and Customization Guide.

Analyzing Output Manager object relationships and database statistics with ITOMweb administrative reports

Administrative reports are a set of pre-defined queries and actions that enable administrators to view Output Manager object relationships and database statistics.

Administrators can view the list of administrative reports available by clicking **Administrative Reports** on the ITOMweb homepage. The set of Administrative Reports displayed are loaded from the Report Definition file pointed to in the REPORTDEFFILE configuration parameter of omweb.conf.

The following scenarios are a few examples of how Administrative Reports can be used:

Retrieve archive statistics:

Administrative reports can help you collect archive statistics. The Archive Residency report can give you a count of the total number of Output Manager archives that are stored on primary DASD, the total number of archives that have been migrated, or on third party tape sorted by location. For example, the REMAINING3RDPARTYVOLSERS report contains a list of the volsers that have third party archives that have not yet been migrated, and the UNRECALLED3RDPARTYARCHIVES report contains a list of the remaining third party archives that have not been recalled on specified volsers set.

View Reporting statistics:

The administrative reports queries allow you to see how your Output Manager reports are being used. For example, the UNUSEDREPORTS query retrieves a list of reports that have been defined but have never been run (and therefore may no longer be used), the NODISTREPORTS query retrieves a list of reports that are not assigned to a distribution list (and therefore cannot be viewed), and the REPORTSFORUSER query allows you to view which reports and distribution lists a specific user can view.

Perform database changes:

Some administrative reports can be used to perform database changes. For example, the MULTIPLYDEFINEDUSERS report provides a list of users that have more than one recipient ID defined to their user ID. Because it is recommended that each user ID have only one recipient ID, this report

should come back with no results. Administrators can remove a recipient ID from the Output Manager database by checking the checkbox next to a recipient name and clicking **Delete**.

Important: Use caution while deleting user IDs. If you use the "Select all" option to delete, all occurrences of users with duplicate user IDs are deleted.

Running administrative reports

Some administrative report queries require user input. User input fields are displayed as a series of dashes ("-----"). To enter a value in these fields, click the dashes and specify your parameter in the pop-up window that is displayed. Click **OK**, and your specified value is displayed in place of the dashes. You can then click **Re-Run Report** to re-run the query and return results based on the new parameter value.

The administrative reports batch job, BJT@ARPT

The queries of ITOMweb's administrative reports return only the first 1,000 result rows. To view the complete list of results, submit the batch job in SBJTSAMP member BJT@ARPT. This member includes instructions in the comments on configuring the job for your use. Many of these variables that need to be changed were specified in the omweb.conf and httpd.conf files used to configure your webserver:

- Change ?BJTHLQ? to the site's high-level qualifier for the OUTPUT MANAGER product libraries
- Change ?SCEERUN? to the Language Environment® Runtime Library
- Change ?ITOMweb mount point? to the ITOMWEB directory name
- Change ?SDSNLOAD? to the DSN of the Db2 Runtime Library
- Change ?DB2SSID? to the Db2 subsystem ID of the ITOM database
- Change ?BJTQUAL? to the OWNER NAME of the database tables
- Change ?BJTPLANX? to the PLAN NAME built for ITOMWEB
- Specify RNAME and SYSIN DATA:
 - RNAME: The name of the Administrative Report. For complete names, refer to the current report list in ITOMweb displayed in the **Administrative Reports** link. For example, NODISTREPORTS
 - TYPE: ADMINREPORTS (this is the only valid value)
 - SYSIN DATA: Specify values for the report's input variables. Refer to the reports in ITOMweb Administrative reports for the list of supported input variables (if any). For example: USERID=USER1. This section can be blank if the report does not take any input variables.

This job also defines the following required data sets:

- Input data set: BJTARDEF (this is the Report Definition file pointed to in the REPORTDEFFILE configuration parameter of omweb.conf)
- Output data sets: BJTADRPT (the report output) and STDERR (error log)

Note: You cannot use the Administrative Report batch job to perform database changes that are available in some reports, such as deleting recipient IDs in the MULTIPLYDEFINEDUSERS report.

Administrative Report batch job examples:

The following is an example of a report that does not require input variables in SYSIN DATA:

```
// SET TYPE=ADMINREPORTS
// SET SSID=DSX1
// SET PLAN=BJTPLANX
// SET QUAL=BJTQUAL
// SET RNAME=MULTIPLYDEFINEDUSERS
//*
//BATCHRP1 EXEC PGM=BJTADRPT,REGION=0M,
// PARM='&TYPE &SSID &PLAN &QUAL &RNAME'
//STEPLIB DD DISP=SHR,DSN=BJT.SBJTLOAD
// DD DISP=SHR,DSN=CEE.SCEERUN
// DD DISP=SHR,DSN=DSN.V910.SDSNLOAD
//BJTARDEF DD PATH='/u/itomweb/adminreports.enc'
```

```
//BJTADRPT DD SYSOUT=*,DCB=(RECFM=FB,LRECL=4096)
//STDERR DD SYSOUT=*
//SYSIN DD DUMMY
/*
```

The following is an example of a report that does require input variables (REPORTSFORUSER) in SYSIN DATA:

```
// SET RNAME=REPORTSFORUSER
//BATCHRP2 EXEC PGM=BJTADRPT,REGION=0M,
// PARM='&TYPE &SSID &PLAN &QUAL &RNAME'
//STEPLIB DD DISP=SHR,DSN=BJT.SBJTLOAD
// DD DISP=SHR,DSN=CEE.SCEERUN
// DD DISP=SHR,DSN=DSN.V910.SDSNLOAD
//BJTARDEF DD PATH='/u/itomweb/adminreports.enc'
//BJTADRPT DD SYSOUT=*,DCB=(RECFM=FB,LRECL=4096)
//STDERR DD SYSOUT=*
//SYSIN DD *
USERID=PDTEST1
/*
```

Administrative report details

This section details the provided administrative reports, as well as the input arguments and cross referenced links.

Note: In some admin reports, one or more fields are a link to another report, and the value is passed as an input argument to the related report.

<i>Table 7. Administrative report details</i>			
Admin report	Description	Links	Input arguments
ARCHIVEWITHSELECTOR	Show recent archived sysouts for job name with the selector name. This report includes details about each job that was captured in the last <i>N</i> days.	None	<ul style="list-style-type: none"> JOBNAME 1-8 character jobname LASTNDAYS integer, maximum value 14
ARCHIVEWITHREPORTRULE	Show recent archived sysouts that used a Report Rule. This report includes details about each job that was captured in the last <i>N</i> days that resulted in new reports being generated.	None	<ul style="list-style-type: none"> JOBNAME 1-8 character jobname STNDAYS integer, maximum value 14
ARCHIVERESIDENCY	Show the count of ITOM archives stored on primary DASD, migrated (HSM migration volumes), or on third-party tape.	None	None

Table 7. Administrative report details (continued)

Admin report	Description	Links	Input arguments
REPORTSBYDATE	Show captured report details within a date range. This report includes details about each report captured within the specified date range.	<p>Click the report name to open the RECIPIENTS report for the selected report name.</p> <p>Click the jobname to open the ARCHIVE WITH REPORT RULE report to show details about the job that was captured.</p>	<ul style="list-style-type: none"> STARTDATE YYYY-MM-DD or local date format such as MM/DD/YYYY ENDDATE YYYY-MM-DD or local date format such as MM/DD/YYYY
REPORTSWTO	Show WTO options for captured reports within a date range. This report includes details about each report captured within the specified date range, including the options set for WTO (write to operator).	<p>Click the report name to open the RECIPIENTS report for the selected report name.</p> <p>Click the jobname to open the ARCHIVE WITH REPORT RULE report to show details about the job that was captured.</p>	<ul style="list-style-type: none"> STARTDATE YYYY-MM-DD or local date format such as MM/DD/YYYY ENDDATE YYYY-MM-DD or local date format such as MM/DD/YYYY
REMAININGISVVOLERS	Shows the set of ISV Tape Volsers that still have reports that have not yet been recalled by ITOM. This report includes the number of reports remaining on each ISV tape volume.	Click VOLSER to open the UNRECALLED ARCHIVES report to list the archives that still exist on the selected volume.	None
UNRECALLEDARCHIVES	Shows the set of archives on a given tape volser that have not been recalled.	Click Archive Name to recall a specific archive from the tape.	VOLSER 1 to 6 character Volume Serial Number
ISVTAPESTOSCRATCH	Shows the set of ISV tape volsers that are no longer needed; all entries have been recalled. This report is a list of all tapes that originally contained unrecalled ISV archive data sets. The tapes are no longer needed by Output Manager because all of the archives have been copied from the tape into an Output Manager archive.	None	None

Table 7. Administrative report details (continued)

Admin report	Description	Links	Input arguments
EMAILRETRIES	<p>Shows a list of all users with failed email attempts that awaiting retries.</p> <p>Use this report to remove entries from email processing that have an invalid email address. Use the checkbox in the leftmost column to select the recipients to be modified. The clean up action disables the email option in all distribution lists for the selected user.</p>	None	None
UNUSEDREPORTS	Shows reports that are defined but might no longer be used. No captured reports exist for the report names listed in this report.	None	None
NODISTREPORTS	Shows reports with no distribution list or an empty list. Reports with no distribution list or an empty distribution are generally not visible to any users.	None	None
TOPNARCHIVENAMES	Shows the <i>N</i> most numerous archive names in ITOM's archives. Refer to this list for the most frequently captured archives.	None	N Integer value from 10 to 100
TOPNJOBNAMES	Shows the <i>N</i> most numerous jobnames in ITOM's archives. Refer to this list for the most frequently captured job names.	None	N Integer value from 10 to 100

Table 7. Administrative report details (continued)

Admin report	Description	Links	Input arguments
MULTIPLYDEFINEDUSERS	<p>Shows the SAF user IDs of all users who have more than one recipient definition. Use this report to find recipients that have been defined with the same USERID.</p> <p>You can delete the duplicate entries using the check box to select the redundant entry that is no longer needed. This deletes the recipient entry and removes all references to the recipient from Bundles and distribution lists</p>	None	None
ACCIDS	<p>Show user IDs for input ACCID with link to Reports. Includes all recipients that use the specified ACCID value.</p>	<p>Click the Reports column open the REPORTS FOR USER report to see a list of all reports that include the selected recipient in the report distribution list.</p> <p>Click the user ID to see the USER ID ACCMASK report using the selected user ID.</p>	<p>ACCID 1 to 32 character Access ID. The name can end with a wildcard (*)</p>
USERIDACCMASK	<p>Shows Access ID mask (ACCMASK) for input USERID with link to Reports. Includes all recipients that use the specified USERID value.</p>	<p>Click the Reports column open the REPORTS FOR USER report to see a list of all reports that include the selected recipient in the report distribution list.</p> <p>Click the Access ID to see the ACCIDS report for the selected Access ID.</p>	<p>USERID 1 to 8 character User ID. The name can end with a wildcard (*)</p>
REPORTSFORUSER	<p>The list of reports and associated distribution lists for a given ITOM ACCMASK. Includes all reports using distribution lists that include a recipient that matches the specified Access ID.</p>	<p>Click the distribution list to see the RECIPIENTS report for the selected list name.</p> <p>Click the Access ID to see the ACC IDS report for the selected Access ID.</p>	<p>ACCID 1 to 32 character Access ID. The name can end with a wildcard (*)</p>

Table 7. Administrative report details (continued)

Admin report	Description	Links	Input arguments
DISTRIBUTIONLISTS	Shows all distribution lists with drill-down to reports. Includes all distributions lists defined in the Output Manager instance.	Click the distribution list name to see the set of reports that use the selected distribution list.	None
REPORTSBYDISTLIST	Shows the set of reports that use the specified distribution list.	Click the distribution list to see the REPORTS BY DIST LIST report using the selected list name.	DNAME 1 to 60 character distribution list name. The name can end with a wildcard ('*')
RECIPIENTS	Show the list of recipients in a report distribution list. This report includes the distribution list contents for the specified report name.	<p>Click the distribution list name to see the REPORTS BY DIST LIST report for the selected list name.</p> <p>Click the User Id to see the USER ID ACCMASK report using the selected user ID.</p>	REPORT 1 to 64 character report name. The name can end with a wildcard ('*')
DISTRIBUTIONLISTCONTENTS	Shows the contents of all levels in a distribution list. Includes the contents of the specified distribution list, including the recipients in any nested sub-lists.	<p>Click the distribution list to see the REPORTS BY DIST LIST report using the selected list name.</p> <p>Click the user ID to see the USER ID ACCMASK report using the selected user ID.</p> <p>Click Access ID or Access Mask values to see the ACCIDS report for the selected access ID or access mask</p>	LISTNAME 1 to 60 character distribution list name. The name can end with a wildcard ('*')

Table 7. Administrative report details (continued)

Admin report	Description	Links	Input arguments
PRINTERATTRIBUTES	Shows printer attributes with cross reference links. Includes details about a set of printer attributes matching the PRTNAME.	<p>Click the BUNDLES link to open the PRINTER XREF BUNDLES report to show all bundles using the selected printer attribute.</p> <p>Click the REPORTS link to open the PRINTER XREF REPORTS to show all report definitions that use the selected printer attribute.</p> <p>Click the RECIPIENTS link to open the PRINTER XREF RECIPIENTS to show all recipients and distribution lists that use the selected printer attribute.</p>	PRTNAME 1 to 32 character printer attribute name. The name can end with a wildcard (*').
PRINTERXREFBUNDLES	Shows bundles linked to a printer. This report lists all bundles using the selected printer attribute.	Click the printer name to open the PRINTER ATTRIBUTES report for the selected printer name.	PRTATTR 1 to 32 character printer attribute name. Wildcards not supported.
PRINTERXREFRECIPIENTS	Shows recipients linked to a printer. This report lists all recipients and distribution lists that use the selected printer attribute.	<p>Click the distribution list name to open the REPORTS BY DISTLIST report to see the list of reports using the selected distribution list.</p> <p>Click the printer or user printer link to open the PRINTER ATTRIBUTES report for the selected printer name.</p>	PRTATTR 1 to 32 character Printer attribute name. Wildcards not supported.
PRINTERXREFREPORTS	Shows reports linked to a printer. This report lists all report definitions that use the selected printer attribute.	<p>Click the report name link to open the RECIPIENTS report for the selected report name.</p> <p>Click the printer link to open the PRINTER ATTRIBUTES report for the selected printer name.</p>	PRTATTR 1 to 32 character Printer attribute name. Wildcards not supported.

Table 7. Administrative report details (continued)

Admin report	Description	Links	Input arguments
TPLRULESWITHSELECTORS	Shows the list of TPL rules linked to selectors, sorted by the TPL rule name.	None	None
SELECTORSWITHTPLRULES	Shows the list of selector rules linked to TPL rules, sorted by the selector name.	None	None
TEMPLATESWITHTRANSLATIONS* Note: * This is one word	Shows templates linked with translations Includes the list of report templates matching the specified template name along with the columns and translation sets used in the template.	Click the layout name to open the LAYOUT WITH TEMPLATES report to see other templates that use the selected layout	TEMPLATE_NAME 1 to 64 character report template name. The name can end with a wildcard ('*')
LAYOUTWITHTEMPLATES	Shows layouts linked to templates and translations. Includes the set of templates using the specified layout along with the columns and translation sets used in the template.	Click the template name to open the TEMPLATES WITH TRANSLATIONS report for the specified template	LAYOUT_NAME 1 to 64 character layout name. The name can end with a wildcard ('*')
FORMATTEDVIEWS	Shows the archives and reports that have formatted views. Includes the list of formatted views defined in the database, ordered by the archive name and report name to which the view applies.	Click the formatted view name to open the view for editing.	None
INDEXEDREPORTS	Shows reports that are indexed. Includes the list of report definitions that include indexing of layout fields within the report.	None	None

Chapter 11. Security

Privileges to view, list, and access Output Manager objects are determined by the level of access that a user has to an object's associated security profile, as specified in RACF, as well as any optionally specified Output Manager security configuration parameters.

You create a RACF profile for each Output Manager object type (administrative objects including archive attributes and selector rules, as well as end-users objects such as reports and archives), and then grant each user, or group of users, the appropriate level of access for each Output Manager object profile.

Your security configuration affects both the Output Manager ISPF and the ITOMweb interfaces.

The recommended security configuration is outlined in [“Overview of the recommended security configuration”](#) on page 208. Alternatively, you can have a RACF-only setup, without Output Manager security configuration if you prefer to rely solely on RACF as your means of security.

Note:

- All security definitions and rules are given assuming you are using RACF Security. If using an alternative External Security Manager (ESM) you will need to convert the security rules to those relevant for your security manager. Also Output Manager makes extensive use of RACROUTE REQUEST=AUTH STATUS=ACCESS calls to self-configure according to the security rules. Some ESMs do not allow this call to be made from code that is running unauthorized and this results in unexpected S047 abends. If you are using such an ESM, consult your security vendors documentation on how to enable this.
- ITOMWeb connects to Db2 using RRSF instead of CAF. If MVS Resource Recovery Services (RRS) is not active, ITOMWeb will force the connection to be via CAF, and a warning message will be output. The started task and all utilities currently continue to connect via CAF.

Sample security jobs in SBJTSAMP

There are two sample jobs in SBJTSAMP that you can use to define RACF classes and profiles. BJT#RDEF has RDEFINE statements to define each Output Manager profile. BJT#RPER has PERMIT statements for each profile defined in BJT#RDEF.

Tip: BJT#RPER can be reused to add additional user IDs and groups, as necessary. For example, for creating the necessary PERMIT statements for job scheduling products that submit Output Manager batch utilities.

The <DB_QUALIFIER> path name used in the security examples is the value specified for the BJTQUAL variable during customization, and is equal to the owner of the BJT tables.

Security options for reports

Table 8. Security options for reports	
Security option	Description
General viewing of reports	<p>RACF resource profile BJT.<DB_QUALIFIER>.VIEW.RPRT</p> <p>Create a security profile for viewing reports. The actions that a user can perform are determined by the following levels of access:</p> <ul style="list-style-type: none"> • NONE: Report viewing is disabled for the user. The View Reports ISPF panel and the ITOMweb Reports link are deactivated when the user opens Output Manager. • READ: The user can view reports. The reports that they can and cannot see are determined by whether or not the Access ID (defined in their recipient record) matches at least one of the Access IDs for the recipients in the distribution list, if they are on the report distribution list, and if the level of access granted to them for the RACF profiles of individual report names (BJT.<DB_QUALIFIER>.RPRT.<i>report_name</i>). • CONTROL: The user can view a list of all reports, and can search by user ID in the search panels. Searching by a different user ID allows the user with CONTROL access to check to see which reports that user ID is allowed to access. CONTROL does not allow the user to see the contents of the report. Although they can view search results list, they are restricted from viewing the content of the reports unless their personal user ID has access privileges to the reports (for example, if they also have READ access for the RACF profiles of individual report names). • The reports that they can and cannot see are determined by whether or not the Access ID (defined in their recipient record) matches at least one of the Access IDs for the recipients in the distribution list, if they are on the report distribution list, and if t • ALTER: The user can view a list of all reports, can search by User ID in search panels, and can browse the contents of all reports for which they have READ access to the RACF profiles of individual reports (BJT.<DB_QUALIFIER>.RPRT.<i>report_name</i>. Although these users do not need to be on the distribution list, they do need to have access to BJT.<DB_QUALIFIER>.RPRT.<i>report_name</i>). <p>Note: For more information on searching by User ID, see “Viewing list panels as a different user ID” on page 214</p> <p>Tip: You can grant online report-view access to a RACF group rather than to each user ID individually. For more information, see “Using a RACF group as a recipient for a distribution list” on page 107.</p>

Table 8. Security options for reports (continued)

Security option	Description
Viewing of specific reports	<p>RACF resource profiles BJT.<DB_QUALIFIER>.RPRT.report_name</p> <p>Create a RACF security profile for each report name (or, using wildcards, a group of similarly named report names). The actions that a user can perform on a report are determined by the following levels of access:</p> <ul style="list-style-type: none"> • NONE: The user cannot view reports associated with this RACF security profile. • READ: The user can view reports associated with this RACF security profile. • CONTROL: The user can view reports associated with this RACF security profile. • ALTER: The user can view reports associated with this RACF security profile.
Printing reports	<p>RACF resource profile BJT.<DB_QUALIFIER>.VIEW.RPRT.PRINT</p> <p>The print actions that a user can perform on a report are determined by the following levels of access:</p> <ul style="list-style-type: none"> • NONE: The user cannot print reports. • READ: The user can print reports. <p>Set UACC(NONE) if your site policy prohibits printing reports or limits printing to specific users or groups. Set UACC(READ) if you allow most users to print reports.</p>
Downloading reports	<p>RACF resource profile BJT.<DB_QUALIFIER>.VIEW.RPRT.DOWNLOAD</p> <p>The download actions that a user can perform on a report are determined by the following levels of access:</p> <ul style="list-style-type: none"> • NONE: The user cannot download reports. • READ: The user can download reports. <p>Set UACC(NONE) if your site policy prohibits downloading reports or limits downloading to specific users or groups. Set UACC(READ) if you allow most users to download reports.</p>

Table 8. Security options for reports (continued)

Security option	Description
Reprinting reports	<p>The reprint security profiles define which report administrators are allowed to reprint reports, as well as their level of update privileges for the distribution list. The reprint actions that a user can perform on a report are determined by the levels of access on the following profiles:</p> <ul style="list-style-type: none"> • BJT.<DB_QUALIFIER>.VIEW.RPRT.REPRINT <ul style="list-style-type: none"> – NONE: The user cannot reprint reports. – READ (or higher): The user can reprint reports. • BJT.<DB_QUALIFIER>.VIEW.RPRT.REPRINT.DIST <ul style="list-style-type: none"> – ALTER (or higher): The user can select a different distribution list to perform the reprint. – CONTROL: The user can add recipients to the distribution list selected to perform the reprint. • BJT.<DB_QUALIFIER>.VIEW.RPRT.REPRINT.REC <ul style="list-style-type: none"> – READ (or higher): The user can make changes to the recipients in the distribution list. <p>It is recommended to set UACC(NONE) for the reprint profiles, and then grant higher permissions to report administrators as appropriate for your site's security policy.</p>
REPORT_ACCESS_ID <i>user_ID</i>	<p>Output Manager internal security configuration parameter, specified in the Recipient ID panels (ISPF A.J).</p> <p>Switches a user's personal user ID to an external security user ID (RACF ID) when they view or print a report. Because it is the temporary user ID that accesses the underlying archive data set(s), individual user IDs do not need access to these data set(s).</p> <p>Output Manager determines a user's access ID by the following hierarchy of access priority:</p> <ol style="list-style-type: none"> 1. Finding a recipient definition that matches the current MVS user ID 2. Finding a recipient definition that matches the current MVS user ID by a wildcard match 3. Finding a recipient entry that specifies a RACF group in which the current MVS user ID is a member 4. Defaulting to the user's ACCID and ACCMASK. If not defined, the ACCID and ACCMASK = User ID
ACCESS MASK	<p>Output Manager internal security configuration parameter, specified in the Policy Administration panels (ISPF A.PA).</p> <p>For users with READ access to BJT.<DB_QUALIFIER>.VIEW.RPRT, the access mask is always used to determine which reports they have access to.</p>

Security options for archives

Table 9. Security options for archives	
Security option	Description
General viewing of archives	<p>RACF resource profile BJT.<DB_QUALIFIER>.VIEW.ARCH</p> <p>Create a security profile for viewing archives. The actions that a user can perform are determined by the following levels of access:</p> <ul style="list-style-type: none"> • NONE: Archive viewing is disabled for the user. The View Archive ISPF panels and ITOMweb Archives link are deactivated when the user opens Output Manager. • READ: The user can list and view archives. The archives they can and cannot list and view are determined by the archives filtered by the Output Manager ARCFILTER and VARCHIVE configuration settings specified in the next step. • CONTROL: The user can see a list of all archives except those hidden by VARCHIVE. Whether or not they are allowed to view the actual archive is determined by the Output Manager ARCFILTER settings. A user can view the archive if the archive name matches an entry in their archive access list. <p>CONTROL access does not override the VARCHIVE configuration setting; if VARCHIVE is set to hide archives that contain reports, the archives will remain hidden. However, CONTROL access does override the ARCFILTER setting to control which archive names are displayed in the list.</p> <ul style="list-style-type: none"> • ALTER: The user can list, view, and browse all archives, even those that would normally be filtered by ARCFILTER. ALTER does not override the VARCHIVE configuration specified in the next step. <p>Note: By default, the Data Set Name column is hidden in the Output Manager ISPF interface Archive list panel. A user is allowed to un-hide the Data Set Name column (using the Hide/Unhide option of Options menu) if they have CONTROL or ALTER access to BJT.<DB_QUALIFIER>.VIEW.ARCH</p>
Printing archives	<p>RACF resource profile BJT.<DB_QUALIFIER>.VIEW.ARCH.PRINT</p> <p>The print actions that a user can perform on an archive are determined by the following levels of access:</p> <ul style="list-style-type: none"> • NONE: The user cannot print archives. • READ: The user can print archives. <p>Set UACC(NONE) if your site policy prohibits printing archives or limits printing to specific users or groups. Set UACC(READ) if you allow most users to print archives.</p>

<i>Table 9. Security options for archives (continued)</i>	
Security option	Description
Downloading archives	<p>RACF resource profile BJT.<DB_QUALIFIER>.VIEW.ARCH.DOWNLOAD</p> <p>The download actions that a user can perform on an archive are determined by the following levels of access:</p> <ul style="list-style-type: none"> • NONE: The user cannot download archives. • READ: The user can download archives. <p>Set UACC(NONE) if your site policy prohibits downloading archives or limits downloading to specific users or groups. Set UACC(READ) if you allow most users to download archives.</p>
VARCHIVE: ALL NOREPORT	<p>Output Manager internal security configuration parameter, specified in the Policy Administration panels (ISPF A.PA).</p> <p>Controls which archives are presented to the user when they open the View Archives panel (V.A in ISPF, or clicks the Archives link in ITOMweb). Specify ALL to display all archives, or NOREPORT to only display archives that do not have associated reports. This setting will not override permission privileges determined by RACF profiles.</p>
ARCFILTER: ENABLE DISABLE	<p>Output Manager internal security configuration parameter, specified in the Policy Administration panels (ISPF A.PA).</p> <p>When ENABLE is specified, the list of archives that a user sees is limited by their list of Archive Access IDs (defined in their Output Manager recipient ID). If any of the user's Archive Access IDs match an archive name, either generic, or fully-qualified, that user can view that archive.</p> <p>When DISABLE is specified, the list of archives that a user sees is not filtered by Archive Access IDs. Archive Access IDs do not need to be defined if ARCFILTER is set to DISABLE.</p>

Started task resource profiles

<i>Table 10. RACF resource profiles for started task security</i>	
Security option	Description
Policy Activate/Deactivate	BJT.<DB_QUALIFIER>.CMND

Notes on security

Notes:

- If permission to perform an operation is controlled by more than one resource or flag, you must satisfy both criteria.
- Bundle printing with BJTbatch requires access to BJT.<DB_QUALIFIER>.ADM.BUN. If you submit bundle printing through the started task via a modify command, the ID of the STC needs access to BJT.<DB_QUALIFIER>.ADM.BUN. When bundle printing is performed by a user submitting BJT@BUNP, then that user needs appropriate access to BJT.<DB_QUALIFIER>.ADM.BUN.
- The started task must have ALTER access to BJT.<DB_QUALIFIER>.VIEW.RPRT for automatic printing.

Overview of the recommended security configuration

Recommended security setup overview:

1. Set up archive security:
 - a. Create security profiles for viewing archives, BJT.<DB_QUALIFIER>.VIEW.ARCH.
 - b. Specify Output Manager security configuration settings for archives:
 - i) VARCHIVE
 - ii) ARCFILTER
2. Set up report security:
 - a. Create RACF security profiles for individual report names, BJT.<DB_QUALIFIER>.RPRT.name.
 - b. Create RACF security profiles for viewing reports, BJT.<DB_QUALIFIER>.VIEW.RPRT.
 - c. Specify Output Manager security configuration settings for reports:
 - i) Access IDs
 - ii) REPORT_ACCESS_ID
3. Set up administrator security.
4. Ensure that your security policies provide the started task with access to create and modify archives.

Setting up archive security

Create RACF profiles for viewing archives, and then specify optional Output Manager archive security configuration parameters.

1. In RACF, create a security profile for BJT.<DB_QUALIFIER>.VIEW.ARCH.

Where *DB_QUALIFIER* is your database qualifier.

Tip: There are two sample jobs in SBJTSAMP that you can use to define RACF classes and profiles. BJT#RDEF has RDEFINE statements to define each Output Manager profile. BJT#RPER has PERMIT statements for each profile defined in BJT#RDEF.

This RACF profile determines if and how a user can view archives. The actions they can perform are determined by the following levels of access:

- **NONE:** Archive viewing is disabled for the user. The View Archive ISPF panels and ITOMweb Archives link are deactivated when the user opens Output Manager.
- **READ:** The user can list and view archives. The archives they can and cannot list and view are determined by the archives filtered by the Output Manager ARCFILTER and VARCHIVE configuration settings specified in the next step.
- **CONTROL:** The user can see a list of all archives except those hidden by VARCHIVE. Whether or not they are allowed to view the actual archive is determined by the Output Manager ARCFILTER settings. A user can view the archive if the archive name matches an entry in their archive access list.

CONTROL access does not override the VARCHIVE configuration setting; if VARCHIVE is set to hide archives that contain reports, the archives will remain hidden. However, CONTROL access does override the ARCFILTER setting to control which archive names are displayed in the list.

- **ALTER:** The user can list, view, and browse all archives, even those that would normally be filtered by ARCFILTER. ALTER does not override the VARCHIVE configuration specified in the next step.

Note: Users are permitted access to archives only if the user is allowed to view archives by having READ access to VIEW.ARCH and is granted READ access on the underlying data set by RACF (or equivalent external security manager).

Note: By default, the Data Set Name column is hidden in the Output Manager ISPF interface Archive list panel. A user is allowed to un-hide the Data Set Name column (using the Hide/Unhide option of Options menu) if they have CONTROL or ALTER access to BJT.<DB_QUALIFIER>.VIEW.ARCH

2. Specify Output Manager security configuration settings for archives:
 - a) In the Output Manager ISPF interface, navigate to the policy administration panel (ISPF A.PA).

- b) In the **Subsystem type** field, type an asterisk (*), which applies this change to the default subsystem.
- c) In the **Type** field, type an asterisk (*), which applies this change to the non-specific (global) type.
- d) In the command line, type E (Edit), and press Enter. The **Policy Administration** panel is displayed.
- e) Add the following configuration parameters in the lines provided on the **Policy Administration** panel:

VARCHIVE: ALL|NOREPORT

This parameter globally controls which archives are presented to the user when they open the **View Archives** panel (V.A in ISPF, or clicks the Archives link in ITOMweb). Specify ALL to display all archives, or NOREPORT to only display archives that do not have associated reports. This setting will not override permission privileges determined by RACF profiles.

ARCFILTER: ENABLE|DISABLE

When ENABLE is specified, the list of archives that a user sees is limited by their list of Archive Access IDs (defined in their Output Manager recipient ID). If any of the user's Archive Access IDs match an archive name, either generic, or fully-qualified, that user can view that archive.

When DISABLE is specified, the list of archives that a user sees is not filtered by Archive Access IDs. Archive Access IDs do not need to be defined if ARCFILTER is set to DISABLE.

- f) Type SAVE on the command line to save your changes.

Setting up report security

Create RACF profiles for viewing reports, and for individual report names or groups or report names, and then specify optional Output Manager report security configuration parameters.

1. In RACF, create a security profile for **BJT.<DB_QUALIFIER>.RPRT.report_name**.

Where <DB_QUALIFIER> is your database qualifier, and *report_name* is the name of a report, or a wildcarded group of reports.

Tip: There are two sample jobs in SBJTSAMP that you can use to define RACF classes and profiles. BJT#RDEF has RDEFINE statements to define each Output Manager profile. BJT#RPER has PERMIT statements for each profile defined in BJT#RDEF.

Create a RACF security profile for each report name (or, using wildcards, a group of similarly named report names). The actions that a user can perform on a report are determined by the following levels of access:

- **NONE:** The user cannot view reports associated with this RACF security profile.
- **READ:** The user can view reports associated with this RACF security profile.
- **CONTROL:** The user can view reports associated with this RACF security profile.
- **ALTER:** The user can view reports associated with this RACF security profile.

For example, granting a user READ access to the security profile BJT.BJT6804.RPRT.HR* would allow that user to read all reports that begin with "HR".

Note: If a report name contains any of the characters &, *, %, or space, those special characters are converted to an underscore. When defining the RACF profiles for these report names, use an underscore in place of these characters.

2. In RACF, create a security profile for **BJT.<DB_QUALIFIER>.VIEW.RPRT**.

Where <DB_QUALIFIER> is your database qualifier.

This RACF profile determines if and how a user can view reports. The actions they can perform are determined by the following levels of access:

- **NONE:** Report viewing is disabled for the user. The **View Reports** ISPF panel and the ITOMweb Reports link are deactivated when the user opens Output Manager.
- **READ:** The user can view reports. The reports that they can and cannot see are determined by whether or not the Access ID (defined in their recipient record) matches at least one of

the Access IDs for the recipients in the distribution list, if they are on the report distribution list, and if the level of access granted to them for the RACF profiles of individual report names (BJT.<DB_QUALIFIER>.RPRT.report_name).

- **CONTROL:** The user can view a list of all reports, and can search by User ID in the search panels. The reports that they can and cannot view are determined by whether or not the Access ID (defined in their recipient record) matches at least one of the Access IDs for the recipients in the distribution list, if they are on the report distribution list, and if the level of access granted to them for the RACF profiles of individual report names (BJT.<DB_QUALIFIER>.RPRT.report_name).
 - **ALTER:** The user can view a list of all reports, can search by User ID in search panels, and can browse the contents of all reports for which they have READ access to the RACF profiles of individual reports (BJT.<DB_QUALIFIER>.RPRT.report_name). Although these users do not need to be on the distribution list, they do need to have access to BJT.<DB_QUALIFIER>.RPRT.report_name).
3. Specify Output Manager security configuration settings for reports:
- a) In the Output Manager ISPF interface, navigate to the policy administration panel (ISPF A.PA).
 - b) In the **Subsystem name** field, type an asterisk (*) to apply this change to the default subsystem.
 - c) In the **Type** field, type an asterisk (*) to apply this change to the non-specific (global) type.
 - d) In the command line, type E (Edit), and press Enter. The **Policy Administration** panel is displayed.
 - e) Add the following configuration parameter in the lines provided on the **Policy Administration** panel:

REPORT_ACCESS_ID user_ID

Specify this optional parameter to specify an external security user ID (such as a RACF ID) to be temporarily used when a user elects to view or print a report. This user ID, rather than the RACF user ID of the user, will be used to access the underlying archive data set(s) when a user requests a report associated with an archive. The user ID will then switch back to the original user ID after the data has been accessed. Because it is the temporary user ID that accesses the underlying archive data set(s), individual user IDs do not need access to these data set(s). This allows users to access reports based on archives inside of Output Manager, while preventing users from accessing the underlying archives the reports are based on outside of Output Manager (your security product will prevent them from browsing the archives).

The user ID specified for the REPORT_ACCESS_ID attribute must have access authority to the underlying archive data set(s).

The recommended value for this parameter is the user ID that runs under the Output Manager started task or ITOMweb. It is also recommended that this user ID is granted full access to the Output Manager archive data sets.

In order to use REPORT_ACCESS_ID in the Output Manager ISPF interface, you must also specify a value for the ARA_PORT attribute. Restart the started task and the TSO/ISPF logon after specifying these attributes for the first time.

- f) Type SAVE on the command line to save your changes.
- g) Optional: If desired, configure Access IDs for users.

Access IDs, are an optional security configuration, used in addition to USER ID, used to determine security access. If used, a user's current Access ID supersedes their TSO user ID when attempting to access reports. The Access ID is used to determine which reports a user has access to.

 - i) Navigate to the **Recipient Details** panel (ISPF A.J), and select a recipient ID to edit.
 - ii) Determine whether or not a user has the ability to change their ID by specifying a value in the **Access Mask** field. To allow a user to change their Access ID, specify an Access Mask with a wildcard. To prevent a user from changing their Access ID, specify a fully-qualified access mask. For example, the access mask value ACCMASK = XYZ* would allow the user to change their Access ID to any value beginning with XYZ. If the Access Mask were full-qualified, such as ACCMASK = XYZ1 , the user's Access ID is XYZ1 and cannot be changed.
 - iii) In the **Access ID** field, type an Access ID for the user. This user ID will be used instead of their TSO user ID to access reports.

Setting up administrator security

Create RACF profiles for each Output Manager administrative object type.

1. In RACF, create a security profile for each of the following Output Manager administrative objects:

<i>Table 11. Security resource profiles for Output Manager administrative objects</i>	
Output Manager administrative object	Security resource profile
Archive attributes	BJT.<DB_QUALIFIER>.ADM.ATT
Selector rules	BJT.<DB_QUALIFIER>.ADM.SEL
TPL rules	BJT.<DB_QUALIFIER>.ADM.TPL
Report layouts	BJT.<DB_QUALIFIER>.ADM.LAY
Report selection rules	BJT.<DB_QUALIFIER>.ADM.RSEL
Report definitions	BJT.<DB_QUALIFIER>.ADM.REP
Recipient IDs	BJT.<DB_QUALIFIER>.ADM.REC
Distribution lists	BJT.<DB_QUALIFIER>.ADM.DIST
Printer attributes	BJT.<DB_QUALIFIER>.ADM.PRT
Banner pages	BJT.<DB_QUALIFIER>.ADM.BANN
PRSET members	BJT.<DB_QUALIFIER>.ADM.PRST
Bundle administration	BJT.<DB_QUALIFIER>.ADM.BUN
Policy administration	BJT.<DB_QUALIFIER>.ADM.PA
User variables	BJT.<DB_QUALIFIER>.ADM.UV
User messages	BJT.<DB_QUALIFIER>.ADM.UM
Universal Batch Utility (UBU)	BJT.<DB_QUALIFIER>.ADM.UBU
CATSYNC	BJT.<DB_QUALIFIER>.ADM.CSNC
Formatted views and filters	BJT.<DB_QUALIFIER>.ADM.FVF
CMND	BJT.<DB_QUALIFIER>.CMND
STC tracing	BJT.<DB_QUALIFIER>.STC.TRACE
Administrative reports	BJT.<DB_QUALIFIER>.ARPT

Where *DB_QUALIFIER* is your database qualifier.

Tip: There are two sample jobs in SBJTSAMP that you can use to define RACF classes and profiles. BJT#RDEF has RDEFINE statements to define each Output Manager profile. BJT#RPER has PERMIT statements for each profile defined in BJT#RDEF.

2. Grant privileges for these Output Manager objects to your administrative users.

These RACF profiles determine if and how a user can view that administrative object. The actions they can perform are determined by the following levels of access:

- **NONE:** The corresponding menu or option is unavailable. If the user attempts to access the object, an error message is displayed. When applied to formatted views and filter resources, users with NONE level of access do not have ability to create, edit or delete formatted views and filters.
- **READ:** The user can select and view the corresponding menu or option to access the resource. However, they cannot create, delete, or modify that object type. When applied to formatted views

and filter resources, users with READ access do not have ability to create, edit or delete formatted views and filters.

- **UPDATE:** The user can select the corresponding menu or option to access the resource, as well as view and update the resource and extract and modify that object type in UBU. However, they cannot create or delete objects of the specified type. When applied to formatted views and filter resources, users with UPDATE access can create, edit, and delete his or her own formatted views and filters.
- **CONTROL:** The user can select the corresponding menu or option to access the resource, as well as view and update the resource, extract and modify that object type in UBU. However, they cannot create or delete them objects of that type. Additionally, if applied to the bundle resource, the user will be able to activate, deactivate, or reactivate bundles. When applied to formatted views and filter resources, users with CONTROL access can edit filters and formatted views created by anyone.
- **ALTER:** The user will be able to select the corresponding menu or UBU option to access resources, as well as view, update, create and delete that object type. When applied to formatted views and filter resources, users with ALTER access can edit and delete formatted views and filters created by anyone.

Provide the started task and web server with security access

1. Ensure that your security policies provide the started task with access to create and modify archives.
2. Ensure that the started task has ALTER privileges on the BJT.<DB_QUALIFIER>.VIEW.RPRT resource.
3. Ensure that the ITOMweb web server has ALTER privileges on all of the defined Output Manager RACF security profiles.

RACF-only security setup

As an alternative to the recommended configuration documented in the previous section, you can have a RACF-only setup, without Output Manager security configuration if you prefer to rely solely on RACF as your means of security.

1. In RACF, create a security profile for **BJT.DB_QUALIFIER.RPRT.report_name**.

Where *DB_QUALIFIER* is your database qualifier, and *report_name* is the name of a report, or a wildcarded group of reports.

Create a RACF security profile for each report name (or, using wildcards, a group of similarly named report names). The actions that a user can perform on a report are determined by the following levels of access:

- **NONE:** The user cannot view reports associated with this RACF security profile.
- **READ:** The user can view reports associated with this RACF security profile.
- **CONTROL:** The user can view reports associated with this RACF security profile.
- **ALTER:** The user can view reports associated with this RACF security profile.

For example, granting a user READ access to the security profile BJT.BJT6804.RPRT.HR* would allow that user to read all reports that begin with “HR”.

Note: If a report name contains any of the characters &, *, %, or space, those special characters are converted to an underscore. When defining the RACF profiles for these report names, use an underscore in place of these characters.

2. In RACF, create a security profile for **BJT.DB_QUALIFIER.VIEW.RPRT**, and grant all users ALTER access to this profile.

Where *DB_QUALIFIER* is your database qualifier.

Access to reports is solely determined by which reports the user has READ access to for the BJT.DB_QUALIFIER.RPRT.reportname profiles.

3. In RACF, create a security profile for BJT.<DB_QUALIFIER>.VIEW.ARCH.

Where *DB_QUALIFIER* is your database qualifier.

In this security model, grant all users ALTER access to this profile. Access to reports is solely determined by RACF data set security.

4. In the Output Manager ISPF interface, navigate to the policy administration panel (ISPF A.PA).
 - a) In the Subsystem type field, type an asterisk (*) to indicate the default subsystem.
 - b) In the Type field, type an asterisk (*) to apply this change to the non-specific (global) type.
 - c) In the command line, type E (Edit), and press Enter. The Policy Administration panel is displayed.
 - d) Add the following configuration parameter in the lines provided on the Policy Administration panel:
VARCHIVE: ALL
This parameter globally controls which archives are presented to the user when they open the View Archives panel (V.A in ISPF, or clicks the Archives link in ITOMweb). This security configuration requires you to specify ALL to display all archives.
 - e) Type SAVE on the command line to save your changes.
 - f) Press F3 to return to the Policy Administration panel.
 - g) Type I (Initialize policies) on the command line of the Policy Administration panel, and press Enter to initialize your changes.
 - h) Set up RACF data set profiles for the archives to prevent unauthorized access. You will need to set up appropriate Archive Masks in your Archive Attributes and apply generic RACF data set profiles to these masks to control who can read the data sets. Note that the started task must always have ALTER access to Archives.

Viewing list panels as a different user ID

Administrators with the appropriate security privileges can use the View As User field of the report and archive search panels to check to see which reports and archives that user ID is allowed to access.

When you specify another user ID in the **View as User** field, you can see the list of report or archive names that the user ID has access to. Although you can view search results list, you are restricted from viewing the content of the reports unless your personal user ID has access privileges to the reports.

To specify a different user ID in a search panel:

1. Navigate to the Search for Reports (V.R) or Search for Archives (V.A) panel.
2. In the **View as User** field, specify the user ID that you want to view the list as.
3. Press Enter. The list displayed contains the reports or archives that the user ID would be able to access.

Using a RACF group as a recipient for a distribution list

You can specify a RACF group as a recipient in a Output Manager distribution list to allow an entire RACF group to view reports online.

Specifying RACF groups as recipients allows sites with high turnover or large groups to grant report-view-access to an entire group rather than individually for each user ID. When a new employee is added to (or removed from) a RACF group that has access to a report, the report-viewing privileges for that employee are automatically updated.

RACF groups as recipients in distribution lists are for online viewing only. RACF groups must have an MVS group ID, and everyone in the RACF group must have the same permissions.

To add a RACF group to a distribution list

1. Create a recipient ID for the RACF group. In the **User** field of the Recipient Details panel, type up to eight (8) characters for the MVS user ID, RACF Group ID, or wildcarded MVS User ID for the recipient(s).
2. Create your distribution list. When the Recipient Selection panel pops up, select the recipient ID that you created for the RACF group.

Chapter 12. Maintenance tasks

Product administrators will need to perform some routine maintenance tasks on the z/OS image where the Output Manager Db2 database resides to maintain the proper functioning of the product.

Performing catalog synchronization

Catalog synchronization (CATSYNC) is a batch process for synchronizing the Output Manager archive and report tables with the z/OS system catalog.

It can also update the migration status that Output Manager displays for archive data sets on the Archived Reports panel if you set the appropriate keyword.

To perform catalog synchronization, you must first customize the sample JCL that Output Manager provides. Then schedule the job to run on a regular basis by using your existing job scheduling product. For example, you might want to run the catalog synchronization job after you perform DFSMSHsm backup operations. By running the catalog synchronization job regularly, you ensure that Output Manager users have the latest information on report migration and availability.

Sample JCL for catalog synchronization

The sample JCL for catalog synchronization is in the BJTCTSNC member of the *samphlq*.SBJTSAMP library.

The sample JCL defines a job that performs the following actions on the Db2 subsystem that you specify:

- Deletes archive entries that correspond to data sets that are no longer in the catalog. Also deletes any field indexes and custom and basic reports that are based on a deleted archive. If a deleted report is part of a bundle instance and you attempt to reprint that bundle instance, the reprint results will not reflect the original state of the bundle instance at deactivation time.
- Prints a list of archive data sets that have changed status (such as migrated or deleted).
- Directs Output Manager to indicate whether archived reports have been migrated (if MIGRAT is the volser that represents a data set has been migrated).

Authorizing users to run Catsync

Users submitting the BJTBRJAB job (that runs BJTCCATS) require ALTER access to the BJT.<DB_QUALIFIER>.ADM.CSNC profile. *DB_QUALIFIER* is your database qualifier. This profile is defined in the JCL sample, BJT#RDEF in SBJTSAMP. The access list is defined in the JCL sample, BJT@RPER.

Catalog synchronization keywords and syntax

Specify the keyword parameters that are appropriate for your site in the SYSIN DD statement. These keywords are not positional. They can start in any column.

For readability, specify each keyword on its own line using the following syntax:

```
KEYWORD = VALUE
```

You can enter zero or more spaces on either side of the equals (=) sign. If you need to comment out a line, place an asterisk (*) or a semicolon (;) in column 1.

Catalog synchronization keywords

ALLOW_DELETE

Specifies what should happen with archives that have data sets that are not cataloged. Specify YES if you want archives that have data sets that are not cataloged to be deleted. The default is NO.

ALLOW_UPDATE

Specifies what should happen to the migration status of archives. Specify YES if you want the migration status of archives to be updated. The default is NO.

DETAILED

Specifies whether to print a detailed report of all actions taken during catalog synchronization. Valid values are: YES (prints a detailed report) and NO (does not print a detailed report). The default is NO.

DATASETS

Run catalog synchronization for only the data sets with names that match a specified pattern to prevent CATSYNC from making updates to Output Manager tables when a catalog is offline or an alias has been deleted. For more information, see [“Running CATSYNC for specified data sets” on page 217.](#)

PLAN

Specifies the plan name you have chosen in place of ?BJTPLAN?X. It should match the other uses of ?BJTPLAN?X in BJT@PRBI and BJT@PRGR.

SHOW_CHANGED_ARCHIVE_DATASET_NAMES

Specifies whether to display the names of data sets for which the "Migrated" status has changed. Valid values include YES and NO. The default is NO.

SSID

Specifies the subsystem ID of the Db2 subsystem that contains the Output Manager tables that are to undergo catalog synchronization processing.

VOLSER

Specifies the volume serial number (volser) that your site uses to indicate a data set has been migrated. You can specify up to 10 volser control cards. If you do not specify a volser, Output Manager uses MIGRAT by default.

Note: If MIGRAT is specified, the Archived Reports panel will display a migration status of "Yes" in the **Migrated** column for archived reports that have been migrated to tapes or other level 1 storage.

Customizing the sample JCL for catalog synchronization

Before running catalog synchronization for the first time, you must create the database structures used by the BJTCCATS program. If you are installing for the first time, the SBJTSAMP member BJT@JCDB contains the commands to build the structures. Run BJT@JCBX to perform the BINDs and GRANTS.

Whether you are installing for the first time or updating from an earlier version, you must also customize the SBJTSAMP member BJTCTSNC, which contains the JCL for running the catalog synchronization utility.

Note: If the SBJTLPA modules are not loaded into the dynamic LPA, it must be link-listed or STEPLIBed until the next IPL.

To customize the JCL in the BJTCTSNC member:

1. Replace the following variables with the values that you set during product customization:
 - ?BJTHLQ? - The high-level qualifier for your Output Manager product libraries
 - ?BJTPLAN?X - The plan name you used in BJT@PRBX for the catalog synchronization plan.
 - ?DB2SSID? - The subsystem ID of the Db2 subsystem that is contains Output Manager database
 - ?SDSNEXIT? The Db2 Exit library for your Db2 subsystem.
 - ?SDSNLOAD?- The fully qualified name of your Db2 load library

For more information about these variables, see the *IBM Tivoli Output Manager for z/OS Installation and Customization Guide*.

2. Ensure that the job card is valid for your site.
3. In the SYSIN DD statement, specify the appropriate keyword parameters for your site using the syntax `KEYWORD = VALUE`.
 - a. (Optional) If you have a Space Management product that moves inactive data sets to another form of storage after being unreferenced after a specified number of days, use the VOLSER keyword to specify the volume serial number that represents a data set has been MIGRATED. If your site uses

only MIGRAT(1|2) to represent migrated data sets, this keyword can be omitted. You can specify up to 10 VOLSER values. For example, if your site uses the volsers MIGRAT and ARCIIVE to indicate migrated devices, specify the following VOLSER cards:

```
VOLSER = MIGRAT
```

```
VOLSER = ARCIIVE
```

- b. (Required) Use the SSID keyword to specify the subsystem ID of the Db2 subsystem that contains the tables to undergo catalog synchronization processing.
- c. (Optional) If you want the catalog synchronization utility to delete archive table entries that point to data sets that are no longer cataloged, specify both ALLOW_DELETE = YES and ALLOW_UPDATE = YES. If you want the catalog synchronization utility to retain these archive table entries while updating the indication that says whether the dataset is present, specify both ALLOW_DELETE = NO and ALLOW_UPDATE = YES.

If you are running a test, and you want the catalog synchronization utility to make no database changes at all, specify both ALLOW_DELETE = NO and ALLOW_UPDATE = NO.

- d. (Optional) If you want to print a detailed report of all actions taken during catalog synchronization, specify DETAIL = YES. If you do not want a printed detailed report, specify DETAIL = NO.
- e. (Optional) If you want to display the names of data sets for which the "Migrated" status change, specify SHOW_CHANGED_ARCHIVE_DATASET_NAMES=YES.
- f. (Optional) If you want to specify the number of deletions or updates that the catalog synchronization utility must perform before a Db2 COMMIT is issued, specify the COMMITSIZE keyword with a number from 1 through 1000.

If you do not specify the COMMITSIZE keyword, the default value of 100 is used.

- g. (Optional) You can set CSI_WORK_AREA_SIZE = 1024000.

The maximum value that can be specified is 8192000 and if not specified, the value defaults to 102400. A larger value is required if there are GDGs within this HLQ that contain a large number of entries.

For more information about these keywords, see [“Catalog synchronization keywords and syntax” on page 215](#).

4. When you are finished customizing the JCL, save the BJTCTSNC member.

Running CATSYNC for specified data sets

The catalog synchronization (CATSYNC) option, DATASETS, allows users to run catalog synchronization for only the data sets with names that match a specified pattern. This prevents catalog synchronization from making updates to Output Manager tables when a catalog is offline or an alias has been deleted. The DATASETS option can also be used to force the update or deletion of Output Manager metadata, even when no data sets matching a pattern are found in the catalog.

The DATASETS keyword is a safeguard against catalogs being offline. Include a DATASETS keyword for each alias or multi-level alias that is used for Output Manager data sets. Output Manager will write suggested DATASETS commands to the sysout CHANGES DDNAME. After running Output Manager, check this DD and add these commands to the SYSIN DD in the Cat Sync JCL.

The DATASETS option uses the following syntax:

```
DATASETS (match pattern) [FORCE]
```

Where:

- **(match pattern)** is the pattern against which to match the data set names. When an archive data set name matches the specified pattern, CATSYNC is performed on it. The pattern must end in **, and must have no other wildcards. For example:

DATASETS **

Would match all data sets and is the equivalent of omitting all of the DATASETS parameters. If the pattern is "**", it is equivalent to specifying a DATASETS HLQ.** for each HLQ mentioned in the database. This statement is useful when your system has only single level aliases. However, if you have a multilevel catalog alias environment, this statement will not prevent updates to Output Manager tables in the case of an offline catalog or deleted alias. To determine the alias level of your environment, you can issue the following MVS command:

```
F CATALOG,REPORT
```

DATASETS BJT.**

Would match all data sets with the high-level qualifier "BJT", and CATSYNC would be performed for all data sets beginning with BJT. This statement is useful when "BJT" is an alias.

DATASETS BJT.ABC.**

Would match all data sets with the high-level qualifier "BJT" and the second level qualifier of "ABC". CATSYNC would be performed for only the data sets beginning with "BJT.ABC". This statement is useful when "BJT.ABC" is an alias.

- **FORCE** is an optional parameter that indicates whether to force updates to the Output Manager database, when no data sets matching the pattern are found.

- **When FORCE is omitted:** If no data sets matching the pattern are found in the catalog, no changes are made to the database for that matched pattern. The archive rows are preserved.

If the most-specific DATASETS pattern does not match any data sets in the catalog, but does match some database archive and related table rows, the matching database archive and related table rows are not deleted. If these rows are not deleted, a return code 8 warning message is written to the SYSPRINT. This message includes information on what happened and how to re-run to delete those database rows.

- **When FORCE is specified:** Depending on whether or not the archive data sets exist in a user catalog, FORCE determines what is done to the database rows.

- If there are no archive data sets in the user catalog, the database rows are updated.
- If there are archive data sets in the user catalog, the job ends with a return code 4. Warning messages are written to the SYSPRINT and a SYSOUT DDNAME CHANGES is dynamically allocated. CHANGES includes information on what should be added to the SYSIN DD.

Note: FORCE is optional, and because it intentionally avoids an important check, it is not recommended. The use of FORCE is only recommended for users who are very familiar with their archive attribute mask patterns, and who have backed up their production system database.

If you do not expect any data sets to exist in the catalog for a DATASETS archive attribute mask, and you want to update the Output Manager tables accordingly (by deleting rows relating to the mask), then FORCE is the appropriate action. It is highly recommended to follow the steps listed in [“Catalog synchronization best practices”](#) on page 219 before using the FORCE parameter.

The DATASETS option can be omitted, specified once, or specified multiple times. Omitting the DATASETS option is the equivalent of specifying DATASETS ** and CATSYNC will match all data sets.

When ALLOW_DELETE or ALLOW_UPDATE = YES is specified and CATSYNC is performed, the Output Manager database rows that relate to the archive data sets that matched the matched DATASETS pattern when "dsn" is not found in the catalog are deleted or updated to 'G' (Gone).

Important: It is highly recommended to make the changes suggested in the CHANGES DD output. If the archive data sets that exist in the Output Manager tables are tied to a multi-level alias catalog environment, and a CATSYNC job that had previously completed with an RC=0 now results in an RC=4, you must make the recommended changes to the SYSIN DD in the JCL to prevent data loss in the event that a catalog was offline or a catalog alias had been accidentally deleted.

If an Output Manager database row refers to a data set name ("dsn") that is not matched by any of the DATASETS match patterns, a warning message containing a suggested DATASETS pattern is printed, and a return code 4 is returned.

Catalog synchronization best practices

It is recommended to follow these best practices when performing CATSYNC:

1. Ensure that all required aliases are defined, and that all required catalogs are online.
2. Use the POLICY DEACT command to deactivate the selectors.
3. Run an image copy to back up your data. A sample image copy, BJT@JCC1, is provided in SBJTSAMP.
4. Submit BJTCTSNC to update Output Manager tables with the z/OS user catalog(s) that contain Output Manager archive data sets.
5. Review the SYSPRINT to see if there were problems. If generated, review the CHANGES DD for recommendations on data set patterns to add to the DATASETS keyword in the SYSIN section of your customized CATSYNC JCL.
6. Restart the selectors using POLICY ACT

Because this procedure involves deactivating SYSOUT capture, it is recommended to perform this at a time when there is no report generation activity. Viewing and printing will not be disrupted for ISPF users unless REPORT_ACCESS_ID has been specified.

Enhancing database performance

Note: Always shut down the Output Manager started task before performing these steps.

If your Output Manager database is large, you should periodically run the Db2 REORG and RUNSTATS utilities to enhance database performance.

To enhance database performance:

1. Back up the Output Manager table spaces by using the JCL in the SBJTSAMP member BJT@JCC1.

Important: Always make a backup copy of your table spaces before running the REORG utility.

2. To reorganize all Output Manager tables, run the REORG utility by using the JCL in the SBJTSAMP member BJT@JCRO.

The REORG command includes the COPYDDN option to create a copy of each table space at the conclusion of the reload phase. This replaces the need to run SBJTSAMP member BJT@JCC2 to make a copy of the reorganized table spaces.

3. Run the RUNSTATS utility on all Output Manager tables and indexes by using the JCL in the SBJTSAMP member BJT@JCRS.
4. Rebind the Output Manager Db2 plans by running the JCL in the SBJTSAMP member BJT@JCBI.

Note: If you notice issue in performance, you could try changing the bind parameter to **REOPT (ONCE)**. The default bind option is **REOPT (ALWAYS)**.

Chapter 13. Reference

Reference information supports the tasks that you must complete to install, customize, and use Output Manager.

Output Manager Messages

This section describes the messages that Output Manager generates in the following order:

- **Started task and program messages:** The messages from the Output Manager started task and programs have message numbers that use the format *BJTnnnnn*, where *nnnnn* is a number.
- **ISPF interface messages:** The messages from the Output Manager ISPF interface have message numbers that use the format *BJTMnnnl*, where *nnn* is a number and *l* is a letter.
- **Universal Batch Utility messages:** The messages from the Output Manager Universal Batch Utility have message numbers that use the format *BJTUnnnl*, where *nnn* is a number and *l* is a letter.
- **BJTBATCH messages:** The messages from the Output Manager BJTBATCH program have message numbers that use the format *BJTPnnnl*, where *nnn* is a number and *l* is a letter.
- **Common messages:** The messages from common components, such as the SORT function, have message numbers that use the format *BJTnnn*, where *nnn* is a number.

In all messages, variables are shown in *italics*. Some messages end with one of the following severity codes:

Severity Code	Description
I	Informational message. No error occurred, and no user action is required. The message is informational only.
W	Warning message. No error occurred but results might not be as expected or incomplete.
E	Error message. Some errors can be corrected by users, for example, by changing the JCL change or a parameter. The User Response provides the suggested course of action. Output may not have been generated.
S	Severe error message. A severe syntax, internal, or environmental error occurred. The User Response provides the suggested course of action. Users may need to call IBM Software Support for assistance in resolving these errors.

Command and response messages are recorded in the started task DDname SYSPRINT.

BJT1102E **TPL requires Metal/C, which requires z/OS 1.9 or higher.**

Explanation

Current operating system level does not support the Text Processing Language (TPL) feature of Output Manager. If you plan to use TPL rules, you must install Metal/C, which requires z/OS 1.9 or higher. If you do not plan to use TPL rules, you can ignore this message.

System action

TPL processing is disabled.

User response

None required.

BJT01001I **Product(*product_name*) is already running**

Explanation

This message is informational only.

User response

No action is required.

Module

BJTSTART

BJT01002I **Name Token retrieve failed,**
rc=return_code

Explanation

A problem occurred during product startup.

User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTSTART

BJT01006I **Unable to create name token,**
rc=return_code

Explanation

A problem occurred during product startup.

User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTSTART

BJT01007I **Product parm block acquired**
at(location)

Explanation

This message is informational only.

User response

No action is required.

Module

BJTSTART

BJT01008I **Unable to obtain storage for**
product block, rc=return_code

Explanation

A problem occurred during product startup.

User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTSTART

BJT01011I **Unable to obtain storage for**
initialize WS, rc=return_code

Explanation

A problem occurred during product startup.

User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTSTART

BJT01012I **Attach of initializer subtask failed,**
rc=return_code

Explanation

A problem occurred during product startup.

User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTSTART

BJT01014I **Product High Availability INIT**
Success

Explanation

This message is informational only.

User response

No action is required.

Module

BJTSTART

BJT01015I **Product High Availability INIT
Failed, rc=*****,rs=*******

Explanation

A problem occurred during product High Availability startup.

User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTSTART

BJT01016I **Product High Availability Wait
Failed**

Explanation

A problem occurred during product High Availability startup.

User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTSTART

BJT02001I **No plist passed to BJTSINIT**

Explanation

A problem that is associated with product initialization occurred.

User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTSINIT

BJT02002I **No PARMs in plist passed to
BJTSINIT**

Explanation

A problem that is associated with product initialization occurred.

User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTSINIT

BJT02003I **No INIW block passed to
BJTSINIT**

Explanation

A problem that is associated with product initialization occurred.

User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTSINIT

BJT02004I **Bad INIW block passed to
BJTSINIT**

Explanation

A problem that is associated with product initialization occurred.

User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTSINIT

BJT02005I **No PROD block passed to
BJTSINIT**

Explanation

A problem that is associated with product initialization occurred.

User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTSINIT

BJT02006I	Bad PROD block passed to BJTSINIT
------------------	--

Explanation

A problem that is associated with product initialization occurred.

User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTSINIT

BJT02007I	Unable to acquire private storage, rc=return_code
------------------	--

Explanation

A problem that is associated with product initialization occurred.

User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTSINIT

BJT02008I	Unable to open report file, rc=return_code
------------------	---

Explanation

A problem that is associated with product initialization occurred.

User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTSINIT

BJT02009I	Function table is corrupted a(*****)
------------------	---

Explanation

A problem that is associated with product initialization occurred.

User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTSINIT

BJT02010I	Product block located at <i>location</i>
------------------	---

Explanation

This message is informational only.

User response

No action is required.

Module

BJTSINIT

BJT02011I	Unable to format dataspace, rc=return_code, rs=reason_code
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Explanation

A problem that is associated with product initialization occurred.

User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTSINIT

BJT02012I **IBM Output Manager is ready for commands**

Explanation

Output Manager product startup is complete.

User response

No action is required.

Module

BJTSINIT

BJT02013I **Shutdown process is beginning**

Explanation

Output Manager is in the process of shutting down.

User response

No action is required.

Module

BJTSINIT

BJT02014I **Service subtasks being terminated**

Explanation

Output Manager is in the process of shutting down.

User response

No action is required.

Module

BJTSINIT

BJT02015I **Subtask manager acknowledges shutdown request**

Explanation

Output Manager is in the process of shutting down.

User response

No action is required.

Module

BJTSINIT

BJT02016I **Service subtasks termination complete**

Explanation

Output Manager is in the process of shutting down.

User response

No action is required.

Module

BJTSINIT

BJT02017I **ETDIS failed rc=return_code**

Explanation

A problem that is associated with product initialization occurred.

User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTSINIT

BJT02018I **ETDES failed rc=return_code**

Explanation

A problem that is associated with product initialization occurred.

User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTSINIT

BJT02019I **Starting Module Residency Initialization**

Explanation

Output Manager is in the process of starting.

User response

No action is required.

Module

BJTSINIT

BJT02020I **Resource Manager Stub has bad footprint, a=*******

Explanation

A problem that is associated with product initialization occurred.

User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTSINIT

Explanation

A problem that is associated with product initialization occurred.

User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTSINIT

BJT02021I **Can not obtain storage for resmgr, rc=return_code**

Explanation

A problem that is associated with product initialization occurred.

User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTSINIT

BJT02028I **Unable to obtain function block storage rc=(return_code)**

Explanation

A problem that is associated with product initialization occurred.

User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTSINIT

BJT02022I **RESMGR ADD for **** failed rc=return_code**

Explanation

A problem that is associated with product initialization occurred.

User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTSINIT

BJT02029I **Function block obtained at A(*****)**

Explanation

This message is informational only.

User response

No action is required.

Module

BJTSINIT

BJT02023I **RESMGR DELETE for **** failed rc=return_code**

BJT02033I **Error loading module *module*, rc=return_code**

Explanation

A problem that is associated with product initialization occurred.

User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTSINIT

BJT02034I **Error loading module *module*,
rc=*return_code*, rs=*reason_code***

Explanation

A problem that is associated with product initialization occurred.

User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTSINIT

BJT02038I **Starting configuration file
processing**

Explanation

Output Manager has begun processing the contents of the CONFIGUR DD in the started task JCL as part of started task startup.

User response

No action is required.

Module

BJTSINIT

BJT02039I **DD(*ddname*) is not present in JCL,
can not process configuration file**

Explanation

The JCL in the PROC for starting the Output Manager started task contains an error. As a result, the configuration information that is specified by the CONFIGUR DD cannot be processed.

User response

Notify your report administrator or systems administrator about the problem.

Module

BJTSINIT

BJT02040I **Unable to obtain storage for
configuration file, rc=*return_code***

Explanation

A problem that is associated with product initialization occurred.

User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTSINIT

BJT02041I **Unable to open configuration file**

Explanation

A problem that is associated with product initialization occurred.

User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTSINIT

BJT02043I **Allocation of ABEND table failed
rc=*return_code***

Explanation

A problem that is associated with product initialization occurred.

User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTSINIT

BJT02044I **Product diagnostic
token=*token_value***

Explanation

This message is informational only.

User response

No action is required.

Module

BJTSINIT

BJT02045I **Db2 critical resource is unavailable**

Explanation

Db2 is running, but a Db2 resource that Output Manager requires is unavailable. For example, a table might be unavailable for updating because it is in RO (read only) mode. As a result, the Output Manager started task will shut down in a controlled manner.

User response

Correct the situation that is preventing access to the required Db2 resource, and then restart the Output Manager started task.

Module

BJTSINIT

BJT02046I **Db2 connection failure detected**

Explanation

While Output Manager was running, its connection to the Db2 subsystem that contains its database was lost. As a result, Output Manager terminates any active selector tasks and shuts down in a controlled manner. No report SYSOUT that is on the JES spool will be lost.

User response

Restart the Db2 subsystem, if necessary. Then, restart the Output Manager started task.

Module

BJTSINIT

BJT02047I **Db2 subsystem outage detected**

Explanation

Db2 was not running when the Output Manager started task started, or Db2 terminated unexpectedly while Output Manager was running. As a result, Output

Manager will shut down in a controlled manner. No report SYSOUT that is on the JES spool will be lost.

User response

Start Db2, and then restart the Output Manager started task. Output Manager will then activate the selector tasks and archive the report SYSOUT.

Module

BJTSINIT

BJT02049I **SQL error code detected = *sql_code***

Explanation

A database error occurred that prevented normal product processing from continuing. The Output Manager started task has shut down. This message provides the SQL error code that was issued.

User response

Provide the text of this message, including the SQL error code, to your Db2 systems administrator for diagnostic use.

Module

BJTSINIT

BJT02050S **Command processor abended**

Explanation

The Output Manager command that was issued terminated abnormally.

User response

Contact your report administrator or systems administrator.

Module

BJTSINIT

BJT02051E **Command processor failed**

Explanation

The Output Manager command that was issued completed with a non-zero return code.

User response

Contact your systems administrator to investigate the problem.

Module

BJTSINIT

BJT02052I Starting file processing for preconfiguration

Explanation

Output Manager has begun processing the contents of the configuration file that is specified by the PRECONFG DD in the started task JCL. This "preconfiguration" processing occurs early in the startup of the started task.

User response

No action is required.

Module

BJTSINIT

BJT02053I DD(*ddname*) is not present in JCL, can not process preconfiguration file

Explanation

The PROC for starting the Output Manager started task does not contain the required PRECONFG DD statement. As a result, the configuration file that is specified by the PRECONFG DD cannot be processed.

User response

Add the PRECONFG DD statement to the started task JCL. This DD specifies the preconfiguration file that contains the startup commands to be processed early in the startup of the started task. Although the PRECONFG DD is required and must specify the preconfiguration file (BJT#IN05 by default), the commands in the preconfiguration file are optional and can be commented out.

Module

BJTSINIT

BJT02054I Unable to obtain storage for preconfiguration file, rc=*return_code*

Explanation

Sufficient storage cannot be obtained for the started task preconfiguration file probably because the Output Manager region does not have enough virtual memory.

User response

Try increasing the storage for the preconfiguration file.

Module

BJTSINIT

BJT02055I Unable to open preconfiguration file

Explanation

The preconfiguration file that is specified by the PRECONFG DD in the started task JCL cannot be opened because it is either missing or improperly configured.

User response

Ensure that the PRECONFG DD in the started task JCL is correctly specified.

Module

BJTSINIT

BJT02056I Primary JES subsystem is active: JES2

Explanation

At product startup, JES2 has been detected as the primary job entry subsystem.

User response

No action is required.

Module

BJTSINIT

BJT02057I Primary JES subsystem is active: JES3

Explanation

At product startup, JES3 has been detected as the primary job entry subsystem.

User response

No action is required.

Module

BJTSINIT

BJT02058I Allocation of TKAN failed
rc=*****

Explanation

At product startup, the allocation of the TKANBLOK data area failed. As a result, the report access identity security feature (implemented through SET REPACC and SET REPACCID) will be unavailable for use.

User response

Contact your systems programmer.

Module

BJTSINIT

BJT02059I ITOM Started
task USER=*****
GROUP=*****

Explanation

This message is informational only, and issued at product start up. It indicates the user id and group that the ITOM started task is using.

User response

No action is required.

Module

BJTSINIT

BJT03001E No command entered

Explanation

This message is informational only.

User response

No action is required.

Module

BJTRCMDS

BJT03002E Command *command_name* is not a valid command

Explanation

An invalid command was specified.

User response

Specify a valid command.

Module

BJTRCMDS

BJT03003I Command received: *command*

Explanation

This message is informational only.

User response

No action is required.

Module

BJTRCMDS

BJT03004I Trace functionality has not been initialized

Explanation

This message is informational only.

User response

No action is required.

Module

BJTRCMDS

BJT03005E Trace control block is corrupted
a(location)

Explanation

This message indicates a problem with the product's internal trace routines.

User response

No action is required if the product is otherwise operating normally.

Module

BJTRCMDS

BJT03006I Trace table has not yet been acquired

Explanation

This message indicates a problem with the product's internal trace routines.

User response

No action is required if the product is otherwise operating normally.

Module

BJTRCMDS

BJT03007I Trace table exists at(*location*) for a length of *nnnnnnnn*

Explanation

This message is informational only.

User response

No action is required.

Module

BJTRCMDS

BJT03008I Tracing is currently *status*

Explanation

This message is informational only.

User response

No action is required.

Module

BJTRCMDS

BJT03009I A trace table is pending deletion *a(*****)*

Explanation

This message indicates a problem with the product's internal trace routines.

User response

No action is required if the product is otherwise operating normally.

Module

BJTRCMDS

BJT03010I A prior trace table delete is pending, enter the TRACECOMMIT command, *a(*****)*

Explanation

This message indicates a problem with the product's internal trace routines.

User response

No action is required if the product is otherwise operating normally.

Module

BJTRCMDS

BJT03011E Trace table must be greater than zero and less than 64K, requested=*amount*

Explanation

This message indicates a problem with the product's internal trace routines.

User response

No action is required.

Module

BJTRCMDS

BJT03012E Storage obtain failed for trace table, *rc-return_code*

Explanation

This message indicates a problem with the product's internal trace routines.

User response

No action is required if the product is otherwise operating normally.

Module

BJTRCMDS

BJT03013E Trace table has been corrupted, *a(*****)*

Explanation

This message indicates a problem with the product's internal trace routines.

User response

No action is required if the product is otherwise operating normally.

Module

BJTRCMDS

BJT03014I Trace table exists at(*location*) for a length of *nnnnnnnn*

Explanation

This message is informational only.

User response

No action is required.

Module

BJTRCMDS

BJT03015E Trace control does not currently exist

Explanation

This message indicates a problem with the product's internal trace routines.

User response

No action is required if the product is otherwise operating normally.

Module

BJTRCMDS

BJT03016E Trace control has been corrupted

Explanation

This message indicates a problem with the product's internal trace routines.

User response

No action is required if the product is otherwise operating normally.

Module

BJTRCMDS

BJT03017I A prior trace table delete is pending, enter the TRACE COMMIT command, a(*******)

Explanation

This message indicates a problem with the product's internal trace routines.

User response

No action is required if the product is otherwise operating normally.

Module

BJTRCMDS

BJT03018I Trace table is ready for deletion, enter the TRACE COMMIT command, a(*******)

Explanation

This message indicates a problem with the product's internal trace routines.

User response

No action is required if the product is otherwise operating normally.

Module

BJTRCMDS

BJT03019E Trace control does not currently exist

Explanation

This message indicates a problem with the product's internal trace routines.

User response

No action is required if the product is otherwise operating normally.

Module

BJTRCMDS

BJT03020E Trace control has been corrupted

Explanation

This message indicates a problem with the product's internal trace routines.

User response

No action is required if the product is otherwise operating normally.

Module

BJTRCMDS

BJT03021E **No trace table is pending delete**

Explanation

This message indicates a problem with the product's internal trace routines.

User response

No action is required if the product is otherwise operating normally.

Module

BJTRCMDS

BJT03022E **Trace table has been corrupted
a(*****)**

Explanation

This message indicates a problem with the product's internal trace routines.

User response

No action is required if the product is otherwise operating normally.

Module

BJTRCMDS

BJT03023I **Trace table at(*location*) of
len(*length*) has been freed**

Explanation

This message indicates a problem with the product's internal trace routines.

User response

No action is required if the product is otherwise operating normally.

Module

BJTRCMDS

BJT03024E **Trace control does not currently
exist**

Explanation

This message indicates a problem with the product's internal trace routines.

User response

No action is required if the product is otherwise operating normally.

Module

BJTRCMDS

BJT03025E **Trace control has been corrupted**

Explanation

This message indicates a problem with the product's internal trace routines.

User response

No action is required if the product is otherwise operating normally.

Module

BJTRCMDS

BJT03026E **Trace stub is not present**

Explanation

This message indicates a problem with the product's internal trace routines.

User response

No action is required if the product is otherwise operating normally.

Module

BJTRCMDS

BJT03027I **Trace has now been turned on**

Explanation

This message is an internal trace message.

User response

No action is required.

Module

BJTRCMDS

BJT03028E **Trace table is missing or bad
a(*****)**

Explanation

This message indicates a problem with the product's internal trace routines.

User response

No action is required if the product is otherwise operating normally.

Module

BJTRCMDS

BJT03032I **Trace has now been turned off**

Explanation

This message is an internal trace message.

User response

No action is required.

Module

BJTRCMDS

BJT03034E **Trace control does not currently
exist**

Explanation

This message indicates a problem with the product's internal trace routines.

User response

No action is required if the product is otherwise operating normally.

Module

BJTRCMDS

BJT03035E **Trace control has been corrupted**

Explanation

This message indicates a problem with the product's internal trace routines.

User response

No action is required if the product is otherwise operating normally.

Module

BJTRCMDS

BJT03036E **Trace table does not exist**

Explanation

This message is an internal trace message.

User response

No action is required.

Module

BJTRCMDS

BJT03037E **Trace table has been corrupted
a(*****)**

Explanation

This message indicates a problem with the product's internal trace routines.

User response

No action is required if the product is otherwise operating normally.

Module

BJTRCMDS

BJT03038I **Trace has been reset**

Explanation

This message is an internal trace message.

User response

No action is required.

Module

BJTRCMDS

BJT03039I **Storage obtain failed for trace
control, rc=return_code**

Explanation

This message indicates a problem with the product's internal trace routines.

User response

No action is required if the product is otherwise operating normally.

Module

BJTRCMDS

BJT03040I **Storage obtain failed for trace stub, rc=*return_code***

Explanation

This message indicates a problem with the product's internal trace routines.

User response

No action is required if the product is otherwise operating normally.

Module

BJTRCMDS

BJT03085E **Errors encountered...command terminated**

Explanation

An error occurred during command processing within the product started task.

User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTRCMDS

BJT03086E **Selection policy activation failed, rc=*return_code***

Explanation

An error occurred during command processing within the product started task.

User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTRCMDS

BJT03087E **Data set attribute processing failed rc=*return_code***

Explanation

An error occurred during command processing within the product started task.

User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTRCMDS

BJT03089E **Dsn mask in archive attribute *name* has bad variable construct**

Explanation

Validation of the specified set of archive attributes failed. The archive mask is invalid.

User response

Notify your report administrator about the problem. The administrator can then correct the problem.

Module

BJTRCMDS

BJT03090E **Dsn mask in archive attribute *name* has level greater than 8**

Explanation

Validation of the specified set of archive attributes failed. The archive mask is invalid.

User response

Notify your report administrator about the problem. The administrator can then correct the problem.

Module

BJTRCMDS

BJT03091E **Dsn mask in archive attribute *name* has unknown variable name**

Explanation

Validation of the specified set of archive attributes failed. The archive mask is invalid.

User response

Notify your report administrator about the problem. The administrator can then correct the problem.

Module

BJTRCMDS

BJT03092E **Dsn mask in archive attribute name has too many levels**

Explanation

Validation of the specified set of archive attributes failed. The archive mask is invalid.

User response

Notify your report administrator about the problem. The administrator can then correct the problem.

Module

BJTRCMDS

BJT03093E **No storage available for selections, rc=return_code ,rs=reason_code**

Explanation

An error occurred during command processing within the product started task.

User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTRCMDS

BJT03094E **DB2 SET requires ID or TABLE parameter**

Explanation

An error occurred when Output Manager was processing an interactive command or a product startup command (a command in the configuration member that is specified in the CONFIGUR DD statement of the started task JCL).

User response

Notify your report administrator about the problem. The administrator can then correct any errors in the command syntax.

Module

BJTRCMDS

BJT03095E **A Db2 ID is required for the DB2 SET ID command**

Explanation

An error occurred when Output Manager was processing an interactive command or a product startup command (a command in the configuration member that is specified in the CONFIGUR DD statement of the started task JCL).

User response

Notify your report administrator about the problem. The administrator can then correct any errors in the command syntax.

Module

BJTRCMDS

BJT03096E **Db2 ID length of number_of_characters is too long, 4 char max**

Explanation

An error occurred when Output Manager was processing an interactive command or a product startup command (a command in the configuration member that is specified in the CONFIGUR DD statement of the started task JCL).

User response

Notify your report administrator about the problem. The administrator can then correct any errors in the command syntax.

Module

BJTRCMDS

BJT03097I **Db2 ID has been set to ssid**

Explanation

This message is issued in response to the DB2 SET ID command. It indicates that the Db2 subsystem ID

has been successfully set for the subsystem that the Output Manager started task will use.

User response

No action is required.

Module

BJTRCMDS

BJT03098E **A Db2 PLAN is required for the DB2 SET PLAN command**

Explanation

The startup command DB2 SET PLAN was issued without a required plan name.

User response

Notify your report administrator about the problem. The administrator can then specify a plan name to correct the command syntax.

Module

BJTRCMDS

BJT03099E **Db2 PLAN length of *number_of_characters* is too long, 8 char max**

Explanation

The DB2 SET PLAN command was issued with a plan name that is longer than the specified maximum number of characters for this value. The plan name must be eight characters or less.

User response

Notify your report administrator about the problem. The administrator can then correct the plan name so that it is eight characters or less.

Module

BJTRCMDS

BJT03100I **Db2 PLAN has been set to *plan_name***

Explanation

This message is issued in response to the DB2 SET PLAN command. It indicates that the name of the Db2 plan for accessing Output Manager tables has been successfully set.

User response

No action is required.

Module

BJTRCMDS

BJT03101E **DB2 QUERY requires ID or TABLE parameter**

Explanation

An error occurred when Output Manager was processing an interactive command or a product startup command (a command in the configuration member that is specified in the CONFIGUR DD statement of the started task JCL).

User response

Notify your report administrator about the problem. The administrator can then correct any errors in the command syntax.

Module

BJTRCMDS

BJT03102I **Db2 ID has not yet been set**

Explanation

An error occurred when Output Manager was processing an interactive command or a product startup command (a command in the configuration member that is specified in the CONFIGUR DD statement of the started task JCL).

User response

Notify your report administrator about the problem. The administrator can then correct any errors in the command syntax.

Module

BJTRCMDS

BJT03103I **Db2 ID is *ssid***

Explanation

This message is issued in response to the DB2 QUERY ID command. It identifies the Db2 subsystem ID that is currently set for the Output Manager started task (the ID that was set with the DB2 SET ID command).

User response

No action is required.

Module

BJTRCMDS

BJT03104I **Db2 PLAN has not yet been set**

Explanation

A Db2 plan name has not yet been set with the DB2 SET PLAN command. A plan name is required for the Output Manager started task.

User response

Notify your report administrator. The administrator can then set the plan name by issuing the DB2 SET PLAN command with a valid plan name.

Module

BJTRCMDS

BJT03105I **Db2 PLAN is *plan_name***

Explanation

This message is issued in response to the DB2 QUERY TABLE command. It indicates the name of the Db2 plan that is currently used to access the Output Manager tables (the plan name that was set with the DB2 SET PLAN command).

User response

No action is required.

Module

BJTRCMDS

BJT03106E **SAF SET requires ID parameter**

Explanation

The SAF SET ID command was issued without a required ID value. A SAF ID is required to implement Output Manager external security.

User response

Notify your report administrator about the problem. The administrator can then re-issue the SAF SET ID command with a valid ID value of 3 to 8 characters in length.

Module

BJTRCMDS

BJT03107E **SAF ID length of *number_of_characters* is too long, 8 char max**

Explanation

This message is issued in response to the SAF SET ID command. It indicates that the SAF ID that was specified is longer than the maximum allowable length of eight characters. The SAF ID is used for external security.

User response

Notify your report administrator about the problem. The administrator can reset the SAF ID to ensure that it is eight characters or less in length.

Module

BJTRCMDS

BJT03108E **SAF ID length of *number_of_characters* is too short, 3 char min**

Explanation

This message is issued in response to the SAF SET ID command. It indicates that the SAF ID that was specified is shorter than the minimum allowable length of three characters. The SAF ID is used for external security.

User response

Notify your report administrator about the problem. The administrator can reset the SAF ID to ensure that it is at least three characters in length.

Module

BJTRCMDS

BJT03109I **SAF ID has been set to *value***

Explanation

This message is issued in response to the SAF SET ID command. It indicates that the SAF ID was successfully set to specified value for the Output Manager started task. This ID is required to implement external security.

User response

No action is required.

Module

BJTRCMDS

BJT03110I **SAF ID has been reset**

Explanation

This message indicates that the SAF ID value has been reset. You set this ID by using the SAF SET ID global command. The ID is required to implement Output Manager external security.

User response

No action is required.

Module

BJTRCMDS

BJT03111E **SAF Class length of
number_of_characters is too long, 8
char max**

Explanation

This message is issued in response to the SAF SET CLASS command. It indicates that the SAF class that was specified is longer than the maximum allowable length of eight characters. This class is used in implementing external security on Output Manager resources.

User response

Notify your report administrator about the problem. The administrator can reset the SAF class to ensure that it is eight characters or less in length.

Module

BJTRCMDS

BJT03112E **SAF Class length of
number_of_characters is too short,
3 char min**

Explanation

This message is issued in response to the SAF SET CLASS command. It indicates that the SAF class that was specified is shorter than the minimum allowable length of three characters. This class is used in

implementing external security on Output Manager resources.

User response

Notify your report administrator about the problem. The administrator can reset the SAF class to ensure that it is at least three characters in length.

Module

BJTRCMDS

BJT03113I **SAF Class has been set to *class***

Explanation

This message is issued in response to the SAF SET CLASS command. It indicates that the SAF class has been successfully set to the specified value. A SAF class can be used for Output Manager external security.

User response

No action is required.

Module

BJTRCMDS

BJT03114E **No SAF Class specified on set
command**

Explanation

An SAF class was not set. This class is required for implementing Output Manager external security.

User response

Notify your report administrator about the problem. The administrator can then set the SAF class.

Module

BJTRCMDS

BJT03115I **SAF ID has not yet been set**

Explanation

This message is issued in response to the SAF QUERY ID command. It indicates that a SAF ID has not yet been set for the Output Manager started task. A SAF ID is required to implement external security on Output Manager resources.

User response

Notify your report administrator. The administrator can then set the SAF ID by issuing the SAF SET ID command.

Module

BJTRCMDS

BJT03116I SAF ID is *identifier*

Explanation

This message identifies the SAF ID that is currently set for the Output Manager started task. You specify this plan name with the SAF SET ID command.

User response

No action is required.

Module

BJTRCMDS

BJT03117I SAF Class has not yet been set

Explanation

This message is issued in response to the SAF QUERY CLASS command. It indicates that a SAF class has not yet been set for the Output Manager started task. A SAF class is required to implement external security on Output Manager resources.

User response

Notify your report administrator. The administrator can then set the SAF Class by issuing the appropriate command.

Module

BJTRCMDS

BJT03118I SAF Class is *class*

Explanation

This message identifies the SAF class that is currently set for the Output Manager started task. This class is used for implementing external security on Output Manager resources.

User response

No action is required.

Module

BJTRCMDS

BJT03119E LOG SET requires option to be set

Explanation

An error occurred when Output Manager was processing an interactive command or a product startup command (a command in the configuration member that is specified in the CONFIGUR DD statement of the started task JCL).

User response

Notify your report administrator about the problem. The administrator can then correct any errors in the command syntax.

Module

BJTRCMDS

BJT03141E ON or OFF must be specified for LOG SET FMTSYSO command

Explanation

The LOG SET FMTSYSO command was issued without the required ON or OFF option.

User response

Notify your report administrator about the problem. The administrator can then re-issue the command using the correct syntax: the command name followed by the option ON or OFF.

Module

BJTRCMDS

BJT03142E Sysout class must be 1 character in length

Explanation

An invalid SYSOUT class was specified for the log. A SYSOUT class can be only one character in length.

User response

Notify your report administrator about the problem. The administrator can re-issue the command with a valid SYSOUT class.

Module

BJTRCMDS

BJT03143E *class is not a valid sysout class*

Explanation

An invalid SYSOUT class was specified for the log.

User response

Notify your report administrator about the problem. The administrator can re-issue the command with a valid one-character SYSOUT class.

Module

BJTRCMDS

BJT03144I *Log sysout class has been set to class*

Explanation

The SYSOUT class for the log was successfully set to the specified one-character class value.

User response

No action is required.

Module

BJTRCMDS

BJT03160E *LOG CLOSE function failed, rc=return_code*

Explanation

The LOG CLOSE function failed with the specified return code.

User response

Contact your report administrator to diagnose the problem. Provide the administrator with specified return code.

Module

BJTRCMDS

BJT03161I *LOG CLOSE function scheduled*

Explanation

The LOG CLOSE function has been scheduled for execution.

User response

No action is required.

Module

BJTRCMDS

BJT03168I *VARIABLE SET requires a NAME=VALUE specification*

Explanation

The VARIABLE SET command was issued without a required variable name and value. This command is used to specify a value for a reserved or user-defined banner page variable.

User response

Notify your report administrator about the error. The administrator can then re-issue the VARIABLE SET command with the name of a valid banner variable and a variable value.

Module

BJTRCMDS

BJT03169I *VARIABLE variable_name set value*

Explanation

This message indicates that the named variable was set to the specified value by the VARIABLE SET command.

User response

No action is required.

Module

BJTRCMDS

BJT03170I *VARIABLE DELETE requires a variable name and value*

Explanation

The VARIABLE DELETE command was issued without a required banner variable name and value.

User response

Notify your report administrator about the problem. The administrator can then re-issue the command with the name and value of a banner variable that was previously set.

Module

BJTRCMDS

BJT03171I **VARIABLE DELETE failed,
variable_name not found**

Explanation

The VARIABLE DELETE command was issued with an invalid variable name. You must specify the name of a banner variable that was previously set with the VARIABLE SET command.

User response

Notify your report administrator about the problem. The administrator can then re-issue the command with a valid banner variable name and value.

Module

BJTRCMDS

BJT03172I **VARIABLE variable_name deleted**

Explanation

The specification for the named banner variable was deleted with the VARIABLE DELETE command.

User response

No action is required.

Module

BJTRCMDS

BJT03173I **VARIABLE DISPLAY could not find
the variable**

Explanation

The VARIABLE DISPLAY command could not display a banner variable value because the variable could not be found.

User response

Notify the report administrator about the problem. The administrator can check the variable name and then re-issue the VARIABLE DISPLAY command with the correct name.

Module

BJTRCMDS

BJT03174I **VARIABLE variable_name set,
value**

Explanation

The named variable is set to the specified value.

User response

No action is required.

Module

BJTRCMDS

BJT03175I **PROTVIEW option set to value**

Explanation

This message identifies the security option that was set by the PROTVIEW command.

User response

No action is required.

Module

BJTRCMDS

BJT03176I **PROTVIEW option is invalid,
PROTVIEW currently set to value**

Explanation

The PROTVIEW command was specified with an invalid value for the security option.

User response

Notify the report administrator about the problem. The administrator can correct the command syntax and then re-issue the command. Valid options are OFF, USER, AUDIT, ADMIN, and SAF.

Module

BJTRCMDS

BJT03177E **SUBMIT SET requires logical name**

Explanation

A SUBMIT SET command was specified without a required logical name.

User response

Notify the report administrator about the problem. The administrator can re-issue the command with a valid logical name.

Module

BJTRCMDS

BJT03178E SUBMIT SET requires PROC name

Explanation

A SUBMIT SET command was specified without a required PROC name (for example, the PROC for recalling HSM-migrated data sets).

User response

Notify the report administrator about the problem. The administrator can re-issue the command with a valid PROC name.

Module

BJTRCMDS

**BJT03179E SUBMIT SET logical name length
not positive**

Explanation

A SUBMIT SET command was specified with an invalid logical name length.

User response

Notify the report administrator about the problem. The administrator can re-issue the command with a valid logical name.

Module

BJTRCMDS

**BJT03180E SUBMIT SET logical name too long,
8 char max**

Explanation

A SUBMIT SET command was specified with a logical name that is longer than the maximum allowable length of eight characters for this value.

User response

Notify the report administrator about the problem. The administrator can re-issue the command with a logical name that is eight characters or less in length.

Module

BJTRCMDS

**BJT03181E SUBMIT SET PROC name length
not positive**

Explanation

A SUBMIT SET command was specified with an invalid PROC name length.

User response

Notify the report administrator about the problem. The administrator can re-issue the command with a valid PROC name.

Module

BJTRCMDS

**BJT03182E SUBMIT SET PROC name too long,
8 char max**

Explanation

A SUBMIT SET command was specified with a PROC name that is longer than the maximum allowable length of eight characters for this value.

User response

Notify the report administrator about the problem. The administrator can re-issue the command with a PROC name that is eight characters or less in length.

Module

BJTRCMDS

**BJT03183E No storage available for lnam
block, rc=return_code**

Explanation

An error occurred during command processing within the product started task. No storage is available for the logical name block.

User response

Contact your systems programmer. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTRCMDS

BJT03184E Logical name block at *location* is bad id = *identifier*

Explanation

An error occurred during command processing within the product started task.

User response

Contact your systems programmer. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTRCMDS

BJT03185I Logical name *lname* has been set to PROC *proc_name*

Explanation

This message is displayed in response to the SUBMIT SET command. It indicates that the logical name has been set to the specified PROC name.

User response

No action is required.

Module

BJTRCMDS

BJT03186E Logical name block at *location* is bad id = *identifier*

Explanation

An error occurred during command processing within the product started task.

User response

Contact your systems programmer. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTRCMDS

BJT03187I Logical name *lname* is mapped to PROC *proc_name*

Explanation

This message is displayed in response to the SUBMT QUERY command. It identifies the logical name that is currently mapped to the specified PROC name.

User response

No action is required.

Module

BJTRCMDS

BJT03196E Activate Selector error, rc=*return_code*, rs=*reason_code*

Explanation

An error occurred during command processing within the product started task.

User response

Contact your systems programmer. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTRCMDS

BJT03198E *value* is not a valid verb for the *command_name* command

Explanation

An error occurred while processing the specified command. An invalid verb value was encountered.

User response

Notify your report administrator about the problem. The administrator can re-issue the command with a valid verb value.

Module

BJTRCMDS

BJT03199E *command_name* command requires parameters

Explanation

The specified command was issued without its required parameters.

User response

Notify your report administrator about the problem. The administrator can re-issue the command with the required parameters.

Module

BJTRCMDS

BJT03200E SET CONDCODE requires a value

Explanation

A parameter value was not specified for the SET CONDCODE command, or the parameter value was specified incorrectly for this command in the SBJTSAMP member BJT#IN03.

User response

Specify one of the following valid parameter values for the SET CONDCODE command: LASTNONZERO or HIGHEST. If you specify LASTNONZERO, the **Cond** column on the Archived Reports panel will display the last non-zero condition code for a job. If you specify HIGHEST, the **Cond** column will display the highest condition code. To specify the command, you can use the Modify operator command as follows: */F product instance, SET CONDCODE parameter*. If you specified the SET CONDCODE command as a startup command, check the BJT#IN03 member to ensure that you specified the parameter correctly.

Module

BJTRCMDS

BJT03201E SET CONDCODE parameter is not valid, parameter

Explanation

The specified parameter value that was set by the SET CONDCODE command is not a valid value. The SET CONDCODE parameter determines whether the **Cond** column on the Archived Reports panel displays the last non-zero condition code for a job or the highest condition code.

User response

Specify either SET CONDCODE LASTNONZERO or SET CONDCODE HIGHEST. You can specify the command as a startup command in the SBJTSAMP member BJT#IN03 or by using the Modify (/F) operator command. If you specify the LASTNONZERO parameter value, the **Cond** column on the Archived Reports panel will display the last non-zero condition

code for a job. If you specify the HIGHEST parameter value, the **Cond** column will display the highest condition code.

Module

BJTRCMDS

BJT03202I CONDCODE has been set to parameter

Explanation

This message is issued after the SET CONDCODE command is successfully processed. It identifies the condition code parameter that was set by the command. If the parameter value is LASTNONZERO, the **Cond** column on the Archived Reports panel will display the last non-zero condition code for a job. If the parameter value is HIGHEST, the **Cond** column will display the highest condition code.

User response

No action is required.

Module

BJTRCMDS

BJT03203I CONDCODE is set to parameter

Explanation

This message is issued in response to the QUERY CONDCODE command. It identifies how the condition code parameter is set. If the parameter value is LASTNONZERO, the **Cond** column on the Archived Reports panel displays the last non-zero condition code for a job. If the parameter value is HIGHEST, the **Cond** column displays the highest condition code.

User response

No action is required.

Module

BJTRCMDS

BJT03204E SET LOGCLASS requires a value

Explanation

The SET LOGCLASS command was issued without a required class value. The command specifies the SYSOUT class to use for the ACTIVITY DD sysout for the Output Manager started task if the started task terminates.

User response

Notify your report administrator about the problem. The administrator can re-issue the command with a valid one-character class.

Module

BJTRCMDS

BJT03205I **SET PRSETPDS command no longer specifies a PDS name value**

Explanation

The SET PRSETPDS command was issued without a PDS name. Therefore, no PRSET PDS is currently set for the Output Manager started task. Possibly, the command was issued without a name to disable PRSET processing globally for the Output Manager instance.

User response

If the PDS name was inadvertently omitted, specify the SET PRSETPDS command again and include the PDS name. If you want PRSET processing to be disabled, no action is required.

Module

BJTRCMDS

BJT03206E **SET PRSETPDS command specifies a PDS name that is too long**

Explanation

The SET PRSETPDS command was issued with a PDS name that is too long. A PDS name can be a maximum of 44 characters in length.

User response

Specify the SET PRSETPDS command again with a PDS name that is 44 characters or less in length.

Module

BJTRCMDS

BJT03207I **PRSETPDS is not set**

Explanation

The QUERY PRSETPDS command was issued to determine the name of the PRSET partitioned data set (PDS) that is currently set for the Output Manager

started task. However, no PRSET PDS is currently specified.

User response

No action is required.

Module

BJTRCMDS

BJT03208I **PRSETPDS is set to *prset_pds_name***

Explanation

This message identifies the name of the PRSET partitioned data set (PDS) that is set for the Output Manager started task. It is displayed after the SET PRSETPDS command is successfully issued. The PRSET PDS stores binary characters that can be used to control printing on some printers.

User response

No action is required.

Module

BJTRCMDS

BJT03209E **SET KEEPDEST requires a value**

Explanation

The SET KEEPDEST command was issued without a destination value. This startup command specifies a mask that is used to generate keep destinations for temporarily holding SYSOUT data sets. These keep destinations are only for SYSOUT data sets that are captured based on a selector or subselector rule that specifies both a **Combine Sysout** value of **YES** and a normal **Disposition** value of **DELETE**. If you specify no destination value for the SET KEEPDEST command, Output Manager will use the default mask of TOMGR.

User response

Specify a five-character mask with the SET KEEPDEST command, or accept the default mask of TOMGR. Ensure that any mask you use will not generate keep destinations that conflict with the existing keep destinations that are in use at your site.

Module

BJTRCMDS

BJT03210E **SET BUNDJCL requires a value**

Explanation

The SET BUNDJCL command was issued without a required partitioned data set (PDS) name. This startup command identifies the name of the global PDS that holds all of the bundle print jobs for printing and reprinting report bundles.

User response

After "SET BUNDJCL," specify the name of the PDS that you created for storing the JCL for printing and reprinting bundle instances.

Module

BJTRCMDS

BJT03211E BUNDLE ACT requires a value

Explanation

The BUNDLE ACT command was issued without a bundle name. This command requires the name of the report bundle that you want to activate, as specified in a bundle definition.

User response

After "BUNDLE ACT," specify the unique bundle name of the bundle to be activated.

Module

BJTRCMDS

BJT03212E BUNDLE DEACT requires a value

Explanation

The BUNDLE DEACT command was issued without a bundle name. This command requires the name of the report bundle that you want to deactivate, as specified in a bundle definition.

User response

After BUNDLE DEACT, specify the unique bundle name of the bundle instance that you want to deactivate.

Module

BJTRCMDS

BJT03213E SET AFPDETCT requires a value

Explanation

The SET AFPDETCT command was issued without a required option. The command name must be followed by either the value ON or OFF.

User response

After the SET AFPDETCT command, specify either ON or OFF. Specify ON only if you use AFP printers and want Output Manager to use any hexadecimal 5A characters that occur in captured SYSOUTs to determine where new pages begin. The correct detection of new pages is required for matching the index fields and condition entries that are specified in layouts against a SYSOUT. Any other ASA or Machine print-control characters that exist will also still be used.

Module

BJTRCMDS

**BJT03214I PRSETPDS is active:
*prset_pds_name***

Explanation

This message identifies the name of the PRSET partitioned data set (PDS) that is currently active for the Output Manager started task. This message is displayed in response to the QUERY PRSETPDS command. The PRSET PDS stores binary characters that can be used to control printing on some printers. The PDS name is specified by the SET PRSETPDS startup command.

User response

No action is required.

Module

BJTRCMDS

BJT03215I LIMIT *limit_type* is set to value

Explanation

This message is displayed in response to the QUERY LIMITS command. It identifies the limit that is currently set for the maximum number of activity results, archived reports, or captured reports to display (that is, a limit that was set by the SET ACTLIMIT, SET ARCLIMIT, or SET RPTLIMIT startup command).

User response

No action is required.

Module

BJTRCMDS

BJT03216E **SET *limit_type* requires limit value**

Explanation

The specified SET command was issued without a required limit value. The SET ACTLIMIT, SET ARCLIMIT, and SET RPTLIMIT commands must be followed by a 6-digit number from 000000 through 100000. These commands limit the number of activity results, archived reports, or captured reports that are reported.

User response

Edit the specified command by adding a number from 000000 through 100000 after the command name. If you specify 000000, the product default of 010000 will be used.

Module

BJTRCMDS

BJT03217E **SET *limit_type* parameter must be numeric, *****

Explanation

The specified SET command was issued with an invalid non-numeric value. The SET ACTLIMIT, SET ARCLIMIT, and SET RPTLIMIT commands must be followed by a 6-digit number from 000000 through 100000. These commands limit the number of activity results, archived reports, or captured reports that are reported.

User response

Edit the value that occurs after the specified command to specify a number from 000000 through 100000. If you specify 000000, the product default of 010000 will be used.

Module

BJTRCMDS

BJT03218E **SET *limit_type* parameter can not be greater than *value***

Explanation

The specified SET command was issued with a numeric value that is greater than the maximum allowable value. The SET ACTLIMIT, SET ARCLIMIT, and SET RPTLIMIT commands must be followed by a 6-digit number from 000000 through 100000. These commands limit the number of activity results, archived reports, or captured reports that are reported.

User response

Edit the value that occurs after the specified command to specify a number from 000000 through 100000. If you specify 000000, the product default of 010000 will be used.

Module

BJTRCMDS

BJT03219I ***Parameter_name* has been set to *value***

Explanation

This message indicates the value that was set for the specified parameter (usually by a startup command).

User response

No action is required.

Module

BJTRCMDS

BJT03220E **SET LRECLARC has invalid parameter**

Explanation

An invalid parameter value was specified for the SET LRECLARC startup command. This command specifies the LRECL value (in bytes) to use for all of your Output Manager archived data sets.

User response

Specify a number from 0 through 32760 for the SET LRECLARC startup command. The LRECL value should be high enough to accommodate your largest archive data sets.

Module

BJTRCMDS

BJT03221I **Db2 requests Queued=nnnnnnnn
Total=nnnnnnnn Tasks=nnnn**

Explanation

This message is issued in response to the DB2 QUERY QUEUES operator command. The message identifies: 1) the number of requests to the Output Manager Db2 database that are currently queued (that is, because all Db2 tasks are busy), 2) the total number of Db2 requests, and 3) the total number of Db2 tasks that are active for the Output Manager started task.

User response

No action is required.

Module

BJTRCMDS

BJT03222E **SET DB2THD has invalid
parameter**

Explanation

An invalid parameter is specified for the SET DB2THD command in the SBJTSAMP member BJT#IN05. This command sets the number of Db2 tasks to use for the Output Manager started task. Valid values are from 1 through 5. By default, two tasks are used when this command is not specified.

User response

In the SBJTSAMP member BJT#IN05, specify a number up to 5 for the SET DB2THD command. Use the following syntax: SET DB2THD *n* where *n* is a number from 1 through 5.

Module

BJTRCMDS

BJT03224E **Invalid ACTION *action_type*
specified for the DB2 ERROR
command**

Explanation

A DB2 ERROR command in the SBJTSAMP member BJT#IN05 contains an invalid value for the ACTION keyword. The ACTION keyword indicates the type of action that Output Manager should take when a specific SQL error causes an INSERT operation to fail. Only the following ACTION values are valid: DEFAULT, ERROR, TERMINATE.

User response

In the SBJTSAMP member BJT#IN05, check the DB2 ERROR commands that include the ACTION keyword. Ensure that each ACTION keyword specifies one of the following valid values:

- **DEFAULT** - The default behavior. Refer to the comments in the BJT#IN05 member for an explanation.
- **ERROR** - Issue an error after retrying the INSERT operation the number of times that is specified by the COUNT option.
- **TERMINATE** - Terminate the Output Manager started task after retrying the INSERT operation the number of times that is specified by the COUNT option.

Alternatively, you can remove the ACTION keyword from the command if the default behavior is acceptable.

Module

BJTRCMDS

BJT03225E **Invalid RECONNECT *value*
specified for the DB2 ERROR
command**

Explanation

A DB2 ERROR command in the SBJTSAMP member BJT#IN05 contains an invalid value for the RECONNECT keyword. The RECONNECT keyword indicates whether Output Manager should attempt to reconnect to its Db2 database to retry a failed INSERT operation that is related to a specific SQL error.

User response

In the SBJTSAMP member BJT#IN05, check the DB2 ERROR commands that include the RECONNECT keyword. Ensure that each RECONNECT keyword specifies either YES or NO. Alternatively, you can remove the RECONNECT keyword if the default value of NO is acceptable.

Module

BJTRCMDS

BJT03226E **SET RDATASTH requires a value**

Explanation

The SET RDATASTH command was issued without a required value. The command either enables or disables the use of the printer associated with the

distribution list when capturing report-level dynamic printer attributes.

User response

Notify your report administrator about the problem. The administrator can re-issue the command with a value of either: ENABLE or DISABLE.

Module

BJTRCMDS

BJT03227E **SET OUTCLASS requires a value**

Explanation

The SET OUTCLASS command was issued without a required class value. The command specifies the default SYSOUT class to be used for printed reports when the class is missing from the printer or the recipient definition.

User response

Notify your report administrator about the problem. The administrator can re-issue the command with a valid one-character class.

Module

BJTRCMDS

BJT03228E **SET VARCHIVE requires a value**

Explanation

The SET VARCHIVE command was issued without a required value. The command allows either all archives to be viewed by the user, or only those archives which do not have any reports based on them.

User response

Notify your report administrator about the problem. The administrator can re-issue the command with a value of either: ALL (view all archives) or NOREPORT (view only archives which generated no reports).

Module

BJTRCMDS

BJT03229E **SET DYNBRMOD requires a value**

Explanation

The SET DYNBRMOD command was issued without a required value. The command specifies a default print

model to be used for basic report definitions that are created dynamically by Output Manager.

User response

Notify your report administrator about the problem. The administrator can re-issue the command with a value of either: CLASSIC or REPORT.

Module

BJTRCMDS

BJT03230E **SET REPACC requires a value**

Explanation

The SET REPACC command was issued without a required value. The command is used to enable or disable the Report Access Identity security feature.

User response

Notify your report administrator about the problem. The administrator can re-issue the command with a value of either: ENABLE or DISABLE. Also see the command SET REPACCID.

Module

BJTRCMDS

BJT03231E **SET REPACCID requires a value**

Explanation

The SET REPACCID command was issued without a required value. The command is used to establish an alternative identity or user ID to be used when viewing or printing reports, as part of the report access identity security feature.

User response

Notify your report administrator about the problem. The administrator can re-issue the command with the name of a USER ID, which must be valid with the external security product (such as RACF). Also see the command SET REPACC.

Module

BJTRCMDS

BJT13001I **Output Manager selector (*selector_id*, TCB:*task_control_block*, DEST:*destination*) started**

Explanation

The specified selector is active.

User response

No action is required.

Module

BJTRSPAR

BJT13002I **Output Manager selector
(*selector_id*) has terminated
normally**

Explanation

The specified selector terminated normally.

User response

No action is required.

Module

BJTRSPAR

BJT13003E **Output Manager selector
(*selector_id*) has terminated
abnormally *rc=return_code***

Explanation

The specified selector task failed, possibly because of invalid or inaccurate values in the selector definition or the associated set of archive attributes.

User response

For more information about the error, check the ACTIVITY DD sysout for the Output Manager started task for any exceptions that are related to the selector and check the console log messages that are associated with the Output Manager started task. Also, ensure that all field values in the selector definition and in the associated set of archive attributes are valid.

Module

BJTRSPAR

BJT13009E **Failed to select *dsn_name* after
number of attempts**

Explanation

This message is issued when there is an attempt to create two selector rules on the same SYSOUT.

User response

Avoid creating two selector rules on the same SYSOUT. Run the Selector Analyze report and fix the overlapping Selector. For more information, see [Resolving conflicts in selection rules with the Selector Rule Analysis Utility \(BJT@ANLZ\)](#). Contact Technical Support for assistance.

Module

BJTRSPAR

BJT13010E **Error reading from DSN name**

Explanation:

Error occurs when the capture process receives an error from JES while reading the sysout.

User response:

Refer to the messages in either JESMSGLG, ACTIVITY DD, or on the console for guidance.

Module:

BJTRSPAR

BJT13016I **JES archive failure**

Explanation:

JES failure. There should be additional messages in the system log around the time BJT13016I is written that indicate what was failing.

User response:

Contact your System Administrator.

Module:

BJTRSPAR

BJT13017I **JES archive abended**

Explanation:

JES failure. There should be additional messages in the system log around the time BJT13017I is written that indicate what was failing.

User response:

Contact your System Administrator.

Module:

BJTRSPAR

BJT16001I **Connect for Db2 failed
*rc=return_code rs=reason_code***

Explanation

An error occurred when the Output Manager started task attempted to connect to the Db2 subsystem that is named in the startup commands member.

User response

Verify that the Db2 subsystem is active. Then attempt to restart Output Manager. If the problem persists, contact Technical Support.

Module

BJTRDB2R

BJT16002I **Open for Db2 failed rc=return_code
rs=reason_code**

Explanation

An error occurred when the Output Manager started task attempted to connect to the Db2 subsystem that is named in the startup commands member.

User response

Verify that the Db2 subsystem is active. Then attempt to restart Output Manager. If the problem persists, contact Technical Support.

Module

BJTRDB2R

BJT16003I **Translation service failed
rc=return_code rs=reason_code**

Explanation

An error occurred when the Output Manager started task attempted to connect to the Db2 subsystem that is named in the startup commands member.

User response

Verify that the Db2 subsystem is active. Then attempt to restart Output Manager. If the problem persists, contact Technical Support.

Module

BJTRDB2R

BJT16004I **SQL Error PROGN=dbrm_member
STNUM=statement_number
STYPE=db2_statement_type**

Explanation

This message is issued when a Db2 error occurs. The message BJT16005I and a Db2 error message (as decoded by DSNTIAR) follow this message and provide additional information.

User response

No action is required.

Module

BJTRDBDR

BJT16005I **SQL Error CODE=-sqlcode
ACTION=option**

Explanation

The SQL error that has the specified SQLCODE occurred. As a result, Output Manager took the specified action. The type of action that Output Manager takes for a SQL error is determined by a Db2 ERROR startup command in the SBJTSAMP member BJT#IN05. A Db2 error message (as decoded by DSNTIAR) follows this message.

User response

Look up the SQLCODE that is provided by the related Db2 error message in the *Db2 Messages and Codes* manual to determine how to respond to the error.

Module

BJTRDBDR

BJT16006I **BJTDBSAV record count is
record_count**

Explanation

The connection to the Db2 database failed. To preserve the records for captured SYSOUTs that were produced by active jobs but not yet committed, Output Manager writes these records to the BJTSAVE data set. (This data set is allocated by the BJTDBSAV DD in the started task JCL.) This message identifies the number of records that were written to the BJTSAVE data set. The next time the Output Manager started task is started, these records will be automatically inserted into the database.

User response

No action is required.

Module

BJTRDBDR

BJT28001I **Selector selector_name failed,
reason**

Explanation

The selector *selector_name* has invalid selection criteria, see the *reason* for details.

User response

- If "*reason*" is "Authorization failed", provide at least SAF UPDATE authority for the JESSPOOL to the started task.
- For any of the following *reason* codes, fix the specified field in the selector, and do a POLICY ACTIVATE again: Invalid destination specified, USERID has error, DESTINATION has error, JOBNAME has error, FORM has error, WRITER has error, PRMODE has error, CLASS has error, FCB has error, UCS has error, CHAR has error, MOD has error, FLASH has error, new sysout class not A-Z and not 0-9, new sysout class has error, new FORMS has error, new WRITER has error, new DEST has error
- For any other *reason* message, contact customer support

Module

BJTRSPGR SAPIIF

BJT29001E **Archive data set deleted,
dsname=*dsname***

Explanation

This message is issued when an archive attribute has an abnormal disposition of delete, and there was an error while writing an archive. The archive data set is deleted at the time it is unallocated, and then this message is issued.

User response

Check the ITOM job logs for X37 errors.

Module:

BJTRDSNS ARCDSDDEL

BJT29002E **Archive data set deleted,
Zero length archive created,
dsname=*dataset_name***

Explanation

A problem occurred during selector processing that caused an empty archive data set to be generated. When archives are listed, this row will appear with "Line count" equal to 0 (zero).

User response

Notify your systems programmer about the problem. View Archives to identify the jobname and jobID - expect to find two rows with the same job attributes; one with zero lines, the other with lines > 0. Select the row with zero lines to obtain the data set name. Delete this data set from the system catalog. The empty row will be deleted during the next CATSYNC run.

If the problem persists, set the following SLIP trap and contact Technical Support for dump analysis:

```
SLIP SET, JOBNAME=started_task_name,  
MSGID=BJT29002E, ACTION=SVCD,  
SDATA=(PSA,CSA,SQA,SUM,RGN,TRT), END
```

Module:

BJTRDSNS ARCZERO

BJT29004E **The gdg version
dsname=*gdg_version_dsname* is
already in the catalog**

Explanation

A GDG version data set was not allocated because the data set already exists in the catalog. This problem can occur if an existing data set name conflicts with the generation data set to be allocated, or if the GDG generation number overflows and old (rolled-off) generation data sets have not been deleted.

User response

Delete the conflicting or rolled-off data set. Use IDCAMS to do a LISTCAT ALL LEVEL(*gdg_base_dsname*). If you see that all versions of this data set became rolled-off, choose the most recent version, and use IDCAMS to do an ALTER *gdg_version_dsname* ROLLIN

Module:

BJTRDSNS

BJT29007I **Create Archive Failure**

Explanation:

DFSMS failure. There should be additional messages in the system log around the time BJT29007I is written that indicate what was failing.

User response:

Check on IEC*** message. If there is any abend associated with the message check the web for an APAR. Contact your Storage Administrator.

Module:

BJTRDSNS

BJT30001E **Requesting SVCDDUMP,
title=*title_string***

Explanation

Output Manager is requesting a dump because an abend occurred. The dump may not actually be produced if there is a SLIP trap with ACTION=NOSVCD, or because of the dump elimination (DAE) feature of MVS.

User response

If the dump is due to SB37, SD37, or SE37, find the corresponding IEC030I, IEC031I, or IEC032I message, read the explanation of the IEC message in the IBM manual, and adjust the settings in the corresponding Output Manager Archive Attributes.

- For D37, in the Archive attributes, either use "Auto Calculate" Yes or specify a non zero "Secondary quantity".
- For B37 and E37 abends, (1) make the primary and secondary allocations larger (by adjusting the Archive Attributes), (2) specify more volumes in the Archive Attributes, or (3) specify a volume count greater than 1 in the Data Class. The Data Class is selected by your site's ACS rules, and (depending on the ACS rules) can be directly specified in the Archive Attributes.

If a dump was produced, send it to customer support.

Module

BJTRSTSK SVCDTITL

BJT35001I **No Partner Info, reason**

Explanation

EZBDDOMAIN has not been set up in the SERVAUTH class (SERVAUTH class must be active and raclisted). Reason is:

- V1R12 or newer required
- The partner is not in the same sysplex
- The security domain name is not defined
- The security domain name is not the same

User response

Contact your system security administrator.

BJT35003E **The port has not been set, rc=return_code**

Explanation

A problem occurred during product startup.

User response

Notify your systems programmer about the problem. You may need to check your ARA_PORT in policy administration of your product setup. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTCSRVR

BJT35004E **Out of memory in ARA sever**

Explanation

A problem occurred during product startup.

User response

Notify your systems programmer about the problem. You may need to check policy administration of your product setup. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTCARAS

BJT35005E **Setting DISCONNECT_TIMESTAMP of ARA_SESSION row failed with SQLCODE=-sqlcode**

Explanation

A problem occurred during product usage due to a Db2 database issue.

User response

Notify your systems programmer about the ARA SERVER issue that occurs when trying to view archive data. Your data in the Db2 database is either incorrect or you are not allowed to update the table. You may need to check your Db2 access permissions. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTCARAS

BJT35006E **Deleting old ARA_SESSION rows failed with SQLCODE=-sqlcode**

Explanation

A problem occurred during product usage due to a Db2 database issue.

User response

Notify your systems programmer about the ARA SERVER issue that occurs when trying to view archive data. Your data in the Db2 database is either incorrect or you are not allowed to delete the table. You may need to check your Db2 access permissions. If the problem persists, gather all details and contact Technical Support for assistance.

Module

BJTCARAS

BJT6039E **Not authorized to (*function*)**

Explanation

The user is not allowed to perform the specified function using the BJTCATS program. BJTCATS is used for catalog synchronization and for deleting job output from active bundles.

Function is:

- run BJTCTSN
- use ALLOW_UPDATE = YES
- use ALLOW_DELETE = YES

User response

Contact your system security administrator. The function is protected by the the BJT.<DB_QUALIFIER>.ADM.CSNC profile.

BJT77019E **Cannot open codepage converter %s from %s**

Explanation

The problem could be one of the following:

- An invalid multibyte sequence is encountered in the input.
- The input byte sequence has been entirely converted, that is *inbytesleft has gone down to 0.
- An incomplete multibyte sequence is encountered in the input, and the input byte sequence terminates after it.
- The output buffer has no more room for the next converted character.

User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Product Support for assistance.

BJT77020E **Cannot convert codepage**

Explanation

Error generated by the IBM call utility 'iconv' while converting characters in file from one code page set to another. The converted text is written to standard output (stdout).

User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Product Support for assistance.

BJT77022E **Failed to find static file '%s', rc=%d**

Explanation

Error Generated by Apache call filename Present in the error is not present in respective location.

User response

Correct the error by having a filename given in error at designated location. For more information, please contact product support.

BJT77033W **unknown printAttr %s**

Explanation

The printer attributes is not specified correctly or not defined.

User response

Defined the printer attributes in A.K of ITOM ISPF panel and activate the policy.

BJT77034I **unknown banner substitution variable %.*s**

Explanation

Message is generated because the required banner variable cannot be substituted as it is not present in the list.

User response

Declare the required banner variable.

BJT77037E **x37 abend in writing %x**

Explanation

During writing to disk from the z/OS server, x37 Abends can occur more readily when data sets are created with small SPACE primary and secondary allocation units.

User response

For the z/OS server to avoid possible x37 Abends, data sets should be allocated with primary and secondary SPACE allocation units to fit the largest byte data stream from an NFS client. Contact your system admin for space availability.

BJT77038E **other problem printing archive/
report errno=%d errno2=%d**

Explanation

An abend other than x37 occurred while printing archive or report.

User response

Look for abend code and contact your administrator for further assistance.

BJT77051E **Could not connect to DB2**

Explanation

Error generated when connection to DB2 failed.

User response

Make sure your Db2 connection is up and running. If issue persists, contact your system administrator.

BJT7705E **initialization incomplete, PLAN, or
SUBSYSTEM missing**

Explanation

Db2 initialization, PLAN, or SUBSYSTEM is missing.

User response

Make sure you have initialised DB2 properly. If issue persists, contact your system administrator.

BJT77061W **DB2 fetch failed from BJTARC**

Explanation

Warning is generated when DB2 fetch is failed for BJTARC Table and result is not returned.

User response

Contact your DB2 administrator.

BJT77063W **page bounds out of range
lastIndex=%d pageCount=%d**

Explanation

Warning appears if last index is greater than page count.

User response

No user action required.

BJT77064W **DB2 prepare/open failed from
BJTARC**

Explanation

Warning is generated when DB2 Open or DB2 Prepare statement fails for the BJTARC TABLE.

User response

Contact your DB2 administrator and ensure DB2 connection is getting established successfully.

BJT77066E **Could not get filter for id=%d**

Explanation

This error message indicates that filter is not created properly.

User response

The issue is with BJTFVF table. Check if the **Name** column of BJTFVF table has filter name. Also, its associated ROWID having value not equal to **0**. For more information, please contact DB2 administrator.

BJT7706E **OM web server not initialized.**

Explanation

OM Web Server was not initialized properly.

User response

Refer to logs and Contact your administrator

BJT77071E **no print attrs found for archive**

Explanation

This message indicates that no print attributes were found for archive.

User response

Validate if print attributes are defined correctly.

BJT77071AE **no print attrs found for report**

Explanation

This message indicates that no print attributes were found for report.

User response

Validate if print attributes are defined correctly.

BJT77072 **could not allocate print dataset**

Explanation

This error might occur when printing dataset through BJTBatch and dataset name specified in RUNMODE=OUTPUT is not created.

User response

Check if parameters specified for print dataset are correct or not.

BJT77077W **failed to make FV iterator**

Explanation

Formatted view iterator is not created successfully for chosen view.

User response

Ensure that parameters given in formatted view are correct with respect to specific report or archive.

BJT77078W **no data set to iterate %s**

Explanation

Archived Dataset name not found to perform iteration.

User response

Ensure that archived dataset is not deleted.

BJT77079W **could not open archive containing report for printing %s**

Explanation

Archived Dataset name not found for printing.

User response

Ensure that archived dataset is not deleted.

BJT7708E **Unknown Parameter: %s**

Explanation

Unknown parameter name specified in the policy admin of ITOMWeb.

User response

Ensure to give correct parameter name from the list.

BJT77091E **Bad page range %s**

Explanation

Incorrect page range specified in the print option.

User response

Specify the correct page range to allow printing.

BJT77092E **Internal error, no column type %c**

Explanation

Invalid column type value is assigned.

User response

From Formatted Views, select the appropriate column type value. Appropriate value for column type are **Extract From Line** and **Literal Text**.

BJT77093E **Internal error, no heading type %c**

Explanation

Invalid header type value is assigned.

User response

From Formatted Views, select the appropriate column type value. Appropriate value for column type are **Extract From Line**, **Literal Text**, and **Whole Line**.

BJT77092W **cannot email migrated dataset %s**

Explanation

The requested dataset is migrated.

User response

Recall the requested dataset.

BJT77092AW **cannot email unknown dataset %s**

Explanation

The requested dataset is not found to email.

User response

Ensure that the requested dataset is present and not deleted.

BJT77092BW cannot email 3rd party archive unknown dataset %s

Explanation

3rd party Archive which is migrated using ISV recall cannot be emailed.

User response

No user action required.

BJT77093W Request rejected. Maximum concurrent request limit exceeded

Explanation

HTTP service call is rejected as maximum concurrent request limit exceeded.

User response

Please ensure if HTTP instance is configured correctly. If issue persists, contact HTTP support team.

BJT77095AE User %s is not authorized to print report data for %s

Explanation

User do not have access to perform print operation for chosen report.

User response

Contact your admin to provide access.

BJT77096E User %s is not authorized to see report data for %s.

Explanation

Specified user is not authorised to see report data. It could be due to insufficient access to report.

User response

Please contact your Admin to provide access.

BJT77097E User %s is not authorized to download report data for %s

Explanation

Specified user is not authorised to see report data. It could be due to insufficient access to download report.

User response

Please contact your Admin to provide access.

BJT77098W unknown pdf page geomtry '%s'

Explanation

Invalid page size chosen for PDF email attachment.

User response

Select appropriate page dimension specified on panel.

BJT77099E bad email address for userid=%s

Explanation

No email address is specified for a given userid.

User response

Specify correct email address.

BJT77101W ACCOUNTINGTOKEN is too long and will be truncated.

Explanation

Lenght of *ACCOUNTINGTOKEN* is more than 21 charcter in policy admin. The result will be truncated.

User response

Set the lenght of *ACCOUNTINGTOKEN* with character length less than 22.

BJT77102W ACCOUNTINGSTRING is too long and will be truncated.

Explanation

Lenght of *ACCOUNTINGSTRING* is more than 254 charcter in policy admin. The result will be truncated.

User response

Set the lenght of *ACCOUNTINGSTRING* with character length less than 255.

BJT77103W ACCOUNTINGSTRING starts with predefined characters.

Explanation

The *ACCOUNTINGSTRING* values begin with the following three-character combinations: ARI, DSN, JCC, QSQ, or SQL in policy admin.

User response

The *ACCOUNTINGSTRING* should not begin with the following three-character combinations: ARI, DSN, JCC, QSQ, or SQL.

BJT77104E **User %s is not authorized to see archive data for %s.**

Explanation

Specified user is not authorised to see archive data. It could be due to insufficient access to archive.

User response

Contact your Admin to provide access.

BJT77105E **User %s is not authorized to print archive data for %s.**

Explanation

Specified user is not authorised to print archive data. It could be due to insufficient access to print archive.

User response

Contact your Admin to provide access.

BJT77106W **SAF Class %s is not allowed. SAF Class will be set to %s.**

Explanation

SAF Class other than FACILITY or XFACILIT is not allowed. The default will be set to FACILITY.

User response

No user action required.

BJT77112E **AFP View cannot be applied in this context**

Explanation

View Name cannot be one of these reserved names: NoCC, UnformattedView, LineMode, AFP.

User response

Keep viewname other than NoCC, UnformattedView, LineMode or AFP.

BJT77113W **Unable to open LogFile %s, errno=%d, errno2=%08X**

Explanation

Log file was not opened as user do not have appropriate permission to log file.

User response

Check the appropriate permission given to the logfile for a user to access.

BJT77115E **Unable to open html template %s, errno=%d, errno2=%08X**

Explanation

User or user group do not have access to html file.

User response

User or User group need access to extracted html files. It is recommended to have appropriate access to all extracted ITOMWEB files.

BJT77116E **Unable to open static file %s, errno=%d, errno2=%08X**

Explanation

Unable to open static files on ITOMWEB.

User response

Ensure that user or user group have appropriate access to all extracted ITOMWEB files.

BJT77117E **invalid DSNAME specification '%s'**

Explanation

Invalid dataset length is specified.

User response

Ensure that generated dataset has with standard dataset length

BJT77119W **Unable to set locale to '%s'.**

Explanation

LOCALE parameter in Policy Admin is not specified correctly.

User response

Specify appropriate LOCALE value in Policy Admin.

BJT77120E **User %s has no permission to download archives.**

Explanation

User do not have access to perform download archive operation for choosen archive.

User response

Contact your Admin to provide access.

BJT77121E **User %s has no permission to download reports.**

Explanation

User do not have access to perform download report operation for choosen report.

User response

Contact your Admin to provide access.

BJT77122E **User %s has no permission to print archives.**

Explanation

User do not have access to perform print archive operation for choosen archive.

User response

Contact your Admin to provide access.

BJT77123E **User %s has no permission to print reports.**

Explanation

User do not have access to perform print report operation for choosen report.

User response

Contact your Admin to provide access.

BJT77135W **Unable to open report definitions %s**

Explanation

Invalid path of REPORT_DEF_FILE given in Policy Admin of ITOMWeb.

User response

Provide appropriate adminreports.enc file path generated by extracting om directory. Activate the

policy and bounce ITOMWeb instance in order to pick the changes.

BJT7751W **unknown charset %s**

Explanation

The value entered as input in Admin report section is not alphanumeric.

User response

Specify alphanumeric values in the Admin Report section fields.

BJT7754W **Parameter name too long at %d in %s**

Explanation

Parameter length exceeds 255 character length.

User response

Specify the paramter length with less than 255 character length.

BJTZ114 **The requested function is still under construction.**

Explanation:

An attempt was made to utilize an Output Manager enhancement function that is not yet complete.

User response:

No response required.

BJTZ115 **Abend (abend code) has occurred, reason (reason code)**

Explanation:

An abend occurred when Output Manager attempted an operation. As a result, the program cannot complete and will terminate. This message provides the abend code and reason code that was returned from the operation.

User response:

To determine the cause of the error, look up the abend code that this message provides in the IBM MVS documentation.

BJTZ119 **Policy activation command is issued.**

Explanation:

The Output Manager policy activate command has been issued.

User response:

No response required.

BJTZ120 **You no longer have access to this report****Explanation:**

You attempted to access a report that you are not authorized to access. As a result, the report is not displayed.

User response:

If you need to access the report, contact your report administrator for assistance.

BJTZ12 **Access ID (access ID) does not comply to Access Mask (access mask name).****Explanation:**

An invalid value was specified in the Access ID field. An Access ID must be derived from the Access Mask.

User response:

Type a valid access ID in the Access ID field.

BJTZ122 **Access mask was changed by administrator****Explanation:**

Your access mask was changed by an administrator. Access masks determine which access IDs a user can switch to, and your access ID must be a derivative of your new access mask.

User response:

Specify an access ID that is derivative of the new access mask.

BJTZ123 **You are not authorized to access this archive****Explanation:**

You attempted to access an archive that you are not authorized to access. As a result, the archive is not displayed.

User response:

If you need to access the archive, contact your report administrator for assistance.

BJTZ124 **Invalid line command****Explanation:**

An invalid line command was issued.

User response:

Specify a valid line command. For a full list of valid line commands for a panel, refer to that panel's Help by pressing PF1 or selecting Help from the drop-down list.

BJTZ125 **The job associated with this report ran, but no data was generated for this report****Explanation:**

This message is meant to inform you that the job associated with a report ran successfully, but no data was captured because no data matched the selection criteria specified in the report selector rule.

User response:

No response required.

BJTZ126 **Referenced object has been deleted from the database, and the reference to it has been erased****Explanation:**

You successfully deleted an Output Manager object from the database. This object was referenced by another Output Manager object, and that reference was successfully deleted as well.

User response:

No response required.

BJTZ127 **No enabled custom reports found for this layout. Status changed to disabled****Explanation:**

An attempt was made to enable a layout, however, layouts can only be enabled when they have one or more custom reports enabled.

User response:

Leave the layout disabled, or enable a custom report for this layout.

BJTZ128 **TPL rule expression must not be blank.****Explanation:**

You are attempting to save a TPL rule definition that does not contain a TPL rule expression. A TPL rule expression is required in the TPL Rule field of the TPL Rules Details panel.

User response:

Type a valid TPL rule expression in the TPL Rule field. For more information on TPL rules, view the help panel of the TPL Rules Details panel.

BJTZ129 **TPL rule expression must not be longer than 440 lines****Explanation:**

You are attempting to save a TPL rule definition, but the TPL rule expression is too long. TPL rule expressions must not exceed 440 lines.

User response:

Edit the TPL rule expression in the TPL Rule field to be 440 lines or less. For more information on TPL rules, view the help panel of the TPL Rules Details panel.

BJTZ135: **Request Canceled****Explanation:**

You successfully canceled this process.

User response:
No action is required.

BJTZ138 **Program storage exhausted. Enter more specific search criteria to shorten the list of displayed items**

Explanation:
The total number of result rows that Output Manager returned for the panel exceeds the number of rows that can be listed on the panel at one time due to storage limitations. This situation can occur if you specified very general search criteria or if you have not previously specified any search criteria for this panel.

User response:
To reduce the number of result rows, you can enter more specific search criteria by choosing option 1 (Enter Search Criteria) from the Search pull-down menu.

BJTZ140 **Invalid character. Only alphanumeric characters are allowed (A-Z,a-z,0-9)**

Explanation:
An invalid value was specified in a field that supports only alphanumeric characters (A-Z,a-z,0-9).

User response:
When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify alphanumeric characters (A-Z,a-z,0-9) in that field.

BJTZ141 **Invalid character. Only alphanumeric characters and wildcards allowed (A-Z,a-z,0-9,?*)**

Explanation:
An invalid value was specified in a field that supports only alphanumeric characters (A-Z,a-z,0-9) and wildcards (? and *).

User response:
When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify alphanumeric characters (A-Z,a-z,0-9) or wildcards (? and *) in that field.

BJTZ142 **Invalid character. Only alphanumeric and national characters allowed (A-Z,a-z,0-9,@,#,\$)**

Explanation:
An invalid value was specified in a field that supports only alphanumeric and national characters (A-Z,a-z,0-9,@,#,\$).

User response:
When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify alphanumeric and national characters (A-Z,a-z,0-9,@,#,\$) in that field.

BJTZ143 **Invalid character. Only alphanumeric, national characters, and wildcards are allowed (A-Z,a-z,0-9,@,#,\$,?*)**

Explanation:
An invalid value was specified in a field that supports only alphanumeric, national, and wildcard characters (A-Z,a-z,0-9,@,#,\$,?*)).

User response:
When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify alphanumeric, national, and wildcard characters (A-Z,a-z,0-9,@,#,\$,?*) in that field.

BJTZ144 **Invalid character. Only alphanumeric, national characters, and period are allowed (A-Z,a-z,0-9,@,#,\$,.). The first character must be non-numeric.**

Explanation:
An invalid value was specified in a field that supports only alphanumeric characters, national characters, and period ((A-Z,a-z,0-9,@,#,\$,.). The first character cannot be a number.

User response:
When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify alphanumeric characters, national characters, and period (A-Z,a-z,0-9,@,#,\$,.) in that field. The first character cannot be a number.

BJTZ145 **Invalid character. Only alphanumeric, national characters, period, and wildcards allowed (A-Z,a-z,0-9,@,#,\$,.,?*) . The first character must be non-numeric**

Explanation:
An invalid value was specified in a field that supports only alphanumeric characters, national characters, wildcard characters, and period (A-Z,a-z,0-9,@,#,\$,.,?*) . The first character cannot be a number.

User response:
When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify alphanumeric, national, and wildcard characters, and period (A-Z,a-z,0-9,@,#,\$,.,?*) in that field. The first character cannot be a number.

BJTZ146 **Blank not allowed. A blank value is not allowed.**

Explanation:
A blank was specified in a field that cannot have blanks.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a valid value in that field.

BJTZ147 **Invalid character. Only alphanumeric and national characters allowed (A-Z,a-z,0-9,@,#,\$), except exceptions.**

Explanation:

An invalid value was specified in a field that supports only alphanumeric and national characters (A-Z,a-z,0-9,@,#,\$), with the exception of the words displayed in the message.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify alphanumeric and national characters (A-Z,a-z,0-9,@,#,\$) in that field. Make sure you do not include the invalid words displayed in this message.

BJTZ148 **Invalid character. Only alphanumeric, national, and wildcard characters allowed (A-Z,a-z,0-9,@,#,\$,?), except words exceptions.**

Explanation:

An invalid value was specified in a field that supports only alphanumeric, national, and wildcard characters (A-Z,a-z,0-9,@,#,\$,?), with the exception of the words displayed in the message.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify alphanumeric, national, and wildcard characters (A-Z,a-z,0-9,@,#,\$,?) in that field. Make sure you do not include the invalid words displayed in this message.

BJTZ149 **Invalid value. Field value is not compatible with parent item field values**

Explanation:

An invalid value was specified in a field of a child object. The fields of child objects must be derivative of the fields of the parent object.

User response:

Compare the fields of the parent object with the fields of the child object and specify derivative values in the child object fields.

BJTZ150 **Invalid value. Only Yes and No are allowed**

Explanation:

A value other than Yes or No was specified in a field that only supports Yes or No.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Type Yes or No in that field.

BJTZ151 **Invalid email address. Email address must be in the format "xx.xx.xx@yy.y.zz"**

Explanation:

An invalid email address was specified.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Type an email address in the format xx.xx.xx@yy.y.zz

BJTZ152 **Invalid value. Either "Able to access via ITOMWEB" or "Able to access via ISPF" must be "Yes"**

Explanation:

You must specify YES in either the "Able to access via ITOMWEB" field or the "Able to access via ISPF" field to specify the accessible interface.

User response:

Type YES in either the "Able to access via ITOMWEB" field or the "Able to access via ISPF" field.

BJTZ153 **Duplicate name. Recipient name is not unique**

Explanation:

The specified recipient name was not inserted into the Output Manager database because a recipient name with that value already exists. Recipient names must be unique.

User response:

Type a unique value in the recipient name field.

BJTZ154 **Invalid value. Job records must begin with //**

Explanation:

An invalid value was specified. Job records must begin with two slashes (/).

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Type a job record that begins with //.

BJTZ155 **Invalid jobclass. Job class must be one alphanumeric character (0-9, uppercase A-Z, or lowercase s or t).**

Explanation:

An invalid value was specified in the jobclass field. Job class must be one alphanumeric character (0-9, uppercase A-Z, or lowercase s or t). Lowercase s is used when job type is STC, and lowercase t is used when job type is TSU.

User response:

Type a valid value in the jobclass field.

BJTZ156 Duplicate name. Selector name is not unique

Explanation:

The specified selector name was not inserted into the Output Manager database because a selector name with that value already exists. Selector names must be unique.

User response:

Type a unique value in the selector name field.

BJTZ157 Invalid character. Only alphanumeric and national characters are allowed (A-Z,a-z,0-9,@,#,\$), except words (INTRDR, STDWTR, NJERDR)

Explanation:

An invalid value was specified in a field that supports only alphanumeric and national characters (A-Z,a-z,0-9,@,#,\$), with the exception of the words displayed in the message.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify alphanumeric and national characters (A-Z,a-z,0-9,@,#,\$) in that field. Make sure you do not include the invalid words displayed in this message.

BJTZ158 Duplicate name. Rule name is not unique

Explanation:

The specified rule name was not inserted into the Output Manager database because a rule name with that value already exists. Rule names must be unique.

User response:

Type a unique value in the rule name field.

BJTZ159 Duplicate name. Rule name is not unique.

Explanation:

The specified rule name was not inserted into the Output Manager database because a rule name with that value already exists. Rule names must be unique.

User response:

Type a unique value in the rule name field.

BJTZ160 Invalid value. There are subselectors conflicting with this selector configuration.

Explanation:

An invalid value was specified in one or more of the selection fields. This selector rule is a parent selector rule, and this modification would result in orphaning one or more of its child subselector rules, the

modification was not applied. The selection criteria of subselector rules must be derivative of the associated parent selector rule.

User response:

To return to editing the parent selector, press Enter or type CANCEL. To review the list of conflicting subselector rules, including the fields in conflict, type CONFLIST on the command line and press Enter.

BJTZ161 Invalid email. Email address must contain one and only one @ symbol.

Explanation:

An invalid email address was specified. The value specified is either missing an @ symbol, or it contains too many @ symbols. One and only one @ symbol is required.

User response:

Specify a valid email address with one and only one @ symbol.

BJTZ162 Invalid email. There is more than one @ symbol in email.

Explanation:

An invalid email address was specified. The value specified contains too many @ symbols. One and only one @ symbol is required.

User response:

Specify a valid email address with one and only one @ symbol.

BJTZ163 Invalid email. @ symbol cannot be the first or last character of email.

Explanation:

An invalid email address was specified. The value specified either begins with or ends with an @ symbol, but the @ symbol cannot be the first or last character of an email address.

User response:

Specify a valid email address with one and only one @ symbol that is not the first or last character.

BJTZ164 Invalid Job Class. Job Class must contain only "A-Z 0-9" symbols when Job Type is Batch.

Explanation:

An invalid value was specified in the Job Class field. When the Job Type is set to BATCH, valid characters are A-Z 0-9.

User response:

Specify a valid value in the job class field.

BJTZ165 Invalid Job Class. Job Class must be blank or "s" when Job Type is STC.

Explanation:

An invalid value was specified in the Job Class field. When the Job Type is set to STC, job class must be blank or lowercase s.

User response:

Specify a valid value in the job class field.

BJTZ166 **Invalid Job Class. Job Class must be blank or "t" when Job Type is TSO.**

Explanation:

An invalid value was specified in the Job Class field. When the Job Type is set to TSO, job class must be blank or lowercase t.

User response:

Specify a valid value in the job class field.

BJTZ167 **Invalid Job Class. Job Class must contain only "A-Z 0-9" symbols when Job Type is Appc.**

Explanation:

An invalid value was specified in the Job Class field. When the Job Type is set to Appc, job class must be uppercase A-Z, or numbers 0-9. It cannot be lowercase s or t.

User response:

Specify a valid value in the job class field.

BJTZ168 **Invalid Job Class. Job Class must contain only uppercase A-Z, lowercase s or t, or 0-9 symbols when Job Type is All.**

Explanation:

An invalid value was specified in the Job Class field. When the Job Type is set to All, job class must be uppercase A-Z, lowercase s or t, or numbers 0-9.

User response:

Specify a valid value in the job class field.

BJTZ169 **Invalid Destination. Destination contains an invalid value.**

Explanation:

An invalid value was specific in the Destination field.

User response:

Specify a valid value in the destination field.

BJTZ170 **Invalid character. Only alphanumeric and national characters allowed (A-Z,a-z,0-9,@,#,\$). The first character must be non-numeric.**

Explanation:

An invalid value was specified in a field that supports only alphanumeric and national characters (A-Z,a-z,0-9,@,#,\$).

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify alphanumeric and national characters (A-Z,a-z,0-9,@,#,\$) in that field.

BJTZ171 **Invalid character. Only alphanumeric and national characters allowed (A-Z,a-z,0-9,@,#,\$), except words (invalid words). The first character must be non-numeric.**

Explanation:

An invalid value was specified in a field that supports only alphanumeric and national characters (A-Z,a-z,0-9,@,#,\$), with the exception of the words displayed in the message.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify alphanumeric and national characters (A-Z,a-z,0-9,@,#,\$) in that field. Make sure you do not include the invalid words displayed in this message.

BJTZ172 **Invalid character. Only alphanumeric, national, and wildcard characters are allowed (A-Z,a-z,0-9,@,#,\$,*,?). First character must be non-numeric.**

Explanation:

An invalid value was specified in a field that supports only alphanumeric characters, national characters, wildcard characters (A-Z,a-z,0-9,@,#,\$,*,?). The first character cannot be a number.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify alphanumeric, national, and wildcard characters (A-Z,a-z,0-9,@,#,\$,*,?) in that field. The first character cannot be a number.

BJTZ173 **Invalid character. Only alphanumeric, national, and wildcard characters are allowed (A-Z,a-z,0-9,@,#,\$,*,?). The first character must be non-numeric.**

Explanation:

An invalid value was specified in a field that supports only alphanumeric, national, and wildcard characters (A-Z,a-z,0-9,@,#,\$,*,?), with the exception of the words displayed in the message. The first character cannot be a number.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify

alphanumeric, national, and wildcard characters (A-Z,a-z,0-9,@,#,\$,?,*) in that field. Make sure you do not include the invalid words displayed in this message. The first character cannot be a number.

BJTZ174 **Invalid argument. Positive integer argument expected.**

Explanation:

An invalid argument was specified. Only positive numbers are allowed.

User response:

Specify a positive number for the argument.

BJTZ175 **Database connection failed.**

Explanation:

While Output Manager was running, its connection to the Db2 subsystem that contains its database was lost. As a result, Output Manager terminates any active selector tasks and shuts down in a controlled manner. No report SYSOUT that is on the JES spool will be lost.

User response:

Restart the Db2 subsystem, if necessary. Then, restart the Output Manager started task.

BJTZ176 **Archive row not found in database.**

Explanation:

Output Manager did not find an entry for the archive in the database.

User response:

No action is required.

BJTZ177 **Report row not found in database.**

Explanation:

Output Manager did not find an entry for the report in the database.

User response:

No action is required.

BJTZ178 **Duplicate name. Archive Attribute name is not unique.**

Explanation:

The specified archive attribute name was not inserted into the Output Manager database because an archive attribute with that name already exists. Archive attribute names must be unique.

User response:

Type a unique value in the archive attribute name field.

BJTZ179 **Duplicate name. Layout Field name is not unique.**

Explanation:

The specified layout field name was not inserted into the Output Manager database because a layout field with that name already exists. Layout field names must be unique.

User response:

Type a unique value in the layout field name field.

BJTZ200A **Invalid color. Only Red, Pink, Green, Yellow, Blue, Turquoise or White allowed**

Explanation:

An invalid color was specified in a color field on the User Preferences panel. This message identifies the valid colors.

User response:

Specify a valid color by typing the first letter of the color name, as follows: R (red), P (pink), G (green), Y (yellow), B (blue), T (turquoise), or W (white).

BJTZ200B **Invalid hilite. Only None, Blink, Reverse, or Uscore allowed.**

Explanation:

An invalid value was specified for a hilite field on the User Preferences panel. A hilite value indicates how to highlight a specified type of information. This message identifies the valid hilite values.

User response:

Type one of the following valid values: Blink (display flashing text), Reverse (reverse the background and foreground colors), Uscore (underscore the text), or None (do not use highlighting).

BJTZ200C **Invalid intensity. Only Low or High allowed.**

Explanation:

An invalid value was specified in an intensity field on the User Preferences panel. An intensity value indicates the level of brightness. The only valid values are Low and High.

User response:

Type either Low or High for the intensity.

BJTZ200D **Preferences saved in your profile dataset.**

Explanation:

The preferences that you specified have been successfully saved to your ISPF profile data set. These preferences will be used for your future Output Manager sessions until you change them.

User response:

No action is required.

BJTZ203 **Subsystem type is incorrect. Only *, STC, ITOMWeb, and ISPF are allowed.**

Explanation:

An invalid value was specified for the subsystem name. The subsystem type must be *, STC, ITOMWeb, ISPF, or BJTBTATCH.

User response:

Type *, STC, ITOMWeb, or ISPF in the subsystem type field.

BJTZ204 **Blank is not allowed. Subsystem name must not be blank.**

Explanation:

An invalid value was specified for the subsystem name. The subsystem name cannot be blank.

User response:

Specify a valid subsystem name.

BJTZ205 **Policy updated.**

Explanation:

The Output Manager policy was successfully updated. Any new or updated rules have read into memory and available for use by Output Manager.

User response:

No action is required.

BJTZ206: **Policy deleted.**

Explanation:

You successfully deleted a policy.

User response:

No action is required.

BJTZ207 **Subsystem type must be 'Started task' for policy activation**

Explanation:

You issued the policy activate command, but the value in the Type field is not Started Task. Policy Activate can only be used for Started Task type.

User response:

Type Started Task in the Type field.

BJTZ210C **Invalid Exists. Only Leave, Replace, or Extend are allowed**

Explanation:

An invalid value was specified in the Exists field. This field indicates what Output Manager should do if an archive already exists.

User response

In the Exists field, type one of the following valid values:

- Replace - To replace the data in the archive with the new data
- Leave - To leave the old data in the archive and not update it, and to keep the new data on the spool
- Extend - To write the new data at the end of the old archive data set

BJTZ210D **Invalid Status. Only Enabled, Disabled, or Skip are allowed.**

Explanation:

An invalid value was specified in the Status field for the rule. Only Enabled, Disabled, and Skip are valid values.

User response:

In the Status field, type either Enabled (to make the rule active and available for processing), Disabled (to make the rule unavailable), or Skip (to skip the rule and continue processing).

BJTZ210E **Invalid combine option. Only Yes or No allowed.**

Explanation:

An invalid value was specified in the Combine Sysout field. This field indicates whether Output Manager should combine multiple SYSOUTs from the job that is specified in the selector rule into a single archive file. The only valid values are Yes and No.

User response:

Specify either Yes or No in the Combine Sysout field.

BJTZ210G **Invalid Job type. Only All, Batch, Tso, Stc, or APPC are allowed.**

Explanation:

An invalid value was specified in the Job Type field. This field indicates the type of job to which the selector rule applies.

User response:

In the Job Type field, type one of the following valid values: - All: For all jobs - Batch: For only jobs that are processed in batch mode - Appc: For only jobs that are associated with a specific application - Tso: For only jobs that are processed on TSO systems - Stc: For only jobs that are related to the started task

BJTZ210H **Invalid jesqueue. Only All, Hold, External Writer, or Write are allowed.**

Explanation:

An invalid value was specified in the JES Queue field. This field indicates what to do with the jobs in the JES queue that will be archived.

User response:

In the JES Queue field, type one of the following valid values: - All: To select all jobs in the JES queue - External: To select the jobs that are assigned to a special, external writer, which may or may not be a printer - Write: To select the jobs that are ready to be written to a printer - Hold: To select the jobs that are held on the JES queue but are not ready to be written

BJTZ210I **Invalid archive source. Only J, W, or U are allowed.**

Explanation

An invalid value was specified in the Source field, which is part of the archive name rule for the selector

rule or subselector rule. This field determines how Output Manager generates a logical archive name (archived report name). Valid values are:

- J: Use the job name as the archive name
- W: Use a writer name that you optionally specified in the JCL for the job
- U: Use an optional user exit that gathers the text for the archive name from comments that are embedded in the JCL

User response:

Specify one of the following values: J (for the job name), W (for the Writer name), or U (for the user exit).

BJTZ210M **Invalid name out. Name out can only be Yes or No.**

Explanation:

An invalid value was specified in the Name Out field on the Recipient Details panel. This field indicates whether the recipient's name should be generated as part of the output card.

User response:

Type either Yes or No in the Name Out field.

BJTZ210P **Invalid access ID. Access ID must be derived from Access Mask.**

Explanation:

The Access ID value does not match the mask value of the specified row. ACCID must be a derivative of ACCMASK.

User response:

Change the access ID and/or the access mask values to make the access ID value derivative of the value specified in access mask field.

BJTZ210R **Invalid access mask. A blank value in Access Mask is not allowed.**

Explanation:

You must specify a value in the Access Mask field.

User response:

Type a valid value in the Access Mask field. You can specify a fully-qualified Access Mask, or you can include a wildcard in the Access Mask.

BJTZ210Q **Invalid copies value. The Copies value must be a number from 0-255.**

Explanation:

An invalid value was specified in the Copies field on the Recipient Details panel. This field specifies the number of report copies to print for the recipient.

User response:

Specify a number from 0 through 255 in the Copies field. If you accept the default value of zero, the report will be distributed online but will not be printed.

BJTZ210S **Invalid duplex. Only No, Normal, or Tumble are allowed.**

Explanation:

An invalid value was specified in the Duplex field. This field indicates whether or not to print in duplex mode (double-sided). This message identifies the valid values.

User response:

In the Duplex field, type one of the following valid values: - No: Do not print the archive in duplex mode - Normal: Print the archive in duplex mode and bind the archive along the long edge of the paper. - Tumble: Print the archive in duplex mode and bind the archive along the short edge of the paper.

BJTZ210T **Invalid burst. Only Yes or No are allowed.**

Explanation:

An invalid value was specified in the Burst field. This field indicates whether to physically separate a report into smaller reports based on specific criteria, for example, a branch ID.

User response:

In the Burst field, type either Yes or No.

BJTZ210U **Invalid label. Only Yes or No are allowed.**

Explanation:

An invalid value was specified in the Label field. This field indicates whether to print a security label with the recipient's reports.

User response:

In the Label field, type either Yes or No.

BJTZ210V **Invalid sysarea. Only Yes or No are allowed.**

Explanation:

An invalid value was specified in the Sys Area field. This field indicates whether a system area label is printed with the recipient's reports.

User response:

In the Sys Area field, type either Yes or No.

BJTZ210W **Try REPrint, Print, REAL, None, All, Requested, Custom, or Mixed.**

Explanation:

An invalid value was specified in the Attr Usage field on the Recipient Details panel. This field indicates under what conditions the linked set of printer attributes should be used for the recipient. The message identifies the valid values for this field.

User response:

In the Attr Usage field, specify one of these valid values: - Reprint: Use for Reprint requests only - Print: Use for Print requests only - Real: Use for real-time printing only - None: Use for no types of printing (Print, Reprint, and real-time) - All: Use for all types of printing - Requested: Use for any Print or Reprint request made by the recipient - Custom: Use for the real-time printing or reprinting of custom reports - Mixed: Use for real-time printing or reprinting of custom and basic reports

BJTZ210X **Invalid attr usage. Only REPrint, Print, REAL, None, All, Requested, Custom, or Mixed are allowed.**

Explanation:

An invalid value was specified in the Attr Usage field on the Recipient Details panel. This field indicates under what conditions the linked set of printer attributes should be used for the recipient. The message identifies the valid values for this field.

User response:

In the Attr Usage field, specify one of these valid values: - Reprint: Use for Reprint requests only - Print: Use for Print requests only - Real: Use for real-time printing only - None: Use for no types of printing (Print, Reprint, and real-time) - All: Use for all types of printing - Requested: Use for any Print or Reprint request made by the recipient - Custom: Use for the real-time printing or reprinting of custom reports - Mixed: Use for real-time printing or reprinting of custom and basic reports

BJTZ214 **Only Keep, Delete, Hold, Syshold, or Release are allowed.**

Explanation:

An invalid value was specified in the Disposition, Error Disp, or Limit Disp field for this selector rule. The Disposition field applies when archiving is successful. The Error Disp field applies when archiving fails. The Limit Disp field applies when the output data set exceeds the line limit that you specify.

User response:

Specify one of the following valid values in the Disposition, Error Disp, or Limit Disp field: - Keep: To keep the data on the spool in the same location and make a copy of it for the archive - Delete: To remove the data from the spool after making a copy of it for the archive - Hold: To keep the data on the JES spool and place it in the hold queue - Syshold: To keep the data on the JES spool and place it in the syshold queue - Release: To keep the data on the JES spool and place it in the write queue

BJTZ215 **Invalid archive source. Only J, W, or U are allowed.**

Explanation

An invalid value was specified in the Source field, which is part of the archive name rule for the selector rule or subselector rule. This field determines how Output Manager generates a logical archive name (archived report name). Valid values are:

- J: Use the job name as the archive name
- W: Use a writer name that you optionally specified in the JCL for the job
- U: Use an optional user exit that gathers the text for the archive name from comments that are embedded in the JCL

User response:

Specify one of the following values: J (for the job name), W (for the writer name), or U (for the user exit).

BJTZ216 **Invalid Job type. Only All, Batch, Tso, Stc, or APPC are allowed.**

Explanation:

An invalid value was specified in the Job Type field. This field indicates the type of job to which the selector rule applies.

User response:

In the Job Type field, type one of the following valid values: - All: For all jobs - Batch: For only jobs that are processed in batch mode - Appc: For only jobs that are associated with a specific application - Tso: For only jobs that are processed on TSO systems - Stc: For only jobs that are related to the started task

BJTZ217 **Invalid Status. Only Enabled, Disabled, or Skip are allowed.**

Explanation:

An invalid value was specified in the Status field for the rule. Only Enabled, Disabled, and Skip are valid values.

User response:

In the Status field, type either Enabled (to make the rule active and available for processing), Disabled (to make the rule unavailable), or Skip (to skip the rule and continue processing).

BJTZ218 **Invalid Exists. Only Leave, Replace, or Extend are allowed.**

Explanation:

An invalid value was specified in the Exists field. This field indicates what Output Manager should do if an archive already exists.

User response

In the Exists field, type one of the following valid values:

- Replace - To replace the data in the archive with the new data

- Leave - To leave the old data in the archive and not update it, and to keep the new data on the spool
- Extend - To write the new data at the end of the old archive data set

BJTZ219 **Invalid jesqueue: Only All, Hold, External Writer, or Write are allowed.**

Explanation:

An invalid value was specified in the JES Queue field. This field indicates what to do with the jobs in the JES queue that will be archived.

User response:

In the JES Queue field, type one of the following valid values: - All: To select all jobs in the JES queue - External: To select the jobs that are assigned to a special, external writer, which may or may not be a printer - Write: To select the jobs that are ready to be written to a printer - Hold: To select the jobs that are held on the JES queue but are not ready to be written

BJTZ220A **Not a valid number. Only numeric values are allowed.**

Explanation:

A non-numeric character was specified in a field that only supports numeric values.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Type a number in that field.

BJTZ220B **Invalid name. A field name is required.**

Explanation:

An invalid value was specified in the field name field. The field was not inserted into the Output Manager database.

User response:

Type a valid value in the field name field.

BJTZ220D **Invalid CC. Only DCB, ASA, or Machine are allowed.**

Explanation:

An invalid value was specified in the CC field on the Layout panel. This field indicates the type of printer control that will be used with this report layout

User response:

In the CC field, specify one of the following valid values: - DCB: To use the spacing that is assigned to the report by the application - ASA: To use ANSI-standard spacing - Machine: To use machine carriage control If you do not know which value to enter, accept the default value of DCB.

BJTZ220E **Invalid name. A layout name is required.**

Explanation:

An invalid value was specified in the layout name field. The layout was not inserted into the Output Manager database.

User response:

Type a valid value in the layout name field.

BJTZ220G **Invalid name. An invalid PRSET member name was specified.**

Explanation:

An invalid value was specified in the PRSET member name field.

User response:

Type a valid value in the PRSET member name field.

BJTZ220I **Invalid description. An attribute description is required**

Explanation:

An invalid value was specified in the description field.

User response:

Type a valid value in the description field.

BJTZ220J **Invalid input. Only the characters A-Z, #, \$, @, and 0-9 are allowed.**

Explanation:

An invalid value was specified in a field that supports only the characters A-Z, #, \$, @, and 0-9.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a valid character (A-Z, #, \$, @, and 0-9) in that field.

BJTZ220K **Invalid input. Table reference character can only be Yes or No**

Explanation:

An invalid value was specified in the Table ref chr field. This field indicates whether the data contains table reference characters (TRC) codes. (A TRC code indicates which font in the Char arg tbl field should be used to print the record.)

User response:

In the Table ref chr field, type either Yes or No.

BJTZ220L **Invalid CopyGroup value: a non-zero value cannot be preceded by a zero value.**

Explanation:

An invalid value was specified in the Copy Group field. In this field, a non-zero value cannot be preceded by 0.

User response:

Type a valid value in the CopyGroup field.

BJTZ220M **Invalid sum. Sum of group-values must not exceed 255.**

Explanation:

An invalid value was specified in one or more of the Copy Group fields. The sum of all Copy Group fields must not exceed 255.

User response:

Adjust the values specified in the Copy Group fields so that the sum of the Copy Group values are less than or equal to 255.

BJTZ220Q **Invalid control. Control can only be Program, Single, Double, or Triple.**

Explanation:

An invalid value was specified in the Control field. This field indicates the printer control to use for spacing the output. This message identifies the valid values for the field.

User response:

In the Control field, type one of these valid values: - Program: To start each logical record with a carriage control character - Single: To print the output with single spacing - Double: To print the output with double spacing - Triple: To print the output with triple spacing

BJTZ220R **Invalid resolution. Resolution format can only be P240 or P300**

Explanation:

An invalid value was specified in the Resolution field. This field indicates the type of resolution that is used to format the printed data set.

User response:

In the Resolution field, type one of the following valid values: - P240: To format the printed data set using 240 pels per inch - P300: To format the printed data set using 300 pels per inch

BJTZ220S **Invalid disposition. Disposition can only be Hold, Keep, Leave, Purge, or Write.**

Explanation:

An invalid value was specified in the Disp field. This field indicates the disposition of the SYSOUT data set when a job completes normally.

User response:

In the Norm Disp field, type one of the following valid options: Write, Hold, Keep, Leave, or Purge. For information about these options, see the online Help.

BJTZ220T **Invalid print errors. Print errors can only be Yes or No.**

Explanation:

An invalid value was specified in the Print Errors field. The first line of this field indicates whether all error messages should be printed at the end of the output data set. The second line of this field indicates the

maximum number of error messages to allow before canceling the printing of the current data set.

User response:

On the first line of the Print Errors field, type either Yes or No to indicate whether all error messages should be printed at the end of the output data set. If you type No, only the messages that force an early termination of the print job are printed. On the second line, type a number from 0 through 999 to indicate the maximum number of error messages to allow before canceling the printing. A value of zero means an infinite number. This message count includes all error messages that are generated by PSF (even if you specified No on the first line to prevent the printing of error messages).

BJTZ220U **Invalid disposition. Print error disposition can only be Quit or Hold.**

Explanation:

An invalid value was specified in the Error Disp field. This field indicates what to do if an error occurs that forces the early termination of a print job.

User response:

In the Error Disp field, type one of these valid values: - Quit - To release the data set to JES as complete, even if an early termination error occurs during printing - Hold - To keep the data set on the spool until a system operator releases it.

BJTZ220V **Invalid error blocking. Error blocking can only be Block, Char blk, Pos blk, Unblock.**

Explanation:

An invalid value was specified in the Err Blocking field. This field indicates how to handle the following types of errors: - Print-positioning errors - Errors that occur when the printed data goes beyond the physical limits of the page or beyond the overlay or logical page that is associated with a print job - Invalid-character errors - Errors that occur when a text character is not part of a font set This message indicates the valid values for this field.

User response:

In the Err Blocking field, type one of these valid values: - Block - To not report print-positioning errors and invalid-character errors to PSF - Unblock - To report print-positioning errors and invalid-character errors to PSF - Char blk - To block invalid-character errors but report print-positioning errors - Pos blk - To block print-positioning errors but report invalid-character errors

BJTZ220W **Invalid length. Form length metric can only be Inches or CM.**

Explanation:

An invalid value was specified on the second line of the Form Length field. This field identifies the page length that can be printed without reconfiguring the printer; the second line indicates the unit of measurement (inches or centimeters) for the page length.

User response:

On the second line of the Form Length field, type either Inches (with an uppercase "I") or CM

BJTZ221 **Invalid CC. Only DCB, ASA, or Machine are allowed.**

Explanation:

An invalid value was specified in the CC field on the Layout panel. This field indicates the type of printer control that will be used with this report layout

User response:

In the CC field, specify one of the following valid values: - DCB: To use the spacing that is assigned to the report by the application - ASA: To use ANSI-standard spacing - Machine: To use machine carriage control If you do not know which value to enter, accept the default value of DCB.

BJTZ222 **Invalid value. Invalid value, must be integer in range of 1-999.**

Explanation:

An invalid value was specified. Only numbers 1-999 are allowed.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a number 1-999 in that field.

BJTZ223 **Invalid value. Invalid value, must be integer in range of 0-999.**

Explanation:

An invalid value was specified. Only numbers 0-999 are allowed.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a number 0-999 in that field.

BJTZ224 **Invalid disposition. Disposition can only be Hold, Keep, Leave, Purge, or Write.**

Explanation:

An invalid value was specified in the Norm Disp field. This field indicates the disposition of the SYSOUT data set when a job completes normally.

User response:

In the Norm Disp field, type one of the following valid options: Write, Hold, Keep, Leave, or Purge.

BJTZ225 **Numeric field. Only digits 1-9 are allowed.**

Explanation:

An invalid value was specified. Only numbers 1-9 are allowed.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a number 1-9 in that field.

BJTZ226 **Invalid resolution. Resolution format can only be P240 or P300.**

Explanation:

Resolution field on the Print Attributes Detail panel. This field indicates the type of resolution that is used to format the printed data set.

User response:

In the Resolution field, type one of the following valid values: - P240 - To format the printed data set using 240 pels per inch - P300 - To format the printed data set using 300 pels per inch

BJTZ227 **Invalid value. Value must be a number in the range of 0-99.**

Explanation:

An invalid value was specified. Only numbers 0-99 are allowed.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a number 0-99 in that field.

BJTZ228 **Invalid length. Form length metric can only be Inches or CM.**

Explanation:

An invalid value was specified on the second line of the Form Length field on the Print Attributes Detail panel. This field identifies the page length that can be printed without reconfiguring the printer; the second line indicates the unit of measurement (inches or centimeters) for the page length.

User response:

On the second line of the Form Length field, type either Inches (with an uppercase "I") or CM.

BJTZ229 **Invalid value. Line Count must be a number in the range of 0-2500.**

Explanation:

An invalid value was specified in the line count field. Only numbers 0-2500 are allowed.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a number 0-2500 in that field.

BJTZ230A **Invalid var value. Invalid value specified in the Var column.**

Explanation:

An invalid value was specified in the Var column. Only numeric values from 0 through 99 are valid.

User response

Specify a valid numeric value from 0 through 99 in the Var column, as follows:

- Specify 0 if you want Output Manager to look for the condition entry field only at the exact location that is defined in the layout.
- Specify a number from 1 through 98 if you want Output Manager to look for the start of the field in the starting column that is defined in the layout and in each column to the right of that starting column, up to the number of columns that you specify for this variance.
- Specify 99 if you want Output Manager to look for the start of the field in the defined starting column and in each column to the right, up to the end of the row.

BJTZ230B **Invalid case sensitive. Only Yes or No are allowed.**

Explanation:

An invalid value was specified in the case sensitive field.

User response:

Type YES in the case sensitive field to indicate that the same case is required. Type NO in the case sensitive field to indicate that case sensitivity is not required.

BJTZ230C **Invalid field value. Invalid value specified in the Value column.**

Explanation:

An invalid value was specified in the Value field. The value field specifies the character string that will be compared to the data in the captured sysout to satisfy the match condition.

User response:

BJTZ230D **Invalid operator. Invalid operator specified in the Operator column.**

Explanation:

When defining a custom report, you specified an invalid value in the Operator column.

User response:

In the Operator column, type one of the following valid values: EQ (equals), GT (is greater than), GE (is greater than or equal to), LT (is less than), LE (is less than or equal to), or NE (is not equal to).

BJTZ230E **Invalid status. Status can only be Enabled or Disabled.**

Explanation:

An invalid value was specified in the Status field. Only Enabled and Disabled are valid values.

User response:

In the Status field, type either Enabled (to make the rule active and available for processing) or Disabled (to make the rule unavailable).

BJTZ230F **Invalid name. A report name is required.**

Explanation:

An invalid value was specified in the report name field

User response:

Specify a name for the report in the Report Name field. This name can be up to 24 characters in length

BJTZ230H **Only Yes or No are allowed in contiguous report field.**

Explanation:

An invalid value was specified in the Contiguous field. This field indicates whether the pages in the custom report occur consecutively in the SYSOUT. The only valid values are Yes and No.

User response:

In the Contiguous field, type either Yes or No.

BJTZ230I **Invalid print model. Only Classic or Report are allowed.**

Explanation:

An invalid value was specified in the Print Model field. The only valid values are Classic and Report. This field determines which static, user-defined set of printer attributes (if any) to use for printing the report instances or the indexed report pages that are based on this report definition.

User response:

Type either Classic or Report in the Print Model field. Specify Classic to use the sets of printer attributes that are linked to the recipient IDs on the distribution list that is assigned to the report definition. Specify Report to use the set of printer attributes that is linked directly to the report definition. If you specify Report, you will be able to override any Class, Copies, and Dest information from the report's set of printer attributes for individual recipients on the distribution list. You do so from the Distribution List panel.

BJTZ230J **Invalid dynamic print. Only No or Report are allowed.**

Explanation:

An invalid value was specified in the Dynamic Print field. The only valid values are No and Report. This field determines whether to use the "dynamic printing parameters" from the BJTDAT table for printing report instances or indexed report pages that are based on this report definition. For reports, Output Manager can capture certain key printing parameters from the

SYSOUT and from the set of printer attributes that is linked to 1) the distribution list for the report or 2) the report definition. These "dynamic printing parameters" are stored in the BJTDAT table and merged at report print time.

User response:

Type either No or Report in the Dynamic Print field. Specify No to obtain all printing parameters from the recipient IDs on the distribution list and the applicable user- defined set of printer attributes. (The Print Model field determines which set of printer attributes applies.) Specify Report to obtain the set of "dynamic printing parameters" from the BJTDAT table. (Any other printing parameters that are specified in the applicable set of printer attributes will still be used.)

BJTZ230M **Invalid status. Only Enabled, Disabled, or blank is valid for the Status field.**

Explanation:

An invalid value was specified in the Status field on the Search panel. Only Enabled or Disabled are allowed. You can also leave the field blank if you do not want to search for objects based on a status value.

User response:

Specify Enabled or Disabled in the Status field. Alternatively, leave the field blank if you do not want to search for objects based on their statuses.

BJTZ230N **Rule name is required. Rule name is required.**

Explanation:

A required field is blank.

User response:

Specify a rule name in the rule name field.

BJTZ230P **Numeric value required. Specify a number from 0-99999999 for the line limit.**

Explanation:

An invalid value was specified. Only numbers 0-99999999 are allowed.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a number 0-99999999 in that field.

BJTZ230Q **Invalid status. Only Enabled, Disabled, Skip, or blank is valid for the Status field.**

Explanation:

An invalid value was specified in the Status field on the Search panel. Only Enabled or Disabled is valid. You can also leave the field blank if you do not want to search for objects based on a status value.

User response:

Specify Enabled or Disabled in the Status field. Alternatively, leave the field blank if you do not want to search for objects based on their statuses.

BJTZ230S **Rule name is required. Rule name is required.**

Explanation:

A required field is blank.

User response:

Specify a rule name in the rule name field.

BJTZ230U **Invalid type. Only Basic, Custom, Undefined, Noreports, or All are valid.**

Explanation:

The value that you specified in the Report Type field is not supported.

User response:

Enter one of the following valid report types: Basic, Custom, Undefined, Noreports, All, or leave the field blank. A blank value will return both basic and custom reports.

BJTZ232 **Invalid status. Status can only be Enabled or Disabled.**

Explanation:

An invalid value was specified in the Status field. Only Enabled and Disabled are valid values.

User response:

In the Status field, type either Enabled (to make the rule active and available for processing) or Disabled (to make the rule unavailable).

BJTZ233 **Invalid print model. Only Classic or Report are allowed.**

Explanation:

An invalid value was specified in the Print Model field. The only valid values are Classic and Report. This field determines which static, user-defined set of printer attributes (if any) to use for printing the report instances or the indexed report pages that are based on this report definition.

User response:

Type either Classic or Report in the Print Model field. Specify Classic to use the sets of printer attributes that are linked to the recipient IDs on the distribution list that is assigned to the report definition. Specify Report to use the set of printer attributes that is linked directly to the report definition. If you specify Report, you will be able to override any Class, Copies, and Dest information from the report's set of printer attributes for individual recipients on the distribution list. You do so from the Distribution List panel.

BJTZ234 Invalid dynamic print. Only No or Report are allowed.**Explanation:**

An invalid value was specified in the Dynamic Print field. The only valid values are No and Report. This field determines whether to use the "dynamic printing parameters" from the BJTDAT table for printing report instances or indexed report pages that are based on this report definition. For reports, Output Manager can capture certain key printing parameters from the SYSOUT and from the set of printer attributes that is linked to 1) the distribution list for the report or 2) the report definition. These "dynamic printing parameters" are stored in the BJTDAT table and merged at report print time.

User response:

Type either No or Report in the Dynamic Print field. Specify No to obtain all printing parameters from the recipient IDs on the distribution list and the applicable user- defined set of printer attributes. (The Print Model field determines which set of printer attributes applies.) Specify Report to obtain the set of "dynamic printing parameters" from the BJTDAT table. (Any other printing parameters that are specified in the applicable set of printer attributes will still be used.)

BJTZ235 Invalid var value. Invalid value specified in the Var column.**Explanation:**

An invalid value was specified in the Var column. Only numeric values from 0 through 99 are valid.

User response

Specify a valid numeric value from 0 through 99 in the Var column, as follows:

- Specify 0 if you want Output Manager to look for the condition entry field only at the exact location that is defined in the layout.
- Specify a number from 1 through 98 if you want Output Manager to look for the start of the field in the starting column that is defined in the layout and in each column to the right of that starting column, up to the number of columns that you specify for this variance.
- Specify 99 if you want Output Manager to look for the start of the field in the defined starting column and in each column to the right, up to the end of the row.

BJTZ236 Invalid operator. Invalid operator specified in the Operator column, valid operators are: EQ, NE, GT, LT, GE, and LE.**Explanation:**

When defining a custom report, you specified an invalid value in the Operator column on the Report Condition Entry panel.

User response:

In the Operator column, type one of the following valid values: EQ (equals), NE (is not equal to), GT (is greater than), LT (is less than), GE (is greater than or equal to), or LE (is less than or equal to).

BJTZ238 Invalid case sensitive. Only Yes or No are allowed.**Explanation:**

An invalid value was specified in the case sensitive field.

User response:

Type YES in the case sensitive field to indicate that the same case is required. Type NO in the case sensitive field to indicate that case sensitivity is not required.

BJTZ239 Duplicate name. Report name is not unique.**Explanation:**

The specified report name was not inserted into the Output Manager Db2 tables because a report already exists with that name. Reports must have unique names.

User response:

Specify a unique name for the report.

BJTZ240A Invalid type. Invalid View Type: specify Exceptions, Normal, or All**Explanation:**

An invalid value was specified in the View field on the Search panel. Only Exceptions, Normal, or All are valid. You can also leave the field blank if you do not want to search for activities based on a view value.

User response:

Specify a valid value in the View field. Valid values include: - Exceptions - To only view activities for which an exception occurred - Normal - To only view the normal activities that do not have exceptions - All - To view all activities, both normal activities and those with exceptions.

BJTZ240B Invalid date. Relative date must be in the format of "T-nnnn", where nnnn is the number of days prior to today**Explanation:**

A relative date was specified in the incorrect format in either the Before date field or the After date field. Relative dates must have the format T-nnnn, where "T" represents today and nnnn is a number of days prior to today.

User response:

To specify a relative date, use the format T-nnnn. Alternatively, you can enter a specific date in the format YYYY/MM/DD, or type only T for today.

BJTZ240C **Invalid date. Date must be valid and in the format of YYYY/MM/DD.**

Explanation:

A relative date was specified in the incorrect format in either the Before date field or the After date field. Relative dates must have the format T-nnnn, where "T" represents today and nnnn is a number of days prior to today.

User response:

Specify a date that is composed of valid values for the year, month, and day and that is in the format YYYY/MM/DD.

BJTZ240D **Invalid time. Time must be valid and in the format of HH:MM:SS.**

Explanation:

An invalid time value was specified. Time must be specified in the format HH:MM:SS.

User response:

Specify a 24-hour time that is composed of valid hour, minute, and second values and that is in the format HH:MM:SS.

BJTZ240 **Invalid combine option. Only Yes or No are allowed.**

Explanation:

An invalid value was specified in the Combine Sysout field. This field indicates whether Output Manager should combine multiple SYSOUTs from the job that is specified in the selector rule into a single archive file. The only valid values are Yes and No.

User response:

Specify either Yes or No in the Combine Sysout field.

BJTZ242 **Specify DD name, Writer, or Form name. At least one of DD Name, Writer Name, or Form Name is required.**

Explanation:

A value is required in at least one of the specified fields for the rule.

User response:

Specify a value in the DD Name, Writer Name, or Form Name field.

BJTZ243 **Specify step name, procstep, or step num. At least one of step name, procstep, or step number is required.**

Explanation:

A value is required in at least one of the specified fields for the rule.

User response:

Specify a valid value in at least one of the following fields: Step Name, Proc Step, and Step Number.

BJTZ244 **Invalid input. Only Yes or No are allowed.**

Explanation:

An value was specified in a field that can only have Yes or NO as valid values.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify Yes or No in that field.

BJTZ245 **Invalid status. Only Enabled or Disabled are allowed.**

Explanation:

An invalid value was specified in a field that can only have Enabled or Disabled as valid values.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify Enabled or Disabled in that field.

BJTZ246 **Non-blank value expected. At least one of Step Name and Proc Step Name must be non-blank and not equal to "*".**

Explanation:

A non-blank, non-wildcard value is required in at least one of the specified fields for the rule.

User response:

Specify a valid non-wildcard value in at least one of the following fields: Step Name, Proc Step.

BJTZ247 **Non-blank value expected. At least one of DDName, Writer and Form must be non-blank and not equal to "*".**

Explanation:

A non-blank, non-wildcard value is required in at least one of the specified fields for the rule.

User response:

Specify a valid non-wildcard value in the DD Name, Writer Name, or Form Name field.

BJTZ248 **Non-blank value expected. Job Name must be non-blank and not equal to "*".**

Explanation:

A wildcard was specified in a field that requires a non-wildcard value.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a valid job name in that field.

BJTZ249 **Invalid archive mask. Archive mask cannot start with an ampersand.**

Explanation:

An invalid archive mask value is specified in the Archive Mask field. Archive masks cannot begin with a variable.

User response:

Specify a valid value in the archive mask field. This value must be a valid data set name, can be up to 44 characters in length, and cannot begin with an ampersand.

BJTZ250 **Invalid value. Value must be a number from 0-32767.**

Explanation:

An invalid value was specified. Only numbers 0-32767 are allowed.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a number 0-32767 in that field.

BJTZ251 **Invalid value. Value must be a valid name: up to eight alphanumeric characters (A-Z, #, \$, @, 0-9). The first character must be alphabetic (A-Z, \$, @, or #).**

Explanation:

An invalid value was specified in a field. This field requires a value that is eight characters long, consisting of alphanumeric characters (A-Z, #, \$, @, 0-9), and the first character must be alphabetic.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify an eight character value of alphanumeric characters (A-Z,a-z,0-9,@,#,\$) in that field, with an alphabetic character first.

BJTZ252 **Invalid control. Control can only be Program, Single, Double, or Triple.**

Explanation:

An invalid value was specified in the Control field on the Print Attributes Detail panel. This field indicates the printer control to use for spacing the output. This message identifies the valid values for the field.

User response:

In the Control field, type one of these valid values: - Program - To start each logical record with a carriage control character - Single - To print the output with

single spacing - Double - To print the output with double spacing - Triple - To print the output with triple spacing

BJTZ253 **Invalid value. Value must be a number from 0-255.**

Explanation:

An invalid value was specified. Only numbers 0-255 are allowed.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a number 0-255 in that field.

BJTZ254 **Invalid sum. Sum of group-values must not exceed 255.**

Explanation:

An invalid value was specified in one or more of the Copy Group fields. The sum of all Copy Group fields must not exceed 255.

User response:

Adjust the values specified in the Copy Group fields so that the sum of the Copy Group values are less than or equal to 255.

BJTZ255 **Invalid error blocking. Error blocking can only be Block, Char blk, Pos blk, or Unblock.**

Explanation:

An invalid value was specified in the Err Blocking field on the Print Attributes Detail panel. This field indicates how to handle the following types of errors: - Print-positioning errors - Errors that occur when the printed data goes beyond the physical limits of the page or beyond the overlay or logical page that is associated with a print job - Invalid-character errors - Errors that occur when a text character is not part of a font set This message indicates the valid values for this field.

User response:

In the Err Blocking field, type one of these valid values: - Block - To not report print-positioning errors and invalid-character errors to PSF - Unblock - To report print-positioning errors and invalid-character errors to PSF - Char blk - To block invalid-character errors but report print-positioning errors - Pos blk - To block print-positioning errors but report invalid-character errors

BJTZ256 **Invalid disposition. Print error disposition can only be Quit or Hold.**

Explanation:

An invalid value was specified in the Error Disp field on the Print Attributes Detail panel. This field indicates what to do if an error occurs that forces the early termination of a print job.

User response:

In the Error Disp field, type one of these valid values: -
Quit - To release the data set to JES as complete, even
if an early termination error occurs during printing -
Hold - To keep the data set on the spool until a system
operator releases it

BJTZ257 **Invalid value. Value must be a
number from 0-999.**

Explanation:

An invalid value was specified. Only numbers 0-999
are allowed.

User response:

When you return to the panel, your cursor will be
positioned in the field with the invalid value. Specify
a number 0-999 in that field.

BJTZ258 **Invalid CopyGroup. Invalid
CopyGroup value: a non-zero value
cannot be preceded by a zero
value.**

Explanation:

An invalid value was specified in the Copy Group field.
In this field, a non-zero value cannot be preceded by 0.

User response:

Type a valid value in the CopyGroup field.

BJTZ259 **Invalid value. Value must be a
number from 0-65535.**

Explanation:

An invalid value was specified. Only numbers 0-65535
are allowed.

User response:

When you return to the panel, your cursor will be
positioned in the field with the invalid value. Specify
a number 0-65535 in that field.

BJTZ280 **Print configuration issue**

Explanation:

You don't have authority to change print configuration.

User response:

Contact your Administrator or technical support to give
print configuration access.

BJTZ282 **Authority issue**

Explanation:

The report does not have a distribution list and you
have no authority to add one or print the report.
Request disallowed.

User response:

Add a distribution list and contact your Administrator
or technical support to give an access to add a report
or print a report.

BJTZ283 **Yes, No or blank are valid values
for the 'With reports' field**

Explanation:

An invalid value was specified in the With report field.
The only valid values are Yes, No, and a blank.

User response:

In the 'with report' field, specify Yes or No.
Alternatively, leave the field blank for the 'with reports'
field.

BJTZ286 **Top of data reached. Chars
(character string) not found. Press
RFIND key to continue from
bottom.**

Explanation:

The character string was not found in the data.

User response:

Press the RFIND key to continue searching from the
bottom.

BJTZ287 **Specify a valid variable.**

Explanation:

An invalid variable was specified in the Archive Mask
field.

User response:

Ensure that all of the variable references in the archive
mask point to valid variables. You can refer to the
Archive Attributes Details panel help for the full list
of valid variables.

BJTZ301 **You are in read-only mode, and
cannot delete an entry.**

Explanation:

You cannot delete an entry because you are in read-
only mode. Your deletion request is ignored.

User response:

If the entry needs to be deleted, contact your report
administrator for assistance. Otherwise, no action is
needed

BJTZ302 **This command is only available for
Unformatted view.**

Explanation:

A command was issued, but that command is not
available for this object type.

User response:

No response required.

BJTZ303 **Text type must be either PLAIN or
HTML.**

Explanation:

An invalid value was specified in the text type field.
Valid values include PLAIN or HTML to specify the type
of text to include in an email distribution.

User response:

Type either PLAIN or HTML in the text type field.

BJTZ304 **Invalid attachment type. Attachment type must be either PDF or TEXT.**

Explanation:

An invalid value was specified in the Attachment Type field. Valid values include PDF or TEXT to specify the type of attachment to include in an email distribution.

User response:

Type either PDF or TEXT in the Attachment Type field.

BJTZ305 **Invalid type. Type can only be Both, Heading, or Trailing.**

Explanation:

An invalid value was specified in the Type field. This field indicates where the banner page information will be printed. Valid values are Both (before and after the report data), Heading (before the report data only), and Trailing (after the report data only).

User response:

Specify a valid value in the Type field.

BJTZ306 **Invalid value. Value must be a number from 0-9999.**

Explanation:

An invalid value was specified. Only numbers 0-9999 are allowed.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a number 0-9999 in that field.

BJTZ307 **Duplicate name. Banner name is not unique.**

Explanation:

The banner name that was specified in the Name field duplicates a name that was specified for another banner. Each banner name must be unique.

User response:

Specify a unique name for the banner.

BJTZ308 **Duplicate name. Prset member name is not unique.**

Explanation:

The Prset member name that was specified in the PRSET field duplicates a name that was specified for another Prset member. Each Prset member name must be unique.

User response:

Specify a unique name for the Prset member.

BJTZ309 **Duplicate name. Printer attribute name is not unique.**

Explanation:

The printer attribute name that was specified in the Name field duplicates a name that was specified for another printer attribute. Each printer attribute name must be unique.

User response:

Specify a unique name for the printer attribute.

BJTZ310 **Invalid page. Page number is out of range.**

Explanation:

A page range was specified that exceeds the number of pages in the report or archive. Pages that exceed the page range are ignored.

User response:

Correct input, specifying a valid page count.

BJTZ311 **Invalid line. Line number is out of range.**

Explanation:

A line number was specified that exceeds the number of lines in the report or archive. Lines that exceed the line range are ignored.

User response:

Correct input, specifying a valid line number.

BJTZ440A **Invalid input. Control can only be Program, Single, Double, or Triple.**

Explanation:

An invalid value was specified in the Control field. This field indicates the printer control to use for spacing the output. This message identifies the valid values for the field.

User response:

In the Control field, type one of these valid values: - Program: To start each logical record with a carriage control character - Single: To print the output with single spacing - Double: To print the output with double spacing - Triple: To print the output with triple spacing

BJTZ440B **Invalid input. Normal disposition can only be Write, Hold, Keep, Leave, or Purge.**

Explanation:

An invalid value was specified in the Norm Disp field. This field indicates the disposition of the SYSOUT data set when a job completes normally.

User response:

In the Norm Disp field, type one of the following valid options: Write, Hold, Keep, Leave, or Purge. For information about these options, see the associated Help panel.

BJTZ440C **Invalid input Abnormal disposition can only be Write, Hold, Keep, Leave, or Purge.**

Explanation:

An invalid value was specified in the Cond Disp field. This field indicates the disposition of a SYSOUT data set when a job ends abnormally.

User response:

In the Cond Disp field, type one of the following valid options: Write, Hold, Keep, Leave, or Purge. For details on these options, see the associated Help panel.

BJTZ440D **Invalid input. Form length metric can only be Inches or CM.**

Explanation:

An invalid value was specified on the second line of the Form Length field. This field identifies the page length that can be printed without reconfiguring the printer; the second line indicates the unit of measurement (inches or centimeters) for the page length.

User response:

On the second line of the Form Length field, type either Inches (with an uppercase "I") or CM.

BJTZ440E **Invalid input. Error blocking can only be Block, Unblock, Char blk, or Pos blk.**

Explanation:

An invalid value was specified in the Err Blocking field. This field indicates how to handle the following types of errors: - Print-positioning errors - Errors that occur when the printed data goes beyond the physical limits of the page or beyond the overlay or logical page that is associated with a print job - Invalid-character errors - Errors that occur when a text character is not part of a font set This message indicates the valid values for this field.

User response:

In the Err Blocking field, type one of these valid values: - Block - To not report print-positioning errors and invalid-character errors to PSF - Unblock - To report print-positioning errors and invalid-character errors to PSF - Char blk - To block invalid-character errors but report print-positioning errors - Pos blk - To block print-positioning errors but report invalid-character errors

BJTZ440F **An invalid value was specified in the Print Errors field.**

Explanation:

An invalid value was specified in the Print Errors field. The first line of this field indicates whether all error messages should be printed at the end of the output data set. The second line of this field indicates the maximum number of error messages to allow before canceling the printing of the current data set.

User response:

On the first line of the Print Errors field, type either Yes or No to indicate whether all error messages should be

printed at the end of the output data set. If you type No, only the messages that force an early termination of the print job are printed. On the second line, type a number from 0 through 999 to indicate the maximum number of error messages to allow before canceling the printing. A value of zero means an infinite number. This message count includes all error messages that are generated by PSF (even if you specified No on the first line to prevent the printing of error messages).

BJTZ440G **Invalid input. Print error disposition can only be Quit or Hold.**

Explanation:

An invalid value was specified in the Error Disp field. This field indicates what to do if an error occurs that forces the early termination of a print job.

User response:

In the Error Disp field, type one of these valid values: - Quit - To release the data set to JES as complete, even if an early termination error occurs during printing - Hold - To keep the data set on the spool until a system operator releases it.

BJTZ440I **Invalid input. Table reference character can only be Yes or No.**

Explanation:

An invalid value was specified in the Table ref chr field. This field indicates whether the data contains table reference characters (TRC) codes. (A TRC code indicates which font in the Char arg tbl field should be used to print the record.)

User response:

In the Table ref chr field, type either Yes or No.

BJTZ440J **Invalid input. Resolution format can only be P240 or P300.**

Explanation:

An invalid value was specified in the Resolution field. This field indicates the type of resolution that is used to format the printed data set.

User response:

In the Resolution field, type one of the following valid values: - P240: To format the printed data set using 240 pels per inch - P300: To format the printed data set using 300 pels per inch

BJTZ440K **Printer attribute data saved.**

Explanation:

The information that you specified for the set of printer attributes was saved.

User response:

No action is required.

BJTZ440L **An attribute description is required.**

Explanation:

A name for the set of printer attributes must be specified in the Name field.

User response:

Type a descriptive name for the set of printer attributes in the Name field. This value can be up to 24 characters in length.

BJTZ440M **Printer attributes updated for this print request.**

Explanation:

Changes have been made to the set of printer attributes for the current print request.

User response:

No action is required.

BJTZ440N **Invalid input. Only the characters A-Z, #, \$, @, and 0-9 are allowed.**

Explanation:

An invalid value was specified in the Format Def or Page Def field.

User response:

Type a valid value in the Format Def or Page Def field. In each field, you can specify a value of up to 6 characters in length that is composed of alphanumeric characters and national characters (\$, #, @) only.

BJTZ440O **Invalid input. The range must be in the format N or N:M, where N and M are integers and N is less than or equal to M. Only values from 1 to total pages are allowed. There is to be no space before or after the ":" (colon) sign, but there must be at least one space between two ranges.**

Explanation:

An invalid value was entered in the PAGES field. This field specifies which pages are to be printed for a recipient. Valid values include single pages with a space between each page number, and a range of pages with a colon (:) between the first page number in the range and the last page number in the range (which a space between multiple ranges). The second number in a range must be greater than the first number in the range. For example, to print pages 5 through 10, specify 5:10. To print pages 5 through 10 AND pages 12 through 15, but not pages 11 and 12, specify 5:10 12:15.

User response:

Specify a valid page number, or a valid range of page numbers in the PAGES field.

BJTZ440P **Invalid CopyGroup value: a non-zero value cannot be preceded by a zero value.**

Explanation:

An invalid value was specified in the Copy Group field. In this field, a non-zero value cannot be preceded by 0.

User response:

Type a valid value in the CopyGroup field.

BJTZ440R **Sum of group-values must not exceed 255.**

Explanation:

An invalid value was specified in one or more of the Copy Group fields. The sum of all Copy Group fields must not exceed 255.

User response:

Adjust the values specified in the Copy Group fields so that the sum of the Copy Group values are less than or equal to 255.

BJTZ441 **Invalid input. The range must be in the format N or N:M, where N and M are integers and N is less than or equal to M. Only values from 1 to total pages are allowed. There is to be no space before or after the ":" (colon) sign, but there must be at least one space between two ranges.**

Explanation:

An invalid value was entered in a range field. Valid values include single pages with a space between each page number, and a range of pages with a colon (:) between the first page number in the range and the last page number in the range (which a space between multiple ranges). The second number in a range must be greater than the first number in the range. For example, to print pages 5 through 10, specify 5:10. To print pages 5 through 10 AND pages 12 through 15, but not pages 11 and 12, specify 5:10 12:15.

User response:

Specify a valid page number, or a valid range of page numbers in the PAGES field.

BJTZ442 **Invalid time value. The time value must be either FOREVER or in format HHHH:MM:SS.**

Explanation:

An invalid time value was specified. Time must be either FOREVER or in the format HHHH:MM:SS.

User response:

Either specify FOREVER, or Specify a 24-hour time that is composed of valid hour, minute, and second values and that is in the format HHHH:MM:SS.

BJTZ443 **Invalid time value. The time value must be in format HHHH:MM:SS.**

Explanation:

An invalid time value was specified. Time must be specified in the format HHHH:MM:SS.

User response:

Specify a 24-hour time that is composed of valid hour, minute, and second values and that is in the format HHHH:MM:SS.

BJTZ444 **Invalid value. The value must be in format {NODE.USERID, where both NODE and USERID must be a valid name: up to eight alphanumeric characters (A-Z, #, \$, @, 0-9). The first character must be alphabetic (A-Z, \$, @, or #).**

Explanation:

An invalid value was specified in the PSF Notify ID field. This field indicates the User ID of the person to be notified when the output is printed. Specify a NODE.USERID, where both NODE and USERID are a valid name. This field can be up to 17 characters total.

User response:

Edit the value specified in the PSF Notify ID field and type a valid value.

BJTZ445 **Invalid data set name. The value must be a valid data set name.**

Explanation:

An invalid value was specified in a field that requires a valid data set name.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a valid data set name in that field.

BJTZ500 **The specified PRSET member does not exist.**

Explanation:

The PRSET member specified does not exist in the partitioned data set specified.

User response:

Specify the name of an existing member in the partitioned data set or restore the missing member.

BJTZ501 **Changes saved. PRSET member saved.**

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ502 **PRSET member has been deleted.**

Explanation:

You successfully deleted an object.

User response:

No response required.

BJTZ503 **Changes saved. PRSET member updated.**

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ504 **Changes saved. PRSET member inserted.**

Explanation:

The changes that you specified have been successfully saved and the object has been inserted.

User response:

No response required.

BJTZ505 **Cut. PRSET member has been copied to the clipboard and cut from the list.**

Explanation:

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ506 **Copied PRSET member has been copied to the clipboard.**

Explanation:

Information for the object has been copied to the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ507 **Pasted PRSET member has been pasted from the clipboard.**

Explanation:

The information for the object that was copied to the Clipboard has been pasted to the current location.

User response:

No action is required.

BJTZ508 **Unable to delete this PRSET, because one or more object is connected to it.**

Explanation:

You attempted to delete a PRSET member that is currently linked to one or more Output Manager objects. A PRSET member connected to other objects cannot be deleted.

User response:

Determine which objects are linked to this PRSET member, then unlink them. After you have unlinked the layout from all objects, you can delete the PRSET member.

BJTZ509 **Subsystem doesn't exist. The specified subsystem does not exist.**

Explanation:

The subsystem that you specified does not exist.

User response:

Specify an existing subsystem.

BJTZ510 **Blank not allowed. The Name field cannot be blank.**

Explanation:

A blank was specified in a field that cannot be blank.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a valid value in that field.

BJTZ511 **Invalid value. Value must be numeric.**

Explanation:

A non-numeric character was specified in a field that only supports numeric values.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Type a number in that field.

BJTZ512 **Invalid value. Value must be in range from 0-16777215.**

Explanation:

An invalid value was specified. Only numbers 0-16777215 are allowed.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a number 0-16777215 in that field.

BJTZ513 **Invalid value. Value must be in range from 0-65535.**

Explanation:

An invalid value was specified. Only numbers 0-65535 are allowed.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a number 0-65535 in that field.

BJTZ514 **Invalid value. Value must be in range from 0-32756.**

Explanation:

An invalid value was specified. Only numbers 0-32756 are allowed.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a number 0-32756 in that field.

BJTZ515 **Your cursor is currently at page (page), line (line), column (column).**

Explanation:

This message displays the location of your cursor.

User response:

No action is required.

BJTZ516 **Your mark is currently at page (page), line (line), column (column), width (width), height (height).**

Explanation:

This message displays the location of your mark.

User response:

No action is required.

BJTZ560 **Cannot contain spaces. User variable name should not contain embedded spaces.**

Explanation:

An invalid value was specified for the user variable name. The user variable name cannot contain embedded spaces.

User response:

Specify a valid value for the user variable name.

BJTZ561 **Selector Name is (selector name).**

Explanation:

This message displays the name of the selector.

User response:

No action is required.

BJTZ562 **Report Selector Name is (report selector name).**

Explanation:

This message displays the name of the report selector rule.

User response:

No response is required.

BJTZ563 **Move Block command cannot be performed when records are filtered out or non-default sorting is used.**

Explanation:

An attempt was made to move a block of records, but the records were not moved because some records in

the selection are not displayed, or because they were sorted with a non-default sort.

User response:

Display all of the records in the default sorting option before moving a block of records.

BJTZ570 **Changes saved. User variable inserted.**

Explanation:

The changes that you specified have been successfully saved and the object has been inserted.

User response:

No response required.

BJTZ571 **Cut. User variable has been copied to the clipboard and cut from the list.**

Explanation:

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ572 **Copied. User variable has been copied to the clipboard.**

Explanation:

Information for the object has been copied to the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ573 **Pasted. User variable has been pasted from the clipboard.**

Explanation:

The information for the object that was copied to the Clipboard has been pasted to the current location.

User response:

No action is required.

BJTZ574 **Unable to delete this User variable.**

Explanation:

You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

User response:

Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

BJTZ575 **Changes saved. User variable has been saved.**

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ576 **Deleted. User variable has been deleted.**

Explanation:

You successfully deleted an object.

User response:

No response required.

BJTZ577 **Changes saved. User variable has been updated.**

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ578 **Blank name is not allowed.**

Explanation:

A blank was specified in a field that cannot be blank.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a valid value in that field.

BJTZ579 **Duplicate name. User variable name is not unique.**

Explanation:

The specified user variable name was not inserted into the Output Manager database because a user variable name with that value already exists. User variable names must be unique.

User response:

Type a unique value in the User variable name field.

BJTZ580 **Command not allowed. The Copy command can be issued only on a layout field.**

Explanation:

An attempt was made to copy a layout page or area, but only fields can be copied.

User response:

No action is required. Use the IP (Insert Page), or IA (Insert Area) to add new pages and areas to the layout.

BJTZ581 **Invalid place. The Paste command can be issued only on a field area.**

Explanation:

An attempt was made to paste a layout field, but the location of the paste was invalid.

User response:

Paste the field after another field. You cannot paste a field on a page or area.

BJTZ582 **Invalid value. Relative Position can only be Adjacent, Below, or Diagonal.**

Explanation:

An invalid value was specified in the Relative Position field. Valid values include Adjacent, Below, or Diagonal.

User response:

Specify the relative position with one of the following options to indicate where the new field is located in relation to the relative field: - Adjacent (starts in the next column to the right, on the same row) - Below (starts in the same column, on the next row down) - Diagonal (starts in the next column to the right and in the next row).

BJTZ583 **Cannot delete. Last page remaining cannot be deleted.**

Explanation:

An attempt was made to delete the only page in the layout. A layout requires at least one page, so the page was not deleted.

User response:

No action is required.

BJTZ584 **Wrong subsystem type. The subsystem type must be * for the specification of User Variables.**

Explanation:

User variables can only be specified when a wildcard is used in the subsystem type field.

User response:

Type an asterisk (*) in the subsystem type field before specifying user variables.

BJTZ585 **Cannot open data set. Check that you have access to it.**

Explanation:

An attempt to open a data set failed.

User response:

Ensure that you have access to the data set. If you require access, contact your administrator. Otherwise, no action is required.

BJTZ586 **(Command) of the policy for configuration (configuration), type (type) is not allowed.**

Explanation:

The command specified for the configuration of the type specified is not allowed.

User response:

No action is required.

BJTZ590 **Changes saved. Instruction inserted.**

Explanation:

The changes that you specified have been successfully saved and the object has been inserted.

User response:

No response required.

BJTZ591 **Cut. Instruction has been copied to the clipboard and cut from the list.**

Explanation:

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ592 **Copied. Instruction has been copied to the clipboard.**

Explanation:

Information for the object has been copied to the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ593 **Pasted. Instruction has been pasted from the clipboard.**

Explanation:

The information for the object that was copied to the Clipboard has been pasted to the current location.

User response:

No action is required.

BJTZ594 **Unable to delete this Instruction.**

Explanation:

You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

User response:

Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

BJTZ595 **Changes saved. Instruction saved.**

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ596 **Instruction has been deleted.**

Explanation:

You successfully deleted an object.

User response:

No response required.

BJTZ597 **Changes saved. Instruction updated.**

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ598 **This Instruction does not exist.**

Explanation:

The instruction member specified does not exist in the partitioned data set specified.

User response:

Specify the name of an existing member in the partitioned data set or restore the missing member.

BJTZ599 **Archive attribute must contain at least one period.**

Explanation:

The value specified for the archive attribute does not contain a period, but archive attributes require at least one period.

User response:

Include a period in the value specified for the archive attribute.

BJTZ600 **Record has been inserted.**

Explanation:

The changes that you specified have been successfully saved and the object has been inserted.

User response:

No response required.

BJTZ601 **Record has been copied to the clipboard and cut from the list.**

Explanation:

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ602 **Record has been copied to the clipboard.**

Explanation:

Information for the object has been copied to the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ603 **Record has been pasted from the clipboard.**

Explanation:

The information for the object that was copied to the Clipboard has been pasted to the current location.

User response:

No action is required.

BJTZ604 **Unable to delete this record, one or more objects are connected to it.**

Explanation:

You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

User response:

Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

BJTZ605 **Record has been saved.**

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ606 **Record has been deleted.**

Explanation:

You successfully deleted an object.

User response:

No response required.

BJTZ607 **Record has been updated.**

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ608 **Cannot paste, clipboard is empty.**

Explanation:

An attempt was made to paste from the clipboard, but the clipboard was empty.

User response:

Use the C (Copy) command on an object to copy its object details to the clipboard. You can then use the T (pasTe) command to paste the object.

BJTZ609 **Record does not exist.**

Explanation:

The record member specified does not exist in the partitioned data set specified.

User response:

No action is required.

BJTZ610 **Changes saved. Archive attribute inserted.**

Explanation:

The changes that you specified have been successfully saved and the object has been inserted.

User response:

No response required.

BJTZ611 **Cut. Archive attribute has been copied to the clipboard and cut from the list.**

Explanation:

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ612 **Copied. Archive attribute has been copied to the clipboard.**

Explanation:

Information for the object has been copied to the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ613 **Pasted. Archive attribute has been pasted from the clipboard.**

Explanation:

The information for the object that was copied to the Clipboard has been pasted to the current location.

User response:

No action is required.

BJTZ614 **Unable to delete this archive attribute, one or more rule is connected.**

Explanation:

You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

User response:

Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

BJTZ615 **Changes saved. Archive attribute saved.**

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ616 **Archive attribute has been deleted.**

Explanation:

You successfully deleted an object.

User response:

No response required.

BJTZ617 **Changes saved. Archive attribute updated.**

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ621 **Cut. Selector rule has been copied to the clipboard and cut from the list.**

Explanation:

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ622 **Copied. Selector rule has been copied to the clipboard.**

Explanation:

Information for the object has been copied to the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ623 **Pasted. Selector rule has been pasted from the clipboard.**

Explanation:

The information for the object that was copied to the Clipboard has been pasted to the current location.

User response:

No action is required.

BJTZ624 **Unable to delete this selector rule, one or more rule is connected to it.**

Explanation:

You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

User response:

Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

BJTZ625 **Changes saved. Selector rule attribute saved.**

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ626 **Selector rule has been deleted.**

Explanation:

You successfully deleted an object.

User response:

No response required.

BJTZ627 **Changes saved. Selector rule updated.**

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ628 **This selector rule does not exist.**

Explanation:

The record member specified does not exist in the partitioned data set specified.

User response:

No action is required.

BJTZ629 **Status set to disabled because the rule is not linked to an archive attribute.**

Explanation:

The status of the selector rule has been set to Disabled because no set of archive attributes is linked to the rule. You will not be able to change the status to Enabled (active) until you link a set of archive attributes to the rule.

User response:

Link a set of archive attributes to the selector rule using the LINK drop-down menu.

BJTZ630 **Layout field has been inserted to local storage.**

Explanation:

The changes that you specified have been successfully saved and the object has been inserted.

User response:

No response required.

BJTZ631 **Layout field has been copied to the clipboard and cut from local storage.**

Explanation:

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ632 **Layout field has been copied to the clipboard.**

Explanation:

Information for the object has been copied to the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ633 **Layout field has been pasted from the clipboard.**

Explanation:

The information for the object that was copied to the Clipboard has been pasted to the current location.

User response:

No action is required.

BJTZ634 **Unable to delete this layout field, one or more rule is connected to it.**

Explanation:

You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

User response:

Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

BJTZ635 **Layout field has been saved to local storage.**

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ636 **Layout field has been deleted from local storage**

Explanation:

You successfully deleted an object.

User response:

No response required.

BJTZ637 **Layout field has been updated in local storage**

Explanation:

The changes that you specified have been successfully saved.

User response:
No response required.

BJTZ638 **This layout field does not exist**

Explanation:
The layout specified does not exist.

User response:
No action is required.

BJTZ640 **Changes saved. Report rule inserted**

Explanation:
The changes that you specified have been successfully saved and the object has been inserted.

User response:
No response required.

BJTZ641 **Cut. Report rule has been copied to the clipboard and cut from the list**

Explanation:
The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

User response:
No action is required.

BJTZ642 **Copied. Report rule has been copied to the clipboard**

Explanation:
Information for the object has been copied to the Clipboard and is available to paste to another location.

User response:
No action is required.

BJTZ643 **Pasted. Report rule has been pasted from the clipboard**

Explanation:
The information for the object that was copied to the Clipboard has been pasted to the current location.

User response:
No action is required.

BJTZ644 **Unable to delete this report rule, one or more rules are connected to it**

Explanation:
You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

User response:
Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

BJTZ645 **Changes saved. Report rule attribute saved**

Explanation:
The changes that you specified have been successfully saved.

User response:
No response required.

BJTZ646 **Report rule has been deleted**

Explanation:
You successfully deleted an object.

User response:
No response required.

BJTZ647 **Changes saved. Report rule updated**

Explanation:
The changes that you specified have been successfully saved.

User response:
No response required.

BJTZ648 **This report rule does not exist**

Explanation:
The report rule specified does not exist.

User response:
No action is required.

BJTZ649 **Unable to delete this banner, one or more objects are connected to it**

Explanation:
You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

User response:
Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

BJTZ650 **Data set not cataloged. Data set was not found in catalog.**

Explanation:
The specified data set could not be found in the MVS catalog.

User response:
Ensure that the data set name is correct.

BJTZ651 **Member not found. Member (member) not found in data set (data set)**

Explanation:
The specified data set could not be found in the MVS catalog. This message displays the member name and data set name.

User response:

Ensure that the data set name is correct.

BJTZ652 **The banner page does not exist.**

Explanation:

The banner page specified does not exist.

User response:

No action is required.

BJTZ653 **Changes saved. Banner page saved**

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ654 **Banner page has been deleted.**

Explanation:

You successfully deleted an object.

User response:

No response required.

BJTZ655 **Changes saved. Banner page updated**

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ656 **Changes saved. Banner page inserted**

Explanation:

The changes that you specified have been successfully saved and the object has been inserted.

User response:

No response required.

BJTZ657 **Cut. Banner page has been copied to the clipboard and cut from the list**

Explanation:

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ658 **Copied. Banner page has been copied to the clipboard**

Explanation:

Information for the object has been copied to the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ659 **Pasted. Banner page has been pasted from the clipboard**

Explanation:

The information for the object that was copied to the Clipboard has been pasted to the current location.

User response:

No action is required.

BJTZ660 **Changes saved. Printer attribute inserted.**

Explanation:

The changes that you specified have been successfully saved and the object has been inserted.

User response:

No response required.

BJTZ661 **Cut. Printer attribute has been copied to the clipboard and cut from the list.**

Explanation:

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ662 **Copied. Printer attribute has been copied to the clipboard.**

Explanation:

Information for the object has been copied to the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ663 **Pasted. Printer attribute has been pasted from the clipboard.**

Explanation:

The information for the object that was copied to the Clipboard has been pasted to the current location.

User response:

No action is required.

BJTZ664 **Unable to delete this printer attribute, one or more rules are connected to it**

Explanation:

You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

User response:

Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

BJTZ665 **Changes saved. Printer attribute saved.**

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ666 **Printer attribute has been deleted**

Explanation:

You successfully deleted an object.

User response:

No response required.

BJTZ667 **Changes saved. Printer attribute updated**

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ668 **This printer attribute does not exist.**

Explanation:

The printer attribute specified does not exist.

User response:

No action is required.

BJTZ670 **Changes saved. Recipient inserted.**

Explanation:

The changes that you specified have been successfully saved and the object has been inserted.

User response:

No response required.

BJTZ670A **Only Yes or No are allowed.**

Explanation:

A value other than Yes or No was specified in a field that only supports Yes or No.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Type Yes or No in that field.

BJTZ671 **Cut. Recipient has been copied to the clipboard and cut from the list**

Explanation:

The specified object was deleted from the list by using the X (Cut) line command. Information for the object

now resides on the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ672 **Copied. Recipient has been copied to the clipboard.**

Explanation:

Information for the object has been copied to the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ673 **Pasted. Recipient has been pasted from the clipboard.**

Explanation:

The information for the object that was copied to the Clipboard has been pasted to the current location.

User response:

No action is required.

BJTZ674 **Unable to delete this recipient, one or more rules are connected to it**

Explanation:

You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

User response:

Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

BJTZ675 **Changes saved. Recipient attribute saved.**

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ676 **Recipient has been deleted.**

Explanation:

You successfully deleted an object.

User response:

No response required.

BJTZ677 **Changes saved. Recipient updated.**

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ678 **This recipient does not exist****Explanation:**

The recipient specified does not exist.

User response:

No action is required.

BJTZ679 **Userid exists. Recipient with this
userid already exists.****Explanation:**

The specified recipient name was not inserted into the Output Manager database because a recipient with that user ID already exists.

User response:

Type a unique value in the Userid field.

BJTZ680 **Changes saved. Report definition
inserted.****Explanation:**

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ681 **Cut. Report definition has been
copied to the clipboard and cut
from the list.****Explanation:**

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ682 **Copied. Report definition has been
copied to the clipboard.****Explanation:**

Information for the object has been copied to the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ683 **Pasted. Report definition has been
pasted from the clipboard****Explanation:**

The information for the object that was copied to the Clipboard has been pasted to the current location.

User response:

No action is required.

BJTZ684 **Unable to delete this report
definition, one or more rules are
connected to it.****Explanation:**

You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

User response:

Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

BJTZ685 **Saved. Report definition saved.****Explanation:**

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ686 **Report definition has been
deleted.****Explanation:**

You successfully deleted an object.

User response:

No response required.

BJTZ687 **Changes saved. Report definition
updated.****Explanation:**

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ688 **This report definition does not
exist.****Explanation:**

The report definition specified does not exist.

User response:

No action is required.

BJTZ689 **You can define only one index.****Explanation:**

An attempt was made to define a new index by specifying the ADDINDEX primary command when an index was already defined for the report. You can define only one index in a report definition. The index can contain from one to eight fields.

User response:

No action is required. You can edit the existing index if necessary.

BJTZ690 **Changes saved. Distribution list
inserted.****Explanation:**

The changes that you specified have been successfully saved and the object has been inserted.

User response:

No response required.

BJTZ691 **Cut. Distribution list has been copied to the clipboard and cut from the list.**

Explanation:

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ692 **Copied. Distribution list has been copied to the clipboard.**

Explanation:

Information for the object has been copied to the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ693 **Pasted. Distribution list has been pasted from the clipboard.**

Explanation:

The information for the object that was copied to the Clipboard has been pasted to the current location.

User response:

No action is required.

BJTZ694 **Unable to delete this distribution list, one or more rules are connected to it.**

Explanation:

You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

User response:

Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

BJTZ695 **Changes saved. Distribution list saved.**

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ696 **Distribution list has been deleted.**

Explanation:

You successfully deleted an object.

User response:

No response required.

BJTZ697 **Changes saved. Distribution list updated.**

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ698 **This distribution list does not exist.**

Explanation:

The distribution list specified does not exist.

User response:

No action is required.

BJTZ699 **Duplicate name. Distribution list name is not unique.**

Explanation:

The specified distribution list name was not inserted into the Output Manager database because a distribution list with that name already exists. Distribution list names must be unique.

User response:

Type a unique value in the distribution list name field.

BJTZ700 **Line command N (Index) is not allowed because the Index field is set to No.**

Explanation:

The N (Index) line command was used, but there are no index fields.

User response:

No action is required.

BJTZ701 **Layout has not been linked to the report definition.**

Explanation:

An attempt was made to save the report definition. However, because a report layout has not been linked to the report definition, this attempt failed. Report definitions with conditions or indexes must be linked to a report layout.

User response:

Either link a report layout to the report definition, or cancel your changes. Use the LINK menu to link to a report layout. Type CANCEL on the command line to cancel your changes.

BJTZ702 **Field (field name) is missing in the layout linked to this report definition.**

Explanation:

The field name specified in the condition is not present in the layout linked to the report definition.

User response:

Specify a valid field included in the layout linked to the report definition. For a list of valid fields included in the linked layout, specify FIELDS on the command line.

BJTZ703 Value cannot be empty.**Explanation:**

A blank was specified in a field that cannot have blanks.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a valid value in that field.

BJTZ704 Condition fields must be defined consecutively.**Explanation:**

An attempt was made to save an index field name that was not specified in consecutive order. When defining an index for a report definition, you must specify the index field names from top to bottom (from field 1 to field 8), without leaving any intervening lines blank.

User response:

Specify the index field names on consecutive lines, starting with Field 1 Name. Then save your index entry.

BJTZ705 Cannot delete Begin condition because End condition exists.**Explanation:**

An attempt was made to delete a BEGIN condition when an END condition still exists. An END condition requires the presence of a BEGIN condition.

User response:

First delete the END condition, and then delete the BEGIN condition.

BJTZ707 End condition inserted.**Explanation:**

The changes that you specified have been successfully saved and the object has been inserted.

User response:

No response required.

BJTZ708 Layout fields: (fields).**Explanation:**

This message displays the list of layout fields.

User response:

No response required.

BJTZ709 Report definition contains condition or index but is not linked to layout.**Explanation:**

An attempt was made to save the report definition. However, because a report layout has not been linked to the report definition, this attempt failed. Report definitions with conditions or indexes must be linked to a report layout.

User response:

Either link a report layout to the report definition, or cancel your changes. Use the LINK menu to link to a report layout. Type CANCEL on the command line to cancel your changes.

BJTZ710 You are in read-only mode, you cannot add an entry.**Explanation:**

You cannot add an entry because you are in read-only mode. Your add request is ignored.

User response:

If the entry needs to be added, contact your report administrator for assistance. Otherwise, no action is needed.

BJTZ711 Report "name" is queued for printing.**Explanation:**

The specified report has been placed on the queue for print processing.

User response:

No action is required.

BJTZ712 Archive "name" is queued for printing.**Explanation:**

The specified archived report has been placed on the queue for print processing.

User response:

No action is required.

BJTZ713 JobName with JobID has been submitted.**Explanation:**

The archive print job has been successfully submitted and will be printed in full or in part, depending on your specifications.

User response:

No action is required.

BJTZ714 Data contains invalid (non-display) characters. Use command ===> FIND P"." to position cursor to the invalid characters.**Explanation:****User response:**

BJTZ715 **Enter a FIND command. The RFIND and FX keys work only after a FIND character string is entered.**

Explanation:

The RFIND or FX keys were pressed, but a FIND command has not been entered.

User response:

Enter a FIND command before using the RFIND and FX keys.

BJTZ716 **Bottom of data reached. Chars (character string) not found. Press RFIND key to continue from top.**

Explanation:

The character string was not found in the data.

User response:

Press the RFIND key to continue searching from the top.

BJTZ717 **CHARS (character string) found. Search for CHARS (character string) in columns A to B was successful.**

Explanation:

The character string that you searched for was found.

User response:

No response required.

BJTZ720 **Changes saved. Bundle definition inserted.**

Explanation:

The changes that you specified have been successfully saved and the object has been inserted.

User response:

No response required.

BJTZ721 **Cut. Bundle definition has been copied to the clipboard and cut from the list.**

Explanation:

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ722 **Copied. Bundle definition has been copied to the clipboard.**

Explanation:

Information for the object has been copied to the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ723 **Pasted. Bundle definition has been pasted from the clipboard.**

Explanation:

The information for the object that was copied to the Clipboard has been pasted to the current location.

User response:

No action is required.

BJTZ724 **Unable to delete this bundle definition.**

Explanation:

You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

User response:

Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

BJTZ725 **Changes saved. Bundle definition saved.**

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ726 **Bundle definition has been deleted.**

Explanation:

You successfully deleted an object.

User response:

No response required.

BJTZ727 **Changes saved. Bundle definition updated.**

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ728 **This bundle definition does not exist.**

Explanation:

The bundle definition specified does not exist.

User response:

No action is required.

BJTZ729 **Duplicate name. Bundle definition name is not unique.**

Explanation:

The specified bundle name was not inserted into the Output Manager database because a bundle name

with that value already exists. Bundle names must be unique.

User response:

Type a unique value in the Bundle name field.

BJTZ730 **Bundle recipient inserted**

Explanation:

The changes that you specified have been successfully saved and the object has been inserted.

User response:

No response required.

BJTZ731 **Bundle recipient has been copied to the clipboard and cut from the list**

Explanation:

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ732 **Bundle recipient has been copied to the clipboard**

Explanation:

Information for the object has been copied to the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ733 **Bundle recipient has been pasted from the clipboard**

Explanation:

The information for the object that was copied to the Clipboard has been pasted to the current location.

User response:

No action is required.

BJTZ734 **Unable to delete this bundle recipient, one or more rules are connected to it.**

Explanation:

You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

User response:

Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

BJTZ735 **Bundle recipient saved**

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ736 **Bundle recipient has been deleted**

Explanation:

You successfully deleted an object.

User response:

No response required.

BJTZ737 **Bundle recipient updated**

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ738 **This bundle recipient does not exist**

Explanation:

The bundle recipient specified does not exist.

User response:

No action is required.

BJTZ739 **Bundle recipient name is not unique.**

Explanation:

The specified bundle recipient name was not inserted into the Output Manager database because a bundle recipient with that name already exists. Bundle recipient names must be unique.

User response:

Type a unique value in the Bundle recipient name field.

BJTZ740 **Condition inserted.**

Explanation:

The changes that you specified have been successfully saved and the object has been inserted.

User response:

No response required.

BJTZ741 **Condition has been copied to the clipboard and cut from the list.**

Explanation:

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ742 **Condition has been copied to the clipboard.**

Explanation:

Information for the object has been copied to the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ743 **Condition has been pasted from the clipboard.**

Explanation:

The information for the object that was copied to the Clipboard has been pasted to the current location.

User response:

No action is required.

BJTZ744 **Unable to delete this condition, one or more rules are connected to it.**

Explanation:

You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

User response:

Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted

BJTZ746 **Condition has been deleted.**

Explanation:

You successfully deleted an object.

User response:

No response required.

BJTZ747 **Condition updated.**

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ748 **You cannot have an END condition without a BEGIN condition.**

Explanation:

An attempt was made to insert an END condition without first defining the BEGIN condition. An END condition requires the presence of a BEGIN condition.

User response:

First define the BEGIN condition, and then define the END condition.

BJTZ749 **This condition does not have any fields.**

Explanation:

An attempt was made to save a condition, but the condition does not have any fields.

User response:

Add fields to the condition before saving it.

BJTZ750 **Index inserted**

Explanation:

The changes that you specified have been successfully saved and the object has been inserted.

User response:

No response required.

BJTZ751 **Index has been copied to the clipboard and cut from the list**

Explanation:

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ752 **Index has been copied to the clipboard**

Explanation:

Information for the object has been copied to the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ753 **Index has been pasted from the clipboard**

Explanation:

The information for the object that was copied to the Clipboard has been pasted to the current location.

User response:

No action is required.

BJTZ754 **Unable to delete this index, one or more rules are connected to it**

Explanation:

You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

User response:

Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

BJTZ755 **Index saved**

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ756 **Index has been deleted**

Explanation:

You successfully deleted an object.

User response:

No response required.

BJTZ757 **Index updated**

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ758 **This index does not exist**

Explanation:

The index specified does not exist.

User response:

No action is required.

BJTZ759 **This index does not have any fields**

Explanation:

An attempt was made to save an index, but the index does not have any fields.

User response:

Add fields to the condit index before saving it.

BJTZ760 **Bundle special instruction has been inserted**

Explanation:

The changes that you specified have been successfully saved and the object has been inserted.

User response:

No response required.

BJTZ761 **Bundle special instruction has been cut from the list and placed in clipboard**

Explanation:

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ762 **Bundle special instruction has been copied to the clipboard**

Explanation:

Information for the object has been copied to the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ763 **Bundle special instruction has been pasted from the clipboard**

Explanation:

The information for the object that was copied to the Clipboard has been pasted to the current location.

User response:

No action is required.

BJTZ764 **Unable to delete this bundle special instruction**

Explanation:

You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

User response:

Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

BJTZ765 **Bundle special instruction saved**

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ766 **Bundle special instruction has been deleted**

Explanation:

You successfully deleted an object.

User response:

No response required.

BJTZ767 **Bundle special instruction has been updated**

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ768 **This bundle special instruction does not exist**

Explanation:

The bundle special instruction specified does not exist

User response:

No action is required.

BJTZ769 **Invalid access ID. Access ID must be derived from access mask.**

Explanation:

An invalid value was specified in the Access ID field. An Access ID must be derived from the Access Mask.

User response:

Type a valid access ID in the Access ID field.

BJTZ770 **Bundle report has been inserted**

Explanation:

The changes that you specified have been successfully saved and the object has been inserted.

User response:
No response required.

BJTZ771 **Bundle report has been cut from the list and placed in clipboard**

Explanation:
The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

User response:
No action is required.

BJTZ772 **Bundle report has been copied to the clipboard**

Explanation:
Information for the object has been copied to the Clipboard and is available to paste to another location.

User response:
No action is required.

BJTZ773 **Bundle report has been pasted from the clipboard**

Explanation:
The information for the object that was copied to the Clipboard has been pasted to the current location.

User response:
No action is required.

BJTZ774 **Unable to delete this bundle report**

Explanation:
You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

User response:
Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

BJTZ775 **Bundle report is saved**

Explanation:
The changes that you specified have been successfully saved.

User response:
No response required.

BJTZ776 **Bundle report has been deleted**

Explanation:
You successfully deleted an object.

User response:
No response required.

BJTZ777 **Bundle report has been updated**

Explanation:

The changes that you specified have been successfully saved.

User response:
No response required.

BJTZ778 **This bundle report does not exist**

Explanation:
The bundle report specified does not exist.

User response:
No action is required.

BJTZ779 **Invalid access mask. Blank access mask is not allowed**

Explanation:
You must specify a value in the Access Mask field.

User response:
Type a valid value in the Access Mask field. You can specify a fully-qualified Access Mask, or you can include a wildcard in the Access Mask.

BJTZ780 **Changes saved. Layout has been inserted**

Explanation:
The changes that you specified have been successfully saved and the object has been inserted.

User response:
No response required.

BJTZ781 **Cut. Layout has been copied to the clipboard and cut from the list**

Explanation:
The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

User response:
No action is required.

BJTZ782 **Copied. Layout has been copied to the clipboard**

Explanation:
Information for the object has been copied to the Clipboard and is available to paste to another location.

User response:
No action is required.

BJTZ783 **Pasted. Layout has been pasted from the clipboard**

Explanation:
The information for the object that was copied to the Clipboard has been pasted to the current location.

User response:
No action is required.

BJTZ784 Unable to delete this layout, one or more rules are connected to it

Explanation:

You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

User response:

Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

BJTZ785 Changes saved. Layout has been saved

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ786 Layout has been deleted

Explanation:

You successfully deleted an object.

User response:

No response required.

BJTZ787 Changes saved. Layout has been updated

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ788 This layout does not exist

Explanation:

The layout specified does not exist.

User response:

No action is required.

BJTZ789 Duplicate name. Layout name is not unique

Explanation:

The specified layout name was not inserted into the Output Manager database because a layout name with that value already exists. Layout names must be unique.

User response:

Type a unique value in the layout name field.

BJTZ790 Bundle definition must already be in database for this operation

Explanation:

You attempted an operation that requires the bundle definition to already exist in the database, but it does not.

User response:

Add the bundle definition to the Output Manager database.

BJTZ791 Bundle recipient must already be in database for this operation

Explanation:

You attempted an operation that requires the bundle recipient to already exist in the database, but it does not.

User response:

Add the bundle recipient to the Output Manager database.

BJTZ792 Distribution list must already be in database for this operation

Explanation:**User response:**

BJTZ793 Invalid value. Only Yes, No, and Default allowed

Explanation:

An invalid value was specified in a field that only accepts Yes, No, and Default as valid values.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Type a valid value in that field.

BJTZ794 Bundle activation command is issued

Explanation:

You successfully activated a bundle.

User response:

No response required.

BJTZ795 Bundle deactivation command is issued

Explanation:

You successfully deactivated a bundle.

User response:

No response required.

BJTZ796 Deactivate all bundles command is issued

Explanation:

You successfully deactivated all bundles.

User response:

No response required.

BJTZ797 Invalid wildcard. Wildcards cannot be followed by

BJTZ809 **Internal error. Error occurred when reading file**

Explanation:

An internal error occurred when attempting to read the file.

User response:

Try again. If you cannot determine the cause of the error, contact Technical Support.

BJTZ830 **Address inserted**

Explanation:

The changes that you specified have been successfully saved and the object has been inserted.

User response:

No response required.

BJTZ831 **Address has been copied to the clipboard and cut from the list**

Explanation:

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ832 **Address has been copied to the clipboard**

Explanation:

Information for the object has been copied to the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ833 **Address has been pasted from the clipboard**

Explanation:

The information for the object that was copied to the Clipboard has been pasted to the current location.

User response:

No action is required.

BJTZ834 **Unable to delete this address**

Explanation:

You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

User response:

Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

BJTZ835 **Address saved**

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ836 **Address has been deleted**

Explanation:

You successfully deleted an object.

User response:

No response required.

BJTZ837 **Address updated**

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ838 **This Address does not exist**

Explanation:

The address that you specified does not exist.

User response:

Specify an existing address.

BJTZ839 **Address name is not unique**

Explanation:

The specified address name was not inserted into the Output Manager database because an address with that name already exists. Address names must be unique.

User response:

Type a unique value in the Address name field.

BJTZ840 **This distribution list does not exist**

Explanation:

The distribution list that you specified does not exist.

User response:

Specify an existing distribution list.

BJTZ841 **Distribution list name is required**

Explanation:

An invalid value was specified in the distribution list name field

User response:

Specify a name for the distribution list in the Distribution List Name field.

BJTZ842 **Invalid input. The range must be in the format N or N:M, where N and M are integers and N is less than or equal to M. Only values from 1 to total pages are allowed. There is to be no space before or after the ":" (colon) sign, but there must**

be at least one space between two ranges.

Explanation:

An invalid value was entered in the PAGES field. This field specifies which pages are to be printed for a recipient. Valid values include single pages with a space between each page number, and a range of pages with a colon (:) between the first page number in the range and the last page number in the range (which a space between multiple ranges). The second number in a range must be greater than the first number in the range. For example, to print pages 5 through 10, specify 5:10. To print pages 5 through 10 AND pages 12 through 15, but not pages 11 and 12, specify 5:10 12:15.

User response:

Specify a valid page number, or a valid range of page numbers in the PAGES field.

BJTZ843 **Invalid syntax. The JCL is missing a continuation character when one is expected.**

Explanation:

The JCL in the Job Details section continues on more than one line without a continuation character.

User response:

When the JCL continues to the next line, end the previous line with a comma.

BJTZ844 **Invalid syntax. A JCL continuation character is expected but is absent or is in an invalid position.**

Explanation:

The JCL in the Job Details section continues on more than line without a continuation character, or the continuation character is in the wrong position.

User response:

When the JCL continues to the next line, end the previous line with a comma.

BJTZ845 **Invalid syntax. The JCL contains a continuation character but the line is not continued.**

Explanation:

The JCL in the Job Details section ends with a continuation character but the JCL is not continued.

User response:

Continue the JCL on the next line, or remove the continuation character from the last line.

BJTZ846 **Only "J" or a blank is valid for the OPTCD field.**

Explanation:

An invalid value was specified in the OPTCD field. The only valid values for this field are blank and J.

User response:

Enter a valid value.

BJTZ847 **Invalid constant. Only No or Yes are allowed.**

Explanation:

An invalid value was specified in the field. The only valid entries are Yes and No.

User response:

Type either Yes or No in the field.

BJTZ848 **Invalid duplex. Only No, Normal, or Tumble are allowed**

Explanation:

An invalid value was specified in the Duplex field. This field indicates whether or not to print in duplex mode (double-sided). This message identifies the valid values.

User response:

In the Duplex field, type one of the following valid values: - No: Do not print the archive in duplex mode - Normal: Print the archive in duplex mode and bind the archive along the long edge of the paper. - Tumble: Print the archive in duplex mode and bind the archive along the short edge of the paper.

BJTZ849 **Invalid input. Normal disposition can only be Write, Hold, Keep, Leave, or Purge**

Explanation:

An invalid value was specified in the Norm Disp field. This field indicates the disposition of the SYSOUT data set when a job completes normally.

User response:

In the Norm Disp field, type one of the following valid options: Write, Hold, Keep, Leave, or Purge. For information about these options, see the associated Help panel.

BJTZ850 **Organization inserted**

Explanation:

The changes that you specified have been successfully saved and the object has been inserted.

User response:

No response required.

BJTZ851 **Organization has been copied to the clipboard and cut from the list**

Explanation:

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ852 Organization has been copied to the clipboard

Explanation:

Information for the object has been copied to the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ853 Organization has been pasted from the clipboard

Explanation:

The information for the object that was copied to the Clipboard has been pasted to the current location.

User response:

No action is required.

BJTZ854 Unable to delete this organization

Explanation:

You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

User response:

Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

BJTZ855 Organization saved

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ856 Organization has been deleted

Explanation:

You successfully deleted an object.

User response:

No response required.

BJTZ857 Organization updated

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ858 This organization does not exist

Explanation:

The organization that you specified does not exist.

User response:

Specify an existing organization.

BJTZ859 Organization name is not unique

Explanation:

The specified organization name was not inserted into the Output Manager database because an organization with that name already exists. Organization names must be unique.

User response:

Type a unique value in the organization name field.

BJTZ870 TPL rule does not exist

Explanation:

The TPL rule that you specified does not exist.

User response:

Specify an existing TPL rule.

BJTZ870A TPL Rule name required. Name required for TPL rule.

Explanation:

An invalid value was specified in the TPL rule name field. The rule was not inserted into the Output Manager database.

User response:

Type a valid value in the TPL name field.

BJTZ871 Changes saved. TPL rule saved.

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ872 TPL rule has been deleted.

Explanation:

You successfully deleted an object.

User response:

No response required.

BJTZ873 Changes saved. TPL rule updated.

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ874 Changes saved. TPL rule inserted.

Explanation:

The changes that you specified have been successfully saved and the object has been inserted.

User response:

No response required.

BJTZ875 Cut. TPL rule has been copied to the clipboard and cut from the list.

Explanation:

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ876 **Copied. TPL rule has been copied to the clipboard.**

Explanation:

Information for the object has been copied to the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ877 **Pasted. TPL rule has been pasted from the clipboard.**

Explanation:

The information for the object that was copied to the Clipboard has been pasted to the current location.

User response:

No action is required.

BJTZ878 **Unable to delete this TPL rule, one or more objects are connected to it.**

Explanation:

You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

User response:

Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

BJTZ880 **Invalid print model. Only Classic or Report are allowed.**

Explanation:

An invalid value was specified in the Print Model field. The only valid values are Classic and Report. This field determines which static, user-defined set of printer attributes (if any) to use for printing the report instances or the indexed report pages that are based on this report definition.

User response:

Type either Classic or Report in the Print Model field. Specify Classic to use the sets of printer attributes that are linked to the recipient IDs on the distribution list that is assigned to the report definition. Specify Report to use the set of printer attributes that is linked directly to the report definition. If you specify Report, you will be able to override any Class, Copies, and Dest information from the report's set of printer attributes for individual recipients on the distribution list. You do so from the Distribution List panel.

BJTZ881 **Invalid dyn print. Only No or Yes are allowed.**

Explanation:

An invalid value was specified in the Dynamic Print field. The only valid values are No and Yes. This field determines whether to use the "dynamic printing parameters" from the BJTDAT table for printing report instances or indexed report pages that are based on this report definition. For reports, Output Manager can capture certain key printing parameters from the SYSOUT and from the set of printer attributes that is linked to 1) the distribution list for the report or 2) the report definition. These "dynamic printing parameters" are stored in the BJTDAT table and merged at report print time.

User response:

Type either No or Yes in the Dynamic Print field. Specify No to obtain all printing parameters from the recipient IDs on the distribution list and the applicable user-defined set of printer attributes. (The Print Model field determines which set of printer attributes applies.) Specify Yes to obtain the set of "dynamic printing parameters" from the BJTDAT table. (Any other printing parameters that are specified in the applicable set of printer attributes will still be used.)

BJTZ882 **Invalid space units. Only Tracks, Cylinders, Blocks, Kilobytes, Megabytes, Bytes, or Records**

Explanation:

An invalid value was specified in the Space Units field. This field specifies the type of units in which the archive space is allocated.

User response:

In the Space Units field, type one of the following valid values: Blocks, Tracks, Cylinders, Kilobytes, Megabytes, Bytes, or Records.

BJTZ883 **Invalid record units. Byte modifier can only be Bytes, Mega, or Kilo**

Explanation:

An invalid value was specified in the Average Record Unit field. This field specifies the type of record units.

User response:

In the Average Record Unit field, type one of the following valid values: B (bytes), M (megabytes), or K (kilobytes).

BJTZ885 **Invalid disposition. Only Catalog or Delete are allowed.**

Explanation:

An invalid value was specified in the Abnormal Disposition field on the Archive Attributes Details panel. This field indicates what to do with an archive when a save-to-archive operation fails.

User response:

In the Abnormal Disposition field, type one of the following valid values: - Catalog or C - To make the archive accessible through a catalog - Delete or D - To delete the archive

BJTZ886 Invalid space release. Only Yes or No are allowed.

Explanation:

An invalid value was specified in the Release Unused Space field. This field indicates whether you want to release unused space.

User response:

In the Release Unused Space field, type either Yes or No.

BJTZ887 Primary quantity can only be 0 if Auto Calculate is used.

Explanation:

A non-zero value was specified in the Primary Quantity field, but Primary Quantity can only be 0 when Auto Calculate is used.

User response:

Either change the Primary Quantity field, or disable Auto Calculate.

BJTZ888 Average block length can only be used when Space Units is set to Blocks

Explanation:

A value was specified in the Average Block Length field, but Space Units must be set to Blocks in order for Average Block Length to be used.

User response:

Either change the Space Units value to Blocks, or remove the value from the Average Block Length field.

BJTZ889 Invalid status value. Only Enabled or Disabled are allowed

Explanation:

An invalid value was specified in the Status field. Only Enabled and Disabled are valid values.

User response:

In the Status field, type either Enabled (to make the rule active and available for processing) or Disabled (to make the rule unavailable).

BJTZ901 Database reconnection failed

Explanation:

Output Manager failed to reconnect to the Db2 database.

User response:

Review the messages that precede this one in the log to determine the reason for the connection failure.

BJTZ902 Database reconnection successful

Explanation:

Output Manager successfully established a connection to Db2.

User response:

No response is required.

BJTZ904 Error connecting to Db2

Explanation:

Output Manager failed to connect to the Db2 database.

User response:

Review the messages that precede this one in the log to determine the reason for the connection failure.

BJTZ905 Error opening plan

Explanation:

The utility failed to open its Db2 plan from the target Db2 subsystem.

User response:

Check whether the utility plan exists on the target Db2 subsystem. If this plan does not exist, you must bind the plan for the program packages.

BJTZ908 Unable to open archive data set

Explanation:

A problem that is associated with product initialization occurred.

User response:

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

BJTZ910M Access ID required. Archive access ID is required.

Explanation:

An archive access ID was not specified in the Access ID field.

User response:

Type a valid access ID in the Access ID field. An Access ID must be derived from the Access Mask.

BJTZ910A Invalid view value. Initial view can only be Job, Step, Stats, or All.

Explanation:

An invalid option was specified in the Initial View field on the Preferences panel.

User response:

In the Initial View field, specify one of the following valid options: Job, Step, Stats, or All.

BJTZ910B Invalid exceptions. Yes, No, or blanks only.

Explanation:

An invalid value was specified in the Exceptions field. The only valid values are Yes, No, and a blank.

User response:

In the Exceptions field, specify Yes (to search for archives with exceptions) or No (to search for archives without exceptions). Alternatively, leave the field blank to search for both archives that have exceptions and those that do not have exceptions

BJTZ910C **Invalid date format. Relative date must be in the format of "T-nnnn", nnnn=days prior to today**

Explanation:

A relative date was specified in the incorrect format in either the Before date field or the After date field. Relative dates must have the format T-nnnn, where "T" represents today and nnnn is a number of days prior to today.

User response:

To specify a relative date, use the format T-nnnn. Alternatively, you can enter a specific date in the format YYYY/MM/DD, or type only T for today.

BJTZ910D **Invalid date format. Date must be valid and in the format of YYYY/MM/DD**

Explanation:

An invalid date value was specified. Dates must be specified in the format YYYY/MM/DD.

User response:

Specify a date that is composed of valid values for the year, month, and day and that is in the format YYYY/MM/DD.

BJTZ910E **Invalid time format. Time must be valid and in the format of HH:MM:SS**

Explanation:

An invalid time value was specified. Time must be specified in the format HH:MM:SS.

User response:

Specify a 24-hour time that is composed of valid hour, minute, and second values and that is in the format HH:MM:SS.

BJTZ910F **Yes or No only. Only Yes and No are valid values for the Prompt on Entry field**

Explanation:

An invalid value was specified in the Prompt on Entry field. This field indicates whether or not Output Manager displays the search criteria panel before an object list panel.

User response:

In the Prompt on Entry field, type YES (to always display a search criteria prompt when you enter a list panel), or NO (do not display search criteria prompt).

BJTZ910G **Yes or No only. Only Yes and No are valid values for the Save Criteria field**

Explanation:

An invalid value was specified in the Save Criteria field on the Search panel. Only Yes or No is valid.

User response:

Specify Yes or No in the Save Criteria field.

BJTZ911 **Selector TPL rule has been inserted to local storage**

Explanation:

The information that you specified for the selector TPL rule was saved.

User response:

No action is required.

BJTZ912 **TPL rule has been copied to the clipboard and cut from the local storage**

Explanation:

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ913 **Selector TPL rule has been copied to the clipboard**

Explanation:

Information for the object has been copied to the Clipboard and is available to paste to another location.

User response:

No action is required.

BJTZ914 **Selector TPL rule has been pasted from the clipboard**

Explanation:

The information for the object that was copied to the clipboard has been pasted to the current location.

User response:

No action is required.

BJTZ915 **Selector TPL rule has been saved to local storage**

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ916 **Selector TPL rule has been deleted from local storage**

Explanation:

You successfully deleted an object.

User response:

No response required.

BJTZ917

Selector TPL rule has been updated in local storage

Explanation:

The changes that you specified have been successfully saved.

User response:

No response required.

BJTZ918

This selector TPL rule does not exist

Explanation:

The TPL rule specified does not exist.

User response:

No action is required.

BJTZ919

Retention period must be non-negative

Explanation:

An invalid value was specified in the Retention Period field. This value must be a number from 0 through 9999.

User response:

In the Retention Period field, type a number from 1 through 9999 to indicate the number of days that you want to keep the archives defined by these archive attributes. Alternatively, accept the default value of 0 if you want to use the retention criteria in the management class defined for your system.

BJTZ920A

Invalid name. Archive attribute name cannot be blank.

Explanation:

A blank was specified in a field that cannot be blank.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a valid value in that field.

BJTZ920C

Not numeric. Retention period must be a number.

Explanation:

A non-numeric character was specified in a field that only supports numeric values.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Type a number in that field.

BJTZ920D

Invalid print model. Only Classic or Report are allowed.

Explanation:

An invalid value was specified in the Print Model field. The only valid values are Classic and Report. This field determines which static, user-defined set of printer attributes (if any) to use for printing the report instances or the indexed report pages that are based on this report definition.

User response:

Type either Classic or Report in the Print Model field. Specify Classic to use the sets of printer attributes that are linked to the recipient IDs on the distribution list that is assigned to the report definition. Specify Report to use the set of printer attributes that is linked directly to the report definition. If you specify Report, you will be able to override any Class, Copies, and Dest information from the report's set of printer attributes for individual recipients on the distribution list. You do so from the Distribution List panel.

BJTZ920E

Invalid dyn print. Only No or Yes are allowed.

Explanation:

An invalid value was specified in the Dynamic Print field. The only valid values are No and Yes. This field determines whether to use the "dynamic printing parameters" from the BJTDAT table for printing report instances or indexed report pages that are based on this report definition. For reports, Output Manager can capture certain key printing parameters from the SYSOUT and from the set of printer attributes that is linked to 1) the distribution list for the report or 2) the report definition. These "dynamic printing parameters" are stored in the BJTDAT table and merged at report print time.

User response:

Type either No or Yes in the Dynamic Print field. Specify No to obtain all printing parameters from the recipient IDs on the distribution list and the applicable user-defined set of printer attributes. (The Print Model field determines which set of printer attributes applies.) Specify Yes to obtain the set of "dynamic printing parameters" from the BJTDAT table. (Any other printing parameters that are specified in the applicable set of printer attributes will still be used.)

BJTZ920F

Invalid space units. Only Tracks, Cylinders, Blocks, Kilobytes, Megabytes, Bytes, or Records Invalid space units. Only Tracks, Cylinders, Blocks, Kilobytes, Megabytes, Bytes, or Records

Explanation:

An invalid value was specified in the Space Units field. This field specifies the type of units in which the archive space is allocated.

User response:

In the Space Units field, type one of the following valid values: Blocks, Tracks, Cylinders, Kilobytes, Megabytes, Bytes, or Records.

BJTZ920G **Invalid record units. Byte modifier can only be Bytes, Mega, or Kilo**

Explanation:

An invalid value was specified in the Average Record Unit field. This field specifies the type of record units.

User response:

In the Average Record Unit field, type one of the following valid values: B (bytes), M (megabytes), or K (kilobytes).

BJTZ920H **Invalid autocalc value. Auto calculate must be either Yes or No**

Explanation:

An invalid value was specified in the Auto Calculate field. Only Yes or No is valid.

User response:

Specify Yes if you want to have the space that is required for allocating the archive file automatically calculated. Note that when you specify Yes, Output Manager ignores any values in the Primary Quantity, Average Record Unit, Space Units, and Block Size fields, provided that JES provides the data quantity information that is required for auto calculation.

BJTZ920I **Invalid disposition. Only Catalog or Delete are allowed. Invalid disposition. Only Catalog or Delete are allowed.**

Explanation:

An invalid value was specified in the Abnormal Disposition field on the Archive Attributes Details panel. This field indicates what to do with an archive when a save-to-archive operation fails.

User response:

In the Abnormal Disposition field, type one of the following valid values: - Catalog or C - To make the archive accessible through a catalog - Delete or D - To delete the archive

BJTZ920J **Invalid space release. Only Yes or No are allowed**

Explanation:

An invalid value was specified in the Release Unused Space field. This field indicates whether you want to release unused space.

User response:

In the Release Unused Space field, type either Yes or No.

BJTZ920K **Invalid input. Value must be either Yes or No.**

Explanation:

An invalid value was specified in the Save Criteria field on the Search panel. Only Yes or No is valid.

User response:

Specify Yes or No in the Save Criteria field.

BJTZ920L **Primary quantity can only be 0 if Auto Calculate is used**

Explanation:

A non-zero value was specified in the Primary Quantity field, but Primary Quantity can only be 0 when Auto Calculate is used.

User response:

Either change the Primary Quantity field, or disable Auto Calculate.

BJTZ920M **Average block length can only be used when space units is blocks**

Explanation:

A value was specified in the Average Block Length field, but Space Units must be set to Blocks in order for Average Block Length to be used.

User response:

Either change the Space Units value to Blocks, or remove the value from the Average Block Length field.

BJTZ920T **Banner name required. Name required for banner page entry.**

Explanation:

An invalid value was specified in the Banner name field. Your changes have not been saved.

User response:

Type a valid value in the Banner name field.

BJTZ920U **Member name required. Member name required for banner page entry.**

Explanation:

An invalid value was specified in the member name field. Your changes have not been saved.

User response:

Type a valid value in the member name field.

BJTZ920V **Data set name required. Data set name required for banner page entry.**

Explanation:

An invalid value was specified in the data set name field. Your changes have not been saved.

User response:

Type a the name of the data set that contains the banner page in the data set name field.

BJTZ920X **Invalid type. Type can only be Both, Heading, or Trailing.**

Explanation:

An invalid value was specified in the Type field. This field indicates where the banner page information will be printed. Valid values are Both (before and after the report data), Heading (before the report data only), and Trailing (after the report data only).

User response:

Specify a valid value in the Type field.

BJTZ920S **PRSET Member name required. Name required for PRSET member entry.**

Explanation:

An invalid value was specified in the PRSET Member name field. Your changes have not been saved.

User response:

Type a valid value in the PRSET Member name field.

BJTZ920Y **Member name required. Member name required for PRSET member entry.**

Explanation:

An invalid value was specified in the Member name field. Your changes have not been saved.

User response:

Type a valid value in the Member name field.

BJTZ920Z **Data set name required. Data set name required for PRSET member entry.**

Explanation:

An invalid value was specified in the data set name field. Your changes have not been saved.

User response:

Type a the name of the data set that contains the PRSET member in the data set name field.

BJTZ921 **Invalid mask. Archive attribute mask cannot be blank.**

Explanation:

A blank was specified in a field that cannot be blank.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a valid value in that field.

BJTZ929 **Invalid retention period. Retention period must be zero when GDG or GDGnnn is specified.**

Explanation:

A non-zero value was specified in the retention period field, but retention period must be zero when GDG or GDGnnn is specified.

User response:

Either type 0 in the retention period field, or remove GDG or GDGnnn.

BJTZ930D **Invalid name. A bundle name is required.**

Explanation:

An invalid value was specified in the bundle name field. The field was not inserted into the Output Manager database.

User response:

Type a valid value in the bundle name field.

BJTZ930E **Invalid DD name mask. Only the characters A-Z, #, \$, @, and 0-9 are allowed. The first character must be alphabetic. There must be exactly three characters.**

Explanation:

An invalid value was specified in the DD name mask field on the Bundle Detail panel. This mask must be composed of three characters, beginning with a letter. Alphanumeric characters and national characters (#, \$, @) are allowed. A numeric value is allowed only in characters 2 and 3.

User response:

Type a valid mask in the DD name mask field. This value can be exactly three characters or blank.

BJTZ930F **Invalid input. Only Yes or No are allowed.**

Explanation:

An value was specified in a field that can only have Yes or NO as valid values.

User response:

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify Yes or No in that field.

BJTZ930G **Invalid status. Only Enabled or Disabled are allowed**

Explanation:

An invalid value was specified in the Status field. Only Enabled or Disabled is valid. You can also leave the field blank if you do not want to search for objects based on a status value.

User response:

Specify Enabled or Disabled in the Status field.

BJTZ930I **Invalid input. Only Save, Prompt, or Nosave are allowed.**

Explanation:

An invalid value was specified in the Changes at exit field. Only the following values are valid: - Prompt: Displays a confirmation prompt when you attempt to exit after making changes. You must confirm the changes to save the changes to the Output Manager database. - Save: Automatically saves the changes without first displaying a confirmation prompt. -

Nosave: Automatically discards the changes without first displaying a confirmation prompt.

User response:

Type one of the following valid values in the Changes at exit field: Prompt, Save, or Nosave.

BJTZ930J **Invalid input. Only Delete, Prompt, or Nodelete are allowed**

Explanation:

An invalid value was specified. This field specifies what should happen if an archive table entry points to a data set that is no longer cataloged.

User response

Only the following values are valid:

- - Delete: Deletes the archive table entry
- Nodelete: Retains the archive table entry
- Prompt: Displays a confirmation prompt asking whether or not to delete the entry.

BJTZ930M **Invalid Status. Only Enabled, Disabled, or Skip are allowed.**

Explanation:

An invalid value was specified in the Status field for the rule. Only Enabled, Disabled, and Skip are valid values.

User response:

In the Status field, type either Enabled (to make the rule active and available for processing), Disabled (to make the rule unavailable), or Skip (to skip the rule and continue processing).

BJTZ930N **Invalid match name. Only Yes or No are allowed.**

Explanation:

An invalid value was specified in the Match name field. This field indicates whether Output Manager should match both the Layout Name value and the Report Name value against the corresponding fields in report definitions when capturing basic reports based on SYSOUT from the named job. This field applies only when a layout name is specified.

User response:

Type Yes or No in the Match Name field.

BJTZ930R **Jobname is required**

Explanation:

An invalid value was specified in the job name field. The field was not inserted into the Output Manager database.

User response:

Type a valid value in the job name field.

BJTZ930S **The value is required. At least one of step name, procstep, or step number is required.**

Explanation:

A value is required in at least one of the specified fields for the rule.

User response:

Specify a valid value in at least one of the following fields: Step Name, Proc Step, and Step Number.

BJTZ930T **The value is required. At least one of DD Name, Writer Name, or Form Name is required**

Explanation:

A non-blank, non-wildcard value is required in at least one of the specified fields for the rule.

User response:

Specify a valid non-wildcard value in the DD Name, Writer Name, or Form Name field.

BJTZ931 **Invalid mask. Symbol requires prefix.**

Explanation:

An invalid value was specified in the mask field. The symbol specified requires a prefix.

User response:

Type a prefix before the symbol.

BJTZ932 **Invalid mask. Symbol requires no prefix or postfix**

Explanation:

An invalid value was specified in the mask field. The symbol specified cannot have a prefix.

User response:

Remove the prefix before the symbol.

BJTZ933 **Invalid mask. Unexpected empty token**

Explanation:

A problem occurred during product startup.

User response:

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

BJTZ934 **Invalid mask. Token is too large**

Explanation:

A problem occurred during product startup.

User response:

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

BJTZ935 Invalid mask. Token starts with invalid character

Explanation:

A problem occurred during product startup.

User response:

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

BJTZ936 Invalid mask. Token contains invalid character

Explanation:

A problem occurred during product startup.

User response:

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

BJTZ939 Invalid copies. The Copies value must be a number between 0 and 255

Explanation:

An invalid value was specified in the Copies field on the Recipient Details panel. This field specifies the number of report copies to print for the recipient.

User response:

Specify a number from 0 through 255 in the Copies field. If you accept the default value of zero, the report will be distributed online but will not be printed.

BJTP901I Parm *n*=value

Explanation:

This informational message displays the parameter number and value for a parameter specified in the BJT@BUNP job.

User response:

No response required.

BJTP902I The parameters contain *n* errors. Only the first 10 errors will be displayed.

Explanation:

The parameters specified in the BJT@BUNP job contain more errors than the errors currently displayed. Only the first 10 errors are displayed.

User response:

Resolve the displayed errors and then rerun the BJT@BUNP job.

BJTP903I Duplicate parameters specified, only final value accepted.

Explanation:

A parameter that can be specified only once was specified multiple times. The value specified in the

last instance of the parameter will be used. Previous instances will be ignored.

User response:

Review the BJT@BUNP job and remove duplicate parameters.

BJTP904I Error in DB2CONNECTION. Value is set to CAF.

Explanation:

The value specified for the DB2CONNECTION parameter in BJT@BUNP is invalid.

User response:

Contact Technical Support.

BJTP905I Parm *n* exceeds the maximum acceptable length of *maximum*. The parameter is ignored.

Explanation:

The specified parameter value is invalid.

User response:

Specify a valid value for the parameter. The message text displays the maximum length allowed for this parameter.

BJTP906I Illegal parameter name, ignored.

Explanation:

An invalid valid was specified for a parameter name. The parameter is ignored.

User response:

Review and modify the BJT@BUNP job to ensure that all parameter names are specified correctly.

BJTP907I Illegal DD name, ignored.

Explanation:

An invalid DD name was specified in the SYSPRINT parameter of BJT@BUNP. The DD name is ignored.

User response:

Contact Technical Support.

BJTP908I Parm *n* is missing an ending quote.

Explanation:

The specified parameter requires an end quote, but one was not included.

User response:

Review and modify the BJT@BUNP job to include an end quote in the specified parameter.

BJTP921S Failed connection to Db2 for SSID = *ssid* and PLAN = *plan*

Explanation:

BJTCBUNP failed to connect to the Db2 subsystem specified in the JCL job stream.

User response:

Ensure the DB2SSID and plan name values are correct and resubmit the BJT@BUNP job.

BJTP922S **The UNIX system service returned a failure. It is most likely that the user does not have an OMVS segment. Errno: *n*, Errno2: *n***

Explanation:

The user ID does not have an OMVS segment defined. The user submitting the BJT@BUNP job must have an OMVS segment (RACF). Processing terminates.

User response:

If necessary, contact your report and/or security administrator to request an OMVS segment be added to your profile.

BJTP923S **Failed to allocate common storage.**

Explanation:

BJTCBUNP was unable to allocate storage used by several internal functions. Processing terminates.

User response:

Increase the region size specified in the JCL and rerun the BJT@BUNP job.

BJTP924S **Database error, SQLCODE=*code***

Explanation:

A database error occurred that requires investigation.

User response:

Contact the product administrator. Provide the full text of this message, including the SQL code. If further assistance is needed, contact Technical Support.

BJTP925S **Required *parameter name* parameter missing.**

Explanation:

A required BJTCBUNP parameter was not specified.

User response:

Review and modify the BJT@BUNP job to include the indicated required parameter.

BJTP927S **Error in parameter SYSPRINT=*value***

Explanation:

An error occurred when trying to open the DD name specified in the SYSPRINT parameter of BJT@BUNP, or the DD statement was not included in the JCL.

User response:

Contact Technical Support.

BJTP928S **Invalid DB2OWNER in database.**

Explanation:

A Db2 error occurred. The DB2OWNER value could not be obtained from Db2.

User response:

Specify a valid Db2 subsystem ID in the DB2SSID parameter and a valid value in the DB2PLAN parameter, and resubmit the BJT@BUNP job.

BJTP929S **Error tailoring bundle print job. PRINT_PDS attribute is not configured. | Unable to open *dsn member*.**

Explanation:

An error occurred in the BJTCBUNP program. Either the PRINT_PDS configuration parameter, which specifies the data set name of the library that contains the Output Manager JCL for printing, re-printing, and bundle printing, has not been specified, or the PRINT_PDS data set cannot be opened.

User response:

If PRINT_PDS has not been specified, specify it in the Policy Administration panels (Output Manager ISPF A.PA). If PRINT_PDS has already been specified, ensure that the specified data set is available.

BJTP930S **Dynamic allocation error.**

Explanation:

The BJTCBUNP program was unable to allocate INTRDR in order to submit a bundle print job.

User response:

Determine the cause of the dynamic allocation error. If you cannot correct the error, contact your report administrator or Technical Support.

BJTP931S **User not authorized to *action bundles*.**

Explanation:

The user ID does not have the necessary security permissions to perform the specified action.

User response:

To list bundles, the user must have READ access to the BJT.*bjtownner*.ADM.BUN resource, where *bjtownner* is the name of the owner of the Output Manager Db2 tables. To activate, deactivate or reactivate bundles, the user must have CONTROL access.

BJTP932S **BUNDLE_INSTANCE line not found in *dsn member*.**

Explanation:

A line required by the BJTCBUNP program was missing in the indicated data set name.

User response:

Specify the BUNDLE_INSTANCE line in the indicated data set name, and then resubmit BJT@BUNP.

BJTP933S **Error writing *n* of *m* records to INTRDR.**

Explanation:

An error occurred while attempting to write records to INTRDR.

User response:

Resubmit the BJT@BUNP job. If the error occurs again, contact your system programmer.

BJTP934S **Configuration error. SAF_CLASS attribute is not configured.**

Explanation:

The SAF_CLASS configuration parameter, which specifies the SAF class used by RACF (FACILITY or XFACILIT), is required but has not been specified.

User response:

Specify the SAF_CLASS configuration attribute in the Policy Administration panels (Output Manager ISPF A.PA).

BJTP932S **BUNDLE_INSTANCE line not found in dsn member.**

Explanation:

A line required by the BJTCBUNP program was missing in the indicated data set name.

User response:

Specify the BUNDLE_INSTANCE line in the indicated data set name, and then resubmit BJT@BUNP.

BJTP932S **BUNDLE_INSTANCE line not found in dsn member.**

Explanation:

A line required by the BJTCBUNP program was missing in the indicated data set name.

User response:

Specify the BUNDLE_INSTANCE line in the indicated data set name, and then resubmit BJT@BUNP.

BJTBATCH messages

This section describes the messages that Output Manager generates in the following order:

In all messages, variables are shown in *italics*. Some messages end with one of the following severity codes:

<i>Table 13. Message severity codes</i>	
Severity Code	Description
I	Informational message. No error occurred, and no user action is required. The message is informational only.
W	Warning message. No error occurred but results might not be as expected or incomplete.
E	Error message. Some errors can be corrected by users, for example, by changing the JCL change or a parameter. The User Response provides the suggested course of action. Output may not have been generated.
S	Severe error message. A severe syntax, internal, or environmental error occurred. The User Response provides the suggested course of action. Users may need to call IBM Software Support for assistance in resolving these errors.

BJTP000I **No reports or archives output**

Explanation

No reports or archives were output due to errors.

System action:

Processing completed.

User response

None required.

Module:

BJTBATCH

BJTP001S **An unexpected line was found**

Explanation

A line was encountered in the input that does not comply with any of the valid control statements.

System action:

Processing terminates.

User response

Correct your control statement input stream and resubmit the job.

Module:

BJTBATCH

BJTP002E **The selection criteria did not match, object=*object name* not found [or has not been recalled from ISV product, or ARC.TYPE is not 'A' or 'S']. All information for this object is ignored.**

Explanation

No objects matching the selection criteria were found in the database. The text of this message indicates the name of the object and the object type (archive, report) that was not found.

System action:

All information for this object is ignored. Processing continues.

User response

Specify new selection criteria, then resubmit the job.

Module:

BJTBATCH

BJTP003E **The ddname *DD name* is incorrect. It is either absent in JCL or there are incorrect parameters in the JCL dd-statement. All information for this ddname is ignored**

Explanation

An output ddname does not correspond to the JCL. Either the dd statement is absent, or the parameters of the dd statement prevents working with a file.

System action:

All information for this ddname is ignored. Processing continues.

User response

Correct your control statement input stream and resubmit the job.

Module:

BJTBATCH

BJTP004E **The instance (*number*) is greater than the number of instances (*amount*) for object<*object name*>. Output for this instance is ignored.**

Explanation

The instance number requested, *n*, is greater than the quantity of selected reports (numbering starts with zero).

System action:

Output for this instance is ignored. Processing continues.

User response

Specify a valid instance number and resubmit the Job.

Module:

BJTBATCH

BJTP005S **Page range is invalid: *range***

Explanation

The range format is N, or N:M, or N:, or :M, where N and M are integer numbers and N is to be less than or equal to M. Only a value from 1 to last page are allowed. There is to be no space before and after the ':' (colon) sign, but there must be at least one space between two ranges.

System action:

Processing terminates.

User response

Correct page range in control statement input stream and resubmit the job.

Module:

BJTBATCH

BJTP006S **Invalid instance. Only * (all), 0 (current), - N (Nth prior), or -M:-N (range) are allowed. The maximum value for N or M is 2,147,483,647.**

Explanation

Syntax error.

System action:

Processing terminates.

User response

Correct syntax error and resubmit the job.

Module:

BJTBATCH

BJTP007I **Invalid parameter name, ignored.**

Explanation

The JCL parameter is incorrect. Only DB2SSID, DB2PLAN, DB2OWNER, VERBOSE, CONFIG, DB2CONNECTION, SECURE, SYSPRINT, and BJTIN are allowed.

System action:

Invalid parameter is ignored. Processing continues.

User response

Correct syntax error and resubmit the job.

Module:
BJTBATCH

BJTP008S **The RUNMODE value *value* is invalid. Only OUTPUT, LIST, or PRINT are allowed.**

Explanation

The value specified in the runmode control statement is invalid.

System action:
Processing terminates.

User response

Specify a valid value in the runmode control statement and resubmit the job.

Module:
BJTBATCH

BJTP009E **Invalid ddname specified for SYSPRINT. The ddname either contains a syntax error or exceeds 8 characters. All information for this ddname is ignored.**

Explanation

An invalid ddname was specified. Either the ddname length was greater than the maximum of 8 characters, or there was a syntax error

System action:
Processing continues, but all information for this ddname is ignored.

User response

Correct your syntax error and resubmit the Job.

Module:
BJTBATCH

BJTP010S **Failed to allocate storage for object *object name***

Explanation:
BJTBATCH was unable to allocate local storage for the object.

System action:
Processing terminates.

User response

Resolve the storage allocation error and then resubmit the job.

Module:
BJTBATCH

BJTP011S **Failed connection to DB2 for SSID = *<subsystem>* and PLAN = *<plan name>***

Explanation:
BJTBATCH failed to connect to the DB2 subsystem specified in the JCL job stream.

System action:
Processing terminates.

User response

Ensure the DB2SSID and plan name values are correct and resubmit the job.

Module:
BJTBATCH

BJTP012S **The UNIX system service returned a failure. It is most likely that the user does not have an OMVS segment, Errno: *<number>*, Errno2: *<hex value>***

Explanation:
The specified user ID does not have an OMVS segment defined. The user submitting the batch job must have an OMVS segment (RACF).

System action:
Processing terminates.

User response

If necessary, contact your report and/or security administrator to request an OMVS segment be added to your profile.

Module:
BJTBATCH

BJTP013S **Failed to open BJTIN, processing terminated.**

Explanation:
BJTBATCH was unable to open the dd defined in BJTIN. Either the dd name was incorrect (for example, //BJTIN DD SYSOUT=*), or there is no DD name for BJTIN described in JCL PARM.

System action:
Processing terminates.

User response

Ensure the specification for the BJTIN DD is present and correct, then resubmit the job.

Module:
BJTBATCH

BJTP014S Failed to allocate common storage.

Explanation:
BJTBATCH was unable to allocate common storage.

System action:
Processing terminates.

User response

If you cannot correct the error, contact your report administrator or Technical Support.

Module:
BJTBATCH

BJTP015S An invalid statement was specified in the **OPTIONS** section.

Explanation:
An invalid control statement was found in the OPTIONS section. Valid control statements in the OPTIONS section include DB2PLAN, DB2OWNER, DB2SSID, CONFIG, DB2CONNECTION, SECURE, and VERBOSE.

System action:
Processing terminates.

User response

Remove any invalid control statements from the OPTIONS section and resubmit the job.

Module:
BJTBATCH

BJTP016S The **DB2SSID** statement is invalid.

Explanation:
The DB2SSID control statement must be less than or equal to 4 characters in length.

System action:
Processing terminates.

User response:
Specify a valid DB2 subsystem ID in the DB2SSID control statement and resubmit the job.

Module:
BJTBATCH

BJTP017S The **DB2OWNER** statement is invalid or blank

Explanation:

A syntax error occurred. The DB2OWNER control statement must be less than or equal to 8 characters in length.

System action:
Processing terminates.

User response

Specify a valid DB2 subsystem ID in the DB2SSID control statement and resubmit the job.

Module:
BJTBATCH

BJTP018S The **DB2PLAN** statement is invalid or blank

Explanation:
A syntax error occurred. The DB2PLAN control statement must be less than 8 or equal to characters in length.

System action:
Processing terminates.

User response

Specify a valid DB2PLAN value and resubmit the job.

Module:
BJTBATCH

BJTP019S An invalid statement was specified in the **SELECT** section. *control statement*

Explanation:
An invalid control statement was found in the SELECT section. Valid SELECT control statements include RUNMODE, INSTANCE, PAGES, FORMAT, ARCHIVE, REPORT, ARCHIVE_INSTANCE, REPORT_INSTANCE, SYSOUT_INSTANCE, REPORT_DISTRIBUTION_INSTANCE, BANNER, PRSET, BANNER_VARIABLE, OUTPUT_ATTRIBUTE, BUNDLE_INSTANCE, RECIPIENT, BUNDLE_REPORT_INSTANCE, BUNDLE_MANIFEST_BANNER, RECIPIENT_MANIFEST_BANNER, and DD.

System action:
Processing terminates.

User response

Remove any invalid control statements from the SELECT section and resubmit the job.

Module:
BJTBATCH

BJTP020S **The OPTIONS section is incomplete, specify more parameters.**

Explanation:

The SELECT statement was specified before the OPTIONS section was complete. The required DB2PLAN or DB2SSID control statements are absent both in OPTIONS section and in JCL PARM.

System action:

Processing terminates.

User response

Specify the required control statements in the OPTIONS section and resubmit the job.

Module:

BJTBATCH

BJTP021S **The OPTIONS control statement was specified more than once.**

Explanation:

The OPTIONS section can only be specified only once per invocation of BJTBCH.

System action:

Processing terminates.

User response

Remove any additional OPTIONS control statements from the input and resubmit the job.

Module:

BJTBATCH

BJTP022S **Parentheses do not match**

Explanation:

A parentheses is incomplete, a matched parenthesis is missing.

System action:

Processing terminates.

User response

Correct the input, making sure all parentheses are matched and resubmit the job.

Module:

BJTBATCH

BJTP023S **<statement> is an invalid control statement**

Explanation:

An invalid control statement was specified. Control statements must be less than or equal to 28 characters in length.

System action:

Processing terminates.

User response

Correct your control statement input stream and resubmit the job.

Module:

BJTBATCH

BJTP024S **Invalid input, only comments are allowed before the OPTIONS control statement.**

Explanation:

Invalid input before OPTIONS. Only comments are allowed before the OPTIONS control statement.

System action:

Processing terminates.

User response

Correct the input, removing any invalid control statements before the OPTIONS control statement and then resubmit the job.

Module:

BJTBATCH

BJTP025S **Invalid input after the OPTIONS Section. The SELECT section is expected.**

Explanation:

Invalid input after the OPTIONS section. Only comments and the SELECT control statement are allowed after the OPTIONS section.

System action:

Processing terminates.

User response

Correct the input, removing any invalid control statements between the OPTIONS section and the SELECT control statement and then resubmit the job.

Module:

BJTBATCH

BJTP026W **Invalid DB2OWNER=owner. Computed OWNER=owner.**

Explanation:

The default qualifier in the specified DB2 PLAN is not the same as that specified in the DB2OWNER control statement. Subsequent processing may lead to unspecified results.

System action:

Processing continues.

User response:

Investigate and correct the value(s) specified for the DB2PLAN or DB2OWNER control statements, or remove the DB2OWNER control statement.

Module:
BJTBATCH

BJTP027S **No report or archive has been specified.**

Explanation

No report or archive has been specified. The possible reasons for this error include:

- the SELECT section is empty
- the first control statement in SELECT section is DD
- the control statement INSTANCE, FORMAT, RUNMODE, PAGES, BANNER, or PRSET were specified more than once but none of the ARCHIVE, REPORT, ARCHIVE_INSTANCE, REPORT_INSTANCE, SYSOUT_INSTANCE, or REPORT_DISTRIBUTION_INSTANCE control statements were specified.
- the control statements relating to BUNDLE_INSTANCE were specified before BUNDLE_INSTANCE was specified.

System action:
Processing terminates.

User response:
Correct your Control Statement input stream and resubmit the Job.

Module:
BJTBATCH

BJTP028S **The input stream is incomplete. Some or all of the required control statements were not specified.**

Explanation:
Empty or insufficient input stream. Some or all of the required control statements were not specified.

System action:
Processing terminates.

User response

Correct the input, specifying all required control statements and then resubmit the job.

Module:
BJTBATCH

BJTP029S **Invalid input: successive DD statements**

Explanation:
The input included two successive DD statements with no control statements between them. You must

have at least one report, instance, runmode, format, or page specification control statement between two successive DD statements.

System action:
Processing terminates.

User response

Correct the input and specify at least one report, instance, or page specification control statement between two successive DD statements. Then, resubmit the job.

Module:
BJTBATCH

BJTP030S **There is no parameter in the control statement name control statement.**

Explanation:
There is no value in the ARCHIVE, REPORT, ARCHIVE_INSTANCE, REPORT_INSTANCE, SYSOUT_INSTANCE, or REPORT_DISTRIBUTION_INSTANCE control statement. For example, REPORT().

System action:
Processing terminates.

User response

Correct the input, specifying a value in either the REPORT control statement or the ARCHIVE control statement and then resubmit the job.

Module:
BJTBATCH

BJTP031S **Report name exceeds the maximum length of limit value characters.**

Explanation:
The length of Report name exceeds the limit.

System action:
Processing terminates.

User response

Specify a valid Output Manager report name and then resubmit the job.

Module:
BJTBATCH

BJTP032I **<control statement>**

Explanation

This is an informational message for BJTBTACH echoing the control statement.

System action:

Processing continues.

User response

None required.

Module:

BJTBTACH

BJTP033S **ARCHIVE_INSTANCE is incompatible with RUNMODE(LIST). (Archive_instance = <ARC.ROWID>).**

Explanation:

Only ARCHIVE and REPORT are compatible with RUNMODE(LIST).

System action:

Processing terminates.

User response

Correct parameter of RUNMODE control statement. The correct values are OUTPUT and PRINT.

Module:

BJTBTACH

BJTP034I **The INSTANCE does not apply to ARCHIVE_INSTANCE, ignored. (Archive_instance = <ARC.ROWID>).**

Explanation:

The INSTANCE control statement does not make sense if the parameter of statement to which it relates is taken via Row ID.

System action:

This INSTANCE is ignored. Processing continues.

User response

Correct input, removing this INSTANCE control statement and then resubmit the job.

Module:

BJTBTACH

BJTP035S **The SELECT control statement was specified more than once.**

Explanation:

The control statement 'SELECT:' can only be specified once.

System action:

Processing terminates.

User response

Correct input, removing any additional SELECT control statements and then resubmit the job.

Module:

BJTBTACH

BJTP036S **The DB2SSID statement was specified more than once.**

Explanation:

The control statement DB2SSID can be specified only once in the OPTIONS section.

System action:

Processing terminates.

User response

Correct input, removing any additional DB2SSID control statements from the OPTIONS section and then resubmit the job.

Module:

BJTBTACH

BJTP037S **The DB2OWNER statement was specified more than once.**

Explanation:

The control statement DB2OWNER can be specified only once in the OPTIONS section.

System action:

Processing terminates.

User response

Correct input, removing any additional DB2OWNER control statements from the OPTIONS section and then resubmit the job.

Module:

BJTBTACH

BJTP038S **The DB2PLAN statement was specified more than once.**

Explanation:

The control statement DB2PLAN can be specified only once.

System action:

Processing terminates.

User response

Correct input, removing any additional DB2PLAN control statements and then resubmit the job.

Module:
BJTBATCH

BJTP039S **Unable to process request to DB2. DB2OWNER=owner name may be invalid**

Explanation:

Unable to process request to DB2.

System action:

Processing terminates.

User response

Correct the input, removing any invalid control statements between the OPTIONS section and the SELECT control statement and then resubmit the job.

Module:
BJTBATCH

BJTP040I **The VERBOSE value value is invalid. Only YES or NO are allowed.**

Explanation:

The VERBOSE control statement contained an invalid value. Valid values include NO (tracing is off) and YES (tracing is on).

System action:

Processing terminates.

User response

Specify a valid value in the VERBOSE control statement and resubmit the job.

Module:
BJTBATCH

BJTP041I **The object for OUTPUT_ATTRIBUTE control statements are invalid. All output attributes for <object> <object name> are ignored.**

Explanation:

The control statement OUTPUT_ATTRIBUTE cannot be applied to archive or report.

System action:

All output attributes for this object are ignored. Processing continues.

User response:

Correct input and then resubmit the job.

Module:
BJTBATCH

BJTP042I **The error BTYPE = <banner_processing_option> ' (ROWID = <ROW ID> of the**

BJTBAN table) for <object> BTYPE is set to <value>.

Explanation:

Incorrect value of the banner_processing_option in BTYPE field of the BJTBAN table of data base. This field may contain 'B', 'H', 'T', or space for banner and 'P' – for prset. The object is 'banner' or 'prset'

System action:

Value is set to 'H' for banner and to 'P' for prset. Processing continues.

User response:

If you cannot correct the error, contact your administrator or technical support.

Module:
BJTBATCH

BJTP043W **Invalid page range for instance = <number> of object1=object 1 name [DDNAME=DD name] [, object2=object 2 name]. Any pages requested exceed the highest page count of amount pages are ignored.**

Explanation:

A page range was specified that exceeds the number of pages in the object1, where amount of pages is the number of pages in the object1. Pages that exceed the page range are ignored. The text of this message indicates the object1 (archive, report, archive_instance, report_instance, sysout_instance), and the its name with the invalid page range. If the object1 is archive or report then instance number is present. If the object1 is archive_instance or sysout_instance then object1 name is <ARC.ROWID>, object2 is 'archive'. If the object1 is report_instance then object1 name is <RPT.RID_ID ARC.ROWID>, object2 is 'report'.

System action:

Any pages requested exceed the highest page count of amount pages are ignored. Processing continues.

User response:

Correct input, specifying a valid page count, and then resubmit the job.

Module:
BJTBATCH

BJTP044E **Invalid page range [for instance = <number> of] object1=object 1 name, [, DDNAME=DD name] [,object2=object 2 name. All pages requested exceed the highest page count of amount pages. Output for this instance is ignored.**

Explanation:

The pages requested are not in the page count of the object. No pages will be included in the output, because the pages requested do not exist.

System action:

Output for this instance is ignored. Processing continues.

User response:

Correct input, specifying a valid page range, and then resubmit the job.

Module:

BJTBATCH

BJTP045E **Output failed for [instance = number of] object1 = object name [,DDNAME=DD name] [, object2=object name**

Explanation:

The requested output for the specified object1 failed. The text of this message indicates the object1 (archive, report, archive_instance, report_instance, sysout_instance) and the its name for which output failed.

System action:

Processing terminates.

User response:

If you cannot correct the error, contact your administrator or technical support.

Module:

BJTBATCH

BJTP046I **Output successful for [instance= <number> of] object1=<object name> [,DDNAME=<DD name>] [, object2=<object name>] [, recipient=<BHI.DID_ID>,<recipient name>] [, '<RPT.RID_ID ARC.ROWID>' for recipient=<recipient name> (<did_id>) of bundle=<bundle_instance>' with BINST-(<BINST1>,<BINST2>)].**

Explanation:

The request for object1 was successfully output. The text of this message indicates the object1 (archive, report, archive_instance, report_instance, sysout_instance, bundle_report_instance, report_recipient_instance) and its name.

User response:

No action required.

Module:

BJTBATCH

BJTP047W **Invalid instance range= <range> of object=<object name>. Any instance number greater than the number of instances (<amount>) are ignored.**

Explanation:

The instances requested are not in the instance count for the report. No instances will be included in the output, for the instance requested does not exist.

System action:

Processing continues. Any instances greater than the number of instances *amount* are ignored.

User response:

Correct input, specifying a valid instance range, and then resubmit the job. Note that the instances are numbered from 0.

Module:

BJTBATCH

BJTP048E **The instance range= <range > is greater than the number of instances (amount) for object =<object name>. Output for this instance range is ignored.**

Explanation:

The instances requested are not in the instance count for the object. No instances will be included in the output, for the instance requested does not exist.

System action:

Processing continues. Output for this instance range is ignored.

User response:

Correct input, specifying a valid instance range, and then resubmit the job.

Module:

BJTBATCH

BJTP049I **FORMAT, PAGES, PRSET and BANNER do not apply to RUNMODE(LIST), ignored.**

Explanation:

The FORMAT, PAGES, PRSET, and BANNER control statements are not valid for RUNMODE(LIST), so these invalid statements are ignored.

System action:

Invalid control statement is ignored. Processing continues

User response:

No action is required.

Module:

BJTBATCH

BJTP050S **There is a nonprintable character in position <number>**

Explanation:

A nonprintable character was encountered in position (number) of the report.

System action:

Processing terminates.

User response:

Correct input and then resubmit the job.

Module:

BJTBATCH

BJTP051S **The format length is invalid.**

Explanation:

An invalid format length was specified. The format length must be less than or equal to 24.

System action:

Processing terminates.

User response:

Correct input, specifying a valid format length, and then resubmit the job.

Module:

BJTBATCH

BJTP052E **An I/O error occurred in fldata() for ddname= <ddname>. All information for this ddname is ignored.**

Explanation:

An I/O error occurred in the fldata of the specified ddname for the report or archive.

System action:

Processing continues, all information for this ddname is ignored.

User response:

If you cannot correct the error, contact your administrator or technical support.

Module:

BJTBATCH

BJTP053E **The <object>'<object name>' with LRECL=<length1> cannot be written into the data set of ddname=<DD name> with LRECL=<length>.**

Explanation:

The file DD name was created for writing of the object. The record length of the file, LRECL=length2, is less than the record length of output record (length1).

System action:

The file is not recorded. Processing continues.

User response:

Specify a ddname that has sufficient LRECL (greater than the number specified in the error message), or increase the LRECL of the specified ddname.

Module:

BJTBATCH

BJTP054W **Incorrect type in statement <control statement>. The type is set to 'H'.**

Explanation:

An invalid value of a banner_processing_option was specified in the BANNER (or BUNDLE_MANIFEST_BANNER, or RECIPIENT_MANIFEST_BANNER) statement. Valid values include H (Header), T (Trailing), or B (Both).

System action:

H (Header) will be used for the banner_processing_option.

User response:

Correct banner_processing_option and then resubmit the job.

Module:

BJTBATCH

BJTP055E **An I/O error occurred when opening for ddname=<ddname> (runmode=<runmode> of object=<object name>). The opening used RECFM=<record format>, LRECL=<record length>, BLKSIZE=<block size>**

Explanation:

An I/O error occurred when opening the specified ddname for the specified object. The text of this message indicates the object (archive, report, archive_instance, report_instance, sysout_instance) and its name.

System action:

Processing continues, all information for this instance is ignored.

User response:

If you cannot correct the error, contact your administrator or technical support.

Module:

BJTBATCH

BJTP056I **List successful for object <object name>.**

Explanation:

The LIST request for the object was output successfully.

System action:

Processing continues.

User response:

No action required.

Module:

BJTBATCH

BJTP057S **Archive name exceeds the maximum length of <limit value> characters.**

Explanation:

An invalid archive name was specified in the ARCHIVE control statement. Archive names cannot exceed the number of characters specified in this message.

User response:

Correct input, specifying a valid archive name, and then resubmit the job.

Module:

BJTBATCH

BJTP058E **The ddname <ddname> has an invalid RECFM (must be F or V). All information for this ddname is ignored.**

Explanation:

The ddname specified has an invalid RECFM. Only F or V are valid.

System action:

Processing continues, all information for this ddname is ignored.

User response:

Correct input, specifying a ddname with a valid RECFM, and then resubmit the job.

Module:

BJTBATCH

BJTP059E **The dsname <dsname> is not available for instance <number> object=<object name>. All information for this instance is ignored.**

Explanation:

The data set is not available for the specified object. The text of this message indicates the object (archive, report, archive_instance, report_instance, sysout_instance, bundle_report_instance, report_recipient_instance) and its name. Note that for report_distribution_instance control statement the object is report_recipient_instance.

System action:

Processing continues, all information for this instance is ignored.

User response:

If you cannot correct the error, contact your administrator or technical support.

Module:

BJTBATCH

BJTP060E **The dsname <dsname> has an invalid RECFM (must be F or V) for instance <number> object= <object name>. All information for this instance is ignored.**

Explanation:

The dsname specified has an invalid RECFM. Only F or V are valid. The text of this message indicates the object, its name, and instance number.

System action:

Processing continues, all information for this instance is ignored.

User response:

Correct input, specifying a ddname with a valid RECFM, and then resubmit the job.

Module:

BJTBATCH

BJTP061S **Failed to load the DB2 functions. Please check STEPLIB.**

Explanation:

The JCL STEPLIB is incorrect.

System action:

Processing terminates.

User response:

If you cannot correct the error, contact your administrator or technical support.

Module:

BJTBATCH

BJTP062I **Length of data sent in formattedDataCallback() equals 0.**

Explanation:

A zero-length record was received.

System action:

Processing continues.

User response:

No action is required. If this persists, contact your administrator or technical support.

Module:

BJTBATCH

BJTP063I **Length of data between the delimiters (<size1>) is longer than the record length (<size2>). Function formattedDataCallback(). Data="<text>"**

Explanation:

A longer record than what was expected was returned when reading the archive. The data text specifies part of the file with the wrong text.

System action:

The record is truncated.

User response:

None. If the problem persists, contact your administrator or technical support.

Module:

BJTBATCH

BJTP064I **The delimiter of records is set. Function formattedDataCallback(). The length of the data without the delimiters (<size1>) is longer than the record length (<size2>). Data="<text>".**

Explanation:

The data text specifies part of the file with the wrong text.

System action:

Processing continues.

User response:

Contact your administrator or technical support.

Module:

BJTBATCH

BJTP065E **Format Name <format name> is absent for object= <object name>. Format Name is set to <format name 1>.**

Explanation:

The formatted view specified does not exist for the object specified. An alternative formatted view was used instead.

System action:

Processing continues using the alternative formatted view.

User response:

If you want to specify a different formatted view, correct the input, specifying a valid formatted view for the object, and then resubmit the job.

Module:

BJTBATCH

BJTP066I **The data set <data set name> has RECFM=<record format 1> and DDNAME=<value of DD statement> has RECFM=<record format 2>.**

Explanation:

An archive containing machine control is being output to an output data set defined with ASA control or vice versa.

System action:

Processing continues.

User response:

Check to see if this is the desired behavior. If not, change your processing options appropriately and resubmit the job.

Module:

BJTBATCH

BJTP067I **End BUNDLE <bundle_instance>' BINST=(<BINST1>, <BINST2>).**

Explanation:

This is an informational message

System action:

Processing continues.

User response:

No action is required.

Module:

BJTBATCH

BJTP068I **The parameters contain <count> errors.**

Explanation:

Specifies the number of errors in the JCL parameters.

System action:

Processing continues.

User response:

No action is required.

Module:

BJTBATCH

BJTP069E **An I/O error occurred in fldata() for banner= <data set banner>. This banner is ignored.**

Explanation:

An I/O error occurred in the fldata of the specified data set for the banner, bundle_manifest_banner, or recipient_manifest_banner.

System action:

Processing continues, all information for this banner (or bundle_manifest_banner, or recipient_manifest_banner) is ignored.

User response:

If you cannot correct the error, contact your administrator or technical support.

Module:

BJTBATCH

BJTP070E **An I/O error occurred when opening banner= <data set banner>. All information for this <sterror(errno>. This banner is ignored.**

Explanation:

An I/O error occurred when opening the specified data set for the banner, bundle_manifest_banner, or recipient_manifest_banner. Maybe, this is nonexistent file, or invalid path, or invalid file name, etc.

System action:

Processing continues, all information for this banner (or bundle_manifest_banner, or recipient_manifest_banner) is ignored.

User response:

If you cannot correct the error, contact your administrator or technical support.

Module:

BJTBATCH

BJTP071E **No print attributes found for banner <banner> for object <object name>. This banner is ignored.**

Explanation:

No print attributes were found for the banner (or bundle_manifest_banner, or recipient_manifest_banner) specified for the object. The text of this message indicates the object (archive, report, archive_instance, report_instance, sysout_instance, report_distribution_instance, bundle_instance, recipient, bundle_report_instance) and its name.

System action:

Processing continues, all information for this banner (or bundle_manifest_banner, or recipient_manifest_banner) is ignored.

User response:

If you cannot correct the error, contact your administrator or technical support.

Module:

BJTBATCH

BJTP072E **An I/O error occurred when opening data set for [manifest] banner <data set banner> for archive <object 1> '<object name 1>' [for object2 '<object name 2>'. This banner is ignored.**

Explanation

An I/O error occurred when opening the specified data set for the banner, bundle_manifest_banner, or recipient_manifest_banner. The text of this message indicates the object (archive, report, archive_instance, report_instance, sysout_instance, report_distribution_instance, bundle_instance, recipient, bundle_report_instance) and its name. If the object1 is archive_instance or sysout_instance then object1 name is <ARC.ROWID>.

If the object1 is report_instance then object1 name is <RPT.RID_ID ARC.ROWID>.

If the object1 is bundle then object1 name is (<BINST1>,<BINST2>) bundle name.

If the object1 is recipient object2 is bundle.

System action:

Processing continues, all information for this banner (or bundle_manifest_banner, or recipient_manifest_banner) is ignored.

User response:

If you cannot correct the error, contact your administrator or technical support.

Module:

BJTBATCH

BJTP073E **There is a syntax error in the statement <control statement>.**

Explanation

A syntax error was encountered in the control statement. Possible reasons include:

- If there is the data set name:
 - unpaired brackets
 - empty in brackets
 - data set name length or member name is greater than the allowable (44 and 8 respectively).
- In control statement like attributes and variables:
 - empty in brackets
 - there is no equal sign

System action:

This control statement is ignored.

User response:

Correct syntax error and resubmit the job.

Module:

BJTBATCH

BJTP074I **Illegal dd name, ignored.**

Explanation:

Syntactically incorrect name DD is specified in the JCL parameters.

System action:

Processing continues, all information for this ddname is ignored.

User response:

Correct syntax error and resubmit the job.

Module:

BJTBATCH

BJTP075S **REPORT_INSTANCE is incompatible**

with RUNMODE(LIST).
(Report_instance = <RPT_RID
ARC_ROWID>).

Explanation:

Only 'output' and 'print' are valid value for RUNMODE relating to REPORT_INSTANCE.

System action:

Processing terminates.

User response:

Correct input, specifying a valid RUNMODE value, and then resubmit the job.

Module:

BJTBATCH

BJTP076S Wildcard is suitable to use with RUNMODE(LIST) only. (Wildcard is <criteria>).

Explanation:

Only 'list' is a valid value for RUNMODE if RUNMODE is related to statement containing a wild card.

System action:

Processing terminates.

User response:

Correct input, specifying a valid RUNMODE value, and then resubmit the job.

Module:

BJTBATCH

BJTP077E Search criteria <criteria> does not match any <object>.

Explanation:

There is no object corresponding to criteria. The text of this message indicates the object (archive or report).

System action:

This object is ignored. Processing continues.

User response:

Correct input, specifying a valid criteria, and then resubmit the job.

Module:

BJTBATCH

BJTP078E The BJTBUP table has bad reference = <bupid>. The COPIES is set to 0. Prset is ignored.

Explanation:

There is dangling pointer bupid

System action:

The COPIES output attribute is set to 0. Prset is ignored. Processing continues.

User response:

Contact your administrator or technical support.

Module:

BJTBATCH

BJTP079I No data output for [instance=<number> of] <object1=object1 name> [,DDNAME=<DD name>] [,<object2>=<object2 name>] [, '<RPT.RID_ID ARC.ROWID>' for recipient='<recipient name>'(<did_ID>) of bundle='<bundle_instance>' with BINST=(<BINST1>,<BINST2>)]

Explanation

The output file is empty. Probable cause: the WEB function formattedDataCallback didn't call the special BJTBATCH function formattedDataCallback which is outputting archives and reports (if runmode is output or print). The text of this message indicates the object1 (archive, report, archive_instance, report_instance, sysout_instance, bundle_report_instance, report_recipient_instance) and its name.

If the object1 is archive or report then instance number is present.

If the object1 is archive_instance or sysout_instance then object1 name is <ARC.ROWID>, object2 is 'archive'.

If the object1 is report_instance or report_recipient_instance then object1 name is <RPT.RID_ID ARC.ROWID>, object2 is 'report'.

The DDNAME appears for sysout_instance only.

For report_distribution_instance control statement the object1 is report_recipient_instance.

System action:

Processing continues.

User response:

Contact your administrator or technical support.

Module:

BJTBATCH

BJTP080I SMF Logging <sanction> [using record type <record type>] [because of an invalid SMF configuration]

Explanation:

This is an informational message.

System action:

Processing continues.

User response:

No response required.

Module:
BJTBATCH

BJTP081S **Error in PARM sysprint= <current param>: <strerror(errno)>**

Explanation

The possible reasons:

- There is no the name specified in the parameter SYSPRINT of JCL PARM among the DD names of a job
- DCB of JCL do not match existing file which indicated in DSN
- The job ran on unworthy userid.

System action:

Processing terminates.

User response:

Correct the error and resubmit the job

Module:
BJTBATCH

BJTP082E **An I/O error occurred when opening for prset= <dsname>. <strerror(errno)>. This prset is ignored.**

Explanation:

An I/O error occurred when opening the specified data set for the prset. Maybe, this is nonexistent file, or invalid path, or invalid file name, etc.

System action:

Processing continues, all information for this prset is ignored.

User response:

If you cannot correct the error, contact your administrator or technical support.

Module:
BJTBATCH

BJTP083E **An I/O error occurred when opening for prset <data set name>. For <object> ' <object name>'. This PRSET is ignored.**

Explanation:

An I/O error occurred when opening the specified data set for the prset. The text of this message indicates the object (archive, report, archive_instance, report_instance, sysout_instance, report_distribution_instance, bundle_report_instance) and its name. If the object is archive_instance or sysout_instance then object name is <ARC.ROWID>. If the object is report_instance then object name is <RPT.RID_ID ARC.ROWID>.

System action:

Processing continues, all information for this prset is ignored.

User response:

If you cannot correct the error, contact your administrator or technical support.

Module:
BJTBATCH

BJTP084S **<object> is incompatible with RUNMODE(PRINT). <object> = <object name>.**

Explanation:

Only archive_instance, report_instance, sysout_instance, report_distribution_instance, and bundle_instance are compatible with RUNMODE(PRINT).

System action:

Processing terminates.

User response:

Correct the error and resubmit the job.

Module:
BJTBATCH

BJTP085S **It is not enough memory for the control statement <control statement>.**

Explanation:

Control statement is very long.

System action:

Processing terminates.

User response:

Contact your administrator or technical support if you can't make shorter this control statement.

Module:
BJTBATCH

BJTP086E **A BANNER(*NONE*) makes sense for RUNMODE(PRINT) only. Ignored.**

Explanation:

Only 'print' are valid value for RUNMODE if RUNMODE is related to control statement BANNER containing value *NONE*.

System action:

The control statement BANNER(*NONE*) is ignored. Processing continues.

User response:

Correct the error and resubmit the job.

Module:
BJTBATCH

BJTP087S **There is a syntax error in statement <control statement>.**

Explanation

A syntax error was encountered in the control statement. Possible reasons include:

- there is no equal-sign in parameter of RECIPIENT control statement
- a space has crept into the parameter name of RECIPIENT control statement
- the invalid parameter name of RECIPIENT control statement
- invalid characters in the numbers or the number is not in the interval [-2147483648,2147483647]
- there is no value in the BUNDLE_INSTANCE, RECIPIENT, or BUNDLE_REPORT_INSTANCE control statement
- there is only one parameter instead two in BUNDLE_INSTANCE or REPORT_INSTANCE control statement.

System action:

Processing terminates.

User response:

Correct the error and resubmit the job.

Module:

BJTBATCH

BJTP088E **A PRSET(*NONE*) makes sense for RUNMODE(PRINT) only. Ignored.**

Explanation:

Only 'print' are valid value for RUNMODE if RUNMODE is related to control statement PRSET containing value *NONE*.

System action:

The control statement PRSET (*NONE*) is ignored. Processing continues.

User response:

Correct the error and resubmit the job.

Module:

BJTBATCH

BJTP089S **Only RUNMODE(PRINT) is valid for OUTPUT_ATTRIBUTE.**

Explanation:

The OUTPUT_ATTRIBUTE control statement needs RUNMODE(PRINT) and DD(*).

System action:

Processing terminates.

User response:

Correct the error and resubmit the job.

Module:

BJTBATCH

BJTP090I **The quantity of parameters has exceeded admissible, equal <value>.**

Explanation:

The number of parameters in JCL is more than it is provided by the program. Probably, any parameter is written twice.

System action:

Processing continues.

User response:

Correct the error and resubmit the job.

Module:

BJTBATCH

BJTP091E **Space in the name is not valid. Ignored control statement <control statement>.**

Explanation:

There should be no spaces in the parameter name of BANNER_VARIABLE or OUTPUT_ATTRIBUTE control statement.

System action:

This control statement is ignored. Processing continues.

User response:

Correct the error and resubmit the job.

Module:

BJTBATCH

BJTP092I **The OUTPUT_ATTRIBUTE control statements must follow one after another without interrupt. Illegal statement <control statement> is ignored.**

Explanation:

The output attributes related to the same object should not be mixed with any other control statements.

System action:

All OUTPUT_ATTRIBUTE control statements, which have appeared after a control statement which have interrupted them, are ignored. Processing continues.

User response:

Correct the error and resubmit the job.

Module:

BJTBATCH

BJTP093E **Only DD(*) is compatible with OUTPUT_ATTRIBUTE. All output attributes are ignored. [(<object>=<object name>)] [(BINST1=<value1> BINST2=<value2>)].**

Explanation:

The OUTPUT_ATTRIBUTE control statement needs RUNMODE(PRINT) and DD(*).

System action:

All output attributes are ignored. Processing continues.

User response:

Correct the error and resubmit the job.

Module:

BJTBATCH

BJTP094E **An I/O error occurred in fldata() for prset=<data set>. This PRSET is ignored.**

Explanation:

An I/O error occurred in the fldata of the specified data set for the prset.

System action:

Processing continues, all information for this prset is ignored.

User response:

If you cannot correct the error, contact your administrator or technical support.

Module:

BJTBATCH

BJTP095E **The bundle_instance <BINST1 BINST2> is absent. All information for this bundle_instance is ignored.**

Explanation:

The bundle with the specified parameters has been found.

System action:

All information for this bundle_instance is ignored. Processing continues.

User response:

If you cannot correct the error, contact your administrator or technical support.

Module:

BJTBATCH

BJTP096W **Invalid deliver with did_id=<BHI®.DID_ID> for bundle_instance <(BINST1 BINST2)bundle name>. All information for this delivery is ignored.**

Explanation:

There is a dangling pointer.

System action:

All information for this delivery is ignored. Processing continues.

User response:

If you cannot correct the error, contact your administrator or technical support.

Module:

BJTBATCH

BJTP097E **The recipient <type> <value> for bundle_instance <(BINST1 BINST2) bundle name> is absent. All information for this bundle_instance is ignored.**

Explanation:

The recipient with the specified parameter has been found.

System action:

All information for this bundle_instance is ignored. Processing continues.

User response:

If you cannot correct the error, contact your administrator or technical support.

Module:

BJTBATCH

BJTP098E **The bundle_report_instance(*) for recipient(*) for bundle_instance <(BINST1 BINST2) bundle name> is absent. All information for this bundle report instance is ignored.**

Explanation:

There are no reports for this bundle.

System action:

All information for this bundle report instance is ignored. Processing continues.

User response:

Contact your administrator or technical support.

Module:

BJTBATCH

BJTP099E **The bundle_report_instance(*) for recipient with did_id=<BHI.DID_ID> name=<recipient name> for bundle_instance<(BINST1 BINST2) bundle name> is absent. All information for this bundle report instance is ignored.**

Explanation:

There are no reports for this bundle.

System action:

All information for this bundle report instance is ignored. Processing continues.

User response:

Contact your administrator or technical support.

Module:
BJTBATCH

BJTP100E **The bundle_report_instance (<BHI.ROWID>) for recipient with did_id=<BHI.DID_ID>, name=<name> for bundle_instance (<BINST1 BINST2) bundle name> is absent. All information for this bundle report instance is ignored.**

Explanation:
There is no report with such number at this recipient.

System action:
All information for this bundle report instance is ignored. Processing continues.

User response:
If you cannot correct the error, contact your report administrator or Technical Support.

Module:
BJTBATCH

BJTP101E **The BJTBAN table object is not present=<value>. This <object> is ignored.**

Explanation:
The banner or PRSET member referenced has been deleted.. The object is ' banner' or 'prset'.

System action:
This object is ignored. Processing continues.

User response:
If you cannot correct the error, contact your report administrator or Technical Support.

Module:
BJTBATCH

BJTP102E **No print attributes found for opening dynamic ddname. (runmode= PRINT of <object> = <object name>)**

Explanation:
No print attributes assigned for user found in database for automatic printing.

System action:
Processing continues.

User response:
Assign print attributes or contact your administrator or technical support.

Module:
BJTBATCH

BJTP103E **The error occurred when opening dynamic ddname. (runmode= PRINT of <object>**

= <object name>). The opening used LRECL=<value>, Machine=<yes/no>

Explanation:
An I/O error occurred when opening ddname for automatic printing of the object.

System action:
Processing continues.

User response:
Contact your administrator or technical support.

Module:
BJTBATCH

BJTP104I **The OUTPUT_ATTRIBUTE control statement is not allowed for the recipient. The control statement <control statement> is ignored.**

Explanation:
The recipient cannot have output attributes.

System action:
The output attribute is ignored. Processing continues.

User response:
No action is required.

Module:
BJTBATCH

BJTP105S **Invalid RECIPIENT: when RECIPIENT(*) is specified, additional RECIPIENT statements are invalid.**

Explanation:
When RECIPIENT is specified with an asterisk, RECIPIENT(*), you cannot add additional recipients to the bundle.

System action:
Processing terminates.

User response:
Correct the error and resubmit the job.

Module:
BJTBATCH

BJTP106S **Invalid location of control statement <control statement>.**

Explanation:
The specified control statement cannot be specified in its current location in relation to prerequisite control statements. For example, the BUNDLE_INSTANCE statement cannot be absent when RECIPIENT, or BUNDLE_REPORT_INSTANCE, or BUNDLE_MANIFEST_BANNER, or RECIPIENT_MANIFEST_BANNER is specified. As well, Prset cannot be specified after the bundle or recipient, but before the bundle_report_instance.

System action:
Processing terminates.

User response:
Correct the error and resubmit the job.

Module:
BJTBATCH

BJTP107S **Invalid
BUNDLE_REPORT_INSTANCE.**

Explanation:
The parameter of this control statement must be the number from the interval [-2147483648,2147483647];

System action:
Processing terminates.

User response:
Correct the error and resubmit the job.

Module:
BJTBATCH

BJTP108S **There should be no other
BUNDLE_REPORT_INSTANCE
for RECIPIENT if the
BUNDLE_REPORT_INSTANCE(*)
has been specified.**

Explanation:
The recipient cannot have several occurrences of bundle_report_instance if it has a bundle_report_instance with an asterisk.

System action:
Processing terminates.

User response:
Correct the error and resubmit the job.

Module:
BJTBATCH

BJTP109I **The INSTANCE control
statement does not apply
to REPORT_INSTANCE, ignored.
(Report_instance = <RPT.RID_ID
ARC.ROWID>).**

Explanation:
The INSTANCE control statement is invalid when the parameter of the related statement is derived via Row ID.

System action:
The INSTANCE control statement is ignored.
Processing continues.

User response:
No action is required.

Module:
BJTBATCH

BJTP110I **The INSTANCE control
statement does not
apply to BUNDLE_INSTANCE,
ignored. (BINST1=<value1>
BINST2=<value2>)**

Explanation:
The INSTANCE control statement is not valid for BUNDLE_INSTANCE.

System action:
The INSTANCE control statement is ignored.
Processing continues.

User response:
No action is required.

Module:
BJTBATCH

BJTP111I **The PAGES control statement does
not apply to BUNDLE_INSTANCE,
ignored. (BINST1=<value1>
BINST2=<value2>)**

Explanation:
The PAGES control statement is not valid for BUNDLE_INSTANCE.

System action:
The PAGES control statement is ignored. Processing continues.

User response:
No action is required.

Module:
BJTBATCH

BJTP112I **The SECURE value is invalid. Only
'YES' or 'NO' is allowed. Value is
set to <value>.**

Explanation:
Invalid parameter is in SECURE control statement.

System action:
If several values are set, the value is equal to the previous value. If a previous value is not present, then the value is set to "NO". Processing continues.

User response:
Correct the error and resubmit the job.

Module:
BJTBATCH

BJTP113I **The INSTANCE control statement
does not apply to
REPORT_DISTRIBUTION_INSTAN
CE, ignored.
(Report_distribution_instance =
<ARC.ROWID>).**

Explanation:

The INSTANCE control statement is not valid if the parameter of the statement to which it relates is taken via Row ID.

System action:

This INSTANCE control statement is ignored. Processing continues.

User response:

No response required.

Module:

BJTBATCH

BJTP114I **The FORMAT control statement does not apply to REPORT_DISTRIBUTION_INSTANCE, ignored. (Report_distribution_instance = <ARC.ROWID>).**

Explanation:

The FORMAT control statement is not valid for REPORT_DISTRIBUTION_INSTANCE.

System action:

The FORMAT control statement is ignored. Processing continues.

User response:

No response required.

Module:

BJTBATCH

BJTP115S **Invalid runmode. Only PRINT is allowed for BUNDLE_INSTANCE.**

Explanation:

Only PRINT is correct for RUNMODE relating to BUNDLE_INSTANCE.

System action:

Processing terminates.

User response:

Correct error and resubmit the job.

Module:

BJTBATCH

BJTP116S **Invalid runmode. Only PRINT is allowed for DD(*).**

Explanation:

: Only PRINT is correct for RUNMODE relating to DD(*).

System action:

Processing terminates.

User response:

Correct error and resubmit the job.

Module:

BJTBATCH

BJTP117I **The FORMAT control statement does not apply to BUNDLE_INSTANCE, ignored. (BINST1=<value1> BINST2=<value2>).**

Explanation:

The FORMAT control statement is not valid for BUNDLE_INSTANCE.

System action:

The FORMAT control statement is ignored. Processing continues.

User response:

Correct error and resubmit the job.

Module:

BJTBATCH

BJTP118I **BJTBATCH <LEVEL> <day of the week> <MMM>MDD><TT:TT:TT><YYYY>**

Explanation:

This is an informational message.

System action:

Processing continues.

User response:

No action required.

Module:

BJTBATCH

BJTP119E **An I/O error occurred when opening for ddname=<DD name> (runmode=<runmode> of <object>=<object name>). Insufficient access authority for writing into the specified file.**

Explanation:

An I/O error occurred because of insufficient access authority for writing when opening the specified ddname for the object.

System action:

Processing continues.

User response:

Contact your administrator or technical support.

Module:

BJTBATCH

BJTP120I **The function writeFormattedReportOrArchive did not call the function formattedDataCallback for [instance=<number> of] <object>=<value1[<value2>] [,DDNAME=<DD name>] [,<object2>=<object2 name>].**

Explanation:

Internal error.

System action:

Processing continues.

User response:

Contact your administrator or technical support.

Module:

BJTBATCH

BJTP121S

You do not have access to BJTBATCH. Contact your administrator.

Explanation

You do not have permission to run BJTBATCH. The user ID that ran this job does not have the required access to any of the RACF profiles associated with BJTBATCH. These profiles include:

- BJT.<DBQUAL>.VIEW.ARCH
- BJT.<DBQUAL>.VIEW.RPRT
- BJT.<DBQUAL>.ADM.BUN

If the user ID has access to one of these profiles and they attempt an operation that requires authority for a profile that they do not have access to, an additional, more specific, message is also emitted.

System action:

Processing terminates.

User response

Contact your administrator or technical support.

Tip: If this message came from the started task while performing automatic printing, ensure that the started task user ID has ALTER access to BJT.<DBQUAL>.VIEW.RPRT.

Module:

BJTBATCH

BJTP122I

All banner_variables statements must be grouped together, without interruption. The banner_variable <name>=<value> is ignored.

Explanation:

The banner variables related to the same object should not be mixed with any other control statements.

System action:

The banner variable is ignored. Processing continues.

User response:

Correct error and resubmit the job.

Module:

BJTBATCH

BJTP123E

You do not have access to archives. All archive operations are ignored. Contact your administrator.

Explanation:

You do not have permission to have an input stream in the control statements ARCHIVE, ARCHIVE_INSTANCE.

System action:

The inaccessible control statement is ignored. Processing continues.

User response:

Contact your administrator or technical support.

Module:

BJTBATCH

BJTP124E

You do not have access to reports, all report operations are ignored. Contact your administrator.

Explanation:

You do not have permission to have in input stream the control statements REPORT, REPORT_INSTANCE, SYSOUT_INSTANCE.

System action:

The inaccessible control statement is ignored. Processing continues.

User response:

Contact your administrator or technical support.

Module:

BJTBATCH

BJTP125I

The PAGES control statement does not apply to REPORT_DISTRIBUTION_INSTANCE, ignored. (Report_distribution_instance =<ARC.ROWID>).

Explanation:

The PAGES control statement is not valid for REPORT_DISTRIBUTION_INSTANCE.

System action:

The PAGES control statement is ignored. Processing continues.

User response:

Correct the error and resubmit the job.

Module:

BJTBATCH

BJTP126S

BJTP126S Only RUNMODE(PRINT) is valid for REPORT_DISTRIBUTION_INSTANCE

CE. (Report_distribution_instance = < value>).

Explanation:

The REPORT_DISTRIBUTION_INSTANCE control statement may be used with RUNMODE(PRINT) and DD(*) only.

System action:

Processing terminates.

User response:

Correct the error and resubmit the job.

Module:

BJTBATCH

BJTP127S Only DD(*) is compatible with REPORT_DISTRIBUTION_INSTANCE. (Report_distribution_instance = <value>).

Explanation:

The REPORT_DISTRIBUTION_INSTANCE control statement may be used with RUNMODE(PRINT) and DD(*) only.

System action:

Processing terminates.

User response:

Correct the error and resubmit the job.

Module:

BJTBATCH

BJTP128E You do not have access to report_distribution_instance, all report_distribution_instance operations are ignored. Contact your administrator.

Explanation:

You do not have permission to have an input stream in the control statement REPORT_DISTRIBUTION_INSTANCE.

System action:

REPORT_DISTRIBUTION_INSTANCE is ignored. Processing continues.

User response:

Contact your administrator or technical support. The user ID of the started task must have ALTER privileges to to BJT.<DB_QUALIFIER>.VIEW.RPRT, as well as READ access to BJT.DB_QUALIFIER>.RPRT.*

Module:

BJTBATCH

BJTP129I There are no reports for archive with id=<ARC.ROWID>.

Explanation:

No reports were found when processing the REPORT_DISTRIBUTION_INSTANCE control statement.

System action:

Processing continues.

User response:

Contact your administrator or technical support.

Module:

BJTBATCH

BJTP130I Begin reports (count = <count> with distribution list for archive '<archive name>', id=<ARC.ROWID> [(total=<count2>). You do not have access to reports (count=<count3>)].

Explanation:

Information on a beginning of processing of the REPORT_DISTRIBUTION_INSTANCE control statement.

System action:

Processing continues.

User response:

None.

Module:

BJTBATCH

BJTP131I End reports with distribution list for archive <archive name>, id=<ARC_ROWID>.

Explanation:

Information on completion of processing of the REPORT_DISTRIBUTION_INSTANCE control statement.

System action:

Processing continues.

User response:

None.

Module:

BJTBATCH

BJTP132I Distribution list <name>, id=<LIST_ID> for report <report name> has no recipient with HARDCOPY=Y.

Explanation:

The distribution list (by name) in LIST_ID column (table BJTDST) pointed by RID_ID (table BJTRPT) is either empty or all elements have HARDCOPY 'N'.

System action:

Processing continues.

User response:

If you cannot correct the error, contact your report administrator or Technical Support.

Module:

BJTBATCH

BJTP133I **Number of recipients with Hardcopy = Y for report <report name>, id=<RPT_RID_ID> and distribution list <name>, id=<DIST.LIST_IN> is <count>.**

Explanation:

This is an informational message.

System action:

Processing continues.

User response:

No response required.

Module:

BJTBATCH

BJTP134E **Only DD(*) is compatible with OUTPUT_ATTRIBUTE. OUTPUT_ATTRIBUTE is ignored for bundle_report_instance (<BJTBHI.ROWID>, in bundle_instance=<BINST1 BINST2> .**

Explanation:

The OUTPUT_ATTRIBUTE control statement requires RUNMODE(PRINT) and DD(*).

System action:

All output attributes for this bundle_report_instance are ignored. Processing continues.

User response:

No response required.

Module:

BJTBATCH

BJTP135I **Error in Db2connection. Value is set to <value>.**

Explanation:

Invalid parameter is in DB2CONNECTION control statement. The parameter of DB2CONNECTION control statement may be only CAF or RRSAF.

System action:

If several values are set the value is equal to previous value. If previous value isn't present the value is equal to "CAF". Processing continues.

User response:

Correct an error and resubmit the job.

Module:

BJTBATCH

BJTP136I **When no value is specified in the control statements BANNER, BUNDLE_MANIFEST_BANNER, and RECIPIENT_MANIFEST_BANNER, banner_variables is not required. Control statement is ignored.**

Explanation:

Informational message.

System action:

Processing continues.

User response:

If you need banner_variables then change *NONE* by file name containing a banner.

Module:

BJTBATCH

BJTP137I **Invalid statement <control statement> is ignored.**

Explanation:

The banner, or manifest, or banner_variable is not in the right location.

System action:

Processing continues.

User response:

Correct the error and resubmit the job.

Module:

BJTBATCH

BJTP138I **Parm(<parm>) exceeds the maximum acceptable length of <nnn>. The parameter is ignored.**

Explanation:

The common length of all JCL parameters must be equal or less than nnn.

System action:

Processing continues.

User response:

Correct the error and resubmit the job.

Module:

BJTBATCH

BJTP139E **You do not have access to <object> (runmode=<runmode>) of <object name> [for instance=-<number>].**

Explanation:

You do not have access to the object displayed in the message text.

System action:

Processing continues.

User response:

Contact your administrator or technical support.

Module:
BJTBATCH

BJTP140I **The length of CONFIG exceeds the maximum length of 24. Value is set to <value>.**

Explanation:
Invalid parameter is in CONFIG control statement. The parameter of CONFIG control statement may be equal or less 24 character of length.

System action:
If several values are set the value is equal to previous value. If previous value isn't present the value is equal to an asterisk ("*"). Processing continues.

User response:
Correct the error and resubmit the job.

Module:
BJTBATCH

BJTP141I **The INSTANCE control statement does not apply to SYSOUT_INSTANCE, ignored. (sysout_instance = <arcrowid>).**

Explanation:
The INSTANCE control statement is not valid if the parameter of statement to which it relates is taken via Row ID.

System action:
This INSTANCE is ignored. Processing continues.

User response:
Correct input, removing this INSTANCE control statement and then resubmit the job.

Module:
BJTBATCH

BJTP142S **SYSOUT_INSTANCE is incompatible with RUNMODE(LIST). (Sysout_instance = <arcrowid>).**

Explanation:
Only ARCHIVE and REPORT are compatible with RUNMODE(LIST).

System action:
Processing continues.

User response:
Correct parameter of RUNMODE control statement. The correct values are OUTPUT and PRINT.

Module:
BJTBATCH

BJTP143E **You do not have access to bundles, all bundle operations are ignored. Contact your administrator.**

Explanation:
You do not have permission to have in input stream the control statement BUNDLE_INSTANCE.

System action:
BUNDLE_INSTANCE is ignored. Processing continues.

User response:
Contact your administrator or technical support.

Module:
BJTBATCH

BJTP144I **You do not have access to all reports (count = <count> for archive <archive name>, id=<ARC_ROWID>).**

Explanation:
This message concerns only to the report_distribution_instance. Denied access to all reports of this archive.

System action:
Processing continues.

User response:
Contact your administrator or technical support.

Module:
BJTBATCH

BJTP145 **GTF is [not] active.**

Explanation:
This is an informational message.

System action:
Processing continues.

User response:
No action is required.

Module:
BJTBATCH

BJTP146I **REPACCID='<REPACCID>' is in force. Local ARA will be used.**

Explanation:
This is an informational message.

System action:
Processing continues.

User response:
No action is required.

Module:
BJTBATCH

BJTP147I **ARAS not connected.**

Explanation:
This is an informational message.

System action:
Processing continues.

User response:
No action is required.

Module:
BJTBATCH

BJTP148I Failed to get data set
dcb info, dsname=<dsname>,
[function=<error_function>,
code=<error_code>]
[recfm=<record format>,
lrecl=<record size> (includes
rdw), blocksize=<block size>]

Explanation:
A file containing an archive cannot be read.

System action:
Processing continues.

User response:
Contact your administrator or technical support.

Module:
BJTBATCH

BJTP149I End
RECIPIENT=<recipient>(<did_id>
of BUNDLE='<bundle_instance>',
BINST=(<BINST1, BINST2>).

Explanation:
Information on completion of processing of the
RECIPIENT control statement.

System action:
Processing continues.

User response:
No response is required.

Module:
BJTBATCH

BJTP150I The name <attribute name> is
not present among attributes.
The control statement <control
statement> is ignored.

Explanation:
There is no such name in the table of attributes.

System action:
Processing continues.

User response:
Correct the error and resubmit the job.

Module:
BJTBATCH

BJTP151I The <object> <object name> may
not be overridden. The control
statement <control statement> is
ignored.

Explanation:

The new value of this object is invalid..

System action:
The new value is not set. Processing continues.

User response:
No response is required.

Module:
BJTBATCH

BJTP152I The value must be numeric
in range from <lower value>
to <upper value>. The control
statement <control statement> is
ignored.

Explanation:
A value exceeded the bounds or it is not numeric.

System action:
The control statement is ignored. Processing
continues.

User response:
Correct the error and resubmit the job.

Module:
BJTBATCH

BJTP153I The length of the value must not
be less than <n1>, and not more
than <n2>. The control statement
<control statement> is ignored.

Explanation:
A length of the value exceeded the bounds.

System action:
The control statement is ignored. Processing
continues.

User response:
Correct the error and resubmit the job.

Module:
BJTBATCH

BJTP154I Only alphanumeric characters are
allowed. The control statement
<control statement> is ignored.

Explanation:
Wrong character met in the value.

System action:
The control statement is ignored. Processing
continues.

User response:
Correct the error and resubmit the job.

Module:
BJTBATCH

BJTP155I Only alphanumeric or national (\$,
#, @) characters are allowed.

The control statement <control statement> is ignored.

Explanation:

Wrong character met in the value.

System action:

The control statement is ignored. Processing continues.

User response:

Correct the error and resubmit the job.

Module:

BJTBATCH

BJTP156I **Only alphanumeric, national (\$, #, @) characters, and hyphen are allowed. The control statement <control statement> is ignored.**

Explanation:

Wrong character met in the value.

System action:

The control statement is ignored. Processing continues.

User response:

Correct the error and resubmit the job.

Module:

BJTBATCH

BJTP157I **The first character must be alphabetic or national (\$, #, @). The control statement <control statement> is ignored.**

Explanation:

Wrong character met in the value.

System action:

The control statement is ignored. Processing continues.

User response:

Correct the error and resubmit the job.

Module:

BJTBATCH

BJTP158I **Only Yes or No is allowed. The control statement <control statement> is ignored.**

Explanation:

Control statement contained an invalid value. Valid values include YES and NO.

System action:

The control statement is ignored. Processing continues.

User response:

Correct the error and resubmit the job.

Module:

BJTBATCH

BJTP159I **Only PROGRAM, SINGLE, DOUBLE, or TRIPLE is allowed. The control statement <control statement> is ignored.**

Explanation:

Control statement contained an invalid value. Valid values include PROGRAM, SINGLE, DOUBLE, and TRIPLE.

System action:

The control statement is ignored. Processing continues.

User response:

Correct the error and resubmit the job.

Module:

BJTBATCH

BJTP160I **Only BLOCK, UNBLOCK, BLKCHAR, or BLKPOS is allowed. The control statement <control statement> is ignored.**

Explanation:

Control statement contained an invalid value. Valid values include BLOCK, UNBLOCK, BLKCHAR, and BLKPOS

System action:

The control statement is ignored. Processing continues.

User response:

Correct the error and resubmit the job.

Module:

BJTBATCH

BJTP161I **Only NO, NORMAL, or TUMBLE is allowed. The control statement <control statement> is ignored.**

Explanation:

Control statement contained an invalid value. Valid values include NO, NORMAL, and TUMBLE.

System action:

The control statement is ignored. Processing continues.

User response:

Correct the error and resubmit the job.

Module:

BJTBATCH

BJTP162I **Only IN or CM is allowed. The control statement <control statement> is ignored.**

Explanation:

Control statement contained an invalid value. Valid values include IN and CM.

System action:

The control statement is ignored. Processing continues.

User response:

Correct the error and resubmit the job.

Module:

BJTBATCH

BJTP163I **Only WRITE, HOLD, KEEP, LEAVE, or PURGE is allowed. The control statement <control statement> is ignored.**

Explanation:

Control statement contained an invalid value. Valid values include WRITE, HOLD, KEEP, LEAVE, and PURGE.

System action:

The control statement is ignored. Processing continues.

User response:

Correct the error and resubmit the job.

Module:

BJTBATCH

BJTP164I **Only QUIT or HOLD is allowed. The control statement <control statement> is ignored.**

Explanation:

Control statement contained an invalid value. Valid values include QUIT and HOLD.

System action:

The control statement is ignored. Processing continues.

User response:

Correct the error and resubmit the job.

Module:

BJTBATCH

BJTP165I **Only P240 or P300 is allowed. The control statement <control statement> is ignored.**

Explanation:

Control statement contained an invalid value. Valid values include P240 and P300.

System action:

The control statement is ignored. Processing continues.

User response:

Correct the error and resubmit the job.

Module:

BJTBATCH

BJTP166I **Only ON or OFF is allowed. The control statement <control statement> is ignored.**

Explanation:

Control statement contained an invalid value. Valid values include ON and OFF.

System action:

The control statement is ignored. Processing continues.

User response:

Correct the error and resubmit the job.

Module:

BJTBATCH

BJTP167I **Invalid value for WRITER. The control statement <control statement> is ignored.**

Explanation:

Wrong character met in the value. Only A-Z, #, \$, @, 0-9 are allowed. The values INTRDR, STDWTR, NJERDR are not allowed.

System action:

The control statement is ignored. Processing continues.

User response:

Correct the error and resubmit the job.

Module:

BJTBATCH

BJTP168I **The length of the qualifier should be between 1-8. The control statement <control statement> is ignored.**

Explanation

- For data set: Each qualifier should consist of 1 to 8 alphanumeric, or national (\$, #, @) characters, or a hyphen and the first must be alphabetic or national (\$, #, @).
- For NOTIFY: The value must be in format {NODE.}USERID, where both NODE and USERID must be a valid name: up to eight alphanumeric characters (A-Z, #, \$, @, 0-9). The first character must be alphabetic (A-Z, \$, @, or #).

System action:

The control statement is ignored. Processing continues.

User response:

Correct the error and resubmit the job.

Module:

BJTBATCH

BJTP169I **The time has invalid format.
The control statement <control
statement> is ignored.**

Explanation

The time must be in format HHHH:MM:SS

<HHHH> 0-9999

<MM> 0-59

<SS> 0-59

Also, the 'FOREVER' value is allowed for the output attributes RETAINF and RETAINS.

System action:

The control statement is ignored. Processing continues.

User response:

Correct the error and resubmit the job.

Module:

BJTBATCH

BJTP170I **First character must be slash (/).
The control statement <control
statement> is ignored.**

Explanation:

The first character in a path must be a slash. The path can be specified as a maximum of 255 characters including any blank characters.

System action:

The control statement is ignored. Processing continues.

User response:

Correct the error and resubmit the job.

Module:

BJTBATCH

BJTP171I **Invalid DEST format. The control
statement <control statement> is
ignored.**

Explanation:

DEST=IP:ipaddr | name.IP:ipaddr | name | name.name
ipaddr – can be any printable character string of from 1 to 124 characters. name – 1 through 8 alphanumeric or national (\$, #, @) characters. The first character must be alphabetic (A-Z, \$, @, or #).

System action:

The control statement is ignored. Processing continues.

User response:

Correct the error and resubmit the job.

Module:

BJTBATCH

BJTP172I **The first character of each
qualifier should be alphabetic or
national (\$, #, @). The control
statement <control statement> is
ignored.**

Explanation

- For data set: Each qualifier should consist of 1 to 8 alphanumeric, or national (\$, #, @) characters, or a hyphen and the first must be alphabetic or national (\$, #, @).
- For NOTIFY: The value must be in format {NODE.}USERID, where both NODE and USERID must be a valid name: up to eight alphanumeric characters (A-Z, #, \$, @, 0-9). The first character must be alphabetic (A-Z, \$, @, or #).

System action:

The control statement is ignored. Processing continues.

User response:

Correct the error and resubmit the job.

Module:

BJTBATCH

BJTP184E **The REPORT_TYPE value is
invalid. Only 'BASIC', 'CUSTOM',
'UNDEFINED', or '*' is allowed. The
control statement REPORT_TYPE
is ignored. Value is set to '*'.**

Explanation:

The value specified in the report_type control statement is invalid.

System action:

Processing terminates.

User response:

Specify a valid value in the report_type control statement and resubmit the job.

Module:

BJTBATCH

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