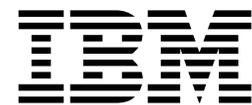
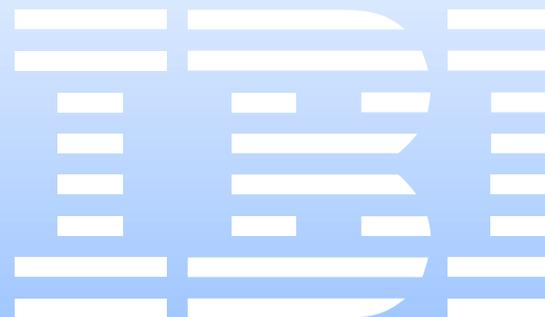


Output Manager for z/OS



# User's Guide

*Version 2 Release 1*





Output Manager for z/OS



# User's Guide

*Version 2 Release 1*

**Note!**

Before using this information and the product it supports, be sure to read the general information under Appendix B, "Notices," on page 253.

**First Edition (March 2004)**

This edition applies to Version 2, Release 1 of IBM® Output Manager for z/OS (product number SC18-9200-00) and to all subsequent releases and modifications until otherwise indicated in new editions.

This edition replaces SC18-7251-03 and GC18-7281-03.

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# Contents

<b>Figures</b> .....	<b>ix</b>
<b>Tables</b> .....	<b>xi</b>
<b>Preface</b> .....	<b>xiii</b>
Who should read this book .....	xiii
Conventions used in this book .....	xiii
Terminology used in this book .....	xiv
Service updates and support information .....	xiv
<b>Summary of Changes</b> .....	<b>xv</b>
<hr/>	
<b>Part 1. Introduction</b> .....	<b>1</b>
<b>Chapter 1. Introduction</b> .....	<b>3</b>
About Output Manager .....	3
Output Manager business flow .....	3
Selecting reports .....	4
Post-processing of reports .....	5
Functions and components .....	6
Administrative components .....	7
General functions .....	11
Additional functions .....	12
<hr/>	
<b>Part 2. Planning and customization</b> .....	<b>13</b>
<b>Chapter 2. Preparing for Output Manager</b> .....	<b>15</b>
Requirements .....	15
Administrative roles and responsibilities .....	15
Data set naming and storage considerations .....	16
Data set retention and retention enforcement .....	16
Deployment considerations .....	16
Storage and space considerations .....	16
DB2 considerations .....	17
Tailoring SYSOUT storage, capture, and output .....	17
Sharing Output Manager resources .....	17
<b>Chapter 3. Customizing Output Manager</b> .....	<b>19</b>
Customization overview .....	19
Customization members .....	19
Customization parameters .....	21
Overview of Output Manager's DB2 objects .....	23
Customization steps .....	24
Step 1: Modify Output Manager's DDL .....	24
Step 2: Execute the DDL .....	25
Step 3: Bind the BJT plan and grant plan EXECUTE authority .....	26
Step 4: APF-authorize the libraries .....	27
Step 5: Customize HSM recall and related members .....	27
Step 6: Specify startup commands .....	28
Step 7: Modify the started task JCL .....	29
Step 8: Create access to interface .....	29
Step 9: Installation verification .....	30
Installing and customizing the Archive Viewer .....	31
Step 1: Create the Archive Viewer tables .....	31
Step 2: Bind the Archive Viewer plans and grant plan EXECUTE authority .....	32
Step 3: Customize view recall and related procedures .....	33
Step 4: Customize Output Manager for view recall .....	33

Installing and configuring the Web-Based Report Viewer .....	34
Installation overview .....	35
Installation steps .....	35
Configuring the HTTP server .....	35
Configuration of the WBRV control file .....	37
WBRV control file configuration .....	39
Building initial page definitions and URLs .....	42
Security and authentication .....	43
<b>Chapter 4. Security .....</b>	<b>45</b>
External security .....	46
External security in a RACF environment .....	46
Resources .....	46
Activating external security .....	49
Displaying the current SAF ID .....	50
Deactivating external security .....	50
Internal security .....	50
Archive data set security considerations .....	50
Sample security scenarios .....	51
Protecting Output Manager resources using one profile .....	51
Protecting specific Output Manager data using resource names .....	51
Using wildcards in RACF profiles to protect resources .....	51
About MENU resources .....	52
View security .....	53
Securing a report .....	53
Security and authentication of the WBRV .....	53
Securing sensitive data .....	54
End-user authentication .....	54
View security with the WBRV .....	54
<b>Chapter 5. Third-party archive conversion .....</b>	<b>57</b>
Conversion processing .....	57
Step I: Master index conversion .....	57
Step II: Archive report conversion .....	58
Master index conversion .....	58
Editing the control card file .....	59
Control card types .....	59
Archive report conversion .....	61
<hr/>	
<b>Part 3. General use .....</b>	<b>63</b>
<b>Chapter 6. Getting started .....</b>	<b>65</b>
Output Manager main menu .....	65
Product navigation .....	66
Commands and actions .....	67
FIND command .....	67
SORT command .....	67
Scrolling .....	69
Copy, cut, and paste .....	69
Product primary commands .....	70
Preferences .....	71
<b>Chapter 7. Viewing reports .....</b>	<b>73</b>
Accessing report functions .....	73
Viewing captured reports .....	74
Viewing archived reports .....	76
Recalling HSM-migrated data sets .....	79
Searching captured reports .....	80
Searching archived reports .....	81
Preferences .....	83
Display preferences .....	83
Search preferences .....	83
Archive preferences .....	84
Viewing reports with a web browser .....	85

Launching the WBRV . . . . .	86
Viewing archived SYSOUT . . . . .	86
Viewing custom reports . . . . .	88
Specifying selection criteria . . . . .	89
Refreshing query information . . . . .	90
Setting preferences . . . . .	90
<b>Chapter 8. Local printing . . . . .</b>	<b>93</b>
Printing a report locally . . . . .	93
Print override . . . . .	93
Setting print confirmation preferences . . . . .	94
<hr/>	
<b>Part 4. Administration . . . . .</b>	<b>97</b>
<b>Chapter 9. Overview of administrative functions . . . . .</b>	<b>99</b>
Accessing administrative functions . . . . .	99
<b>Chapter 10. SYSOUT identification and archive data set attributes . . . . .</b>	<b>103</b>
About rules . . . . .	103
About archive attributes . . . . .	104
Interceptor rules . . . . .	104
Creating an interceptor rule . . . . .	104
Editing an interceptor rule . . . . .	108
Deleting an interceptor rule . . . . .	108
Linking an interceptor rule to an archive . . . . .	108
Initiating the interceptor process . . . . .	108
Suspending the interceptor process . . . . .	109
Selector definitions . . . . .	109
Creating a selector definition . . . . .	109
Editing a selector definition rule . . . . .	113
Deleting a selector definition . . . . .	114
Linking a selector definition to an archive . . . . .	115
Subselector rules . . . . .	115
Report selection rules . . . . .	119
Creating a report selection rule . . . . .	119
Editing a report selection rule . . . . .	122
Deleting a report selection rule . . . . .	122
Linking report selection rules and report layouts . . . . .	122
Linking report selection rules to printer attributes . . . . .	123
Accessing report information . . . . .	124
Archive attributes . . . . .	124
Creating archive attributes . . . . .	124
Editing archive attributes . . . . .	129
Deleting archive attributes . . . . .	130
Linking an archive to rules . . . . .	130
<b>Chapter 11. Custom report definitions . . . . .</b>	<b>133</b>
About custom report definitions . . . . .	133
Report Types . . . . .	134
Basic Reports . . . . .	134
Custom Reports . . . . .	134
Report Components . . . . .	134
Report Layout . . . . .	135
Recipient . . . . .	136
Distribution list . . . . .	136
Custom report definition . . . . .	136
Report selection rule . . . . .	137
Designing a report layout . . . . .	137
Using the Report Layout screen . . . . .	138
Capturing reports . . . . .	148
Creating a Custom Report Definition . . . . .	148
Specifying field-condition-value . . . . .	149
Line Commands . . . . .	152
Combining a layout, report, and distribution list . . . . .	152

Tie a report to a layout .....	152
Tie a report layout to a report selection rule .....	154
Tie a report to a distribution list .....	154
Report Selection Rules .....	156
Line commands for Rules screen .....	158
Editing a rule .....	158
Inserting a rule .....	159
Deleting a rule .....	160
Assigning a layout to the report rule .....	160
Displaying an assigned layout .....	161
Accessing reports captured for a custom report .....	161

## **Chapter 12. Printing-related functions ..... 163**

Recipient IDs .....	163
Creating a recipient .....	163
Editing a recipient .....	166
Deleting a recipient .....	167
Adding a recipient to a distribution list .....	167
Distribution lists .....	167
Creating a distribution list .....	167
Editing a distribution list .....	169
Selecting a distribution list .....	169
Setting the hardcopy option .....	171
Deleting a distribution list .....	173
Adding recipients to a distribution list .....	173
Removing recipients from a distribution list .....	174
Linking a distribution list to a custom report definition .....	174
Printer attributes .....	175
Creating printer attributes .....	176
Editing printer attributes .....	183
Deleting printer attributes .....	184
Linking printer attributes to recipients .....	184
Banner pages .....	185
Creating a banner page .....	185
Editing a banner page .....	187
Deleting a banner page .....	187
Editing a banner page member .....	187
Loading a banner page member .....	188
Linking a banner page to a custom report .....	188
Reprinting .....	189
Reprint override .....	189
Reprint distribution .....	189
Reprint distribution override .....	190

## **Chapter 13. General product functions ..... 191**

Activity monitor .....	191
Viewing activities .....	191
Selecting events .....	192
View options .....	193
Product status .....	195
Viewing product status .....	196
User messages .....	197
Working with user messages .....	197

---

## **Part 5. Reference ..... 199**

### **Chapter 14. Administrative tutorial ..... 201**

Step 1: Start Output Manager .....	201
Step 2: Set preferences .....	202
Step 3: Create SYSOUT rules .....	205
Step 4: Define archive attributes .....	206
Step 5: Combine rules and archives .....	210
Step 6: Activate the rules .....	211
Step 7: Create a report layout .....	211

Step 8: Create a custom report definition . . . . .	214
Step 9: Create a report selection rule. . . . .	217
Step 10: Combine rules, layouts, and reports . . . . .	218
Step 11: Configure recipient IDs . . . . .	219
Step 12: Set up a distribution list . . . . .	222
Step 13: Set up a banner page. . . . .	224
Step 14: Run and capture a sample bank report . . . . .	226
<b>Chapter 15. Maintenance tasks . . . . .</b>	<b>227</b>
Catalog synchronization . . . . .	227
Sample JCL . . . . .	227
Customizing the sample JCL . . . . .	228
Activity log maintenance . . . . .	229
<b>Chapter 16. Variables. . . . .</b>	<b>231</b>
Variable descriptions . . . . .	231
Assigning. . . . .	232
Assigning values to user-defined variables . . . . .	232
Using variables in banner pages . . . . .	232
<b>Chapter 17. Column names for sorting . . . . .</b>	<b>233</b>
Column names and corresponding sort names. . . . .	233
<hr/>	
<b>Part 6. Appendixes. . . . .</b>	<b>239</b>
<b>Appendix A. Messages . . . . .</b>	<b>241</b>
CTC messages. . . . .	275
<b>Appendix B. Notices . . . . .</b>	<b>279</b>
Trademarks . . . . .	281
<b>Glossary . . . . .</b>	<b>283</b>
<b>Index . . . . .</b>	<b>287</b>



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## Figures

1. Output Manager business flow integration	4
2. Report selection process	5
3. Post-processing of reports	6
4. Installation Verification message	30
5. IBM Output Manager main menu	30
6. Installation Verification message	31
7. Initial page definition	37
8. Initial page definition variable assignments	37
9. Sample WBRV control file with variables	39
10. Sample WBRV control file with defined paths	40
11. Sample WBRV control file with additional launch option variables	41
12. Sample WBRV control file with additional launch option defined paths	42
13. HTTP server configuration directives used in examples	43
14. Initial page definition	43
15. Service directive	43
16. Output Manager's WBRV components requiring security and authentication measures	54
17. IBM Output Manager main menu	65
18. View Selection panel	66
19. Preferences drop-down menu	66
20. User Preferences panel	67
21. Before sorting Archived Reports in ascending order based on Capture Time	68
22. After sorting Archived Reports in ascending order based on Capture Time	69
23. User Preferences panel	71
24. View Selection panel	73
25. Captured Reports panel	74
26. Report display	75
27. Archived Reports panel	76
28. Archived Reports panel	78
29. Report display	78
30. IBM Output Manager WBRV splash screen	86
31. WBRV Archived Sysout tab	87
32. Archived SYSOUT display pop-up	88
33. WBRV Archived Sysout tab	88
34. Archived SYSOUT display pop-up	89
35. Specify selection Criteria dropdown	90
36. Settings dropdown	91
37. No Interceptor Rules Found panel	105
38. List of Interceptor Rules panel	105
39. Interceptor Rules panel	105
40. No Selector Rules Found panel	110
41. List of Selector Rules panel	110
42. Selector Rules panel	110
43. Selector Rules panel	114
44. Sub Selection Rules panel	116
45. No Report Rules Found panel	119
46. List of Report Rules panel	120
47. Report Rules panel	121
48. Layout Selection panel	122
49. Report Rules panel	123
50. Printer Attribute Selection panel	124
51. No Archive Attributes Found panel	124
52. Archive Attributes panel	125
53. Archive Attributes Details panel	126
54. Archive Attribute Selection panel	130
55. No Recipients Found panel	163
56. Recipient IDs panel	164
57. Recipient Details panel	164
58. List of Distribution Lists panel	167
59. Create a Distribution List panel	168
60. Recipient Selection panel	168
61. List of Distribution Lists panel	169
62. Update a Distribution List panel	169
63. List of Distribution Lists panel	170
64. Distribution List panel	170
65. Distribution List panel	171
66. Default Hardcopy panel	171
67. Distribution List panel	172
68. Set Hardcopy panel	172
69. Recipient Selection panel	173
70. Distribution List panel	173

71. Distribution List panel . . . . .	174
72. No Printer Attributes panel . . . . .	176
73. Printer Attributes panel . . . . .	176
74. Print Attributes Detail panel . . . . .	177
75. Print Attributes Detail panel (continued) . . . . .	178
76. Printer Attributes panel . . . . .	184
77. Printer Attributes Selection panel . . . . .	184
78. No Banners Found panel . . . . .	185
79. Banners panel . . . . .	185
80. Create a Banner Page panel . . . . .	186
81. Update a Banner Page panel . . . . .	187
82. Activity List panel . . . . .	192

---

## Tables

1. Description of SBJTSAMP members.....	19
2. Output Manager customization parameters.....	21
3. Output Manager's resources.....	47
4. Tape control card format.....	59
5. Report control card format.....	60
6. Conditions under which printer attributes are used.....	175
7. Activity view types.....	193
8. Select activities after field descriptions.....	194
9. Product status field descriptions.....	196
10. User messages options.....	198
11. Overview of tutorial steps.....	201
12. IBM Output Manager main menu options.....	202
13. User Preferences field descriptions.....	203
14. Archive attributes details field descriptions.....	208
15. Layout page field descriptions.....	212
16. Layout area field descriptions.....	213
17. Report condition entry field descriptions.....	216
18. Recipient details field descriptions.....	220
19. Captured Reports (BJTPRIX9).....	233
20. Archived Reports (BJTPARCE).....	233
21. List of Rules (BJTPDDSE).....	234
22. Archive Attributes (BJTPATTE).....	235
23. Layouts (BJTPLAY9).....	235
24. Custom Reports (BJTPRPT9).....	235
25. Recipient IDs (BJTPDIDE).....	236
26. Distribution Lists (BJTPDIDE).....	236
27. Distribution Lists (BJTPDIDE).....	236
28. Distribution Lists (BJTPPRTE).....	236
29. Banners (BJTPBAN1).....	237
30. Activity List (BJTPACTL).....	237



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## Preface

This book contains usage and reference information for IBM® Output Manager for z/OS™. It provides detailed information about what your site needs to consider when planning for the use of Output Manager for z/OS. This book also provides product customization and installation verification information to facilitate the implementation of Output Manager at your site. For step-by-step installation instructions refer to the *IBM Output Manager for z/OS Program Directory* you received from IBM as part of the product package.

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## Who should read this book

The *IBM Output Manager for z/OS Planning and Customization Guide* is intended for those personnel at your site who are involved with the planning for and implementation of output management including:

- Report administrators
- System administrators
- System security administrators
- Database administrators
- Print room managers and operators
- JES administrators.

The authors of this book assume that readers are familiar with z/OS, OS/390, RACF, DB2, and system administration.

---

## Conventions used in this book

This book uses the following highlighting conventions:

- **Boldface type** indicates commands or user interface controls such as names of fields, folders, icons, or menu choices.
- Monospaced type indicates examples of text that you enter exactly as shown.
- *Italic type* indicates variables that you should replace with a value. It is also used to indicate book titles and to emphasize significant words.

The following labels identify significant elements within this book:

- **Definition:** is used to identify and define terminology unique to this product.
- **Example:** is used to identify example code or scenarios.
- **In this chapter:** is used to identify the significant subsections within each chapter.
- **Recommendation:** is used to provide guidance when more than one option is available.
- **Related reading:** is used to refer you to other publications that contain relevant information.
- **Restriction:** is used to identify a restriction or limitation with this product or an associated procedure.

---

## Terminology used in this book

In this book, Output Manager for z/OS is referred to as “Output Manager” where the context makes the meaning clear.

---

## Service updates and support information

To find service updates and support information, including software FixPaks, PTFs, Frequently Asked Question (FAQs), technical notes, troubleshooting information, and downloads, refer to the following Web address:

[www.ibm.com](http://www.ibm.com)

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## Summary of Changes

The following enhancements are included in this release of Output Manager for z/OS:

### SC18-9200-00 – March 2004

- **Web-based report viewing:** Output Manager's Web-Based Report Viewer (WBRV) enables you to view Output Manager's archived SYSOUT and custom reports using a web browser such as Internet Explorer. The WBRV is highly customizable and can be tailored according to your site's specific report viewing needs. For more information, see "Viewing reports with a web browser" on page 85.
- **Third-party archive viewing:** Output Manager's Archive Viewer provides a conversion process to register third-party archived reports in Output Manager's archive table (BJTARC). This conversion process enables users to access third-party archived reports through the Output Manager interface. For more information, see Chapter 5, "Third-party archive conversion," on page 57.
- **Batch recall process for HSM-migrated data sets:** Output Manager's batch recall process for HSM-migrated data sets enables the recalling of HSM-migrated data sets for use with Output Manager. For more information, see "Step 5: Customize HSM recall and related members" on page 27 and "Recalling HSM-migrated data sets" on page 79.
- **Copy, cut, and paste commands:** Output Manager's copy, cut, and paste commands are available on some of the product's detail-level panels. These commands enable you to copy/cut information from existing detail-level panels as well as paste information from the clipboard into new panels where you can edit the information as needed. This feature eases the process of adding information to your Output Manager system by reducing the time you spend inputting values that already exist elsewhere in the system. For more information, see page 69.
- **Banner pages:** Banner pages enable you to provide additional information with your printed reports. For example, a banner page might contain information such as a description of a report, routing procedures, or delivery instructions. The source information for a banner page resides in a partitioned data set (PDS). Output Manager loads the member into a DB2 table in the appropriate location so as to make it available for print processing. For more information, see "Banner pages" on page 185.
- **User messages:** User messages enable administrators to set four categories of messages: (1) system, (2) administrator, (3) auditor, and (4) user messages. This feature enables the administrator to mark a message as persistent, causing the message to be displayed to the user each time, or as non-persistent, causing the message to be displayed to the user only once. The message categories (system, administrator, auditor, user) correspond to the class of user to which the message is to be displayed. For example, messages belonging to the "system" category are displayed to all users, while messages belonging to the "administrator" category are displayed only to administrators. For more information, see "User messages" on page 197.
- **Activate command:** The ACTIVATE command now enables report administrators to activate the current policy from within the Output Manager dialog. The current policy is the set of interceptor rules, selector definitions, and report rules that are currently defined and saved in your system. For more information, see "Commands and actions" on page 67.

- **Catalog synchronization:** Output Manager’s catalog synchronization process enables you to keep Output Manager’s archive and report tables in sync with the z/OS catalog. The catalog synchronization process also enables you to mark archive data sets that have been migrated to tape. For more information, see “Catalog synchronization” on page 227.

**Note:** IBM strongly recommends that archive attributes write to cataloged data sets. Specifying data sets that are not cataloged may produce unexpected results.

- **Internal and external security functionality:** Output Manager implements security on both external and internal levels. External security enables you to manage and secure Output Manager’s resources by leveraging existing RACF security via the SAF router interface. Internal security enables you to categorize users into three groups (users, administrators, and auditors) so as to provide each user group with the appropriate access to product functionality.

Output Manager also deals with security at the archive data set level. By leveraging the RACF security definitions already in place in your environment, you can establish the level of access to IBM Output Manager’s archive data sets appropriate for each user. For more information, see Chapter 7, “Viewing reports,” on page 73.

- **Exception processing:** Output Manager exception processing consists of examining JES data sets during standard output capture to identify and highlight exceptional conditions. JES data sets are those data sets produced by JES when a job executes and consist of JCL, system messages, and system output. For more information, see “Exception processing” on page 7.

**Note:** JES data sets are not captured with interceptors, thus exceptions cannot be generated for SYSOUT captured via interceptor rules.

- **Reports defined and reports captured:** Output Manager provides several additional techniques for accessing report information. From the List of Report Rules panel (option A.R on the Output Manager main menu), the following line commands are now supported:

- RD—enables users to drill-down to the Reports panel and show only those custom reports that have the same layout ID as the report selection rule.
- RC—enables users to drill-down to the Captured Reports panel to view all reports that have been captured by the same layout ID as the report selection rule.

On the Custom Reports panel (option A.C on the Output Manager main menu), the following line command is now available:

- R—enables users to drill-down to the Reports panel to view all reports captured for the custom report.

- **Print confirmation dialog introduced:** When requesting a print or reprint, a report confirmation dialog will now be displayed. This enables users to confirm what is to be printed prior to it being printed. Preferences can be set to turn off the confirmation. Users can also request the confirmation panel at any time by appending a C to the print line command (for example, PC or RC).
- **Layout assistance tools provided:** Output Manager ships a tool that can be used to facilitate the creation of layout information. By assigning this tool to a PF key, users can—when using ISPF view or edit (including SE line command from SDSF)—place the cursor on the field in a report, press the PF key, and a message is produced showing the row and column number of that field. As long as the data set is defined with the proper carriage control attribute (for example, fbA, fbM, vA) the tool accounts for carriage control characters when computing the row and column values.
- **Subselector rule functionality added:** Subselect rules enables report administrators to assign different attributes to SYSOUT selected by the same

selector. The fields specified in the selector definition are passed to JES via the SAPI interface. JES returns SYSOUT to Output Manager one SYSOUT at a time. Whenever Output Manager is ready to create a new archive for a SYSOUT data set, the subselector rules, if any, are searched. If a match is found, then any control field that was specified is used, instead of the control field from the selector. For more information, see “Subselector rules” on page 115.

- **New disposition fields and options:** Output Manager now allows the specification of two new disposition fields, abnormal disposition and line limit disposition. Output Manager also now enables users to specify either KEEP\_CLASS or KEEP\_DESTINATION for each of the three dispositions: normal, abnormal, and line limit.
- **View security added:** Output Manager ships a tool that can be used to facilitate the creation of layout information. By assigning this tool to a PF key, users can—when using ISPF view or edit (including SE line command from SDSF)—place the cursor on the field in a report, press the PF key, and a message is produced showing the row and column number of that field. As long as the data set is defined with the proper carriage control attribute (for example, fbA, fbM, vA) the tool accounts for carriage control characters when computing the row and column values. For more information see “View security” on page 53.
- **New messages added:** New error messages have been added to Output Manager.



---

## Part 1. Introduction

This section contains information about Output Manager functions, components, and processes. Below is an outline of topics contained in this section:

### Chapter 1. Introduction

- “About Output Manager” on page 3
- “Functions and components” on page 6



---

## Chapter 1. Introduction

Output Manager enables you to automate report distribution, capture and manage historical report data and attributes, and transform data into customized reports. You can specify report attributes, collect report data, split system output into individual reports, perform online and batch print jobs, and deliver report data to end-users. Output Manager is designed to:

- Provides business users with convenient web-based and online access to precisely the z/OS-based reports they need.
- Streamline the report distribution process.
- Help users track report attributes and distribution information.
- Enable business users to view data pertinent to their business needs.
- Leverage existing z/OS facilities whenever possible.
- Maintain historical information about production reports.
- Reduce costs associated with report distribution.

---

### About Output Manager

An Output Manager system consists of the application (request processing and action definition), an ISPF interface, a rules definition language (responsible for sending reports to the SPOOL and report indexer), an archiver, and archive management. Output Manager reports are archived as MVS sequential files and the archive index is a DB2 table.

The diagrams that follow describe how Output Manager fits into an organization's business flow, selects reports, and performs post-processing of reports.

**Note:** These diagrams are intended to provide an overview of one of the many possible ways Output Manager might be implemented. Product implementation will vary based on the individual needs of an organization.

### Output Manager business flow

Figure 1 on page 4 depicts how Output Manager might fit into the overall business flow of a bank and illustrates at a high-level how a bank report is processed from start to finish.

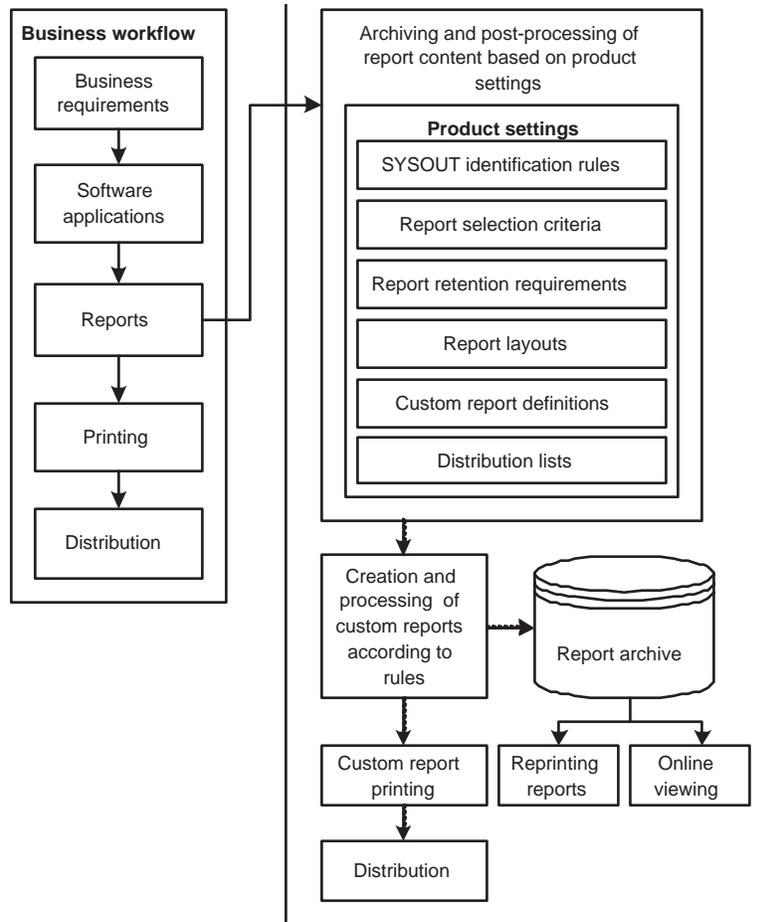


Figure 1. Output Manager business flow integration

Reports are generated by a variety of business applications. Output Manager handles the archiving and post-processing of reports based on product settings such as SYSOUT identification rules, report retention requirements, report layouts, custom report definitions, report selection rules, and distribution information. Output Manager also enables report administrators to reprint reports and general users to view reports online.

## Selecting reports

Figure 2 on page 5 depicts how Output Manager's report selection process might be set up and illustrates how the application uses SYSOUT selection rules, custom report definitions, and report layouts to manage output.

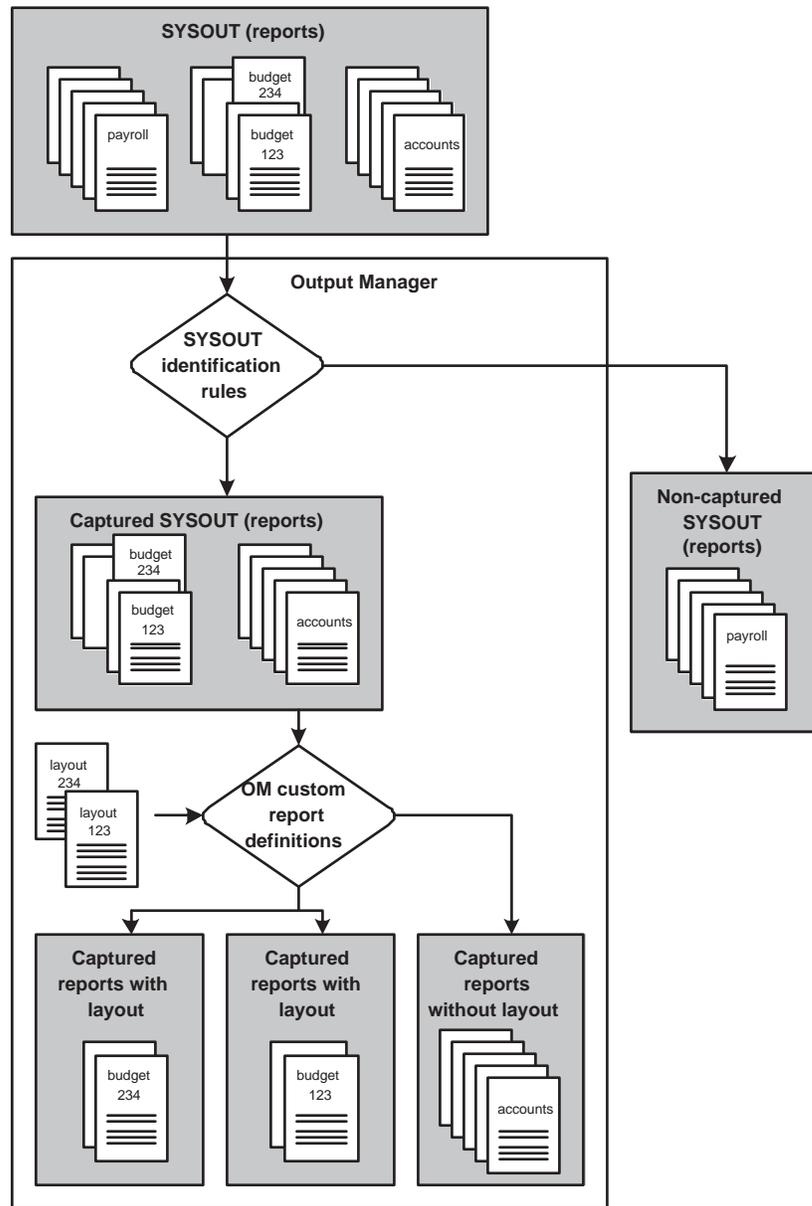


Figure 2. Report selection process

Output Manager identifies SYSOUT of interest using SYSOUT identification rules (which include interceptor rules, selector definitions, and subselector rules). Custom report definitions, report selection rules, and report layouts are then used to further process captured reports.

## Post-processing of reports

Figure 3 on page 6 depicts how Output Manager post-processing might take place. This diagram illustrates how Output Manager bursts reports for efficient distribution.

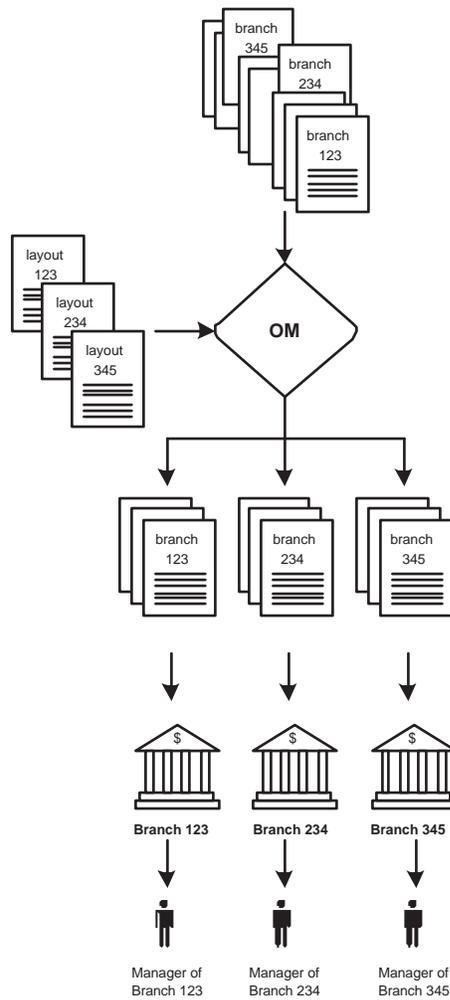


Figure 3. Post-processing of reports

In this example, one large, daily report summarizes the previous day's transactions for a bank's three branches (branch 123, branch 234, and branch 345). The report administrator sets up the appropriate capture rules that enable Output Manager to capture this report (see Figure 2 on page 5 for more information about Output Manager's rules and report selection process).

The report administrator uses Output Manager to create report layouts that define how to break a large report into several custom reports. By using report layouts, Output Manager enables the bank's report administrator to separate (or "burst") the large report into smaller reports, according to branch ID. These smaller subsets of the original report are referred to as custom reports.

Distribution lists and recipient IDs enable custom reports to be distributed to personnel at the various bank branches.

---

## Functions and components

Output Manager's functions and components can be into administrative components, general functions, and additional functions.

## Administrative components

Administrative components include SYSOUT identification rules, exception processing, archive attributes, report selection rules, report layouts, custom report definitions, recipient IDs and distribution lists, printer attributes, banner pages, activity monitor, product status, and user messages.

### SYSOUT identification rules

SYSOUT identification rules include interceptor rules, selector definitions, and subselector rules. **Interceptor rules** enable the specification of criteria by which SYSOUT is captured prior to its reaching the spool (pre-spool). Output Manager monitors JES data management events and uses interceptor rules to determine whether or not an event is of interest. If the event is of interest, Output Manager processes the SYSOUT. If the event is not of interest, Output Manager does not process the SYSOUT.

**Selector definitions** enable the specification of criteria used to select specific output types directly off the spool (post-spool). Output Manager creates a subtask for each selector definition (selector rule) to register interest with JES. JES then delivers output to Output Manager if that output matches the criteria specified in a selector definition.

**Subselector rules** enable report administrators to assign different attributes to SYSOUT selected by the same selector definition. The fields specified in the selector definition are passed to JES via the SAPI interface. JES returns SYSOUT to Output Manager one SYSOUT at a time. Whenever Output Manager is ready to create a new archive for a SYSOUT data set, the subselector rules, if any, are searched. If a match is found, then any control field that was specified is used, instead of the control field from the selector rule.

### Exception processing

Output Manager's **exception processing** consists of examining JES data sets during standard output capture to identify and highlight exceptional conditions. JES data sets are those data sets produced by JES when a job executes and consist of JCL, system messages, and system output.

**Note:** Only jobs that are captured by post-spool processing (selectors) are eligible for exception processing. JES data sets are not captured with interceptors, thus exceptions cannot be generated for output captured by interceptor rules.

When processing JES data sets during standard output capture, Output Manager looks for JCL errors, abends, and non-zero step return codes, in that order. Only one exceptional condition is highlighted per data set, so only the first exception for the data set is recorded. During exception processing, Output Manager looks for the following messages:

**IEF142I** - Step completion code.

**IEF450I** - Abend.

**IEF452I** - JCL error.

**IEF453I** - JCL error.

If a job does not abend and does not create a JCL error but has a nonzero condition code, Output Manager records the condition code from the last step that had the nonzero return code.

If one of these messages is found, Output Manager extracts the abend or condition code from the message and marks the job as an exception and records it in the archive table.

**Note:** If the condition code from IEF1421 is zero, then it is not marked as an exception.

## Archive attributes

When a SYSOUT has been intercepted or selected, Output Manager refers to the appropriate **archive attribute** to determine what set of attributes to use when allocating the sequential file that is to hold captured output. Archive attributes are linked to interceptor and selector rules and multiple rules can be linked to the same archive attribute. Archive attributes specify the data set name (DSN), where to allocate the data set (unit name or SMS storage class), and how much space to reserve for the archive.

One of the key elements of the archive attribute is the **archive mask**. The archive mask serves as a template for the data set name that is to be created for an archive. An archive mask is a character string of up to 44 characters in length and can contain variables which, upon allocation of the archive data set, are replaced with the appropriate values.

Another key element of the archive attribute is the **SMS allocation**. The report administrator, working closely with the storage management group, can use SMS allocation parameters to appropriately implement the data set usage of Output Manager archives.

## Report selection rules

**Report selection rules** are rules that specify the job selection criteria (such as job name, proc 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. **Basic reports** are reports that contain the entire SYSOUT produced by the application. **Custom reports** are reports that contain a subset of the SYSOUT produced by the application (the subset is determined by settings in the custom report definition). **Captured reports** are SYSOUT that have been selected or intercepted by Output Manager.

Report selection rules can be linked to **custom report definitions** via a common **report layout** or a common **report name**. If a custom report definition does not contain selection criteria, it will create a basic report. If a custom report definition contains selection criteria, it will create a custom report. If no custom report definition shares the same report layout or report name as the report selection rule, a custom report definition will be dynamically created that will enable the generation of a basic report.

## Report layouts

A **report layout** defines how the original report looks as produced by the application. A report layout has three sub-components: pages, areas, and fields. Pages contain areas, areas contain fields, and fields are specific data on a report.

A **page** is created for each unique style of page in a SYSOUT. SYSOUT may have one or multiple page styles. On each page, there are one or more **areas**. Areas are conceptually like rectangles which are drawn around the different sections on the report page. For example, the first three lines of a report may be report headings, the large area in the middle is the body of the report, and the two lines at the bottom are the footer. A report can also consist of a single area, which is the same size as the page.

**Fields** represent particular data on the report. Some fields are constant and are used for identification purposes. For example, many reports have a report ID so the user of the report can communicate to the programmers about specific reports. Other fields might contain data, such as a branch ID, that identifies sub-reports within the basic report. These sub-reports can become custom reports.

## Custom reports and custom report definitions

A **custom report** is a report that contain a subset of the SYSOUT produced by the application (the subset is determined by settings in the custom report definition). A **custom report definition** defines either a custom or basic report. If a custom report definition specifies no selection criteria, then a basic report is generated. If a custom report definition specifies selection criteria, then when those criteria are met, it triggers the generation of a custom report.

A custom report definition works in conjunction with a report layout. A report layout contains information about the physical layout of the report as produced by the application. The custom report definition defines the value(s) and field(s) on a report layout that, when matched against a captured report and its report layout, produce a custom report according to the specifications in the custom report definition.

Usually more than one custom report will be defined for each basic report. For example, if a bank with several branches requires that each branch receives its own custom report containing only report information for that location, one custom report definition will be required for each branch and one report layout can be used for all branches.

When a captured SYSOUT matches the job information in a report selection rule, the report layout that you created is read into memory, along with all of the custom report definitions for this basic report. Each page of the captured report, as defined by the report layout, is compared to the criteria in each of the custom report definitions to determine if this page is part of a custom report. What happens next depends upon whether the page matches any of the custom reports:

- If a page matches against a custom report definition, the page is placed in the custom report.
- If the page does not match against any of the custom report definitions, it is placed in an **<undefined>** report. An **<undefined>** report is a report constructed by Output Manager to catch the SYSOUT pages that are not included in a custom report (it is a collection of all of the "unused" pages from this SYSOUT).

Another possible report is referred to as **<no report>**. When the last page of the SYSOUT has been completed, a final scan is performed to see if any pages were found for each of the defined custom reports. If there were no pages for a specific custom report, a special virtual report with no data will be created. It will be listed under Captured Reports on the View Reports panel (option V.R from the main menu) as **<no report>**.

Although there is nothing for you to view, **<no report>** serves as a visual reminder that the application that normally produces this report did run, however no pages that matched the selection criteria for this specific custom report were found. This may be a normal or an exceptional condition, based upon the application. A **<no report>** helps you identify which specific custom reports may need more attention.

## Recipient IDs and distribution lists

**Recipient IDs** contain information about individuals or a generic location. The information in the recipient ID is used whenever a report is printed. It contains information like name, address, building, printer destination, SYSOUT class and other information related to the printing of the report. It can also optionally contain an

individual's USERID. Recipient IDs can be used to restrict or control what reports a user can access (view security).

**Distribution lists** are groups of recipient IDs that are linked to custom report definitions to control the real time, reprint, or "reprint with distribution" functions. You can specify on the distribution list which recipients are to receive hardcopy.

**Note:** Reports cannot be sent to individual recipients, they can only be sent to distribution lists.

## Printer attributes

**Printer attributes** control how reports are printed and are associated. Printer attributes fall into the following categories:

- General attributes (such as a printer name)
- Attributes associated with printing on a 3800 series printer
- PSF-related attributes
- Miscellaneous attributes

Printer attributes are primarily assigned to **report selection rules**, since printer attributes are most-closely aligned with physicality of printing and are thus best kept at the report level. Printer attributes are assigned via the report rules dialog. The assignment of printer attributes to report selection rules is optional.

You can also assign printer attributes to **recipients**. When a printer attribute is assigned to a recipient, there is an additional field (the AttrUsage field) that must be set to indicate when the recipient printer attribute is to be utilized. The Attr Usage field indicates when the printer attribute is to be used for the recipient.

## Banner pages

**Banner pages** enable you to provide additional information with your printed reports. For example, a banner page might contain information such as a description of a report, routing procedures, or delivery instructions. The source information for a banner page resides in a partitioned data set (PDS). Output Manager loads the member into a DB2 table so as to make it available for print processing.

## Activity monitor

As Output Manager operates, numerous events occur such as allocating an archive, opening an archive, querying the rules table. The **activity monitor** groups events together according to their relationship to one another into activities classes such as job selection, archiving of spool data sets, printing of reports, and online viewing of archives.

Each event can be either normal or exceptional and contain primarily text data although some diagnostic information may also be captured. If an activity contains one or more exceptional events, then the activity is flagged as exceptional. Exceptional events and activities are logged in a dynamically allocated SYSOUT file, a DB2 table, or both. These logs enable you to better diagnose start up problems when there are problems with the DB2 interface.

Output Manager also includes an activity class control table which controls the volume of activities that are logged. Each class has a unique set of counters and settings to control where the data is to be logged and how many of each class of activities (both normal and exceptional) are to be logged.

## Product status

Output Manager's **product status** option enables you to view information about system-level processes, statistics, selection criteria, and active processes for your Output Manager system.

## User messages

**User messages** enable administrators to set four categories of messages: system, administrator, auditor, and user messages. This feature enables the administrator to mark a message as persistent, causing the message to be displayed to the user each time, or as non-persistent, causing the message to be displayed to the user only once. The message categories (system, administrator, auditor, user) correspond to the class of user to which the message is to be displayed. For example, messages belonging to the "system" category are displayed to all users, while messages belonging to the "administrator" category are displayed only to administrators.

## General functions

Output Manager's general functions include viewing reports and printing reports.

### Viewing reports

Output Manager's ISPF dialog interface enables you to view captured reports. Additionally, Output Manager's report indexing capabilities enable you to access individual pages or groups of pages within a user-defined report. Output Manager's Web-Based Report Viewer (WBRV) enables you to view Output Manager's archived SYSOUT and custom reports using a web browser such as Internet Explorer. The WBRV is highly customizable and can be tailored according to your site's specific report viewing needs.

### Printing reports

Output Manager prints basic and custom reports. There are three major categories of printing: real-time printing, reprinting, and local printing.

**Real-time printing** is applicable to defined (both custom and basic reports) and archived reports. It occurs at the time the SYSOUT from the application is being processed by Output Manager to create the virtual custom reports. Output Manager will use any assigned distribution list to determine which recipients are to receive hard copies of the report. For each recipient, a real time hard copy will be produced, based on the information contained in each of the recipients.

Real-time printing produces a hard copy report for each recipient in the distribution list associated with a custom report. The production of the hard copy report occurs at the time the SYSOUT from the application is processed by Output Manager to create the virtual custom reports.

**Reprinting** allows the report administrator to reprint defined and archived reports. There is also an option that allows the administrator to alter the distribution list temporarily for reprinting. This is referred to as reprint override. An additional option, reprint distribution, allows the administrator to temporarily direct a report to an alternate distribution list. Additionally, these options can be used in combination, for example, reprint distribution override. **Reprint override** enables report administrators to print a custom report again but also to temporarily alter the distribution list. **Reprint distribution** enables report administrators to reprint a defined report and direct it to the distribution list associated with that custom report. **Reprint distribution override** enables report administrators to reprint a custom report and temporarily direct it to an alternate distribution list.

**Local printing** allows a user to print a defined and archived report for themselves. In addition, a user can temporarily override the printer information to direct the printout to a different printer. This is referred to as **print override**.

## **Additional functions**

Output Manager's additional functions include web-based report viewing, catalog synchronization, batch recall of HSM-migrated data sets, and third-party archive viewing.

### **Web-based report viewing**

Output Manager's Web-Based Report Viewer (WBRV) enables you to view Output Manager's archived SYSOUT and custom reports using a web browser such as Internet Explorer. The WBRV is highly customizable and can be tailored according to your site's specific report viewing needs.

### **Catalog synchronization**

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

### **Batch recall of HSM-migrated data sets**

Output Manager's batch recall process for HSM-migrated data sets enables the recalling of HSM-migrated data sets for use with Output Manager.

### **Third-party archive viewing**

Output Manager's Archive Viewer functionality provides a conversion process to register third-party archived reports in Output Manager's archive table (BJTARC). This conversion process enables users to access third-party archived reports through the Output Manager interface.

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## Part 2. Planning and customization

This section contains detailed information on what your site needs to consider when planning for the use of Output Manager for z/OS. This section also provides an overview of the customization process.

**Note:** For step-by-step installation instructions refer to the *IBM Output Manager for z/OS Program Directory* you received from IBM as part of the product package.

### Chapter 3. Customizing Output Manager

- “Customization overview” on page 19
- “Customization steps” on page 24
- “Installing and customizing the Archive Viewer” on page 31
- “Installing and configuring the Web-Based Report Viewer” on page 34

### Chapter 4. Security

- “External security” on page 46
- “Internal security” on page 50
- “Archive data set security considerations” on page 50
- “Sample security scenarios” on page 51
- “Using wildcards in RACF profiles to protect resources” on page 51
- “About MENU resources” on page 52
- “View security” on page 53

### Chapter 5. Third-party archive conversion

- “Conversion processing” on page 57
- “Master index conversion” on page 58
- “Editing the control card file” on page 59
- “Archive report conversion” on page 61



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## Chapter 2. Preparing for Output Manager

This chapter contains recommendations that you should consider as you prepare for Output Manager implementation.

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### Requirements

**Hardware requirements:** The hardware required to run Output Manager depends on the volume of data that you plan to maintain, your site's backup and recovery practices, and the performance levels your system is expected to maintain.

**Software requirements:** Output Manager can be used on any supported release of OS/390 or z/OS. It requires DB2 and TSO/ISPF. The following software applications are required to implement Output Manager:

- Any supported release of z/OS or OS/390.
- DB2 for OS/390 version 6 or higher.
- TSO/ISPF

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### Administrative roles and responsibilities

Output Manager report administrators are responsible for the implementation and management of the Output Manager system (which includes hardware, application and system software, reports, administration personnel, and users). The various personnel with whom the report administrator will most likely have to collaborate in order to ensure the successful implementation of the Output Manager system include:

- **System administrator:** The system administrator is responsible for the allocation and use of OS/390 system resources. In the planning process, the system administrator is a key player in managing archive reports. The system administrator provides recommendations regarding well-formed data set name construction, adherence to data set retention policies, and data set attribute specification.
- **Security administrator:** The security administrator is responsible for OS/390 system security. In the planning process, the security administrator is responsible for working with the report administrator to assess how site security conventions impact the Output Manager-generated data sets.
- **Database administrator:** The database administrator is responsible for the administration of DB2 objects, processes, and applications. In the planning process, the database administrator manages the various DB2 tables required by Output Manager.
- **Print room manager/operator:** The print room manager/operator is responsible for managing the printed output from Output Manager. The print room manager/operator must be aware of how the Output Manager system is to be implemented.
- **Webmaster:** The webmaster is responsible for managing the computer server and technical programming aspects of a Web site. The webmaster must be involved in the process of implementing the optional Web-Based Report Browser (WBRV).

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## Data set naming and storage considerations

Data set naming and storage considerations include planning for data set name construction, data set attribute specification, and data set retention periods. To prepare for appropriate data set naming and storage of Output Manager data, the report administrator should:

- Contact the security administrator and system administrator to discuss and ensure the construction of well-formed data set names for the archive report data sets that will be produced by Output Manager. All archive report data sets must adhere to your site's requirements and conventions governing data set naming.
- Contact the system administrator to discuss data set attribute assignment and what is most appropriate given the site's conventions, capacity, and resources. Sometimes, depending on the site's data set naming conventions, the data set name will give the storage administrator enough information to determine the attribute assignment for the data sets.
- Contact the system administrator and others responsible for data set retention and enforcement of data set retention. Retention periods for data sets are definable in the JCL but further discussion and policy must be in place to ensure that the data sets that should be kept are, in fact, kept. When data sets are no longer being used but must be retained, there must be appropriate mechanisms in place to ensure that they are rolled-off to tape for long-term storage.

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## Data set retention and retention enforcement

If your site uses SMS-managed data sets, SMS must manage the data set retention period and delete data sets according to site-specific requirements. You must run the catalog synchronization job (BJT@JCCS) after SMS maintenance has completed in order to synchronize the information in the catalog with Output Manager's DB2 tables. Additionally, if you use HSM, it handles all migration of data sets and you must run the catalog synchronization job (BJT@JCCS) after HSM migration completes in order to synchronize the information in the catalog with Output Manager's DB2 tables.

---

## Deployment considerations

Deployment considerations include planning for and evaluating the storage and space that will be required by Output Manager as well as how Output Manager deployment will be managed in the DB2 environment. Additionally, your site's performance and capacity will influence the deployment of Output Manager. These factors are unique to each site and must be carefully considered before Output Manager is implemented.

## Storage and space considerations

Because the data sets generated by Output Manager consume storage space over time, the site must assess how much storage will be necessary to accommodate their expected volume of archived data and the retention periods for which archived data is kept. Assess whether or not additional DASD must be purchased, for example. Below is a list of questions to consider when evaluating the amount of DASD that your Output Manager implementation will require.

- What volume of input will Output Manager be expected to process?
- How large are the reports that Output Manager will be expected to produce and manage (in pages and bytes)?
- How many reports? How many versions of reports?

## DB2 considerations

Output Manager requires the following DB2 objects: a database, one or more table spaces, several tables. The report administrator must contact the site database administrator to obtain the Output Manager names and SQL IDs for these objects. Several DB2 tables are required by the base Output Manager product. Additional tables are required for optional components such as the Archive Viewer. The Output Manager administrator must work with the database administrator to ensure that appropriate space is available for each of these tables.

You should employ regularly scheduled maintenance on the objects created during the installation of this tool, to assure data integrity and to optimize access performance. Such maintenance should include regularly scheduled Image Copies for data integrity, and Reorg and Runstats for access performance considerations.

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## Tailoring SYSOUT storage, capture, and output

Many sites direct JCL listings and production reports to different SYSOUT classes. For instance, you might specify MSGCLASS=A on job cards but use //PRODREPT DD SYSOUT=B for production reports. Additionally, you may have different storage and retention requirements for JCL listings than you would for production reports.

Output Manager provides flexibility regarding how you specify what output to capture and how it is to be stored. When planning for Output Manager use, consider the following:

- Selector rules specify what SYSOUT Output Manager is to capture.
- Archive attributes specify where captured data is to be stored.
- The combination of selector rule parameters and archive attribute parameters determine what is captured and stored.

For example, suppose you want to store your JCL listings in archive data sets based on the following archive mask:

```
SYSOUT.&JOBNAME.&JOBNUMB
```

---

## Sharing Output Manager resources

Output Manager, when implemented in a SYSPLEX environment, can be configured to enable you to view captured output across multiple z/OS images. To do so, an instance of Output Manager must be running on each image. One instance of Output Manager is configured for the capturing of SYSOUT while other instances of Output Manager are configured for viewing and working with captured SYSOUT.

**Note:** When using the Web Based Report Viewer (WBRV) component, the instance of Output Manager must be running on the same z/OS image as the web server used with the WBRV.



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## Chapter 3. Customizing Output Manager

Before customizing Output Manager, complete the installation instructions found in the *Program Directory for IBM Output Manager for z/OS*.

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### Customization overview

After installing Output Manager, you must complete the customization steps summarized below:

1. Modify Output Manager's DDL. For more information, refer to "Step 1: Modify Output Manager's DDL" on page 24.
2. Execute the DDL. For more information, refer to "Step 2: Execute the DDL" on page 25.
3. Bind the plan and grant plan EXECUTE authority. For more information, refer to "Step 3: Bind the BJT plan and grant plan EXECUTE authority" on page 26.
4. APF-authorize the LOADLIB. For more information, refer to "Step 4: APF-authorize the libraries" on page 27.
5. Customize the HSM recall procedure and related members. For more information, see "Step 5: Customize HSM recall and related members" on page 27.
6. Specify startup commands. For more information, refer to "Step 6: Specify startup commands" on page 28.
7. Modify the started task JCL. For more information, refer to "Step 7: Modify the started task JCL" on page 29.
8. Create access to the interface. For more information, refer to "Step 8: Create access to interface" on page 29.
9. Start IBM Output Manager and perform installation verification. For more information, refer to "Step 9: Installation verification" on page 30.

If you would like to configure either of Output Manager's optional components which include the Archive Viewer and the Web-Based Report Viewer (WBRV), refer to the steps in the following sections:

- "Installing and customizing the Archive Viewer" on page 31.
- "Installing and configuring the Web-Based Report Viewer" on page 34.

### Customization members

The SBJTSAMP members shipped with Output Manager are described in Table 1.

**Note:** The following naming conventions apply to SBJTSAMP members:

- Those members whose names start with BJT@JC contain JCL.
- BJT@PROC is the main Output Manager PROC. All other members whose names start with BJT@PR provide input to BJT@PROC.

*Table 1. Description of SBJTSAMP members*

Member	Description
BJT\$INDEX	Index describing SAMPLIB members.

Table 1. Description of SBJTSAMP members

Member	Description
BJT#IN00	Description of DB2 table installation process.
BJT#IN03	Command input for started task to set DB2 values.
BJT#IN04	Sample started task JCL.
BJT@DBCR	DB2 DDL to create the Output Manager database.
BJT@DBDR	DB2 DDL to drop the Output Manager database.
BJT@DUMY	An empty member for proc substitution.
BJT@JCAC	JCL to enable you to perform activity log cleanup.
BJT@JCAV	JCL to define the view conversion tables and table spaces.
BJT@JCBI	JCL to perform the DB2 bind process.
BJT@JCBP	JCL to print a sample bank report.
BJT@JCCS	JCL to execute the catalog synchronization process in batch.
BJT@JCDB	JCL that defines the BJT database and BJT table space.
BJT@JCGR	JCL that grants EXECUTE authority for the plans.
BJT@JCRM	JCL to receive and create scroll message and panel libraries.
BJT@JCPF	JCL to unpax the WBRV to USS.
BJT@JCUT	General utility JCL that can be used to execute DDL and SQL.
BJT@JCX1	JCL to process a view master index file.
BJT@JCX2	JCL to update the Archive Viewer files from extract file.
BJT@JCX3	JCL to report on what would be updated during conversion.
BJT@PAXF	PAX file for the Web-Based Report Viewer component.
BJT@PRAC	SQL to perform activity log cleanup.
BJT@PRBI	Defines Output Manager's bind parameters.
BJT@PRBP	Sample bank report.
BJT@PRGR	Defines plan execution authorities.
BJT@PRH1	HSM archival retrieval input control card.
BJT@PRM1	Archive Viewer control card input.
BJT@PRM2	Archive Viewer control card input.
BJT@PRM3	Sets the plan name for use by the BJTBA3R3 program when the HSM migration completes. The BJTBA3R3 program updates the migration state with a success or failure indication depending upon whether migration from tape to SYSOUT was successful or not.
BJT@PROC	JCL procedure for executing TSO in batch for DB2 work.
BJT@PRSS	Identifies the DB2 subsystem to be used. A unique DB2SSID member needs to be created for each DB2 subsystem on which you plan to configure Output Manager. SBJTSAMP member BJT@PRSS can be used as a template if you need to create multiple DB2SSID members.
BJT@PRTI	DB2 utility control statements.
BJT@PRVR	JCL procedure for recalling view data sets from tape.

Table 1. Description of SBJTSAMP members

Member	Description
BJT@PRX2	Migration control card input.
BJT@PRX3	Migration control card input.
BJT@PRYR	This procedure is used for the HSM recall process. It will be started by the Output Manager started task whenever a user requests a recall of a migrated data set that is still in the foreign archive store.
BJT@TBAV	Contains DDL necessary to create the Archive Viewer DB2 tables.
BJT@TBCR	Contains DDL necessary to create Output Manager's DB2 tables.
BJT@TBDR	Contains DDL to drop Output Manager's tables.
BJT@TSC1 or BJT@TSC2	BJT@TSC1 creates a unique table space for each of Output Manager's tables. BJT@TSC2 creates a common table space for all of Output Manager's tables. <b>Note:</b> During customization, you tailor and run either member BJT@TSC1 (recommended) or member BJT@TSC2.
BJT@TSD1 or BJT@TSD2	BJT@TSD1 enables you to drop Output Manager's table spaces when a unique table space was used for each of Output Manager's tables. BJT@TSD2 enables you to drop Output Manager's table space when a common table space was used for all of Output Manager's tables.
BJTCTCMG	TSO XMIT file of additional messages.
BJTCTCPL	TSO XMIT file of additional panels.

## Customization parameters

The parameters that you need to specify during customization are listed below so you can determine the values that are appropriate for your site prior to performing the customization steps:

Table 2. Output Manager customization parameters

Parameter	Description
?BJTBASE?	The ?BJTBASE? variable is defined in SBJTSAMP members BJT@DBCR, BJT@TBCR, BJT@TSC1, and BJT@TSC2. This variable is used to name the Output Manager database and table spaces. The recommended value for this variable is BJTBASE.
?BJTCTLF?	The ?BJTCTLF? variable must be defined in SBJTSAMP members BJT@JCX1, BJT@JCX2, and BJT@JCX3. This variable identifies the valid data set name where the control card output is to be produced.

Table 2. Output Manager customization parameters

Parameter	Description
?BJTHLQ?	The ?BJTHLQ? variable must be defined in SBJTSAMP members BJT@JCBI, BJT@JCGR, BJT@PRVR, BJT#IN04 (if used), and BJT@PROC, and SBJTEXEC members BJT, BJTA, and BJTD. This variable identifies your site's high-level qualifier that holds Output Manager's product libraries, for example RSQA.
?BJTNAME?	The ?BJTNAME? variable must be defined in the NAME= line of SBJTEXEC member BJT and in the sample started task JCL (if used) in SBJTSAMP member BJT#INO4. This variable identifies the one- to eight- character name assigned to represent the instance of Output Manager you intend to configure. This variable is also referred to as the product instance name.
?BJTPLAN?	The ?BJTPLAN? variable must be defined in SBJTSAMP members BJT#IN03, BJT@PRBI and BJT@PRGR. This variable identifies the one- to eight-character name for the DB2 plan that will be used with the instance of Output Manager you intend to configure. The recommended value for this variable is BJTPLAN.
?BJTPLANB?	The ?BJTPLANB? variable must be defined in SBJTSAMP members BJT@PRBI and BJT@PRGR. This variable the plan name for the batch catalog synchronization process and is specified during the BIND and in the PARM parameter of the EXEC PGM=BJTBARCH JCL in sample member BJTARCH.
?BJTPLANC?	The ?BJTPLANC? variable must be defined in SBJTSAMP member BJT@PRBV.
?BJTPLAND?	The ?BJTPLAND? variable must be defined in SBJTSAMP members BJT@PRM1 and BJT@PRBV.
?BJTPLANE?	The ?BJTPLANE? variable must be defined in SBJTSAMP members BJT@PRBV, BJT@PRM2, and BJT@PRM3.
?BJTPLANF?	The ?BJTPLANF? variable must be defined in SBJTSAMP members BJT@PRBI and BJT@PRGR.
?BJTQUAL?	<p>The ?BJTQUAL? variable must be defined in SBJTSAMP members BJT@TBCR and BJT@TBAV. The ?BJTQUAL? variable is used to name the Output Manager tables. For example, if you define the ?BJTQUAL? variable in BJT@TBCR to be RSTEST, tables are named accordingly. For example, the BJTACT table would be named:</p> <p>RSTEST.BJTACT</p> <p>The ?BJTQUAL? variable, if properly defined in BJT@TBCR, relates Output Manager's DB2 tables to the Output Manager started task.</p> <p><b>Note:</b> If you intend to implement multiple instances of Output Manager, the value of the ?BJTQUAL? variable must be unique for each instance. You can use SAMPLIB member BJT@TBCR as a template to create multiple DDL members. Each DDL member can then be customized as needed to create the necessary objects for each instance of Output Manager.</p>

Table 2. Output Manager customization parameters

Parameter	Description
?BJTTAPE?	The ?BJTTAPE? variable must be defined in SBJTSAMP member BJT@PRVR. This variable identifies the tape unit that is to be used to read the archive tapes for conversion.
?BJTUNLD?	The ?BJTUNLD? variable must be defined in SBJTSAMP members BJT@JCX1, BJT@JCX2, and BJT@JCX3. This variable identifies the valid data set name to which the copy of the third-party master index file is unloaded.
?DB2SSID?	The ?DB2SSID? variable must be defined in SBJTSAMP members BJT#IN03 and BJT@PRSS. This variable identifies the one- to four-character DB2 subsystem ID of the DB2 subsystem that is to contain Output Manager's database components.  <b>Note:</b> Each instance of Output Manager can use the same DB2 subsystem or different ones.
?RUNLIB?	The ?RUNLIB? variable must be defined in SBJTSAMP members BJT@PRTI and BJT@PRBI. This variable identifies the name of your DB2 RUNLIB data set that contains the collection of utilities and routines, for example DSN.V710.RUNLIB.LOAD.
?SDSNLOAD?	The ?SDSNLOAD? variable must be defined in SBJTSAMP members BJT@PROC, BJT#IN04 (if used), and BJT@PRVR. This variable identifies the name of your DB2 load library data set.
?TEPPLAN?	The ?TEPPLAN? variable must be defined in SBJTSAMP members BJT@PRTI, and BJT@PRBI. This variable identifies the valid plan for the DSNTEP2 (or similar) program. For example, a valid plan may be DSNTEP2

## Overview of Output Manager's DB2 objects

Output Manager uses the following objects:

- **DB2 database.** Output Manager uses one DB2 database. Output Manager's database is a logical construction (existing only in the DB2 catalog) that groups the product's tables and table spaces together.
- **Tables.** Output Manager's DB2 tables contain the various Output Manager administrative constructs, archive data sets indexes, and custom reports indexes. Output Manager uses the following DB2 tables (BJTACT, BTJARC, BJTATT, BJTBAN, BJTDID, BJTDDS, BJTDST, BJTLAY, BJTPRT, BJTRIX, BJTRPT). Output Manager's optional Archive Viewer component uses an additional two DB2 tables (BJTAVR and BJTAVT).
- **Table spaces.** Output Manager's table spaces are the physical data sets that hold the product's table data. Table spaces can contain one or more tables. They can be backed by one or more physical data sets when partitioning is implemented. We recommend that you have a unique table space for each table to facilitate DB2 operations (such as backup and recovery).
- **Storage groups.** A storage group is a set of physical volumes on which DB2 can create table spaces. The DDL provided with Output Manager uses SYSDEFLT STOGROUP. Table spaces are created in STOGROUPS.
- **Buffer pools.** Buffer pools are DB2 virtual constructs where data from DB2 tables are staged for use by applications (in this case Output Manager). Buffer pools are set up and maintained by the DB2 system administrator for performance reasons.

**Due to the size of Output Manager's banner table (BJTBAN), it must be staged into a 32 K buffer pool.**

**Note:** This can be done either by creating the banner table in a table space that is assigned to a 32 K buffer pool or at the database level. However, it is recommended that you use the more common technique of assigning it at the table space level.

---

## Customization steps

After you have installed Output Manager according to the instructions in the *Program Directory for IBM Output Manager for z/OS*, you must complete several steps to customize the product for your environment. Customization steps must be completed before executing Output Manager for the first time.

### Step 1: Modify Output Manager's DDL

DB2 objects are maintained via a data definition language (DDL). Output Manager's DDL is provided in the SBJTSAMP library. The steps below describe how to modify Output Manager's DDL to reflect the needs of your implementation:

1. Edit SBJTSAMP member BJT@DBCR:
  - a. Change the variable ?BJTBASE? to a valid database name. The recommended name is BJTBASE.  
**Note:** The value you specify for ?BJTBASE? must be unique within the DB2 system for which you are configuring Output Manager. Check with your DB2 systems administrator to ensure the value you specify for the database name is valid and adheres to your site's naming conventions.
  - b. Save the member.
2. Edit SBJTSAMP member BJT@TSC1 or BJT@TSC2. If you want to create a unique table space for each of Output Manager's tables, edit member BJT@TSC1 (recommended). If you want to create a common table space for all of Output Manager's tables, edit member BJT@TSC2.
  - a. Change each occurrence of the variable ?BJTBASE? to the valid database name you used in step 1a.
  - b. By default, BP32K is assigned to the table space for the large table, BJTBAN. This can be changed based on your installation requirements. **Due to the size of Output Manager's banner table (BJTBAN), it must be staged into a 32 K buffer pool.**
  - c. Save the member.
3. If you customized BJT@TSC1 in step 2, edit SBJTSAMP member BJT@TBCR as follows:
  - a. Change each occurrence of the variable ?BJTBASE? to the valid database name you used in step 1a.
  - b. Change each occurrence of the variable ?BJTQUAL? to the appropriate value for use in naming Output Manager's tables.
  - c. Save the member.

If you customized BJT@TSC2 in step 2, edit SBJTSAMP member BJT@TBCR as follows:

- a. Modify the DDL in BJT@TBCR to point to the one table space you intend to create to hold all of Output Manager's tables
- b. Change each occurrence of the variable ?BJTQUAL? to the appropriate value for use in naming Output Manager's tables.

- c. Save the member.

**Note:** If you intend to place all Output Manager's tables in one table space, that table space must be a 32k to accommodate the banner page table. If you use a non-standard configuration, check with your database administrator for guidance.

## Step 2: Execute the DDL

Your DB2 installation may have multiple instances of DB2 running. Check with your DB2 system administrator before attempting to execute DDL to verify that you have the proper authority to do so. Additionally, each DB2 installation is likely to have unique conventions regarding DDL execution, tracking, and managing. The steps below describe some of the options you might consider in executing DDL for your Output Manager implementation.

### Approach 1: Using DSNTEP2 to execute DDL

To use DSNTEP2 to execute DDL:

1. Edit SBJTSAMP member BJT@PRSS by changing the ?DB2SSID? variable to the appropriate DB2 subsystem ID of the DB2 subsystem that is to contain Output Manager's database components.  
**Note:** A unique DB2SSID member needs to be created for each DB2 subsystem on which you plan to configure Output Manager. SBJTSAMP member BJT@PRSS can be used as a template if you need to create multiple DB2SSID members.
2. Edit SBJTSAMP member BJT@PRTI:
  - a. Change the ?TEPPLAN? variable to the valid plan for the DSNTEP2 (or similar) program.
  - b. Change the ?RUNLIB? variable to the name of your DB2 RUNLIB data set.
3. Edit SBJTSAMP member BJT@PROC:
  - a. Change the ?SDSNLOAD? variable to the name of your DB2 load library data set.
  - b. Change the ?BJTHQL? variable to your site's high-level qualifier that holds IBM Output Manager's product libraries.
4. Edit SBJTSAMP member BJT@JCDB:
  - a. SBJTSAMP member BJT@JCDB contains the JCL to execute BJT@PROC and thus create the DB2 objects Output Manager requires. By default, BJT@JCDB is shipped to include BJT@TSC1 (unique table space for each table). If you selected to use BJT@TSC2 instead of BJT@TSC2, edit BJT@JCDB to specify BJT@TSC2 instead of BJT@TSC1 in the SYSIN DD statement.
  - b. Change the ?BJTHQL? variable to your site's high-level qualifier that holds Output Manager's product libraries.
  - c. Modify the jobcard information to reflect your site's standards.
5. Run BJT@JCDB.

### Approach 2: Using SPUFI to execute DDL

SPUFI is a standard utility shipped with DB2. Check with your DB2 system administrator regarding how to access SPUFI at your site and how it can be used to execute Output Manager's DDL.

### Step 3: Bind the BJT plan and grant plan EXECUTE authority

SBJTSAMP member BJT@PRBI contains Output Manager's bind control statements. SBJTSAMP member BJT@JCBI contains the JCL used to execute the PROCS and points to member BJT@PRBI (which provides the BIND parameters). SBJTSAMP member BJT@JCGR grants EXECUTE authority for the plan.

1. Edit SBJTSAMP member BJT@PRBI:
  - a. Change all occurrences of ?BJTPLAN? to a valid plan name to be used by Output Manager's programs. The recommended value for the ?BJTPLAN? variable is BJTPLAN.  
**Note:** The ?BJTPLAN? is the plan the started task uses and is the name specified during the BIND process and is placed in the CONFIGUR DD statement of the started task as part of the command SET DB2 planname.
  - b. Change all occurrences of ?BJTPLANB? to a valid plan name to be used by Output Manager's batch catalog synchronization process. The recommended value for the ?BJTPLANB? variable is BJTPLANB.  
**Note:** The ?BJTPLANB? is the plan name for the batch catalog synchronization process and is specified during the BIND and in the PARM parameter of the EXEC PGM=BJTBARCH JCL in sample member BJTXARCH.
  - c. Change all occurrences of ?BJTPLANE? to a valid plan name to be used by Output Manager's BJTAPR3 program. The recommended value for the ?BJTPLANE? variable is BJTPLANE.
  - d. Change all occurrences of ?BJTPLANF? to a valid plan name to be used by Output Manager's the BJTAPHR program. The recommended value for the ?BJTPLANF? variable is BJTPLANF.
  - e. Change all occurrences of ?BJTQUAL? to the value you used when defining Output Manager's DB2 tables in "Step 1: Modify Output Manager's DDL" on page 24.
  - f. Change all occurrences of ?BJTHLQ? to a valid high level qualifier. The value you assign to the ?BJTHLQ? variable will be used throughout the installation.
2. Edit SBJTSAMP member BJT@PRGR:
  - a. Change all occurrences of ?BJTPLAN? to a valid plan name to be used by Output Manager's programs. The recommended value for the ?BJTPLAN? variable is BJTPLAN.  
**Note:** The ?BJTPLAN? is the plan the started task uses and is the name specified during the BIND process and is placed in the CONFIGUR DD statement of the started task as part of the command SET DB2 planname.
  - b. Change all occurrences of ?BJTPLANB? to a valid plan name to be used by Output Manager's batch catalog synchronization process. The recommended value for the ?BJTPLANB? variable is BJTPLANB.  
**Note:** The ?BJTPLANB? is the plan name for the batch catalog synchronization process and is specified during the BIND and in the PARM parameter of the EXEC PGM=BJTBARCH JCL in sample member BJTXARCH.
  - c. Change all occurrences of ?BJTPLANE? to a valid plan name to be used by Output Manager's BJTAPR3 program. The recommended value for the ?BJTPLANE? variable is BJTPLANE.
  - d. Change all occurrences of ?BJTPLANF? to a valid plan name to be used by Output Manager's the BJTAPHR program. The recommended value for the ?BJTPLANF? variable is BJTPLANF.

3. If you have not already done so, edit SBJTSAMP member BJT@PRSS by changing the ?DB2SSID? variable to the appropriate DB2 subsystem ID of the DB2 subsystem that is to contain Output Manager's database components.  
**Note:** A unique DB2SSID member needs to be created for each DB2 subsystem on which you plan to configure Output Manager. SBJTSAMP member BJT@PRSS can be used as a template if you need to create multiple DB2SSID members.
4. If you have not already done so, edit SBJTSAMP member BJT@PRTI:
  - a. Change the ?TEPPLAN? variable to the valid plan for the DSNTEP2 (or similar) program.
  - b. Change the ?RUNLIB? variable to the name of your DB2 RUNLIB data set.
5. If you have not already done so, edit SBJTSAMP member BJT@PROC:
  - a. Change the ?SDSNLOAD? variable to the name of your DB2 load library data set.
  - b. Change the ?BJTHQL? variable to your site's high-level qualifier that holds IBM Output Manager's product libraries.
6. Edit SBJTSAMP member BJT@JCBI:
  - a. Modify the jobcard information to reflect your site's standards.
  - b. Change the ?BJTHQL? variable to your site's high-level qualifier that holds IBM Output Manager's product libraries.
7. Edit SBJTSAMP member BJT@JCGR:
  - a. Modify the jobcard information to reflect your site's standards.
  - b. Change the ?BJTHQL? variable to your site's high-level qualifier that holds IBM Output Manager's product libraries.
8. Run BJT@JCBI.

## Step 4: APF-authorize the libraries

Output Manager requires that the target load library (*highlevel.SBJTLOAD*) be APF-authorized. Include the *highlevel.SBJTLOAD* library as part of your system APF-authorized list. Contact your system administrator if you need assistance.

**Note:** Changes you make to SYS.PARMLIB require an IPL command for the PARMLIB updates to take effect.

## Step 5: Customize HSM recall and related members

The customization of the HSM recall procedure requires modification of the following SBJTSAMP members: BJT@PRYR, BJT@PRH1, and BJT@PRM3. The HSM recall procedure is initiated by the Output Manager started task whenever a user requests the recall of an HSM migrated data set.

To customize the HSM recall procedure:

1. Edit SBJTSAMP member BJT@PRYR:
  - a. Change the ?BJTHLQ? variable to your site's high-level qualifier that holds IBM Output Manager's product libraries.
  - b. Change the ?SDSNLOAD? variable to the name of your DB2 load library data set.
2. Edit SBJTSAMP member BJT@PRH1 to change the ?BJTPLANF? variable to a valid plan name to be used by the BJT@BAPHR program. The recommended value for the ?BJTPLANF? variable is BJT@PLANF.

3. Edit SBJTSAMP member BJT@PRM3 to change the ?BJTPLANE? to a valid plan name to be used by the BJTAPR3 program. The BJTAPR3 program is an error completion program. The recommended value for the ?BJTPLANE? variable is BJTPLANE.
4. Place the HSM recall procedure, BJT@PRYR, in your system PROCLIB.

**Note:** You can rename the HSM recall procedure to the name of your choice. For example, the HSM recall procedure might be renamed to BJT22YR. The name you give the HSM recall procedure must be referenced in the SUBMIT SET command in the startup command list in BJT#IN03.

## Step 6: Specify startup commands

Specify Output Manager's startup commands in SBJTSAMP member BJT#IN03. Startup commands specified in BJT#IN03 are issued each time Output Manager is started. The list below describes the various optional and required startup commands:

### **DB2 SET ID ?DB2SSID?**

(Required) Sets the DB2 subsystem on which IBM Output Manager resides.

### **DB2 SET PLAN ?BJTPLAN?**

(Required) Specifies the BJT plan name.

### **POLICY RESTART**

(Recommended) Causes the automatic restart of selectors when Output Manager is recycled or activates the selectors on the first start up of Output Manager after an IPL.

**Note:** If this is a new installation of Output Manager, POLICY RESTART should be deleted or commented out, as no selectors yet exist. Once selectors are added to Output Manager, please insert POLICY RESTART or remove the comment-out asterisk.

### **VARIABLE SET *variable=value***

(Optional) Sets reserved and non-reserved (user-defined) variables for use in banner pages. For more information about Output Manager's variables, you can specify in BJT#IN03, see Chapter 16, "Variables," on page 231. Variables defined in BJT#IN03 can then be referenced by banner pages.

### **PROTVIEW option**

(Optional) Turns on view security. Valid values for the PROTVIEW option are:

- OFF—View security is voluntary. The USERID field displays on the report and archive search panels.
- USER—Any user whose access authority is USER has the view security enforced (they can only view reports for which their USERID has been setup as a recipient on a distribution list assigned to that report). View security is voluntary for users with AUDIT or ADMIN access authority.
- AUDIT—Any user whose access authority is AUDITOR has the view security enforced (they can only view reports for which their USERID has been setup as a recipient on a distribution list assigned to that report). View security is voluntary for users with ADMIN access authority. View security is enforced for users with USER access authority.
- ADMIN—Any user whose access authority is ADMIN has the view security enforced (they can only view reports for which their USERID has been setup as a recipient on a distribution list assigned to that report). View security is enforced for all users. No other users can enter USERID as search criteria.
- SAF—Applies view security based on access to facility class *ID.PRODNAME.SECV* where *ID* is set by SAF global command and

*PRODNAME* is the product instance name (for example BJT.BJTP.SECV). View security is enforced for all users with NONE or READ access to this facility. Those that have UPDATE or CONTROL access can enter a USERID in the search panels.

#### **SUBMIT SET HSMRECAL** *hrproc*

(Required if using HSM migration procedure) Where *hrproc* is the HSM recall procedure name. Enables the started task to initiate the HSM recall procedure.

**Note:** Because the started task references member BJT#IN03, you must complete this step (“Step 6: Specify startup commands” on page 28) prior to modifying the started task.

1. Edit SBJTSAMP member BJT#IN03 as needed to contain the startup commands necessary for your system.
  - a. Replace the ?DB2SSID? variable in the DB2 SET ID command with the DB2 subsystem ID on which IBM Output Manager resides.
  - b. Replace the ?BJTPLAN? variable in the DB2 SET PLAN command with your BJT plan name.

**Note:** The value you use for the ?BJTPLAN? variable should be the same as that used in BJT@PRBI.
  - c. Specify any of Output Manager’s other startup commands described in Table 2 on page 21 as needed for your system’s requirements.

**Note:** If you intend to use the HSM view recall procedure, you must specify the SUBMIT SET HSMRECAL parameter.
2. Save SBJTSAMP member BJT#IN03.

## **Step 7: Modify the started task JCL**

You must modify the started task JCL contained in SBJTSAMP member BJT#IN04 according to your site’s standards. After modifying the started task, you must place the JCL in your system PROCLIB.

**Note:** The started task for Output Manager can be any name you assign.

1. Edit SBJTSAMP member BJT#IN04.
  - a. Replace ?BJTNAME? with product instance name you have chosen for this instance of Output Manager. This is the same name you will specify in the next step, “Step 8: Create access to interface.”
  - b. Replace ?BJTHLQ? with the high level qualifier of your installed IBM Output Manager libraries.
  - c. Replace ?SDSNLOAD? with the DB2 LOADLIB for IBM Output Manager.
2. Place the modified member BJT#IN04 in your system PROCLIB.

## **Step 8: Create access to interface**

To create access to the Output Manager interface, you must create the invocation executable to call the user interface for Output Manager. To do this:

1. Edit the appropriate SBJTEXEC member(s) (BJT, BJTA, and/or BJTD depending on the user groups you need to setup) to point to the product libraries.
  - a. Change the ?BJTHLQ? variable to the high-level qualifier you assigned to the Output Manager libraries.
  - b. Change the ?BJTNAME? variable in the NAME= statement to the product instance name you intend to use for this instance of Output Manager.

2. Save your changes to and make the EXEC members available to your TSO users. Contact your system administrator for assistance.

## Step 9: Installation verification

Verify that the LOADLIB is APF-authorized. Then issue the MVS START command to start the Output Manager started task. For example, in SDSF you can do so by typing /S BJT<sub>B</sub> (where BJT<sub>B</sub> is the Output Manager product instance name). After issuing the start command, verify that installation was successful. To do so:

1. Check for messages that indicate the status of the started task. If you receive the following message, the started task is up and running and you can continue to the next step to check the interface:

```
BJT02012I IBM Output Manager is ready for commands
```

*Figure 4. Installation Verification message*

If you do not receive message BJT02036I, "IBM Output Manager is ready for commands", the started task is not running. In this case, look at other informational messages to determine potential problems. Review the product customization steps or contact your system administrator for further assistance.

2. Start the interface. To access the interface for IBM Output Manager, execute the BJT EXEC that you modified in "Step 8: Create access to interface" on page 29. The IBM Output Manager main menu appears. Press Enter to remove the copyright statement. The main menu appears as shown below:

```
View Administration Preferences Help
-----
                                IBM Output Manager
Command ==>

      P  Preferences                Terminal and user parameters
      V  View Reports              Create and change reports
      A  Administrative Functions  Administer rules and reports
      I  Installation Verification Verify installation

      X  Exit
```

```
-----
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-----
```

*Figure 5. IBM Output Manager main menu*

3. Perform installation verification steps. To proceed with installation verification, type I at the command line and press Enter. The following message appears if installation was successful:

```
IBM Output Management Tool is available
Last verified at 11/04/2002 - 17:44:26 on system RS22
Started task was OMID, product name was OMID
This verification occurred at 11/05/2002 - 04:11:20 on system RS22
Started task is OMID, product name is OMID
```

Figure 6. Installation Verification message

If installation was not successful, you will see one of the following error messages:

- "Product instance name" is not active. Start the product instance to make it active.
- "DB2 is not available." If you receive this message, check the following items:
  - The DB2 subsystem ID is valid.
  - EXECUTE authority is assigned to the USERID of the Output Manager started task.
  - The plan name is valid.
  - The DB2 tables were created successfully.

---

## Installing and customizing the Archive Viewer

Output Manager's Archive Viewer provides a conversion process to register third-party archived reports in Output Manager's archive table (BJTARC). This conversion process enables users to access third-party archived reports through the Output Manager interface.

**Note:** The installation and customization of the Archive Viewer is optional. Installation and customization of the Archive Viewer is only necessary if you intend to convert third-party archive reports for use with Output Manager.

### Step 1: Create the Archive Viewer tables

The Archive Viewer requires that two tables be added to your Output Manager system, BJTAVR and BJTAVT. To add these tables:

1. Edit SBJTSAMP member BJT@TBAV:
  - a. Change the variable ?BJTBASE? to a valid database name. The recommended name is BJTBASE.

**Note:** The value you specify for ?BJTBASE? must be unique within the DB2 system for which you are configuring Output Manager. Check with your DB2 systems administrator to ensure the value you specify for the database name is valid and adheres to your site's naming conventions.
  - b. Change each occurrence of the variable ?BJTQUAL? to the appropriate value for use in naming Output Manager's tables.
  - c. Save the member.
2. Edit SBJTSAMP member BJT@PRSS by changing the ?DB2SSID? variable to the appropriate DB2 subsystem ID of the DB2 subsystem that is to contain Output Manager's database components.

**Note:** A unique DB2SSID member needs to be created for each DB2 subsystem on which you plan to configure Output Manager. SBJTSAMP member BJT@PRSS can be used as a template if you need to create multiple DB2SSID members.

3. Edit SBJTSAMP member BJT@PRTI:

- a. Change the ?TEPPLAN? variable to the valid plan for the DSNTEP2 (or similar) program.
- b. Change the ?RUNLIB? variable to the name of your DB2 RUNLIB data set.
4. Edit SBJTSAMP member BJT@PROC:
  - a. Change the ?SDSNLOAD? variable to the name of your DB2 load library data set.
  - b. Change the ?BJTHQL? variable to your site's high-level qualifier that holds IBM Output Manager's product libraries.
5. Edit SBJTSAMP member BJT@JCAV:
  - a. Change the ?BJTHQL? variable to your site's high-level qualifier that holds Output Manager's product libraries.
  - b. Modify the jobcard information to reflect your site's standards.
6. Run BJT@JCAV.

## Step 2: Bind the Archive Viewer plans and grant plan EXECUTE authority

SBJTSAMP member BJT@PRBV contains Output Manager's bind control statements for the Archive Viewer. SBJTSAMP member BJT@PRGV grants EXECUTE authority for the plan.

1. Edit SBJTSAMP member BJT@PRBV:
  - a. Change all occurrences of ?BJTPLANC? to a valid plan name to be used by Archive Viewer's BJT BIXC2 program. The BJT BIXC2 program updates BJTARC with the third-party master archive index. The recommended value for the ?BJTPLANC? variable is BJTPLANC.
  - b. Change all occurrences of ?BJTPLAND? to a valid plan name to be used by Archive Viewer's BJT PAPER2 program. The BJT BAPER2 program extracts the VOLSER and tape sequence for the actual migration. The recommended value for the ?BJTPLAND? variable is BJTPLAND.
  - c. Change all occurrences of ?BJTPLANE? to a valid plan name to be used by the Archive Viewer's BJT BAPER3 program. The BJT BAPER3 program updates the migration state with a success or failure. The recommended value for the ?BJTPLANE? variable is BJTPLANE.
  - d. Change all occurrences of ?BJTQUAL? to the value you used when defining Output Manager's DB2 tables.
  - e. Change all occurrences of ?BJTHLQ? to a valid high level qualifier. The value you assign to the ?BJTHLQ? variable will be used throughout the installation.
2. Edit SBJTSAMP member BJT@PRGV:
  - a. Change all occurrences of ?BJTPLANC? to a valid plan name to be used by Archive Viewer's BJT BIXC2 program. The BJT BIXC2 program updates BJTARC with the third-party master archive index. The recommended value for the ?BJTPLANC? variable is BJTPLANC.
  - b. Change all occurrences of ?BJTPLAND? to a valid plan name to be used by Archive Viewer's BJT PAPER2 program. The BJT BAPER2 program extracts the VOLSER and tape sequence for the actual migration. The recommended value for the ?BJTPLAND? variable is BJTPLAND.
  - c. Change all occurrences of ?BJTPLANE? to a valid plan name to be used by the Archive Viewer's BJT BAPER3 program. The BJT BAPER3 program updates the migration state with a success or failure. The recommended value for the ?BJTPLANE? variable is BJTPLANE.

3. Edit SBJTSAMP member BJT@JCBV:
  - a. Modify the jobcard information to reflect your site's standards.
  - b. Change the ?BJTHQL? variable to your site's high-level qualifier that holds IBM Output Manager's product libraries.
4. Run BJT@JCBV.

### Step 3: Customize view recall and related procedures

The customization of the view recall procedure requires modification of the following SBJTSAMP members: BJT@PRVR, BJT@PRM1, BJT@PRM2, BJT@PRM3. The view recall procedure is initiated by the Output Manager started task whenever a user requests the recall of a migrated data set that is still in third-party archive format.

**Note:** The view recall procedure requires BLP authority to access the third-party archive reports on tape. Contact your systems security administrator for more information or assistance in configuring the appropriate security settings.

To customize the view recall procedure:

1. Edit SBJTSAMP member BJT@PRVR:
  - a. Change the ?BJTTAPE? variable to the tape unit that is to be used to read the archive tapes for conversion.
  - b. Change the SELC parameter to identify the selector class you intend to specify for the selector definition that is to capture the recalled archive report. For example, you might specify SELC=J. In this case, to capture archive reports after their conversion, you must specify the same selector class, J, in the selector definition you create in Step 1.
  - c. Change the ?BJTHLQ? variable to your site's high-level qualifier that holds IBM Output Manager's product libraries.
  - d. Change the ?SDSNLOAD? variable to the name of your DB2 load library data set.
2. Edit SBJTSAMP member BJT@PRM1 to change the ?BJTPLAND? variable to a valid plan name to be used by Archive Viewer's BJTBAVR2 program. The BJTBAVR2 program extracts the VOLSER and tape sequence for the actual migration. The recommended value for the ?BJTPLAND? variable is BJTPLAND.
3. Edit SBJTSAMP member BJT@PRM2 to change the ?BJTPLANE? to a valid plan name to be used by the Archive Viewer's BJTBAVR3 program. The BJTBAVR3 program updates the migration state with a success or failure. The recommended value for the ?BJTPLANE? variable is BJTPLANE.
4. Place the view recall procedure, BJT@PRVR, in your system PROCLIB.

**Note:** You can rename the view recall procedure to the name of your choice. For example, the view recall procedure might be renamed to BJTBAVR2. The name you give the view recall procedure must be referenced in the SUBMIT SET command in the startup command list in BJT#IN03. For more information, see "Step 4: Customize Output Manager for view recall".

### Step 4: Customize Output Manager for view recall

The following Output Manager customizations are required to ensure the capture of third-party archives that are converted by the view recall procedure:

1. Create a selector definition to capture output printed by the view recall procedure:

- a. From the Output Manager main menu, select option A, Administrative Functions and press Enter. The Administrative Functions panel displays.
  - b. Select option S, Selector Definitions, and press Enter.
  - c. If no other selector definitions exist, the No Selector Rules Found panel displays. Press Enter to access the Selector Rules panel where you can specify the criteria for a new selector definition. If selector definitions currently exist, the List of Selector Rules panel displays. Type I in the CMD field and press enter. The Selector Rules panel displays.
  - d. Specify the appropriate Sysout Class that will capture the converted archive reports. The Sysout Class value you specify should match the selector class specified in the SELC statement in the view recall procedure you customized in Step 1b on page 33. For example, if you specified a SELC=J, then the Sysout Class value you specify for the selector definition should also be J.
  - e. Press PF3. The List of Selector Rules panel displays.
  - f. Press PF3. A save confirmation window displays.
  - g. Press PF3 to save the selector definition.
2. Specify the SUBMIT command in the startup command list. To do so, edit SBJTSAMP member BJT#IN03 to include the following startup command:
 

```
SUBMIT SET VRECALL vrproc
```

where *vrproc* is the name of the view recall procedure you copied to your system PROCLIB in Step 4 on page 33. For example,

```
SUBMIT SET VRECALL BJT22VR
```

---

## Installing and configuring the Web-Based Report Viewer

Output Manager's Web-Based Report Viewer (WBRV) enables you to view Output Manager's archived SYSOUT and custom reports using a web browser such as Internet Explorer. The WBRV is highly customizable and can be tailored according to your site's specific report viewing needs.

The WBRV consists of a set of web server files which include a servlet, HTML files, image files, and a sample WBRV configuration file. These files are provided in the following directory structure:

### WBRVroot directory

```
/bin
/html
/images
/samplib
```

Where:

- The **WBRVroot directory** is the location in your HFS system where you install the WBRV files.
- The **/bin** directory contains the servlet (bjtcgwap.so) which provides the API for Output Manager.
- The **/html** directory contains the default .html files that comprise the WBRV online interface.
- The **/images** directory contains the default .gif images used by the WBRV's .html files.
- The **/samplib** directory contains a sample WBRV configuration file (omsrv.conf) that can be copied and customized for use at your site.

**Note:** The install requires about 5 cylinders in your USS file system.

## Installation overview

Output Manager's WBRV is packaged as a PAX file (SBJTSAMP member BJT@PAXF) which must be placed in the appropriate place on your web server (based on your site's specific HFS requirements). The location you chose for the WBRV files is referred to as the "WBRVroot directory".

The PAX file preserves the file structure of the WBRV files and, when unpackaged, populates the following directory structure within the WBRVroot directory:

### WBRVroot directory

```
/bin
/html
/images
/samplib
```

### Notes:

1. The WBRVroot directory is specified as `*/path/to/WBRVroot/directory?` in the definitions. It is assumed the OM has been installed and has a name assigned to it. In the definitions that will be `*/BJTNAME?`. A URL has been picked that is the base URL for access to the WBRV. In the definitions this will be `*/WBRVURL?`.
2. The examples will all use the following assumptions:
  - The WBRVroot directory chosen is `/web/httpserver/om`.
  - The product name assigned to OM is `BJTP`.
  - The URL picked is `/om`.

## Installation steps

To install the WBRV files on your USS system, you must do the following:

1. Edit SBJTSAMP member BJT@JCPF:
  - a. Modify the jobcard information to reflect your site's standards.
  - b. Change the `*/WBRV mount point?` variable to the location to which your WBRVroot directory will be placed.
  - c. (Optional) Edit the `mkdir` and `cd` statements to point to the WBRVroot directory to be used by your site. The default value for the WBRVroot directory is `om`. For example, if you wanted your WBRVroot directory to be named "omweb", then the statements in the JCL would be edited to:

```
mkdir omweb; +
cd omweb; +
```

2. Run BJT@JCPF. The WBRV files will be unboxed into your WBRVroot directory inside your WBRV mount point.

## Configuring the HTTP server

The complete configuration of an IBM HTTP server is beyond the scope of this document. This section describes only those HTTP server customizations required by Output Manager's WBRV implementation. Please refer to the following manual (available at [www.ibm.com](http://www.ibm.com)) for more information about HTTP server configuration: "HTTP Server Planning, Installing, and Using" (SC34-4826-02).

The WBRV servlet (bjtcgwap.so) requires that three directives be present in the HTTP server configuration file:

1. One "ServerInit" directive (a GWAPI directive that identifies the location of the servlet and gives the servlet's initialization routine control whenever the HTTP server is started or restarted).
2. At least one "Service" directive (which directs URLs to the servlet when accessing Output Manager's captured reports).
3. At least one "Pass" directive (which for the WBRV is used to simplify the request of images).

**Notes:**

1. A current restriction of the WBRV is that only one level of directory structure may be used in the service directive. For example /zos/om is an invalid configuration while /om is a valid configuration.
2. Multiple Service and Pass directives may be defined, depending on the requirements of your site's implementation of the WBRV.
3. The modification of the HTTP server configuration file is often the responsibility of a Webmaster at a site. Contact the appropriate personnel at your site for assistance before attempting to modify the HTTP server configuration file.

The WBRV also requires that the MVSDS service be active and configured for your site. Please refer to "HTTP Server Planning, Installing, and Using" (SC34-4826-02) (available at [www.ibm.com](http://www.ibm.com)) for more information.

To customize the HTTP server:

1. Specify the following ServerInit directive in the HTTP server configuration file:

```
ServerInit ?/path/to/WBRVroot/directory?/bin/bjtcgwap.so:OM_InitServer
?/path/to/WBRVroot/directory?/omsrv.conf
```

For example:

```
ServerInit /web/httpserver/om/bin/bjtcgwap.so:OM_InitServer
/web/httpserver/om/omsrv.conf
```

2. Specify at least one Service directive:

```
Service ?WBRVURL?* ?/path/to/WBRVroot/directory?/bin/bjtcgwap.so:OM_Service*
```

Where ?WBRVURL? is the URL used to indicate a point of entry to the WBRV that points to a particular set of directives in the omsrv.conf file that defines how to launch the WBRV. You can specify multiple Service directives to access different initial page definitions to the WBRV. For example:

```
Service /om /web/httpserver/om/bin/bjtcgwap.so:OM_Service*
```

3. Specify the following Pass directive:

```
Pass ?/virtual/image/root/name?* ?/path/to/WBRVroot/directory?/images/*
```

Where ?virtual/image/root/name? is the virtual name you wish to assign to the path to your WBRV images, ?path/to/WBRVroot/directory/images? is the path to the directory in which you have stored the images used by your WBRV html files. For example:

```
Pass /omsrv/image* /web/httpserver/om/images/*
```

**Note:** The "\*" appended to the two arguments of the Pass statement are important and cause matches for any path whose name matches the first portion of that defined in the pass statement.

## Configuration of the WBRV control file

The WBRV control file (omsrv.conf) contains information about the various initial page definitions for the WBRV. An initial page definition is a method of accessing the WBRV and requires, at a minimum, the following statements:

ServiceDirective	/initial/page/path
HTMLDirectory	?/path/to/WBRVroot/directory?.html
InitialHTML	initial.html

Figure 7. Initial page definition

Where:

- **/initial/page/path** is the path, that when appended to the WBRV's URL, causes a match against a given initial page definition to occur. A current restriction of the WBRV is that this path can only be one level, for example /zos/om is invalid, while /om is a valid.
- **?/path/to/WBRVroot/directory?.html** is the fully qualified path to the WBRV html directory.
- **/initial.html** is the initial html page (of those html pages contained within the HTMLDirectory) that is first displayed upon entry into the WBRV.

**Note:** In order for an initial page definition to function, it requires that the initial part of the name has a matching Service directive defined in the HTTP server configuration file. In our examples we have only one HTTP server "service directive" defined. The additional initial page definitions all build upon the same base name.

An initial page definition can also optionally include variable assignments that further refine the information displayed upon entering the product, such as:

&BJTPRODNAME	?BJTNAME?
&BJTFUNCTION	function

Figure 8. Initial page definition variable assignments

Where:

- **?BJTNAME?** is the product instance name of the target instance of OM.
- **function** is one of the available functions. For more information, see "Functions".

**Note:** Each function must be matched with the proper initial html. This combination of function name and initial html, is how the different initial pages of OM are displayed.

### Functions

The following are the available functions that can be specified for the &BJTFUNCTION variable:

#### LISTPRODUCTS - select.html

This shows a list of the various instances of Output Manager that are running on the same image as the http server. Usually you would only use this if you have more than one instance of OM running at your shop.

#### DISPLAY MENU - menu.html

This will display the main menu of available functions, from which you can select display all archive or reports, or enter selection criteria to select particular archives or reports.

### **QUERYARCHIVES - archive.html**

This will display a list of archives. By default this is all archives. You can preset selection criteria for by specifying values in the selection criteria variables defined below.

### **QUERYREPORTS - report.html**

This will display a list of reports. By default this is all reports. You can preset selection criteria for by specifying values in the selection criteria variables defined below.

The following selection criteria variables are available for archives:

#### **&BJTJOBNAME**

The name of the job that produced the archive, alpha numeric, wild cards allowed.

#### **&BJTSYSOUTCLASS**

The sysout class the original sysout was written to, string of 1 to 36 characters of inclusive classes.

#### **&BJTEXCEPTIONS**

How to select exceptions, one character "Y" - only exceptions, "N" - no exceptions.

#### **&BJTAFTERDATE**

Select after this date, format is yyyy/mm/dd, or "T" or "T-nnnn" where T is today and nnnn is number of days.

#### **&BJTAFERTIME**

Select after this time, format is hh:mm:ss.

#### **&BJTBEFOREDATE**

Select after this date format is yyyy/mm/dd, or "T" or "T-nnnn" where T is today and nnnn is number of days.

#### **&BJTBEFORETIME**

Select before this time, format is hh:mm:ss.

## **Reports**

The following selection criteria variables are available for reports:

#### **&BJTREPORTNAME**

The name of the report, alpha numeric, wildcards allowed.

#### **&BJTREPORTTYPE**

The type of report, one character "B" - Basic, "C" - Custom, "N" - No report, "U" - Undefined.

#### **&BJTAFTERDATE**

Select after this date, format is yyyy/mm/dd, or "T" or "T-nnnn" where T is today and nnnn is number of days.

#### **&BJTAFERTIME**

Select after this time, format is hh:mm:ss.

#### **&BJTBEFOREDATE**

Select after this date format is yyyy/mm/dd, or "T" or "T-nnnn" where T is today and nnnn is number of days.

#### **&BJTBEFORETIME**

Select before this time, format is hh:mm:ss.

#### **&BJTUSERID**

A userid that is in the distribution list, or the special userid ZUSER, which will be the user id of the user logged on to the web browser.

The WBRV requires that you define at least one initial page definition in omsrv.conf. Your site can optionally implement multiple initial page definitions to the WBRV, thus creating multiple ways for users to access different parts of the product, such as a list of archives, a list of custom reports, or a pre-selected list of reports depending on the URL they request. The order in which initial page definitions are listed in omsrv.conf is important (more-specific initial page definitions should be listed before less-specific initial page definitions).

The servlet scans the list of initial page definitions from top to bottom looking for a match between the initial page definition and the requested URL. When a match is found, the WBRV is launched according to the HTMLDirectory, InitialHTML, and variables defined.

A sample omsrv.conf file is located in the

```
*/path/to/WBRVroot/directory*/samplerlib
```

directory. Once customized according to your site's needs, the omsrv.conf file must be placed in the

```
*/path/to/WBRVroot/directory?
```

directory.

## WBRV control file configuration

To configure the WBRV control file:

1. Determine the various initial page definitions you intend to configure for your WBRV. Refer to "Sample WBRV control file" and "Building initial page definitions and URLs" on page 42 for examples of how to configure your WBRV control file and build initial page definitions for your WBRV.
2. Copy the WBRV control file (omsrv.conf) from \*/path/to/WBRVroot/directory\*/samplerlib to your WBRVroot directory.
3. Rename to omsrv.conf.
4. Specify the appropriate initial page for each URL you plan to use to access your WBRV.
5. Save the omsrv.conf file.

### Sample WBRV control file

The following sample WBRV control file illustrates the minimum required for the WBRV to operate:

```
ImageRoot          */virtual/image/root/name?
ServiceDirective   */WBRVURL?
HTMLDirectory      */path/to/WBRVroot/directory*/html/directory
InitialHTML        /menu.html
&BJTPRODNAME       ?BJTNAME?
&BJTFUNCTION       DISPLAYMENU
```

Figure 9. Sample WBRV control file with variables

For example:

```
ImageRoot      /omsv/image
ServiceDirective /om
HTMLDirectory  /web/httpserver/om/html
InitialHTML    /menu.html
&BJTPRODNAME  BJTP
&BJTFUNCTION   DISPLAYMENU
```

*Figure 10. Sample WBRV control file with defined paths*

The following sample WBRV control file illustrates how various additional initial page definitions can be used to refine the ways users might launch the WBRV:

```

#=====#
#
# Output Manager for Z/OS HTTP Servlet configuration
#
# Customize this file according to the instructions included in
# the readme.txt file. After customization, place a copy in the
# root directory that holds your WBRV installation.
#
#=====#

#ImageRoot          ?/virtual/image/root/name?

# To show a list of reports that only the user who logged on to the webserver can see

#ServiceDirective  /?WBRVURL?/myreports
#HTMLDirectory    ?/path/to/WBRVroot/directory?/html/directory
#InitialHTML      /report.html
#&BJTPRODNAME     ?BJTNAME?
#&BJTFUNCTION     QUERYREPORTS
#&BJTUSERID      ZUSER

# To show a list of particular reports for the ash branch of the bank reports

#ServiceDirective  /?WBRVURL?/ash
#HTMLDirectory    ?/path/to/WBRVroot/directory?/html/directory
#InitialHTML      /report.html
#&BJTPRODNAME     ?BJTNAME?
#&BJTFUNCTION     QUERYREPORTS
#&BJTREPORTNAME   ?REPORTNAME?

# To show a list of particular archives

#ServiceDirective  /?WBRVURL?/payroll
#HTMLDirectory    ?/path/to/WBRVroot/directory?/html/directory
#InitialHTML      /archive.html
#&BJTPRODNAME     ?BJTNAME?
#&BJTFUNCTION     QUERYARCHIVES
#&BJTJOBNAME      ?JOBNAME?

# To show a list of all reports

#ServiceDirective  /?WBRVURL?/reports
#HTMLDirectory    ?/path/to/WBRVroot/directory?/html/directory
#InitialHTML      /report.html
#&BJTPRODNAME     ?BJTNAME?
#&BJTFUNCTION     QUERYREPORTS

# To show a list of all archives

#ServiceDirective  /?WBRVURL?/archives
#HTMLDirectory    ?/path/to/WBRVroot/directory?/html/directory
#InitialHTML      /archive.html
#&BJTPRODNAME     ?BJTNAME?

# To show a menu of available functions from within OM

#ServiceDirective  /?WBRVURL?/?BJTNAME?
#HTMLDirectory    ?/path/to/WBRVroot/directory?/html/directory
#InitialHTML      /menu.html
#&BJTPRODNAME     ?BJTNAME?
#&BJTFUNCTION     DISPLAYMENU

# To show a list of instances of OM to allow user to choose

#ServiceDirective  /?WBRVURL?
#HTMLDirectory    ?/path/to/WBRVroot/directory?/html/directory
#InitialHTML      /select.html

```

Figure 11. Sample WBRV control file with additional launch option variables

For example:

```

ImageRoot          /omsrv/image

# To show a list of reports that only the user who logged on to the webserver can see

ServiceDirective   /om/myreports
HTMLDirectory      /web/httpserver/om/html/html/directory
InitialHTML        /report.html
&BJTPRODNAME       BJTP
&BJTFUNCTION       QUERYREPORTS
&BJTUSERID         ZUSER

# To show a list of particular reports for the ash branch of the bank reports

ServiceDirective   /om/ash
HTMLDirectory      /web/httpserver/om/html/html/directory
InitialHTML        /report.html
&BJTPRODNAME       BJTP
&BJTFUNCTION       QUERYREPORTS
&BJTREPORTNAME     ASH

# To show a list of particular archives

ServiceDirective   /om/payroll
HTMLDirectory      /web/httpserver/om/html
InitialHTML        /archive.html
&BJTPRODNAME       BJTP
&BJTFUNCTION       QUERYARCHIVES
&BJTJOBNAME        PAYROL*

# To show a list of all reports

ServiceDirective   /om/reports
HTMLDirectory      /web/httpserver/om/html
InitialHTML        /report.html
&BJTPRODNAME       BJTP
&BJTFUNCTION       QUERYREPORTS

# To show a list of all archives

ServiceDirective   /om/archives
HTMLDirectory      /web/httpserver/om/html
InitialHTML        /archive.html
&BJTPRODNAME       BJTP
&BJTFUNCTION       QUERYARCHIVES

# To show a menu of available functions from within OM

ServiceDirective   /om/archives
HTMLDirectory      /web/httpserver/om/html
InitialHTML        /menu.html
&BJTPRODNAME       BJTP
&BJTFUNCTION       DISPLAYMENU

# To show a list of instances of OM to allow user to choose
HTMLDirectory      /web/httpserver/om/html
InitialHTML        /select.html

```

Figure 12. Sample WBRV control file with additional launch option defined paths

## Building initial page definitions and URLs

The following examples illustrate various initial page definitions that might be used with the WBRV.

**Note:** All of the examples use the following HTTP server configuration directives:

```

ServerInit /web/httpserver/om/bin/bjtcgwap.so:OM_InitServer /web/httpserver/om/
           omsrv.conf
Service    /om* /web/httpserver/om/bin/bjtcgwap.so:OM_Service*
Pass       /omsrv/image* /web/httpserver/om/images/*

```

Figure 13. HTTP server configuration directives used in examples

### Example 1

This initial page definition instructs the WBRV to display the menu (menu.html) for the product instance BJTP via port 9083. The URL for this initial page definition is:

`http://omviewer.rocketsoftware.com:9083/om`

The initial page definition is:

```

ServiceDirective /om
HTMLDirectory   /web/httpserver/om/html
InitialHTML     /menu.html
&BJTPRODNAME    BJTP
&BJTFUNCTION    DISPLAYMENU

```

Figure 14. Initial page definition

### Example 2

This initial page definition instructs the WBRV to display the archive list (archive.html) for the product instance BJTP via port 9083. The URL for this initial page definition is:

`http://omviewer.rocketsoftware.com:9083/om/archives`

The ServiceDirective and related statements in omsrv.conf for this initial page definition are:

```

ServiceDirective /om/archives
HTMLDirectory   /web/httpserver/om/html
InitialHTML     /archive.html
&BJTPRODNAME    BJTP
&BJTFUNCTION    QUERYARCHIVES

```

Figure 15. Service directive

**Note:** For this initial page definition to be effective, it must be listed in the omsrv.conf file prior to less-specific initial page definitions such as the one shown in Example 1.

## Security and authentication

For information about setting up security and authentication of the WBRV, see “Security and authentication of the WBRV” on page 53.



---

## Chapter 4. Security

Output Manager implements security on both external and internal levels. **External security** enables you to manage and secure Output Manager's resources by leveraging existing RACF security via the SAF router interface. **Internal security** enables you to categorize users into three groups (users, administrators, and auditors) so as to provide each user group with the appropriate access to product functionality.

Output Manager also deals with security at the archive data set level. By leveraging the RACF security definitions already in place in your environment, you can establish the level of access to Output Manager's archive data sets appropriate for each user.

Output Manager's **view security** provides report administrators with a mechanism for controlling the reports users can view. View security relies on Output Manager's recipient, distribution list, and report searching functions to provide a mechanism to control the viewing of basic and custom reports.

The terms used throughout this chapter to describe Output Manager's security concepts include:

- **Access authority:** The privileges granted to a particular user or group when accessing a protected resource (such as the ability to read or update a data set). For Output Manager resources protected by RACF profiles, the access authorities are NONE, READ, UPDATE, and CONTROL. These authorities are hierarchical, with UPDATE also granting READ, CONTROL granting UPDATE, and so forth.
- **Access intent:** When a user performs an action in Output Manager, they are attempting to access the resource with some intent. That intent is referred to as the access intent. If the user has sufficient authority for the given request, they will be granted access to the appropriate resources.
- **Access list:** A list of RACF user IDs and group names authorized to access a resource. This list also includes the level of access granted to each user ID and group.
- **Authority:** The right to access objects, resources, or functions.
- **Class:** A collection of RACF-defined entities (users, groups, and resources) with similar characteristics. Classes are defined in the class descriptor table (CDT) except for the USER, GROUP and DATASET classes.
- **Profiles:** RACF-defined entities that are used as the primary protection mechanism. Each Output Manager installation defines its own set of profiles to give the level of protection desired. Profiles can contain wildcards, thus enabling the coverage of more than one resource type, ID, subsystem, etc.
- **Resource:** An entity protected by the security system, for example, data sets, programs, and application-specific objects are resources.
- **Resource name:** The structured name associated with each Output Manager resource. The resource name facilitates the use of wildcards at various levels. The general structure of a resource name consists of levels, like data set names, which are separated by periods. The structure of a resource name is bjt.ssss.restyp.resid where bjt is the three-character SAF ID, ssss is the product instance name, restyp is the object type (menu, rules, arcattr, etc.) and resid is the instance of the particular object. Resource names that contain blanks are represented in RACF profile names with the "\_" character. All resource names will be automatically changed to uppercase.

- **SAF ID:** The variable that identifies the highest level of the structured resource name. This variable is used to differentiate a structured resource from other general resources (such as operator commands).
- **Universal access authority (UACC):** The default access authority that applies to a resource if the user or group is not specifically permitted access to the resource. The universal access authority can be any of the access authorities.

---

## External security

Output Manager's external security functionality leverages system security to manage the product's resources. Output Manager uses the SAF router interface to manage product components and to provide access-control checking and authorization-related checking. To implement Output Manager's external security functionality, your site must have a SAF-enabled interface such as RACF.

### External security in a RACF environment

RACF profiles provide Output Manager with a mechanism for creating a hierarchy of protection for the product's various resources. RACF profiles are ordered and displayed in a specific-to-generic order.

When a user requests an Output Manager resource, the following sequence of actions occur:

1. Output Manager makes a call (using a specific resource name and access intent) to RACF to verify whether or not that resource is protected.
2. RACF takes the specific resource name and locates the defined profile that fits it, if any.
3. RACF then searches all of the profiles looking for a specific profile. If there is no match, then RACF searches for generic profiles.
4. If a profile is found, RACF checks to see if the requesting user is on that profile's access list. If the user is on the profile's access list, RACF compares the user's access intent to the access authority; if access intent and access authority permit, the user is then granted access to the resource.
5. If the user is not on the profile's access list the access intent is checked against the universal access (UACC) of the profile, and permission is granted or not granted as based upon the profile's UACC.

For example, if a user selects option A.I (Interceptor rules) on the Output Manager main menu, a call is made using the resource name (for example, BJT.BJTB.IRUL). If the resource has a profile and the user is on the profile's access list with UPDATE authority, the user can view but not change the interceptor rules. If the user has CONTROL authority, the user can both view and update the interceptor rules.

## Resources

Output Manager can be broken down into a set of **resources** or entities that can be individually protected by the security system (for example, data sets, programs, or application-specific objects). Output Manager's resources are summarized in Table 3 on page 47.

**Note:** The examples in Table 3 on page 47 show the resource names for an Output Manager implementation whose SAF ID is BJT and whose product instance name is BJTB. For more information about how to form a resource name, see "Resource names" on page 48.

Table 3. Output Manager's resources

Resource	Resource type	Description
Menu	MENU	<p>Menu resources consist of the various menu options available to users. There are three resource IDs associated with the MENU resource type:</p> <ul style="list-style-type: none"> <li>• MAIN</li> <li>• VIEW</li> <li>• ADMIN</li> </ul> <p>Examples of menu resource names include: BJT.BJTB.MENU.MAIN, BJT.BJTB.MENU.ADMIN, and BJT.BJTB.MENU.VIEW .</p> <p><b>Note:</b> Users are required to have at least READ access authority to be able to view MENU.MAIN and MENU.VIEW resources (panels BJTPMAIN and BJTPVIEW). Users are required to have UPDATE access authority to be able to view the MENU.ADMIN resource (panel BJTPADMN). Users are required to have CONTROL access authority to be able to view, change, create, or delete Output Manager resources. Some resources, such as individual reports, can be further protected by more specific resource names and additional RACF profiles.</p>
Reports	RPRT	<p>Report resources consist of the print data streams produced by user-defined programs or other software programs and captured by Output Manager. An example of a report resource name is: BJT.BJTB.RPRT.PAYROLL</p>
Interceptors	IRUL	<p>Interceptor resources are administrative resources and consist of Output Manager's rules that (1) specify the criteria by which SYSOUT is captured prior to its reaching the spool and (2) define what to do with captured SYSOUT. An example of an interceptor resource name is: BJT.BJTB.IRUL</p>
Selectors	SRUL	<p>Selector resources are administrative resources and consist of Output Manager's rules that (1) specify the criteria by which specific output types are selected directly off the spool and (2) define what to do with captured output. An example of a selector resource name is: BJT.BJTB.SRUL</p>
Report rules	RRUL	<p>Report rule resources are administrative resources and consist of Output Manager's rules that (1) specify the criteria (such as the job, proc, program, DD name and step) against which captured reports are matched to determine if they should be processed into basic reports and (2) identify the report layout, that if used by a custom report definition, initiates the creation of a custom report from a basic report. An example of a report rule resource name is: BJT.BJTB.RRUL</p>
Archive attributes	ARCA	<p>Archive attribute resources are administrative resources that are sets of attributes that Output Manager uses when allocating a sequential file to hold captured SYSOUT. An example of an archive attribute resource name is: BJT.BJTB.ARCA.ONEUP_PRINT</p>
Layout definitions	LAYO	<p>Layout definitions are administrative resources that provide Output Manager with a way of describing how original reports look as produced by an application. An example of a layout definition resource name is: BJT.BJTB.LAYO.DEPOSITS</p>

Table 3. Output Manager's resources (continued)

Resource	Resource type	Description
Custom reports	CURP	Custom reports are administrative resources that are a subset of a captured report. An example of a custom report resource name is: BJT.BJT.CURP.MONTHLY
Recipients	RCPN	Recipients are administrative resources that represent information about an individual or generic location such as name, address, building, printer destination, SYSOUT class, or USERID. An example of a recipient resource name is: BJT.BJT.RCPN.MANAGERS
Distribution lists	DIST	Distribution lists are administrative resources that represent a group of recipients that are linked to a custom report definition and control the real time, reprint, or reprint with distribution functions. An example of a resource name for an individual distribution list is: BJT.BJT.DIST.DENVER
Printer attributes	PRTA	Printer attributes are administrative resources that include information about general printing attributes, PSF-related attributes, and attributes associated with printing on a 3800 series printer. An example of a printer attribute resource name is: BJT.BJT.PRTA.DEFAULT
Banner pages	BANR	Banner pages are administrative resources that enable you to provide additional information with your printed reports. An example of a resource name for an individual distribution list is: BJT.BJT.BANR.MONTHLY
Activity monitor	ACTM	The activity monitor is a function that enables report administrators to access information about Output Manager's report processing activities. An example of an activity monitor resource name is: BJT.BJT.ACTM
Product status	STAT	Product status is a function that enables report administrators to view the current status of Output Manager. An example of a product status resource name is: BJT.BJT.STAT
Installation verification	IVER	Installation verification is a function that enables administrators to verify the proper installation of the Output Manager product. An example of an installation verification resource name is: BJT.BJT.IVER
Activate command	CMND	The Activate command enables administrators to activate the current rules policy for Output Manager. An example of an activate command resource name is: BJT.BJT.CMND.ACTIVATE

## Resource names

Each resource has a structured name associated with it. The general structure of a resource name consists of levels separated by periods. The structure of a resource name is:

BJT.BJTNAME.restyp.resid

The following describes the components of the resource name:

- BJT** This component of the resource name corresponds to the SAF ID and identifies the highest level of the structured resource name. This variable is used to differentiate a structured resource from other general resources (such as operator commands).

**BJTNAME**

The product instance name.

**Note:** This product instance name is the same as the ?BJTNAME? variable used in “Customization steps” on page 24.

**restyp**

The resource type.

**resid**

**Note:** The resource names for rule resources (IRUL, SRUL, RRUL) do not contain a resid. Rule resources are protected at the level of their restyp. The resid enables another layer of protection needed by resources such as reports (RPRT) and thus enables individual reports to be uniquely named and protected.

Resource names uniquely identify each of Output Managers resources (such as reports, interceptors, selectors, and so forth; for a complete list of Output Manager’s resources, see Table 3 on page 47). Each time a user selects an option that corresponds to one of Output Manager’s resources, a resource call is made to verify what level of access is defined by the user’s access authority.

**Access authorities**

RACF access authorities are the privileges granted to a particular user or group when accessing a protected resource (such as the ability to read or update a data set). Output Manager uses four access authorities: NONE, READ, UPDATE, and CONTROL. These authorities are hierarchical, with UPDATE also granting READ, CONTROL granting UPDATE, and so forth. The table below describes each of these access authorities.

**Note:** The definition of a RACF term (NONE, READ, UPDATE, CONTROL) does not necessarily match what the term implies. Be sure to read the description for each access authority to obtain an accurate understanding of each authority.

**NONE**

The user does not have access to the resource.

**READ**

The user is classified as a USER and can view, but not change, the resource.

**UPDATE**

The user is classified as an AUDITOR and can look at but not change the resource.

**CONTROL**

The user is classified as an ADMINISTRATOR and can view and change resources.

Access to Output Manager’s resources is controlled by these access authorities. For examples of how to implement different security scenarios, see “Sample security scenarios” on page 51. Given a good understanding of RACF, your site may choose to design your own technique for protecting Output Manager’s resources.

**Activating external security**

When activated, Output Manager’s external security functionality makes calls to RACF to see if and how product resources are protected for each user and access intent. To activate external security, issue the product modify command:

```
MODIFY STCN, SAF SET ID xxxx
```

where STCN is the started task name, xxxx is a three- to four- character SAF ID.

## Displaying the current SAF ID

To display the current SAF ID, enter the following command:

```
MODIFY STCN, SAF QUERY ID
```

where STCN is the started task name.

## Deactivating external security

To deactivate external security, Enter the following command:

```
MODIFY STCN, SAF SET ID
```

where STCN is the started task name.

---

## Internal security

Output Manager's internal security functionality categorizes users into three groups: users, administrators, and auditors. To implement internal security, your system administrator modifies each user's EXEC to set the ?BJTUSER? variable to the appropriate value for that user (USER, ADMIN, or AUDITOR).

**USER** Users are typically people that look at the actual reports or archives.

**ADMIN**

Administrators are those people who manipulate the rules and control structures that configure the product.

**AUDITOR**

Auditors are a type of administrator who can view administrative data but cannot alter it.

To set internal security for a given user to USER, ADMIN, or AUDITOR, you must pass the appropriate EXEC as the second word of the parm on the invocation of BJTEXEC.

**BJTU** This sample exec can be used to launch Output Manager as a user with USER internal security via the command TSO BJTU.

**BJTW** This sample exec can be used to launch Output Manager as a user with AUDITOR internal security via the command TSO BJTW.

**BJTA** This sample exec can be used to launch Output Manager as a user with ADMIN internal security via the command TSO BJTA.

**BJTD** This sample exec can be customized to contain a table of users IDs and their corresponding internal security settings. Users would launch Output Manager via the TSO BJTD command. The internal security for each user is then determined by the internal security settings contained within BJTD.

---

## Archive data set security considerations

Since Output Manager does not allow you to bypass your system security tool, it is important to understand that any Output Manager archive data set naming conventions should be designed to fit within your environment's existing RACF security definitions. In this way, each user's access to Output Manager's archive data sets for online viewing, printing, and distribution purposes is regulated by their RACF settings.

---

## Sample security scenarios

In all scenarios listed below, it is assumed that the Output Manager SAF ID is BJT.

### Protecting Output Manager resources using one profile

This scenario illustrates how your site can implement Output Manager's external security by using one profile, BJT.\*. This approach enables you to protect Output Manager resources by creating a single profile with a universal access of READ or NONE. You can then grant those users who you want to be administrators an access authority of CONTROL. If you want to define auditors, then those users would need to have an access authority of UPDATE. General users would require an access authority of READ.

**Note:** For more information about using wildcards with RACF profiles to protect Output Manager resources, see "Using wildcards in RACF profiles to protect resources".

To protect Output Manager resources using one profile:

1. Create a single profile, BJT.\*, with a universal access of READ. This causes Output Manager to treat all users as general users and grants them the ability to look at, but not change, resources. For example:

```
RDEFINE FACILTY BJT.* UACC(READ)
```

2. Identify the users you want to be administrators for your Output Manager system. Grant those users CONTROL access authority for BJT.\*. For example:

```
PERMIT BJT.* ACCESS(CONTROL) CLASS(FACILITY) ID(PDFRED)
```

3. Identify the users you want to be auditors for your Output Manager system. Grant those users UPDATE access authority for BJT.\*. For example:

```
PERMIT BJT.* ACCESS(UPDATE) CLASS(FACILITY) ID(PDPAM)
```

### Protecting specific Output Manager data using resource names

This scenario illustrates how your site can protect a resource while granting access to a specific portion of that resource to selected user IDs. This approach enables you to pinpoint the data to which a user has access. In this example, the protected resource is custom reports (option A.C on the Output Manager main menu) and the data you want to enable the user access to is a single custom report, BANK\_REPORT.

To protect specific Output Manager data using resource names:

1. Create a single profile, BJT.BJT.B.CURP with universal access of NONE. For example:

```
RDEFINE FACILTY BJT.BJT.B.CURP UACC(NONE)
```

2. Identify the users you want to permit access to the BANK\_REPORT custom report. Grant those users READ access authority for BJT.BJT.B.CURP.BANK\_REPORT. For example:

```
PERMIT BJT.BJT.B.CURP.BANK_REPORT ACCESS(READ) CLASS(FACILITY) ID(PDFRED)
```

---

## Using wildcards in RACF profiles to protect resources

By using wildcards in the RACF profiles that protect your Output Manager resources, you can protect groups of resources using one or a few RACF profiles. For example:

- You may create a profile to protect all of your system's archive attribute resources, by creating the following profile:

BJT.BJT.B.ARCA.\*

Such a profile would protect all resources whose resource names match the conditions of this wildcard. For example, if your site's Output Manager system included the following archive attribute resources:

BJT.BJT.B.ARCA.ONEUP\_PRINT

BJT.BJT.B.ARCA.BRANCH\_REPORT

these resources would both be protected by the BJT.BJT.B.ARCA.\* profile.

**Note:** The list of archive attribute resources, BJT.BJT.B.ARCA, would not be protected by the BJT.BJT.B.ARCA.\* profile.

- You may create a profile to protect your system's archive attribute resources as well as the list of those archive attribute resources by creating the following profile:

BJT.BJT.B.ARCA.\*\*

Such a profile (that uses the double asterisk, \*\*) would protect the individual archive attribute resources as well as the list of those archive attribute resources.

---

## About MENU resources

The following provides supplemental information regarding Output Manager's MENU resources:

- **MENU.MAIN:** If there is no profile protecting the MENU.MAIN resource, the user is set to ADMIN and minimum access authority is READ. If a profile exists for MENU.MAIN, then the access authority the user has controls the type of user that they are (such as USER, ADMIN, or AUDITOR). If the user has UPDATE authority, then they are considered by Output Manager to belong to the ADMIN user group.
- **MENU.VIEW:** View resources are accessed via MENU.VIEW and include archives and reports. Archives are MVS data sets and, since protected via data set protection, require no additional internal product security. Reports are Output Manager resources and are therefore protected via their names. For more information about each of these resources, see Table 3 on page 47. Some examples of report names include: BJT.BJT.B.RPRT.PAYROLL or BJT.BJT.B.RPRT.BANK\_REPORT.

**Note:** This example shows the resource name for an Output Manager implementation whose SAFID is BJT and whose product instance name is BJT.B. For more information about how to form a resource name, see "Resource names" on page 48.

If there is no profile protecting MENU.VIEW, the user inherits their access from MENU.MAIN. Both users and administrators can view this menu. Minimum access authority is READ. If a user has READ or UPDATE authority to this resource, they can view this menu.

- **MENU.ADMN:** Administrative resources are accessed via MENU.ADMN and include the following resources: IRUL, SRUL, RRUL, ARCA, LAYO, CURP, RCPN, DIST, PRTA, ACTM, STAT, and IVER. For more information about each of these resources, see Table 3 on page 47. If there is no profile protecting MENU.ADMN, the user inherits their access from MENU.MAIN. Only administrators and auditors can view this menu. Minimum access authority is UPDATE. If the user has UPDATE access to this resource then the user can see the menu and view resources but cannot add, change, create, nor delete resources. If the user has CONTROL access to this resource, then the user can view, add, change, create, and delete resources.

---

## View security

View security provides report administrators with a mechanism for controlling the reports users can view. View security relies on Output Manager's recipient, distribution list, and report searching functions to provide a mechanism to control the viewing of basic and custom reports.

View security is configured for a report using recipients and distribution lists. To secure a report and enable only specified users to view that report, you must create a distribution list, assign that distribution list to the report, define recipients for the USERIDs who are to be allowed to view the report, and assign the recipients to the report's distribution list.

View security is enforced via an extension of the report search functionality. The report search panel contains a field USERID that controls what reports are returned based on the specified USERID. For example, when a specific TSO USERID is specified in the USERID field, only reports associated with that USERID (via the appropriate configuration of recipients and distribution lists) are displayed in the search results. Thus, in order to return reports using the search function, reports must be assigned a distribution list.

The PROTVIEW command is specified as a startup command and enables report administrators to enforce various levels of view security.

## Securing a report

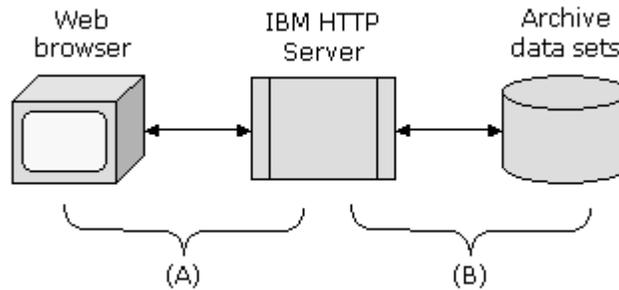
To secure a report via view security:

1. Create a distribution list. For information about creating a distribution list, see "Creating a distribution list" on page 167.
2. Assign the distribution list to a custom report definition. For information about how to assign a distribution list to a report, see "Linking a distribution list to a custom report definition" on page 174.
3. Select a report layout for the custom report definition. For more information, see "Tie a report layout to a report selection rule" on page 154.
4. Define recipients for each user that needs to view the report and for each recipient, set the USERID field of the recipient to the user's TSO USERID. For information about defining recipients, see "Creating a recipient" on page 163.
5. Assign those recipients allowed to view a given report to the distribution list assigned to the report. For more information about assigning recipients to a distribution list, see "Adding recipients to a distribution list" on page 173.
6. Turn on view security function by issuing the PROTVIEW command as a startup command. For more information about specifying startup commands and using the PROTVIEW command, see "Step 6: Specify startup commands" on page 28.

---

## Security and authentication of the WBRV

The deployment of the Web-Based Report Viewer (WBRV) requires several security and authentication considerations. Figure 16 on page 54 provides a high-level illustration of Output Manager's WBRV components for which security and authentication measures should be considered.



*Figure 16. Output Manager's WBRV components requiring security and authentication measures*

There are three main components associated with web-based report viewing:

- The user's web browser (e.g., Internet Explorer, Netscape)
- The web server (an IBM HTTP Server running on the same image as the OM started task)
- The existing report archive data sets produced by Output Manager

The sections that follow describe the various implementation options associated with end-user authentication and the protection of sensitive report data when using the Output Manager's WBRV.

## Securing sensitive data

Securing sensitive data refers to connection (A) in Figure 16. Company reports, by definition, contain sensitive business data. If your end users are accessing Output Manager over the Internet, then it is strongly recommended that the connection between the web server and the end user be secured using SSL (for example, an https connection). Your web master can assist in setting this up. No Output Manager changes are required. This is much less of a consideration when the web server is inside the corporate firewall and end users are all within the company network or are accessing your network through a VPN connection.

## End-user authentication

End-user authentication refers to connection (B) in Figure 16. Web-based applications do not arbitrarily challenge users to identify themselves. Unless specific code has been developed, you visit a web site "anonymously." This is usually not desirable for company-specific reports which are often confidential.

The IBM HTTP Server provides build-it facilities to address end-user authentication issues. Please refer to the IBM publication "HTTP Server Planning, Installing and Using" for details. Sections that discuss the "Protection" and "Protect" directives are of particular importance. No Output Manager changes are required to implement end-user authentication.

## View security with the WBRV

View security limits the list of available reports and refers to connection (B) in Figure 16. In conjunction with end-user authentication, based on the user's query, it is possible that they may be presented with a list of reports that they are not specifically

intended to view. If you wish to ensure that users' result sets are limited to the specific reports for which they are defined, consider implementing the ZUSER variable within the Output Manager configuration file. See "Sample WBRV control file" on page 39.



---

## Chapter 5. Third-party archive conversion

Output Manager's Archive Viewer provides a conversion process to register third-party archived reports in Output Manager's archive table (BJTARC). This conversion process enables users to access third-party archived reports through the Output Manager interface.

After you have installed and customized the Archive Viewer for use with your site's implementation of Output Manager, you must perform a series of steps to convert and view reports via the Output Manager's interface.

---

### Conversion processing

Since it would be resource intensive, and thereby undesirable, to convert all archived reports at once, the Archive Viewer converts third-party archived reports to Output Manager data sets as the user recalls them for viewing. The conversion of a specific report, at the point of recall, is a relatively quick and inexpensive operation.

The Archive Viewer implements a two-step procedure for converting archived reports from third-party format to Output Manager format:

- Step I: Master index conversion
- Step II: Archived report conversion

#### Step I: Master index conversion

During the Archive Viewer's master index conversion step, the master index is unloaded and analyzed. Third-party archived reports are registered in Output Manager's archive table (BJTARC).

##### Master index unload

The Archive Viewer unloads the third-party index to a sequential file for processing. Next, the Archive Viewer analyzes the sequential copy of the master index and creates a file containing control cards representing the archived reports and tapes to be registered in the Output Manager's archive table (BJTARC).

##### Master index analysis

The BJTBIXC1 program analyzes the unloaded master index file. The output of the BJTBIXC1 program includes an execution log and a control file. The user performing the conversion can eliminate control cards from this file as necessary to determine which archived reports and tapes are to be converted. This control card file is then fed into a program, which performs the registration and population of Output Manager's Archive Viewer tables, BJTAVR and BJTAVT. Using records from the master index, the Archive Viewer determines which reports are archived, on which tape they are stored, and their retention requirements.

**Execution log:** The execution log produced during master index analysis provides counts of the number of tape and report control cards that were written to the control card file as well as any error messages produced during the run.

**Control card file:** The control card file is a tool for controlling the conversion process. Control cards contained in this file are used as input to the BJTBIXC2 program which

records information about the archive tapes and archived reports in Output Manager's tables.

## Step II: Archive report conversion

During the Archive Viewer's archived report conversion step, archived reports are converted to Output Manager data sets as they are recalled for viewing. When a user selects an archived third-party report for recall, a started task (BJT@PRVR) runs to retrieve the report and re-print it. The SYSOUT from this conversion program is captured by Output Manager and the SYSOUT becomes an Output Manager report. Information is passed to the Output Manager SYSOUT capture process to direct it to update Output Manager's tables to indicate that this report is no longer archived. When the recall has been completed, the user is notified that the report is available for viewing.

---

### Master index conversion

SBJTSAMP members BJT@JCX1, BJT@JCX2, BJT@JCX3, BJT@PRX2, and BJT@PRX3 contain the JCL necessary to generate control cards from the third-party master indexes and to migrate the indexes to Output Manager data sets.

To convert third-party archive reports to Output Manager data sets:

1. Edit SBJTSAMP member BJT@PRX2:
  - a. Change all occurrences of ?BJTPLANC? to a valid plan name to be used by Archive Viewer's BJT@BIXC2 program.
  - b. Change all occurrences of ?BJTHLQ? to the appropriate high level qualifier.
2. Edit SBJTSAMP member BJT@PRX3:
  - a. Change all occurrences of ?BJTPLANC? to a valid plan name to be used by Archive Viewer's BJT@BIXC2 program.
  - b. Change all occurrences of ?BJTHLQ? to the appropriate high level qualifier.
3. Edit SBJTSAMP member BJT@JCX1:
  - a. Modify the jobcard information to reflect your site's standards.
  - b. Change all occurrences of ?BJTHLQ? to the appropriate high level qualifier.
  - c. Change all occurrences of ?BJTCTLF? to a valid data set name where the control card output is to be produced.
  - d. Change all occurrences of ?BJTUNLD? to a valid data set name to which a copy of the third-party master index is to be unloaded.
4. Edit SBJTSAMP member BJT@JCX2:
  - a. Modify the jobcard information to reflect your site's standards.
  - b. Change all occurrences of ?BJTHLQ? to the appropriate high level qualifier.
  - c. Change all occurrences of ?BJTUNLD? to a valid data set name to which a copy of the third-party master index is to be unloaded.
5. Edit SBJTSAMP member BJT@JCX3:
  - a. Modify the jobcard information to reflect your site's standards.
  - b. Change all occurrences of ?BJTHLQ? to the appropriate high level qualifier.
  - c. Change all occurrences of ?BJTCTLF? to a valid data set name where the control card output is to be produced.
  - d. Change all occurrences of ?BJTUNLD? to a valid data set name to which a copy of the third-party master index is to be unloaded.

6. Run BJT@JCX1 to generate the control cards from the view index masters. These control cards can be exported to the sales analysis tool. Edit the set of cards to remove those data sets that you do not want to migrate. For more information, see "Editing the control card file".
7. (Optional) Run BJT@JCX3 to produce a report to show what the migration will produce.
8. Run BJT@JCX2 to perform the migrate the indexes to Output Manager data sets.

---

## Editing the control card file

The control card file is a tool for controlling the conversion process. Control cards contained in this file are used as input to the BJT@BIX2 program which records information about the archive tapes and archived reports in Output Manager's tables.

You can edit the control card file to tailor the conversion process to your site's needs. When editing the control card file, note the following:

- Contents of the control cards should not be changed.
- By removing control cards or marking them as comments, you can specify which tapes and reports are recorded in Output Manager's tables. For example, you may remove all control cards for reports that are expired.
- Care should be taken to ensure that TAPE control cards are not removed if any REPORT control card refers to them. The TAPESEQ column of both the TAPE and REPORT control cards is used to relate the two.
- Control cards are column-sensitive.
- Data in the control cards should not be reformatted.
- A sequence number is included in each control card so that it can be returned to its original order prior to processing in BJT@BIX2.
- By default, the fields in the control cards are delimited by blanks for ease of viewing.  
**Note:** You can specify a delimiter character via the EXEC parameter if desired. When a delimiter other than a blank is specified, the fields in the control cards will be delimited by that character, and a delimited heading record will be written for each set of control cards. The control card file can then be input to a program such as a spreadsheet for further analysis.
- Control cards with an asterisk (\*) or C in column one are treated as comments.

## Control card types

The following control card types are produced by the BJT@BIX1 program:

- Tape control card
- Report control card

The format of the tape control card is as follows:

*Table 4. Tape control card format*

Columns	Description
1	Comment indicator '*', 'C', or ''
3	Control card type 'T'
5-14	Control card sequence number

*Table 4. Tape control card format*

Columns	Description
16-21	VOLSER
23-66	DSN
68-72	Tape sequence number
74	ERO indicator
76-82	Date created (Julian)
84-88	Lowest generation on tape
90-94	Highest generation on tape
96-100	Number of files on tape
102-109	Generic unit
111-115	Next tape sequence number
117-121	Previous tape sequence number

The format of the report control card is as follows:

*Table 5. Report control card format*

Columns	Description
1	Comment indicator '*', 'C', or ''
3	Control card type 'R'
5-14	Control card sequence number
16-27	Report ID
29	Archived report (Y or N)
31-38	Job name
40-47	Job ID
49-56	User ID
58-65	Archive date (MM/DD/YY)
67-74	Archive time (HH:MM:SS)
76-80	SYSOUT generation
82-86	SYSOUT sequence
88-92	Tape sequence
94-98	File sequence
100-104	Number of tapes
106-110	Max LRECL
112	SYSOUT class
114-121	Last reference date (MM/DD/YY)
123-130	Last reference time (HH:MM:SS)
132-143	ERO table ID
145-149	ERO RETPD

Table 5. Report control card format

Columns	Description
151-155	ERO number of copies
157-161	ERO number of generations
163-167	ERO RETPD (DASD)
169-173	ERO number of copies (DASD)
175-179	ERO number of generations (DASD)
181-185	ERO RETPD since last access
187	ERO Retain <u>A</u> ll or <u>N</u> ew
189	ERO delete expired <u>Y</u> es or <u>N</u> o
191-200	Number of pages
202-211	Number of lines
213-222	Number of bytes

---

## Archive report conversion

Archive reports are converted just-in-time to avoid the resource consumption that would occur if all archived reports were converted at once. The information gathered during the master index conversion process enables Output Manager to provide a catalog of archived reports to the user via the Archive table (BJTARC). Information from the BJTAVR and BJTAVT tables allows Output Manager to quickly access the archived report. To convert the archived report, it is printed and its SYSOUT is captured by Output Manager.

Two additional columns (MIGRATED and MIGSTATE) have been added to the archive table (BJTARC). The MIGRATED column reflects the status of the report migration. Valid values for the MIGRATED column include:

- No—The archive report is not migrated and is available for viewing.
- Yes—The archive report has been migrated to HSM or equivalent, off of DASD.
- View—The archive report is currently in a foreign archive store and has not yet been migrated to Output Manager.
- Gone—The archive report is not on DASD and has not been migrated.

The MIGRATED column is updated by the catalog synchronization process and the index migration process.

The MIGSTATE column reflects the state of the archive as it is being recalled. Valid values for the MIGSTATE column include:

- Not Migrated—Indicates the normal state of non-migrated archive reports.
- Submit—Indicates that Output Manager has started the recall procedure for the archive report.
- Fail—Indicates that the recall procedure for the archive report has failed or ABENDED.
- Print—Indicates the recall procedure has printed the archive report as SYSOUT.
- ErrorCap—Indicates the capture process for the converted archive report has failed.

- **Capture**—Indicates that the capture process has completed for the converted archive report. This also changes the MIGRATED value to NO (not migrated).

When you want to view an archive report that is still in foreign archive store, you are prompted to schedule a recall. If you request that the archive recall be scheduled, Output Manager starts the recall procedure and updates the MIGSTATE for the archive report. The recall procedure requests the archive tape to be mounted. The archive report is recalled and printed to the output queue specified in the recall procedure. The recall procedure updates the MIGSTATE with Print, Fail, or Abend. When the archive is captured, Output Manager creates an Output Manager archive and updates the MIGRATE status to No and the MIGSTATE to Capture. The archive is then available for viewing via the Output Manager interface.

**Note:** If you attempt to view an archive report that is in the process of being recalled, Output Manager displays a popup window indicating the MIGSTATE and what action should be taken if it does not progress beyond the current MIGSTATE. The RESET command can be issued from any of these pop-ups to set the MIGSTATE back to No and the process can then be restarted, if necessary.

---

## Part 3. General use

This part provides information about the Output Manager main menu and general use functions such as viewing reports and performing local printing of reports.

### Chapter 6. Getting started

- “Output Manager main menu” on page 65
- “Product navigation” on page 66
- “Commands and actions” on page 67
- “Preferences” on page 71

### Chapter 7. Viewing reports

- “Accessing report functions” on page 73
- “Viewing captured reports” on page 74
- “Viewing archived reports” on page 76
- “Searching captured reports” on page 80
- “Searching archived reports” on page 81
- “Preferences” on page 83
- “Viewing reports with a web browser” on page 85

### Chapter 8. Local printing

- “Printing a report locally” on page 93
- “Print override” on page 93
- “Setting print confirmation preferences” on page 94



---

## Chapter 6. Getting started

This chapter contains information about the basic Output Manager components and provides references to further information regarding more advanced output management tasks and functions.

---

### Output Manager main menu

To access the main menu, invoke the BJTEXEC using the EXEC your report administrator has designated for your use. For example, if your site uses the sample EXEC shipped with the Output Manager product, you might use the command TSO BJTU to launch the product. If you are unsure of the correct EXEC to use to launch the product, contact your report administrator.

**Note:** At your site, Output Manager may be located on an installation-specific menu. If necessary, contact your report administrator for information about how to navigate to the proper menu to launch Output Manager.

After you launch the product, the Output Manager main menu displays:

```
View Administration Preferences Help
-----
                                IBM Output Manager
Command ==>>>

                                Product name: IGSVRFY
P  Preferences                    Terminal and user parameters
V  View Reports                   Create and change reports
A  Administrative Functions       Administer rules and reports
I  Installation Verification      Verify installation

X  Exit

-----
IBM* Rocket**
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(c) Copyright Rocket Software, Inc. 2002, 2004 All Rights Reserved.
All rights reserved.
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**Trademark of Rocket Software, Inc.
-----
```

Figure 17. IBM Output Manager main menu

The following options can be selected from the main menu:

#### Preferences (Option P)

Option P enables you to set terminal preferences such as the use of color, highlighting, brightness, and intensity for hiperlinks, line commands, and exceptions. For more information, see “Preferences” on page 71.

#### View reports (Option V)

Option V enables you to view and print captured and archived reports. For more information, see Chapter 7, “Viewing reports,” on page 73.

### Administrative functions (Option A)

Option A enables you to define, retrieve, and maintain report information through a variety of functions. For more information, see Chapter 9, “Overview of administrative functions,” on page 99.

### Installation verification (Option I)

Option I enables you to verify that Output Manager was installed properly on your system and is ready for use. For more information, refer to “Step 9: Installation verification” on page 30.

### Exit (Option X)

Option X enables you to exit Output Manager and return to the ISPF main menu.

---

## Product navigation

You can navigate Output Manager’s product panels by typing a desired option in the Command line and pressing Enter. Additionally, Output Manager offers you the ability to navigate product panels using drop-down menus. Drop-down menus consist of **menu items** and **menu options**. A list of menu items is located at the top of each Output Manager product panel. For example, on the View Selection panel, the available menu items are Reports, Archives, Preferences, and Help, as shown below:

```
Reports Archives Preferences Help
-----
BJTPVIEW          IBM Output Manager - View Selection
Command ==>>>

                                Product name: IGSVRFY
P  Preferences          Terminal and user parameters
R  Reports              Customized Reports
A  Archives             Search archives

S  Search Reports      Search Reports
Q  Search Archives     Query Archives

X  Exit                Exit view selection
```

Figure 18. View Selection panel

The available menu items vary based on the product panel being viewed. Each menu item has one or more menu options which can be viewed by placing your cursor on the capitalized letter of the menu item and pressing Enter. A drop-down list of menu options appears. For example, by placing the cursor on the P in the Preferences menu item and pressing Enter, the following drop-down list of menu options appears:

```
Reports Archives Preferences Help
-----
BJTPVIEW          | 1. Set Preferences | View Selection
Command ==>>>    -----

                                Product name: IGSVRFY
P  Preferences          Terminal and user parameters
R  Reports              Customized Reports
A  Archives             Search archives

S  Search Reports      Search Reports
Q  Search Archives     Query Archives

X  Exit                Exit view selection
```

Figure 19. Preferences drop-down menu

To select a menu option, type the corresponding number and press Enter. For example, to set preferences, type 1 and press Enter. The User Preferences panel displays:

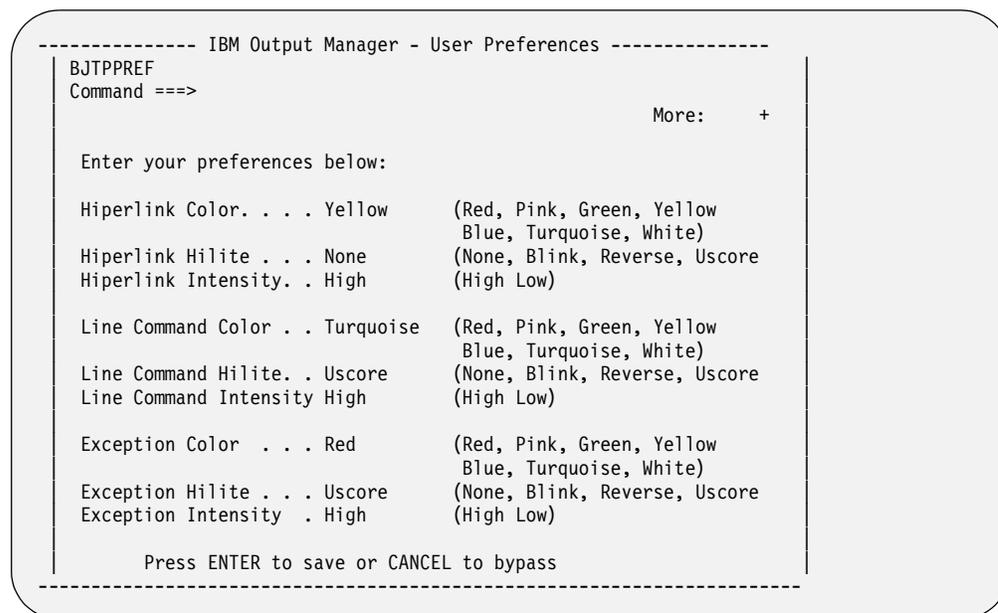


Figure 20. User Preferences panel

## Commands and actions

The following commands and actions can be used on list dialogs throughout the Output Manager product.

**Note:** These commands do not function on the product's detail dialogs.

### FIND command

The FIND command enables you to find a unique string within a panel of data. The command structure for FIND is as follows:

```
FIND textstring
```

This command searches forward from the displayed data. If the specified string is found, the cursor moves to the first position of the found string. If the specified string is not found, the message Find string not found is displayed. To search strings backwards from the displayed data, enter FIND textstring PREV.

### SORT command

When presented with a panel of scrollable or tabular data, you can sort the data by column using the SORT command. The command structure for sorting is as follows:

```
SORT column order
```

where:

- *column* is either the column name or column number of the column you want the sort to be based on. Please note, column names are not synonymous with the headings displayed above the columns on each panel. Refer to Chapter 17, "Column names for sorting," on page 233 for a list of column names. If you would

prefer not to have to look up column names to sort by, we recommend that you use the column number to perform sorting. The CMD column is column 1 and the column numbers increment by +1 as you move to the right.

- *order* (optional) indicates the order of the sort. Valid values for order are **D** (the sort will display in descending order) and **A** (the sort will display in ascending order).

For example, to sort information displayed on the Archived Reports panel in ascending order based on Capture Time:

```

File View Search Preferences Help
-----
BJTPARCE  IBM Output Manager - Archived Reports          Row 1 of 611
Command ==>                                         SCROLL ==> CSR
Line Commands: Select, View, Browse, Print, Print Override, Captured  +>
               Reprint Override, Reprint Distribution
CMD  Job Name  Job Id  Capture Time  Migrated  Cond  Line count
    BJT@JCPF  J0283613  2004 01/15 13:59  No         281
    BJTANKP   J0289159  2004 01/20 10:35  No         63
    BJTANKP   J0289159  2004 01/20 10:35  No        4,092
    BJTANKP   J0289159  2004 01/20 10:35  No          3
    BJTANKP   J0289209  2004 01/20 10:59  No        4,092
    BJTANKP   J0289220  2004 01/20 11:03  No        4,092
    BJTANKP   J0289223  2004 01/20 11:03  No        4,092
    BJTANKP   J0289225  2004 01/20 11:04  No        4,092
    BJTANKR   J0250976  2004 01/02 12:21  Yes        4,092
    BJTANKR   J0250976  2004 01/02 12:21  No          3
    BJTANKR   J0252240  2004 01/03 01:59  No        4,092
    BJTANKR   J0252240  2004 01/03 01:59  No          3
    BJTANKR   J0252266  2004 01/03 02:00  No        4,092
    BJTANKR   J0252266  2004 01/03 02:00  No          3
    BJTANKR   J0255845  2004 01/06 10:18  No        4,092
    BJTANKR   J0255845  2004 01/06 10:18  No          3
    BJTANKR   J0255845  2004 01/06 12:57  No          63

```

*Figure 21. Before sorting Archived Reports in ascending order based on Capture Time*

Issue the following sort command:

```
SORT 4 A
```

The Archived Reports panel refreshes:

File View Search Preferences Help							
BJTPARCE IBM Output Manager - Archived Reports							Row 1 of 611
Command ==>							SCROLL ==> CSR
Line Commands: Select, View, Browse, Print, Print Override, Captured +>							
Reprint Override, Reprint Distribution							
CMD	Job Name	Job Id	Capture Time		Migrated	Cond	Line count
	LFDAT	JOB03592	1994	03/01 08:08	View		7
	I642203K	JOB03152	1994	03/14 12:17	View		12,799
	XPTEST	JOB02382	1994	03/17 09:49	View		6
	I642203H	JOB04010	1994	03/22 14:38	View		11,643
	I647363A	JOB04015	1994	03/22 14:43	View		61
	I647363A	JOB04029	1994	03/22 14:50	View		484
	I646628S	JOB04319	1994	03/23 11:57	View		7
	I646628S	JOB04336	1994	03/23 12:29	View		7
	I646628S	JOB04341	1994	03/23 12:35	View		7
	I646628S	JOB04342	1994	03/23 12:36	View		7
	I646628S	JOB04344	1994	03/23 12:36	View		7
	CAROL	JOB04474	1994	03/23 16:14	View		12,995
	CAROL	JOB04478	1994	03/23 16:22	View		337
	CAROL	JOB04478	1994	03/23 16:22	View		1,788
	I642203K	JOB04505	1994	03/23 17:13	View		12,897
	I647363B	JOB04557	1994	03/24 08:44	View		485
	I407052D	JOB04134	1994	05/27 11:19	View		179

Figure 22. After sorting Archived Reports in ascending order based on Capture Time

## Scrolling

When presented with data that exceeds the size of the panel, indicators have been provided to alert you that additional data exists outside the visible panel. Four character spaces on line 3 of the upper right-hand corner of the panel indicate a scrollable page. Pages may be scrollable horizontally, vertically, or both. A plus sign (+) and/or a minus sign (-) indicates that there is additional data vertically. Use PF8 to scroll down. Use PF7 to scroll up. The less-than sign (<) and/or the greater-than sign (>) indicates that there is additional data horizontally. Use PF10 to scroll to the left. Use PF11 to scroll to the right.

## Copy, cut, and paste

Output Manager's copy, cut, and paste commands are available on some of the product's detail-level panels. These commands enable you to copy/cut information from existing detail-level panels as well as paste information from the clipboard into new panels where you can edit the information as needed. This feature eases the process of adding information to your Output Manager system by reducing the time you spend inputting values that already exist elsewhere in the system. When you copy information from a detail-level panel, it is stored on the clipboard for the duration of your Output Manager session and is available for pasting into a similar detail-level panel. The paste command enables you to create new entries at the list level, and to replace all of the information on a detail panel.

### Notes:

1. The copy and paste commands are only supported for users with administrative authority.
2. You cannot copy information from a detail-level panel of one type and paste it into a detail-level panel of another type. Fields must match on the panels that you are copying from/pasting to in order for these commands to function.
3. On detail panels, these actions are located on the file pull-down menu or can be entered on the command line as: COPY, CUT, or PASTE.

## Product primary commands

The following are the product's primary commands:

### ACTIVATE

**Description:** The ACTIVATE command enables report administrators to activate the current policy from within the Output Manager dialog. The current **policy** is the set of interceptor rules, selector definitions, and report rules that are currently defined and saved in your system.

The ACTIVATE command is valid for the following screens:

- IBM Output Manager - List of Interceptor Rules (option AI, panel BJTPDDSE)
- IBM Output Manager - List of Selector Rules (option AS, panel BJTPDDSE)
- IBM Output Manager - List of Report Rules (option AR, panel BJTPDDSE)

The use of the ACTIVATE command can be protected by 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.

#### Notes:

1. You must have report administration authority to use the ACTIVATE command.
2. You can also activate the current policy using the MODIFY command.

To use the ACTIVATE command:

1. Access one of the three Output Manager rules screens by selecting one of the following options from the IBM Output Manager main menu: AI, AS, or AR.

**Note:** If you make changes to rules, you must enter the SAVE command prior to using the ACTIVATE command. Rules are not automatically saved prior to execution of the ACTIVATE command and changes that have not been saved prior to issuing the ACTIVATE command will be lost.

2. Type ACTIVATE in the command line and press Enter. The Rules Activation confirmation panel displays.
3. Press Enter. The ACTIVATE command is scheduled to run in the product address space and the Rules activation results panel displays.
4. Press Enter to remove the Rules activation results panel and return to the originating rules panel.

### SET ARCHLIMIT

**Description:** Sets the maximum number of archive query results. The SET ARCHLIMIT command can be included as a startup command or entered dynamically via the modify command.

**Syntax:** SET ARCHLIMIT *n* where *n* is a number between 0 and 100000 (one-hundred thousand). A value of zero indicates the use of the product default, 10000 (ten thousand).

**Example:** To set the maximum archive query results to 1000 for started task BJTP using the modify command, issue the following:

```
F BJTP,SET ARCHLIMIT 1000
```

### SET RPTLIMIT

**Description:** Sets the maximum number of report query results. The SET RPTLIMIT command can be included as a startup command or entered dynamically via the modify command.

**Syntax:** SET RPTLIMIT *n* where *n* is a number between 0 and 100000 (one-hundred thousand). A value of zero indicates the use of the product default, 10000 (ten thousand).

**Example:** To set the maximum report query results to 1000 for started task BJTP using the modify command, issue the following:

```
F BJTP,SET RPTLIMIT 1000
```

### SET ACTLIMIT

**Description:** Sets the maximum number of activity results. The SET ACTLIMIT command can be included as a startup command or entered dynamically via the modify command.

**Syntax:** SET ACTLIMIT *n* where *n* is a number between 0 and 100000 (one-hundred thousand). A value of zero indicates the use of the product default, 10000 (ten thousand).

**Example:** To set the maximum activity query results to 1000 for started task BJTP using the modify command, issue the following:

```
F BJTP,SET ACTLIMIT 1000
```

### QUERY LIMITS

Puts query limits into effect for the started task specified in the modify command.

---

## Preferences

Output Manager enables you to set a variety of display preferences to uniquely identify hiperlinks, line commands, and exceptions.

To set preferences:

1. Select option P, Preferences, from the Output Manager main menu and press Enter. The User Preferences panel displays:

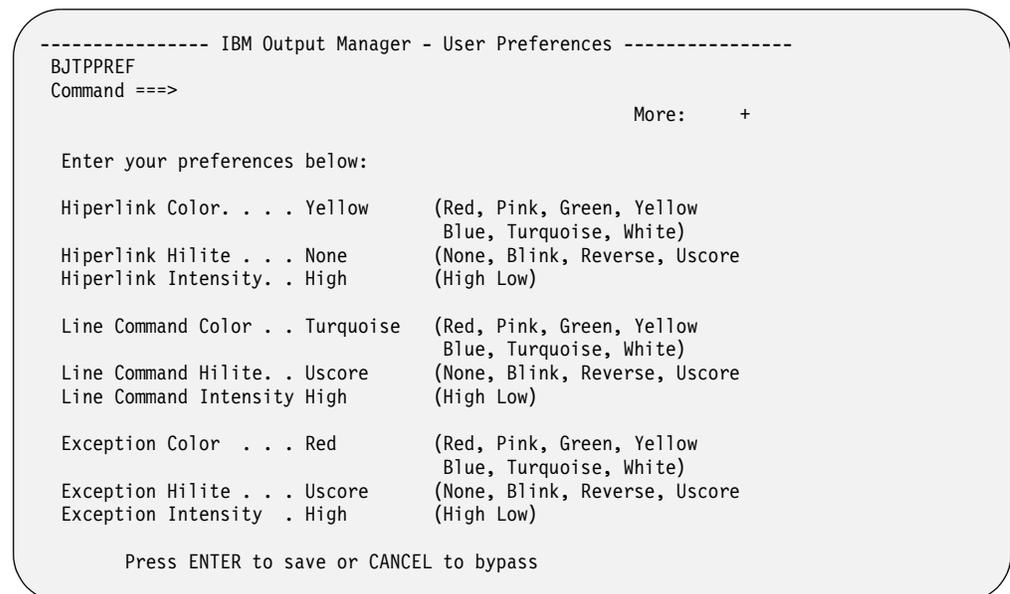


Figure 23. User Preferences panel

**Note:** You can also access the User Preferences panel via option P on the View Selection panel or from various drop-down menus throughout the product.

#### Hiperlink color

Identifies the color used to denote a hiperlink. Valid options are Red, Pink, Green, Yellow, Blue, Turquoise, and White.

**Note:** A hiperlink is a link between BJT objects. Such a link is a rule that points the archive attribute field to an entry in the archive attributes table.

**Hiperlink highlight**

Identifies the highlight method used to denote a hiperlink. Valid options are None (no highlight method used for hiperlinks), Blink (hiperlinks display in blinking text), Reverse (hiperlinks display in reverse text), and Uscore (hiperlinks display with underscore text).

**Hiperlink intensity**

Identifies the highlight intensity used to denote a hiperlink. Valid options are High and Low.

**Line command color**

Identifies the color used to denote a line command. Valid options are Red, Pink, Green, Yellow, Blue, Turquoise, and White.

**Line command highlight**

Identifies the highlight method used to denote a line command. Valid options are None (no highlight method used for line commands), Blink (line commands display in blinking text), Reverse (line commands display in reverse text), and Uscore (line commands display with underscore text).

**Line command intensity**

Identifies the highlight intensity used to denote a line command. Valid options are High and Low.

**Exception color**

Identifies the color used to denote an exception. Valid options are Red, Pink, Green, Yellow, Blue, Turquoise, and White.

**Exception highlight**

Identifies the highlight method used to denote an exception. Valid options are None (no highlight method used for exceptions), Blink (exceptions display in blinking text), Reverse (exceptions display in reverse text), and Uscore (exceptions display with underscore text).

**Exception intensity**

Identifies the highlight intensity used to denote an exception. Valid options are High and Low.

2. Specify the desired preferences and press Enter to save.

---

## Chapter 7. Viewing reports

Output Manager enables you to view reports online as well as to print reports using a range of printing options.

---

### Accessing report functions

Output Manager's View Selection panel provides access to various functions relating to the viewing and printing of captured reports.

To access the View Selection panel:

1. Select option V, View Reports, from the Output Manager main menu and press Enter. The View Selection panel displays:

```
Reports  Archives  Preferences  Help
-----
BJTPVIEW          IBM Output Manager - View Selection
Command ==>>>

                                Product name: IGSVRFY
P  Preferences                Terminal and user parameters
R  Reports                    Customized Reports
A  Archives                    Search archives

S  Search Reports              Search Reports
Q  Search Archives             Query Archives

X  Exit                        Exit view selection
```

Figure 24. View Selection panel

The following fields display on the View Selection panel:

#### Product name

Displays the product instance name. The one- to eight- character name assigned to the instance of Output Manager you are using.

**Note:** This name corresponds to the ?BJTNAME? variable used during configuration.

The following options are available on the View Selection panel:

#### Preferences (Option P)

Accesses the User Preferences panel where you can specify terminal and user settings for viewing reports. For more information about setting preferences, see "Preferences" on page 71.

#### Reports (Option R)

Accesses the Captured Reports panel where you can view and print SYSOUT that has been selected or intercepted by Output Manager. For more information about captured reports, see "Viewing captured reports".

#### Archives (Option A)

Accesses the Archived Reports panel where you can view and print captured reports that have been stored as sequential files (archived). For more information about archives, see "Viewing archived reports" on page 76.

### Search reports (Option S)

Accesses the Report Search Criteria panel where you can specify criteria by which to search for reports. For more information about performing searches for captured reports, see "Searching captured reports" on page 80.

### Search archives (Option Q)

Accesses the Initial Preferences panel where you can specify criteria by which to search archives. For more information about searching archives, see "Searching archived reports" on page 81.

### Exit (Option X)

Exit the View Selection panel and returns to the IBM Output Manager main menu.

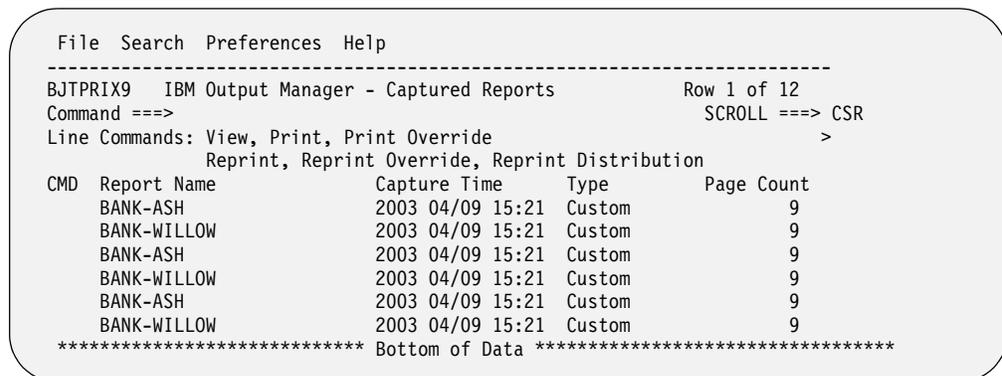
---

## Viewing captured reports

Output Manager enables you to view a list of captured reports for your system and select individual captured reports for viewing.

To view a captured report:

1. Select option V, View Reports, from the IBM Output Manager main menu and press Enter. The View Selection panel displays.
2. Select option R, Reports, and press Enter. The Captured Reports panel displays:



```
File Search Preferences Help
-----
BJTPRIX9 IBM Output Manager - Captured Reports Row 1 of 12
Command ==> SCROLL ==> CSR
Line Commands: View, Print, Print Override >
                Reprint, Reprint Override, Reprint Distribution
CMD Report Name Capture Time Type Page Count
  BANK-ASH 2003 04/09 15:21 Custom 9
  BANK-WILLOW 2003 04/09 15:21 Custom 9
  BANK-ASH 2003 04/09 15:21 Custom 9
  BANK-WILLOW 2003 04/09 15:21 Custom 9
  BANK-ASH 2003 04/09 15:21 Custom 9
  BANK-WILLOW 2003 04/09 15:21 Custom 9
***** Bottom of Data *****
```

Figure 25. Captured Reports panel

The following columns display on the Captured Reports panel:

#### Report name

Indicates the name assigned to the report.

**Note:** This column remains fixed when scrolling columns to the right and left.

#### Capture time

Indicates the data and time that the report was archived.

#### Type

Indicates the type of the report. Valid values are **Basic** (contains every page of the SYSOUT), **Custom** (contains a subset of the basic report), **Undefined** (contains all of the SYSOUT pages that did not match any of the criteria in any of the custom reports), **No report** (an empty report that informs you there were no SYSOUT pages that matched the criteria for this specific custom report).

**Note:** When No report is indicated and is not expected, check the custom report and the application to determine if there is a problem with either the layout or the conditions listed for the custom report.

**Page count**

Indicates the total number of pages in the report.

**Line count**

Indicates the total number of lines in the report.

The following line commands are available on the Captured Reports panel:

**View (Line command V)**

Displays the report.

**Note:** If the memory available for viewing is insufficient, browse is substituted.

**Print (Line command P)**

Accesses the print confirmation panel where you can define how the report is to be printed and initiate printing of the report.

**Print override (Line command PO)**

Accesses the Recipient Details panel where you can specify the print override options for the report and the Print Confirmation panel where you can define how the report is to be printed and initiate printing of the report.

**Reprint (Line command R)**

Enables you to reprint the report for those recipients on the distribution list assigned to the report that are flagged to receive a hardcopy of the report. For more information about distribution lists and hardcopy options, see Chapter 12, "Printing-related functions," on page 163.

**Reprint override (Line command RO)**

Reprints a defined report again and enables you to temporarily alter the distribution list.

**Reprint distribution (Line command RD)**

Reprints the report and directs it to the distribution list associated with the archived report.

3. Type V in the CMD field next to the report you want to view and press Enter. The report displays:

```

File Edit Edit_Settings Menu Utilities Compilers Test Help
-----
BJTPEDDE Report name: BANK-ASH Columns 00001 00072
Command ==> Scroll ==> PAGE
***** ***** Top of Data *****
000001 1
000002 Tree House Bank Confidential
000003
000004
000005 TREE HOUSE BRANCH BANK DAILY TRANSACTION REPORT
000006
000007 Branch - Ash
000008
000009 Address - 1002 Gregory Drive
000010 San Antonio, TX 75232
000011
000012 Manager - Mandy Aspen
000013
000014 Date - August 29th, 2002
000015
000016
000017 Transaction Report

```

Figure 26. Report display

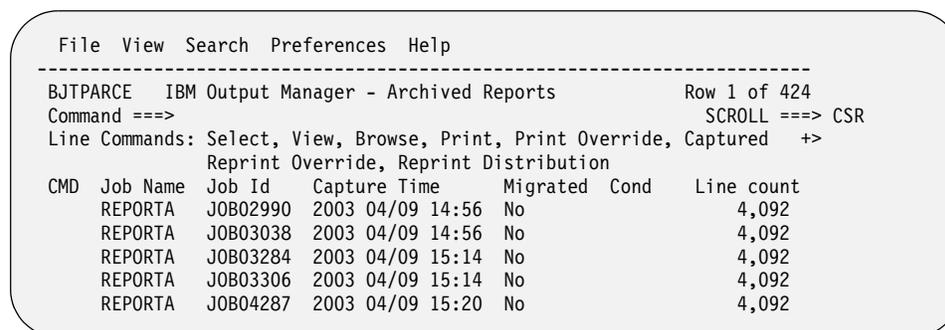
Press PF8 to scroll down to view additional report content.

## Viewing archived reports

Output Manager enables you to view a list of archived reports for your system and select individual archived reports for viewing.

To view an archived report:

1. Select option V, View Reports, from the IBM Output Manager main menu and press Enter. The View Selection panel displays.
2. Select option A, Archives, and press Enter. The Archived Reports panel displays:



```
File View Search Preferences Help
-----
BJTPARCE  IBM Output Manager - Archived Reports          Row 1 of 424
Command ==>                                     SCROLL ==> CSR
Line Commands: Select, View, Browse, Print, Print Override, Captured  +>
               Reprint Override, Reprint Distribution
CMD Job Name Job Id   Capture Time   Migrated Cond   Line count
  REPORTA JOB02990 2003 04/09 14:56 No      4,092
  REPORTA JOB03038 2003 04/09 14:56 No      4,092
  REPORTA JOB03284 2003 04/09 15:14 No      4,092
  REPORTA JOB03306 2003 04/09 15:14 No      4,092
  REPORTA JOB04287 2003 04/09 15:20 No      4,092
```

Figure 27. Archived Reports panel

The following columns display on the Archived Reports panel:

**Job name**

Indicates the name of the job that produced the report.

**Job ID**

Indicates the job ID associated with the stored report.

**Capture time**

Indicates the time the report was captured.

**Migrated**

Indicates whether or not the archive is migrated to tape. Valid values are **No** (the archive report is not migrated and is available for viewing), **Yes** (the archive report has been migrated to HSM or equivalent, off of DASD), **View** (the archive report is currently in a foreign archive store and has not yet been migrated to Output Manager), and **Gone** (the archive report is not on DASD and has not been migrated).

**Cond**

Indicates the state of the archive as it is being recalled. Valid values are **Not migrated** (indicates the normal state of non-migrated archive reports), **Submit** (indicates that Output Manager has started the recall procedure for the archive report), **Fail** (indicates that the recall procedure for the archive report has failed or ABENDED), **Print** (indicates the recall procedure has printed the archive report as SYSOUT), **ErrorCap** (indicates the capture process for the converted archive report has failed), and **Capture** (Indicates that the capture process has completed for the converted archive report. This also changes the MIGRATED value to NO, not migrated).

**Line count**

Indicates the total number of lines in the report.

**Page count**

Indicates the total number of pages in the report.

**Byte count**

Indicates the total number of bytes in the report.

**User ID**

Indicates the RACF user ID of the job that creates the report. Valid values are up to eight characters in length.

**Group ID**

Indicates the group ID of the job that creates the report. Valid values are up to eight characters in length.

**Account 1-8**

Indicate the account name(s) or number(s) associated with the report. Valid values are up to eight characters in length.

**Job class**

Indicates the JES execution class. Valid values are up to 36 characters in length.

**Msg class**

The message class assigned to the SYSOUT.

**Scheduling env**

Indicates the WLM scheduling environment associated with the report. Valid values are up to 17 characters in length.

**Step name**

Indicates the name of the step associated with the report. Valid values are up to eight characters in length.

**Proc step**

Indicates the name of the procedure step associated with the report. Valid values are up to eight characters in length.

**Program**

Indicates the name of the program included in the EXEC PGM= statement in the JCL. Valid values are up to eight characters in length.

**DD Name**

Indicates the DD name associated with the report. Valid values are up to eight characters in length.

**DD Seq#**

The DD sequence number associated with the report.

**Sysout class**

Indicates the SYSOUT class associated with the archived report. Valid values are up to 36 characters in length.

**Data set name**

The data set name for the archived report.

**Comments**

Additional information about the archived report.

**System ID**

The DB2 subsystem on which the archived report is stored.

**Last referenced**

The date of the last time the report was referenced (viewed).

**Retrieve count**

The number of times the report has been retrieved.

**Layout ID**

The report layout associated with the archived report.

The following line commands are available on the Archived Reports panel:

**Select (Line command S)**

Selects the archived report.

**View (Line command V)**

Enables you to view the archived report.

**Browse (Line command B)**

Enables you to browse the archived report.

**Print (Line command P)**

Accesses the Print Confirmation panel where you can define how the report is to be printed and initiate printing of the report.

**Captured (Line command C)**

Accesses the Captured Reports panel where you can view captured reports associated with the selected archive.

**Reprint distribution (Line command RD)**

Reprints the report and directs it to the distribution list associated with the archived report.

**Note:** You can change the way information is displayed on this panel using the View drop-down menu. For example, to view step information about the archived reports, place your cursor on the V in the View menu item and press Enter. The View drop-down list displays. Selection option 2, Step Info, and press Enter. The view changes to display columns pertaining to step information only:

```

File View Search Preferences Help
-----
BJTPARCE  IBM Output Manager - Archived Reports          Row 1 of 424
Command ==>                                     SCROLL ==> CSR
Line Commands: Select, View, Browse, Print, Print Override, Captured  +
              Reprint Override, Reprint Distribution
CMD Job Name Step Name Proc Step Proc Name Program DD Name
  REPORTA COPY          ?         ?         SYSUT2
  REPORTA COPY          ?         ?         SYSUT2

```

Figure 28. Archived Reports panel

- When you find the report you want to view, type V, S, or B in the CMD field next to that report and press Enter. The report displays:

```

File Edit Edit_Settings Menu Utilities Compilers Test Help
-----
ISRBR0BA REPORTA.REPORTA.JOB02990          Line 00000000 Col 001 080
Command ==>                                     Scroll ==> PAGE
***** ***** Top of Data *****
000001 1
000002      Tree House Bank Confidential
000003
000004
000005  TREE HOUSE BRANCH BANK DAILY TRANSACTION REPORT
000006
000007      Branch - Ash
000008
000009      Address - 1002 Gregory Drive
000010      San Antonio, TX 75232
000011
000012      Manager - Mandy Aspen
000013
000014      Date - August 29th, 2002
000015
000016
000017  Transaction Report

```

Figure 29. Report display

Press PF8 to scroll down to view additional report content.

## Recalling HSM-migrated data sets

Output Manager's batch recall process for HSM-migrated data sets enables the recalling of HSM migrated data sets for use with Output Manager. To view an HSM-migrated report:

1. Select option V, View Reports, from the IBM Output Manager main menu and press Enter. The View Selection panel displays.
2. Select option A, Archives, and press Enter. The Archived Reports panel displays:

```
File View Search Preferences Help
-----
BJTPARCE  IBM Output Manager - Archived Reports          Row 1 of 2
Command ==>                                         SCROLL ==> CSR
Line Commands: Select, View, Browse, Print, Print Override, Captured  >
                Reprint Override, Reprint Distribution
CMD  Job Name  Job Id  Capture Time  Migrated Cond  Line count
BJTBANKR  J0120945  2003 12/02 14:26  No           4,092
BJTBANKR  J0120945  2003 12/02 14:26  Yes           66
***** Bottom of Data *****
```

Migrated reports display a Yes value in the Migrated column.

3. Type S in the CMD field next to the migrated report you want to recall and press Enter. The Confirm HSM Recall Request panel displays:

```
----- IBM Output Manager - Confirm HSM recall request -----
BJTPARS1
Command ==>

The Archive you have requested to view
has been migrated off of DASD.

You can do one of the following:

1. Schedule      Submit a JOB to recall Archive
2. Recall        Recall Archive directly

3. eXit          Exit this dialog.

If you schedule a recall process, you will be
notified when the Archive is available.

If you recall directly your terminal will be locked
until the Archive is recalled.
```

The following options are available on the Confirm HSM Recall Request panel:

### Schedule

Enables you to submit a job that will perform the recall of the archived report.

### Recall

Enables you to recall the archived report directly from the Output Manager interface.

**Exit** Exits the dialog.

4. Type 2 in the Command line and press Enter to recall archive directly. The following message displays:

```
ARC1020I DFSMSHSM IS RECALLING FROM DASD DSN=RSTEST.BJTGDG.VRECALL.G0035V00, YOU MAY
CONTINUE THE RECALL IN THE BACKGROUND AND FREE YOUR TSO SESSION BY PRESSING THE
ATTENTION KEY
***
```

- When the recall process has completed, you can then view the report. Migrated field changes to NO. Access the Archived Reports panel. The Migrated column for the report now displays No.

```

File View Search Preferences Help
-----
BJTPARCE  IBM Output Manager - Archived Reports          Row 1 of 2
Command ==>                                         SCROLL ==> CSR
Line Commands: Select, View, Browse, Print, Print Override, Captured  >
                Reprint Override, Reprint Distribution
CMD Job Name Job Id Capture Time Migrated Cond Line count
  BJTANKR J0120945 2003 12/02 14:26 No          4,092
  BJTANKR J0120945 2003 12/02 14:26 No           66
***** Bottom of Data *****

```

- Type S next to the report to select the report. The report displays:

```

-----
ISRBROBA RSTEST.BJTGDG.VRECALL.G0035V00          Line 00000000 Col 001 080
Command ==>                                         Scroll ==> PAGE
-----
                J E S 2  J O B  L O G  --  S Y S T E M  R S 2 2  --  N

4.25.59 J0120945 ---- TUESDAY, 02 DEC 2003 ----
4.25.59 J0120945 IRRO10I USERID PDTAYL IS ASSIGNED TO THIS JOB.
4.25.59 J0120945 ICH70001I PDTAYL LAST ACCESS AT 14:24:42 ON TUESDAY, DECEMB
4.25.59 J0120945 $HASP373 BJTANKR STARTED - INIT 1 - CLASS A - SYS RS22
4.25.59 J0120945 IEF403I BJTANKR - STARTED
4.26.00 J0120945 - --TIMINGS (M
4.26.00 J0120945 -JOBNAME STEPNAME PROCSTEP RC EXCP CONN TCB SRB
4.26.00 J0120945 -BJTBANKR PRINT 00 167 105 .00 .00
4.26.00 J0120945 IEF404I BJTANKR - ENDED
4.26.00 J0120945 -BJTBANKR ENDED. NAME- TOTAL TCB CPU TIM
4.26.00 J0120945 $HASP395 BJTANKR ENDED
----- JES2 JOB STATISTICS -----
02 DEC 2003 JOB EXECUTION DATE
24 CARDS READ
4,158 SYSOUT PRINT RECORDS
0 SYSOUT PUNCH RECORDS
227 SYSOUT SPOOL KBYTES

```

## Searching captured reports

You can search for a captured report based on report name, report type, and capture date. To search for a captured report:

- Select option V, View Reports, from the IBM Output Manager main menu and press Enter. The View Selection panel displays.
- Select option R, Reports, and press Enter. The Captured Reports panel displays.
- Place your cursor on the S in the Search menu item and press Enter. The Search drop-down list displays.
- Select option 1, Enter Search Criteria, and press Enter. The Report Search Criteria panel displays:

```

----- IBM Output Manager - Report Search criteria -----
BJTPRPT1
Command ==>

Enter search criteria for reports.
wildcards are permitted.

Report name . . .

Report type . . .          (Basic Custom Undefined Noreports All)

On or after date          (yyyy/mm/dd, Today, T-nnnn)

Press ENTER to process or CANCEL to bypass

```

The following fields display on the Report Search Criteria panel:

**Report name**

Indicates the name assigned to the report. Wildcards are permitted.

**Report type**

Indicates the type of the report for which to search. Valid values are **Basic** (contains every page of the SYSOUT), **Custom** (contains a subset of the basic report), **Undefined** (contains all of the SYSOUT pages that did not match any of the criteria in any of the custom reports), **Noreports** (empty reports that informs you there were no SYSOUT pages that matched the criteria for this specific custom report).

**On or after date**

Indicates the date or range of dates that you want to include when searching for a report. Valid values are *yyyy/mm/dd* (up to 10 characters for a date, where *yyyy* is the year, *mm* is the month, and *dd* is the date on or after which the report was captured), **Today** (limits search to reports that were archived on the current day), and **T-nnnn** (indicates how many days prior to the current day you want to search where *nnnn* is a number up to four digits. For example, T-14 directs the search to be conducted for reports archived during the previous 14 days).

5. Type the report name, report type, or date in the appropriate field to refine your search and press Enter. The Captured Reports panel displays the reports that match the criteria you specified.

**Note:** After performing a search, you can display all reports on the Captured Reports panel by placing your cursor on the S in the Search menu item, pressing Enter, and selecting option 2, List All.

---

## Searching archived reports

You can search for an archived report based on report name, report type, and capture date. To search for an archived report:

1. Select option V, View Reports, from the Output Manager main menu and press Enter. The View Selection panel displays.
2. Select option A, Archives, and press Enter. The Archived Reports panel displays.
3. Place your cursor on the S in the Search menu item and press Enter. The Search drop-down list displays.
4. Select option 1, Enter Search Criteria, and press Enter. The Archive Search panel displays:

```

----- IBM Output Manager - Archive Search -----
BJTPARS4
Command ==>>

Enter your search criteria for the archive.
Wildcards are permitted.

Job Name . . .:      (Name of archive job)
Sysout Class .:     (Sysout class)

Exceptions . .:     (Yes, No, blank)

After Date . .:     (On or After this date)
Before Date .:      (On or Before this date)
After Time . .:     (On or After this time)
Before Time .:      (On or Before this time)
(Date format is YYYY/MM/DD, Time format is HH:MM:SS)

```

The following search criteria are available on the Archive Search panel:

**Job name**

Indicates the name of the job that produced the report.

**Sysout class**

Indicates the SYSOUT class associated with the reports for which you intend to search. Valid values are up to 34 characters in length.

**Exceptions**

Indicates whether or not to include reports with which exceptions are associated.

**After date**

Indicates the date after which the search will look for archived reports matching your search criteria. Dates entered in this field should be of the format *yyyy/mm/dd* where *yyyy* is the year, *mm* is the month, and *dd* is the day.

**Before date**

Indicates the date before which the search will look for archived reports matching your search criteria. Dates entered in this field should be of the format *yyyy/mm/dd* where *yyyy* is the year, *mm* is the month, and *dd* is the day.

**After time**

Indicates the time after which the search will look for archived reports matching your search criteria. Times entered in this field should be of the format *hh:mm:ss* where *hh* is the hour, *mm* is the minute, and *ss* is the second.

**Before time**

Indicates the time before which the search will look for archived reports matching your search criteria. Times entered in this field should be of the format *hh:mm:ss* where *hh* is the hour, *mm* is the minute, and *ss* is the second.

5. Type the job name, SYSOUT class, dates, times, and exception preferences to refine your search and press Enter. The Archived Reports panel displays the reports that match the criteria you specified.

**Note:** After performing a search, you can once again display all reports on the Archived Reports panel by placing your cursor on the S in the Search menu item, pressing Enter, and selecting option 2, List All.

---

## Preferences

Output Manager enables you to set a variety of preferences to uniquely configure display settings and search preferences.

### Display preferences

You can set display preferences to uniquely identify hiperlinks, line commands, and exceptions. For information about how to set display preferences, refer to "Preferences" on page 71

### Search preferences

Output Manager also enables you to set initial search preferences for the control of report index searches. To set search preferences:

1. Select option V, View Reports, from the Output Manager main menu and press Enter. The View Selection panel displays.
2. Select option R, Reports, and press Enter. The Captured Reports panel displays.
3. Place your cursor on the P in the Preferences menu item and press Enter. The Preferences drop-down list displays.
4. Select option 1, Set Preferences, and press Enter. The Initial Preferences panel displays:

```
----- IBM Output Manager - Initial Preferences -----
BJTPRPT0
Command ==>>>

Establish or change default report index search preferences below.
These values are saved in your ISPF profile data set from session
to session and are used to determine your initial view of report
index data. To remove specific search criteria, clear the field. The
report name and recipient user id fields can be searched generically.

Enter initial search criteria:
Report name . . .
Report type . . . (Basic Custom Undefined Noreports All)
After date . . . (On or After this date)
Before date . . . (On or Before this date)
After time . . . (On or After this time)
Before time . . . (On or Before this time)
Recipient user ID (User ID of distribution recipient)
(Date format is YYYY/MM/DD, Today, T-nnnn. Time format is HH:MM:SS)

Press ENTER to save or CANCEL to bypass
```

#### Report name

Indicates the name assigned to the report for which you want to search. Valid values are up to 36 characters in length. If this field is left blank, the search includes any report name.

#### Report type

Indicates the type of report for which you want to search. Valid values are **Basic** (contains every page of the SYSOUT), **Custom** (contains a subset of the basic report), **Undefined** (contains all of the SYSOUT pages that did not match any of the criteria in any of the custom reports), **No report** (an empty report that informs you there were no SYSOUT pages that matched the criteria for this specific custom report).

**After date**

Indicates the date after which the search will look for archived reports matching your search criteria. Dates entered in this field should be of the format *yyyy/mm/dd* where *yyyy* is the year, *mm* is the month, and *dd* is the day.

**Before date**

Indicates the date before which the search will look for archived reports matching your search criteria. Dates entered in this field should be of the format *yyyy/mm/dd* where *yyyy* is the year, *mm* is the month, and *dd* is the day.

**After time**

Indicates the time after which the search will look for archived reports matching your search criteria. Times entered in this field should be of the format *hh:mm:ss* where *hh* is the hour, *mm* is the minute, and *ss* is the second.

**Before time**

Indicates the time before which the search will look for archived reports matching your search criteria. Times entered in this field should be of the format *hh:mm:ss* where *hh* is the hour, *mm* is the minute, and *ss* is the second.

**Recipient user ID**

Definition

5. Specify your initial search criteria and press Enter.

## Archive preferences

Output Manager enables you to set initial viewing preferences for the control of how archived reports are displayed.

To set archive preferences:

1. Select option V, View Reports, from the Output Manager main menu and press Enter. The View Selection panel displays.
2. Select option A, Archives and press Enter. The Archived Reports panel displays.
3. Place your cursor on the P in the Preferences menu item and press Enter. The Preferences drop-down list displays.
4. Select option 1, Set Preferences, and press Enter. The Initial Preferences panel displays:

```

----- IBM Output Manager - Initial Preferences -----
BJTPARP1
Command ==>

Initial View . . .: JOB      (Job, Step, Stats, or All)

Enter initial search criteria:
Job Name . . .:      (Name of archive job)
Sysout Class .:      (Sysout class)
Relative Date.:      (Today, or T-nnnn)
Exceptions . .:      (Yes, No, blank)

After Date . .:      (On or After this date)
Before Date . .:      (On or Before this date)
After Time . .:      (On or After this time)
Before Time . .:      (On or Before this time)
                (Date format is YYYY/MM/DD, Time format is HH:MM:SS)

Press ENTER to save or CANCEL to abandon changes

```

**Initial view**

Indicates your initial view of report archives. Valid values are **Job** (view reports by the job that produced the report), **Step** (view reports by the step that produced the report), **Stats** (view reports by statistics), **All** (view all reports).

**Job name**

Indicates the JES job name associated with the reports for which you intend to search. Valid values are up to eight characters in length.

**SYSOUT class**

Indicates the SYSOUT class associated with the reports for which you intend to search. Valid values are up to 34 characters in length.

**Relative date**

Indicates the dates for which to search based on the current date. Valid values are **Today** (limits the search to reports that were archived on the current day) and **T-*nnnn*** (indicates how many days prior to the current day you want to search where *nnnn* is a number up to four digits. For example, T-14 directs the search to be conducted for reports archived during the previous 14 days),

**Exceptions**

Indicates whether or not to include reports with which exceptions are associated.

**After date**

Indicates the date after which the search will look for archived reports matching your search criteria. Dates entered in this field should be of the format *yyyy/mm/dd* where *yyyy* is the year, *mm* is the month, and *dd* is the day.

**Before date**

Indicates the date before which the search will look for archived reports matching your search criteria. Dates entered in this field should be of the format *yyyy/mm/dd* where *yyyy* is the year, *mm* is the month, and *dd* is the day.

**After time**

Indicates the time after which the search will look for archived reports matching your search criteria. Times entered in this field should be of the format *hh:mm:ss* where *hh* is the hour, *mm* is the minute, and *ss* is the second.

**Before time**

Indicates the time before which the search will look for archived reports matching your search criteria. Times entered in this field should be of the format *hh:mm:ss* where *hh* is the hour, *mm* is the minute, and *ss* is the second.

5. Enter your initial preferences and press Enter. The Archived Reports panel displays.

---

## Viewing reports with a web browser

Output Manager's Web-Based Report Viewer (WBRV) enables you to view Output Manager's archived SYSOUT and custom reports using a web browser such as Internet Explorer. The WBRV is highly customizable and can be tailored according to your site's specific report viewing needs. The display images shown in the figures that follow illustrate a simple, representative implementation of the WBRV interface.

## Launching the WBRV

To launch the WBRV:

1. Obtain the appropriate URL for your WBRV from your report administrator or webmaster.
2. Launch a supported web browser (supported web browsers include Internet Explorer 5.0 or higher and Netscape Navigator 6.0 or higher).
3. Navigate to the URL for your implementation of the WBRV. The initial page displays, for example:

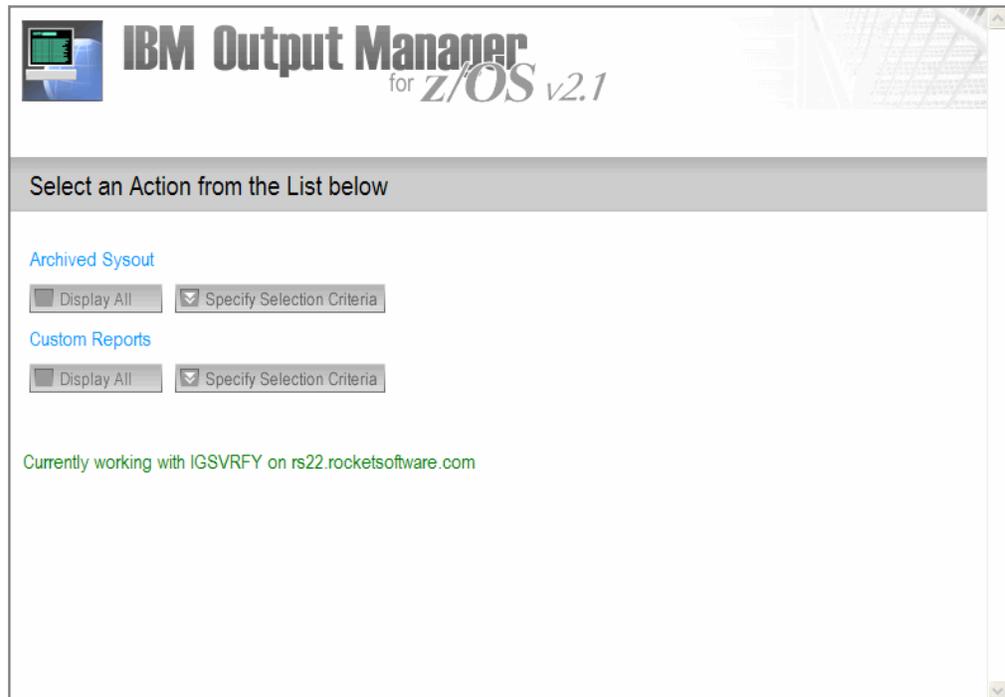


Figure 30. IBM Output Manager WBRV splash screen

**Note:** The initial page that displays when you launch the WBRV depends upon installation-specific criteria. For more information, see “Building initial page definitions and URLs” on page 42.

## Viewing archived SYSOUT

To view archived SYSOUT:

1. Launch the WBRV. For more information, see “Launching the WBRV” on page 86.
2. Click on the Display All button under the Archived Sysout heading. The WBRV displays the Archived Sysout tab:

IBM Output Manager  
for z/OS v2.1

Archived Sysout Custom Reports Settings

Select an archive from list to view Refresh Query Specify Selection Criteria

Jobname	Job Number	Exception	Capture Date	Line Count
BJT@JCPF	J0283613		2004-01-15-13.59.23	281
BJTBANKP	J0289159		2004-01-20-10.35.24	63
BJTBANKP	J0289159		2004-01-20-10.35.25	3
BJTBANKP	J0289159		2004-01-20-10.35.25	4092
BJTBANKP	J0289209		2004-01-20-10.59.31	4092
BJTBANKP	J0289220		2004-01-20-11.03.07	4092
BJTBANKP	J0289223		2004-01-20-11.03.19	4092
BJTBANKP	J0289225		2004-01-20-11.04.42	4092
BJTBANKR	J0250976		2004-01-02-12.21.18	4092
BJTBANKR	J0250976		2004-01-02-12.21.19	3
BJTBANKR	J0252240		2004-01-03-01.59.26	4092
BJTBANKR	J0252240		2004-01-03-01.59.28	3
BJTBANKR	J0252266		2004-01-03-02.00.58	3

Figure 31. WBRV Archived Sysout tab

The following columns display on the Archived Sysout tab:

**Jobname**

The name of the job that produced the report.

**Job Number**

The job ID associated with the stored report.

**Exception**

The exception code produced by the report.

**Capture Date**

The date the report was captured.

**Line Count**

The total number of lines in the report.

**Archived**

Whether or not the report has been archived and requires recall before it can be viewed.

3. Double-click on the archived sysout you want to view. A popup window displays the archived sysout:

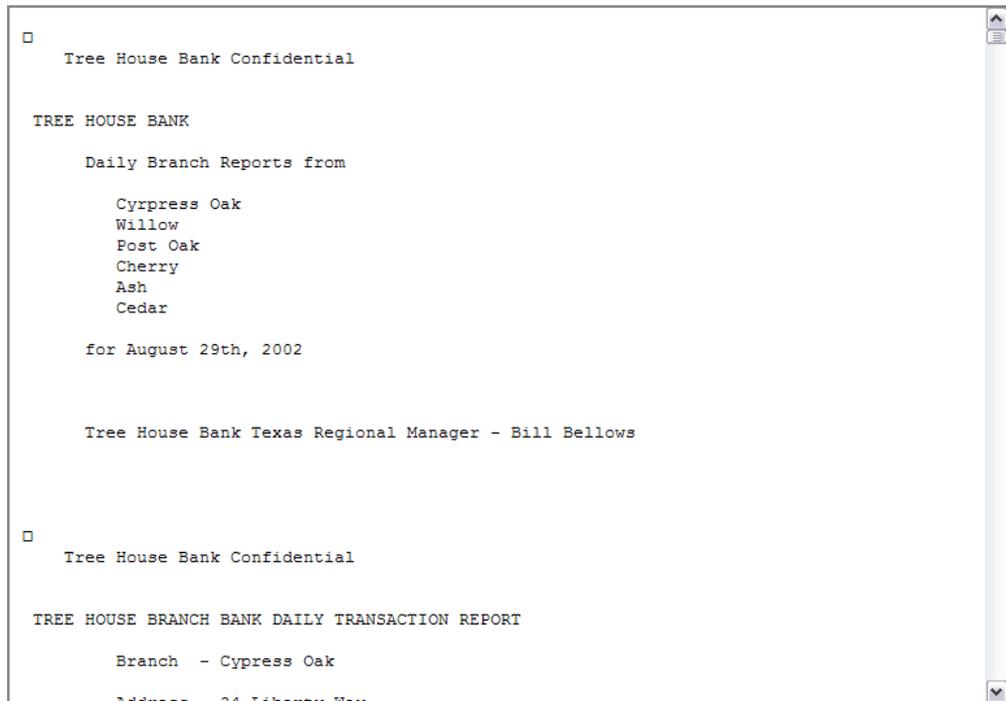


Figure 32. Archived SYSOUT display pop-up

## Viewing custom reports

To view archived SYSOUT:

1. Launch the WBRV. For more information, see “Launching the WBRV” on page 86.
2. Click on the Display All button under the Custom Reports heading. The WBRV displays the Custom Reports tab:

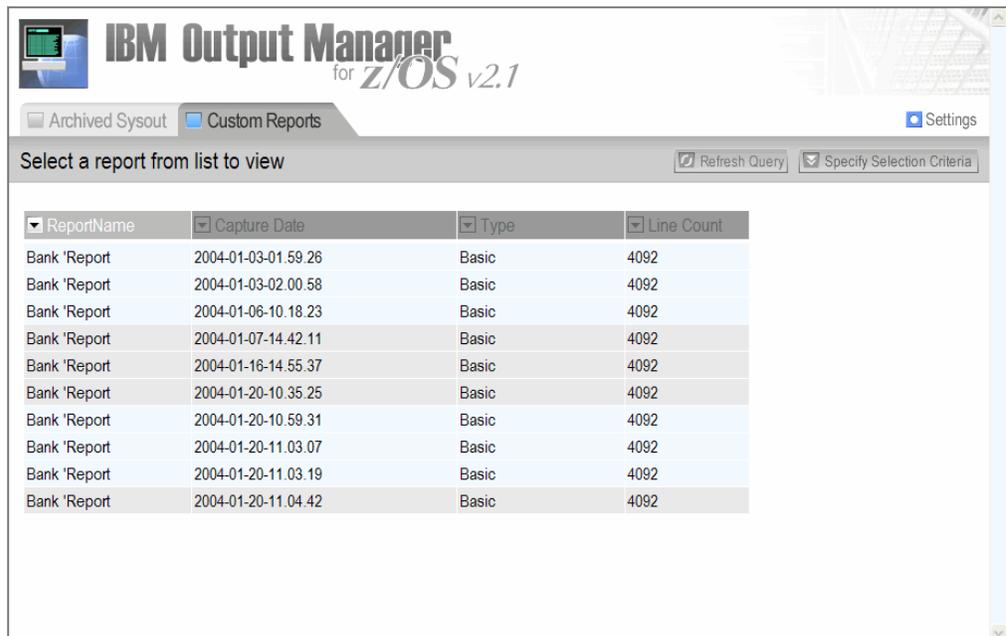


Figure 33. WBRV Archived Sysout tab

The following columns display on the Archived Sysout tab:

**Report Name**

The name of the report.

**Capture Date**

The date the report was captured.

**Type** The type of report (basic, custom).

**Line Count**

The total number of lines in the report.

3. Double-click on the captured report you want to view. A popup window displays the report:

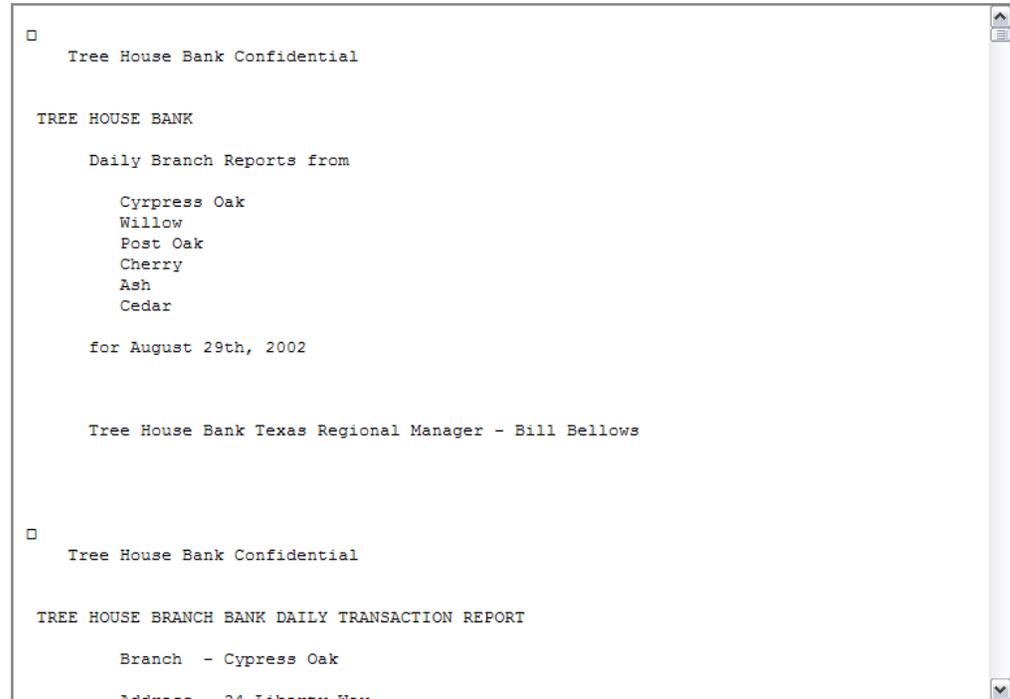


Figure 34. Archived SYSOUT display pop-up

## Specifying selection criteria

The Specify Selection Criteria drop-down box enables you to tailor the selection criteria and in turn the display of sysout and reports on the WBRV tabs. Selection criteria include Jobname, Job status, and Date. You can adjust your WBRV settings using the Settings drop-down box. You can show or hide columns and specify how you would like to display archives. The Refresh Query button enables you to refresh the lists of reports to synchronize your view with the latest OM report information.

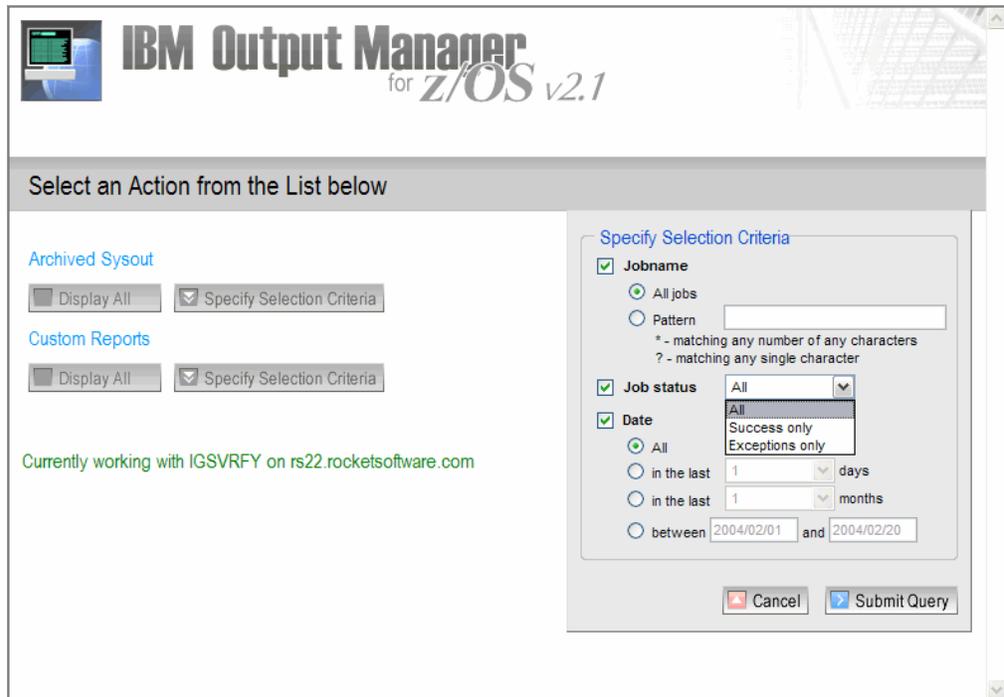


Figure 35. Specify selection Criteria dropdown

## Refreshing query information

The Refresh Query button enables you to refresh the lists of reports to synchronize your view with the latest Output Manager report information.

## Setting preferences

The WBRV enables you to set viewing preferences so as to define the columns that are displayed on the Archived Sysout and Captured Reports tabs. You can also specify whether or not you would like reports to display in separate windows when you open multiple reports.

The screenshot displays the IBM Output Manager for z/OS v2.1 interface. At the top, there are navigation tabs for 'Archived Sysout' and 'Custom Reports', and a 'Settings' button. Below the tabs is a header area with 'Select an archive from list to view' and buttons for 'Refresh Query' and 'Specify Selection Criteria'. The main area contains a table with columns for Jobname, Job Number, Exception, and Capture Date. A settings dropdown menu is open on the right, showing options for 'Show/Hide columns' (Jobname, Job Number, Exception, Capture Date, Line Count, Archived) and 'Display archives' (in separate windows). The table has 15 rows, with the 10th row highlighted in red.

Jobname	Job Number	Exception	Capture Date		
BJT@JCPF	J0283613		2004-01-15-13.5		
BJTBANKP	J0289159		2004-01-20-10.3		
BJTBANKP	J0289159		2004-01-20-10.3		
BJTBANKP	J0289159		2004-01-20-10.3		
BJTBANKP	J0289209		2004-01-20-10.5		
BJTBANKP	J0289220		2004-01-20-11.0		
BJTBANKP	J0289223		2004-01-20-11.0		
BJTBANKP	J0289225		2004-01-20-11.0		
BJTBANKR	J0250976		2004-01-02-12.2		
BJTBANKR	J0250976		2004-01-02-12.21.19	3	N
BJTBANKR	J0252240		2004-01-03-01.59.26	4092	N
BJTBANKR	J0252240		2004-01-03-01.59.28	3	N
BJTBANKR	J0252266		2004-01-03-02.00.58	3	N
BJTBANKR	J0252266		2004-01-03-02.00.58	4092	N

Figure 36. Settings dropdown



---

## Chapter 8. Local printing

Local printing enables users to print a selected report to their user address space (TSO session). A local print request attempts to locate the user's recipient record.

If the recipient record is found, the recipient's information is used to establish output descriptors to augment print-related information such as class and destination. Location information is added to the report output to assist in distribution.

If no recipient record exists for the user requesting the print, the report is printed using TSO default print specifications for class and destination. No distribution information is included with the report.

---

### Printing a report locally

To print a report locally:

1. Select option V, View Reports, from the IBM Output Manager main menu and press Enter. The View Selection panel displays.
2. Select either option R, Reports or option A, Archives, and press Enter. The Captured Reports or Archived Reports panel displays.
3. Type P in the CMD field next to the report you want to print and press Enter. The print confirmation panel displays.
4. Verify that the print settings are correct and press Enter. The report is queued for printing.

---

### Print override

Print override enables users to print a selected report to a temporary location. Print override prints a selected report to the user's address space (TSO session) while enabling them to change or specify recipient information prior to printing the report. The print request attempts to locate the user's recipient record.

If found, the record displays so the user can make the necessary temporary changes to the print execution, destination, and location information.

If no recipient record is found, a blank recipient information input panel displays enabling the user to specify print execution, destination, and location information for the print override.

**Note:** Print override values are not saved to the recipient's record.

To print using the print override command:

1. Select option V, View Reports, from the IBM Output Manager main menu and press Enter. The View Selection panel displays.
2. Select either option R, Reports or option A, Archives, and press Enter. The Captured Reports or Archived Reports panel displays.
3. Type PO in the CMD field next to the report you want to print override and press Enter. The Recipient Details panel displays:

```

File Links Help
-----
BJTPDIDD          IBM Output Manager - Recipient Details
Command ==>>>          SCROLL ==>>
                        More:  +

Descriptive data
Name . . .
Name Out   Yes          (Yes,No ... generate name as outputcard)
Userid                    (MVS Userid)
Department
Room . . .
Building
Address .
Report behaviors
Dest . . .                (Jes printer destination)
Class . .                (SYSOUT class to print to)
Groupid. .                (... to group like reports together)
Copies . . 0              (Number of copies to print)
Duplex . .                (No,Normal,Tumble)
Burst . .                (Yes,No ... Physically burst on 3800)

```

4. Fill in the information as needed for the print override. For more information about the fields on the Recipient Details panel, see “Recipient IDs” on page 163. Press Enter when you have completed filling in the appropriate recipient information. The Print Confirmation panel displays.
5. Verify that the print settings are correct and press Enter. The report is queued for print override.

---

## Setting print confirmation preferences

By default, a confirmation panel displays when you request a print or reprint of a report, enabling you to confirm what is to be printed prior to it being printed. If you do not want this confirmation panel to display for certain print/reprint situations, you can tailor your print confirmation preferences to turn off the confirmation.

To set print confirmation preferences:

1. Select option V, View Reports, from the IBM Output Manager main menu and press Enter. The View Selection panel displays.
2. Select either option R, Reports or option A, Archives, and press Enter. The Captured Reports or Archived Reports panel displays.
3. Type PC in the CMD field next to the report you want to print and press Enter. The print confirmation panel displays.
4. Place your cursor on the P in the Preferences menu item and press Enter. The Preferences drop-down list displays. Select option 1, Set Preferences, and press Enter. The Print Confirmations panel displays:

```

----- IBM Output Manager - Print confirmations -----
BJTPPRPR
Command ==>

Initial View . . .: DESTINATIONS  (Destinations, Banner)

Enter confirmation display options:
Reprint . . . . . YES          (Yes, No)
Reprint Override . . . . . YES  (Yes, No)
Reprint Distribution . . . . . YES (Yes, No)
Reprint Distribution Override . . YES (Yes, No)

Print . . . . . NO          (Yes, No)
Print Override . . . . . YES   (Yes, No)

Press ENTER ,with no changes, to save, CANCEL to exit

```

**Initial View**

The information that Output Manager displays when it provides confirmation of report(s) that are about to be printed/reprinted. Valid values are **Destinations** (Output Manager displays a list of the printer destinations to which the report(s) will be printed, if confirmed) and **Banner** (Output Manager displays the banner associated with the report(s) that will be printed, if confirmed).

**Reprint**

Indicates whether or not a confirmation panel displays when requesting a reprint. Valid values are **Yes** (displays a confirmation panel before submitting the report for reprint) and **No** (does not display a confirmation panel before submitting the report for reprint).

**Reprint Override**

Indicates whether or not a confirmation panel displays when requesting a reprint override. Valid values are **Yes** (displays a confirmation panel before submitting the report for reprint override) and **No** (does not display a confirmation panel before submitting the report for reprint override).

**Reprint Distribution**

Indicates whether or not a confirmation panel displays when requesting a reprint distribution. Valid values are **Yes** (displays a confirmation panel before submitting the report for reprint distribution) and **No** (does not display a confirmation panel before submitting the report for reprint distribution).

**Reprint Distribution Override**

Indicates whether or not a confirmation panel displays when requesting a reprint distribution override. Valid values are **Yes** (displays a confirmation panel before submitting the report for reprint distribution override) and **No** (does not display a confirmation panel before submitting the report for reprint distribution override).

**Print**

Indicates whether or not a confirmation panel displays when requesting the printing of a report. Valid values are **Yes** (displays a confirmation panel before submitting the report for printing) and **No** (does not display a confirmation panel before submitting the report for printing).

**Print Override**

Indicates whether or not a confirmation panel displays when requesting a print override. Valid values are **Yes** (displays a confirmation panel before submitting the report for print override) and **No** (does not display a confirmation panel before submitting the report for print override).

**Note:** If you turn off print/reprint confirmation using using the Print Confirmations panel, you can still request a confirmation to display before the report is queued for

printing. To do so, append the print or reprint line commands (P, PO, R, RO, RD, and RDO) command with the letter C (for example, PC, POC, RC, ROC, RDC, or RDOC) and type the command in the CMD field next to report you want to print and press Enter.

---

## Part 4. Administration

This part contains information about Output Manager's various administrative functions and tasks.

### Chapter 9. Overview of administrative functions

- "Accessing administrative functions" on page 99

### Chapter 10. SYSOUT identification and archive data set attributes

- "About rules" on page 103
- "About archive attributes" on page 104
- "Interceptor rules" on page 104
- "Selector definitions" on page 109
- "Report selection rules" on page 119
- "Archive attributes" on page 124

### Chapter 11. Custom report definitions

- "About custom report definitions" on page 133
- "Report Types" on page 134
- "Report Components" on page 134
- "Designing a report layout" on page 137
- "Capturing reports" on page 148
- "Creating a Custom Report Definition" on page 148
- "Combining a layout, report, and distribution list" on page 152
- "Report Selection Rules" on page 156

### Chapter 12. Printing-related functions

- "Recipient IDs" on page 163
- "Distribution lists" on page 167
- "Printer attributes" on page 175
- "Banner pages" on page 185
- "Reprinting" on page 189
- "Reprint override" on page 189
- "Reprint distribution" on page 189
- "Reprint distribution override" on page 190

### Chapter 13. General product functions

- "Activity monitor" on page 191
- "Product status" on page 195
- "User messages" on page 197



---

## Chapter 9. Overview of administrative functions

Output Manager provides administrative functions that enable report administrators the ability to define, retrieve, and maintain report information. Administrative functions are subdivided into four basic groups:

- SYSOUT identification and archive data set attributes
- Custom report definitions
- Printing-related functions
- General product functions

---

### Accessing administrative functions

The Administrative Functions panel provides access to the various administrative options. To access the Administrative Functions panel:

1. Select option A, Administrative Functions, from the Output Manager main menu and press Enter. The Administrative Functions panel displays:

```
Rules Custom Reports Printing General Preferences Help
-----
BJTPADMN          IBM Output Manager - Administrative Functions
Command ==>>>

                                     Product name: BJTP
                                     More:      +
Sysout identification and archive data set attributes
 I  Interceptor Rules                Pre spool criteria
 S  Selector Definitions              Set selector criteria
 R  Report Selection Rules            Custom report selection rules
 A  Archive Attributes                Maintain archive attributes
Custom report definitions
 L  Report Layouts                    Define layout of basic reports
 C  Custom Reports                    Custom report definitions
Printing-related functions
 J  Recipient Ids                     Maintain recipient Ids
 D  Distribution Lists                 Maintain distribution lists
 K  Printer Attributes                Maintain printer attributes
 B  Banner Pages                      Maintain banner pages
General product functions
 V  Activity Monitor                  View activities and exceptions
 Q  Product Status                    Current status of the product
 M  User messages                      Set or view user messages
```

The following **SYSOUT identification and archive data set attributes options** are available on the Administrative Functions panel:

#### Interceptor rules (Option I)

Enables you to access the List of Interceptor Rules panel to view a list of existing rules that specify the criteria by which SYSOUT are captured prior to reaching the spool.

#### Selector definitions (Option S)

Enables you to access the List of Selector Rules panel to view a list of existing rules that specify the criteria used to select specific output types directly off the spool (post-spool).

#### Report selection rules (Option R)

Enables you to access the List of Report Selection Rules panel to view a list of rules that specify the job selection criteria (such as job name, proc 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.

**Archive attributes (Option A)**

Enables you to access the Archive Attributes panel to view a list of existing archive attribute definitions that specify the attributes to use when allocating the sequential file that is to hold captured output.

The following **custom report definition options** are available on the Administrative Functions panel:

**Report layouts (Option L)**

Enables you to access the Layouts panel to view a list of existing report layouts that define how the original report looks as produced by the application.

**Custom reports**

Enables you to access the Custom Reports panel to view a list of existing report definitions that define either a custom or basic report.

The following **printing-related functions** are available on the Administrative Functions panel:

**Recipient IDs (Option J)**

Enables you to access the Recipient IDs panel to view a list of existing custom recipient IDs which contain information about individuals or a generic location.

**Distribution lists (Option D)**

Enables you to access the List of Distribution Lists panel to view a list of existing distribution lists which are groups of recipient IDs that are linked to custom report definitions to control the real time, reprint, or reprint-with-distribution functions.

**Printer attributes (Option K)**

Enables you to access the Printer Attributes panel to view a list of existing printer attributes which control how reports are printed and are associated.

**Banner pages (Option B)**

Enables you to access the Banner Pages panel to view a list of existing banner pages which enable you to provide additional information with your printed reports.

The following **general functions** are available on the Administrative Functions panel:

**Activity monitor (Option V)**

Enables you to access the Activity List panel to view activity and exceptions for your Output Manager system.

**Product status (Option Q)**

Enables you to access the Product Status panel to view current product status and related information.

**User messages (Option M)**

Enables you to access the User Messages panel to set system, user, administrative, and auditor messages.

**Exit (Option X)**

Enables you to exit the Administrative Functions panel and return to the IBM Output Manager main menu.

2. From the Administrative Functions panel you can:

- Create and modify interceptor rules. For more information, see “Interceptor rules” on page 104.

- Create and modify selector definitions. For more information, see “Selector definitions” on page 109.
- Create and modify report selection rules. For more information, see “Report selection rules” on page 119.
- Create and modify archive attributes. For more information, see “Archive attributes” on page 124.
- Create and modify report layouts. For more information, see “Designing a report layout” on page 137.
- Create and modify custom reports. For more information, see “Creating a Custom Report Definition” on page 148.
- Create and modify recipient IDs. For more information, see “Recipient IDs” on page 163.
- Create and modify distribution lists. For more information, see “Distribution lists” on page 167.
- Create and modify printer attributes. For more information, see “Printer attributes” on page 175.
- Create and modify banner pages. For more information, see “Banner pages” on page 185.
- Access the activity monitor. For more information, see “Activity monitor” on page 191.
- View product status. For more information, see “Viewing product status” on page 196.
- Create and modify user messages. For more information, see “User messages” on page 197.



---

## Chapter 10. SYSOUT identification and archive data set attributes

Output Manager's SYSOUT identification and archive data set attributes tasks include the creation and modification of the following components:

- Interceptor rules
- Selector definitions and subselector rules
- Report selection rules
- Archive attributes

---

### About rules

The following are the types of rules used in the Output Manager system:

- **Interceptor rules**—Interceptor rules are rules that specify the criteria by which SYSOUT is captured prior to its reaching the spool and define what to do with captured SYSOUT, such as what to do with the SYSOUT when it is archived.
- **Selector definitions**—Selector definitions are rules that specify the criteria by which specific output types are selected directly off the spool and define what to do with captured output, such as what to do with the output when it is archived.
- **Subselector rules**—Subselector rules are a subset of selector definitions. Subselector rules enable report administrators to assign different attributes to SYSOUT selected by the same selector definition.
- **Report selection rules**—Report selection rules are rules that specify the criteria (such as the job name, proc 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.

Interceptor rules, selector definitions, and subselector rules enable you to select SYSOUT (pre-spool and post-spool respectively) while report selection rules enable you to specify criteria by which captured reports are processed into basic reports and custom reports.

**Note:** You should not use more than 20 selector definitions concurrently to select SYSOUT. Subselector rules should instead be used to refine the selection process. For more information about subselector rules, see "Subselector rules" on page 115.

When an event occurs, Output Manager's rules are scanned from top to bottom to identify any match that occurs. Therefore, the ordering of the rules within the Output Manager system is important. If there is no match, no action takes place. If there is a match, Output Manager acts upon the SYSOUT or custom report based on the directions in the rule.

For information about creating rules, see:

- "Interceptor rules" on page 104.
- "Selector definitions" on page 109.
- "Subselector rules" on page 115.
- "Report selection rules" on page 119.

---

## About archive attributes

When a SYSOUT has been intercepted or selected, Output Manager refers to the appropriate **archive attribute** to determine what set of attributes to use when allocating the sequential file that is to hold captured output. Archive attributes are linked to interceptor and selector rules and multiple rules can be linked to the same archive attribute. Archive attributes specify the data set name (DSN), where to allocate the data set (unit name or SMS storage class), and how much space to reserve for the archive.

One of the key elements of the archive attribute is the **archive mask**. The archive mask serves as a template for the data set name that is to be created for an archive. An archive mask is a character string of up to 44 characters in length and can contain variables which, upon allocation of the archive data set, are replaced with the appropriate values.

Another key element of the archive attribute is the **SMS allocation**. The report administrator, working closely with the storage management group, can use SMS allocation parameters to appropriately implement the data set usage of Output Manager archives.

---

## Interceptor rules

The use of interceptor rules requires that you:

- Set up one or more interceptor rules. For more information, see “Creating an interceptor rule” and “Editing an interceptor rule” on page 108.
- Create one or more archives and link each interceptor rule to a specific archive. For more information, see “Creating archive attributes” on page 124 and “Linking an interceptor rule to an archive” on page 108.
- Activate the interceptor rule. For more information about activating interceptor rules, see “Initiating the interceptor process” on page 108.

### Notes:

1. On each LPAR, there can only be one instance of Output Manager acting as an interceptor.
2. Because the activation of interceptor rules can have widespread impact within your system, activation of interceptor rules should be performed with the advise of your system administrator.
3. JES data sets are not captured with interceptors, thus exceptions cannot be generated.

## Creating an interceptor rule

To create an interceptor rule:

1. Select option A, Administrative Functions, from the Output Manager main menu and press Enter. The Administrative Functions panel displays.
2. Select option I, Interceptor Rules and press Enter. If there are no other interceptor rules defined for your Output Manager system, the following pop-up window displays:

```

----- No Interceptor rules found -----
BJTPDDSV
Command ==>

No Interceptor rules have been found:
Press ENTER to create a new Interceptor rule
or CANCEL to exit

```

Figure 37. No Interceptor Rules Found panel

Press Enter to create a new rule. If there are rules defined for your Output Manager system, the List of Interceptor Rules panel displays:

```

File View Preferences Help
-----
BJTPDDSE Output Manager - List of Interceptor Rules          Row 1 of 1
Command ==>                                                SCROLL ==> PAGE
Line commands: Edit, Insert, Delete, Prompt, Link          >
CMD Status Disposition Exists Line Limit Capture Combine Insert
Disabled Delete Replace 0 No No No
***** Bottom of Data *****

```

Figure 38. List of Interceptor Rules panel

This panel displays a list of interceptor rules currently defined for your Output Manager system.

- To edit an existing interceptor rule, type E in the CMD field next to the rule and press Enter. To insert a new rule, type I in the CMD field and press Enter. The Interceptor Rules panel displays:

```

File Link Help
-----
BJTPDDED          IBM Output Manager - Interceptor Rules
Command ==>

More:  +

Control fields
Disposition . . Delete (Delete, Keep)
Exists . . . . Replace (Leave, Replace, Extend)
Status . . . . Disabled (Enabled or Disabled)
Line Limit . . 0 (Max lines to allow in archive)
Capture Attrs : No (Yes or No)
Archive Attr. :

Job Selection criteria
Job Type. . . . All (All, Batch, Appc, Tso, Stc)
Job Class . . .
Job Name. . . .
Job ID. . . .

```

Figure 39. Interceptor Rules panel

This panel is divided into three sections:

- Control fields**–Control fields identify the actions to be taken when the rule is applied.
- Job selection criteria**–Job selection criteria identify the conditions under which jobs are selected.
- SYSOUT selection criteria**–SYSOUT selection criteria identify the conditions under which SYSOUT is selected.

**Note:** Use the PF8 key to page down to view all sections and fields on the Interceptor/Selector Rules panel.

The following control fields display on the Interceptor Rules panel:

**Disposition**

Indicates what Output Manager does with the SYOSUT when data is archived. Valid values are **Keep** (keeps the data on the spool and makes a copy of it for the archive) and **Delete** (removes the data from the spool after making the archive copy).

**Note:** For interceptor rules, the value **Keep** sends the data to the spool and simultaneously makes a copy of the data for the archive. **Delete** prevents the data from going to the spool but makes a copy of the data for the archive.

**Exists**

Indicates what Output Manager does if the archive already exists. Valid values are **Replace** (replace data in the archive with the new data), **Leave** (leave old data in the archive and do not update it, keeps the new data on the spool), and **Extend** (write the new data at the end of the old archive data set).

**Status**

Indicates the status of a rule. Valid values are **Enabled** (the rule is enabled) and **Disabled** (the rule is disabled).

**Line limit**

Indicates the maximum number of lines that can be written to the archive. The default line limit is 0.

**Capture attrs**

This field is not active for this release of Output Manager.

**Note:** When available, this field will indicate whether or not to store information associated with SYSOUT (for example, printer attributes) in the archive with the data.

**Archive attr**

(Display only) Indicates the name of a defined archive attribute that is assigned to the rule.

The following job selection criteria are available on the Interceptor Rules panel:

**Job type**

Indicates the type of the job to which the rule applies. Valid values are **All** (all jobs), **Batch** (batch jobs only), **Appc** (only jobs associated with a specific application), **TSO** (only jobs processed on TSO systems), and **STC** (only jobs related to the started task).

**Job class**

Indicates the JES execution class. Valid values are up to 36 characters in length.

**Job name**

Indicates the name of the job. Valid values are up to eight characters in length.

**Job ID**

Indicates the JES job number associated with the report. Valid values are up to eight characters in length.

**Step name**

Indicates the name of the step associated with the report. Valid values are up to eight characters in length.

**Proc step**

Indicates the name of the procedure step associated with the report. Valid values are up to eight characters in length.

**Step number**

Indicates the number of the procedure step associated with the report. Valid values are up to eight characters in length.

**Program**

Indicates the name of the program included in the EXEC PGM= statement in the JCL. Valid values are up to eight characters in length.

**DD name**

Indicates the DD name associated with the report. Valid values are up to eight characters in length.

**Programmer name**

Indicates the name of the programmer of the job associated with the report. Valid values are up to 20 characters in length.

**User ID**

Indicates the RACF user ID of the job that creates the report. Valid values are up to eight characters in length.

**Group**

Indicates the group ID of the job that creates the report. Valid values are up to eight characters in length.

**Schenv**

Indicates the WLM scheduling environment associated with the report. Valid values are up to 17 characters in length.

**Account 1-8**

Indicate the account name(s) or number(s) associated with the report. Valid values are up to eight characters in length.

The following SYSOUT selection criteria are available on the Interceptor Rules panel:

**SYSOUT class**

Indicates the SYSOUT class associated with the archive report. Valid values are up to 36 characters in length.

**Destination**

Indicates the JES printer destination. Valid values are up to 27 characters in length.

**Form 1-8**

Indicates the name of the form(s) associated with the report. Valid values are up to eight characters in length.

**Prmode 1-4**

Indicates the printer process mode used by Output Manager for selection criteria. You can specify up to four Prmodes.

**Note:** The printer process mode is a JCL parameter that Output Manager uses for selection criteria. If you specify a Prmode of 1-8 characters in your JCL, then Output Manager can select the corresponding SYSOUT. For example, to select the SYSOUT if ds18 is specified as one of the modes, your JCL should include:

```
//ds18 output prmode=testmode  
//sysprint dd sysout=a,output=(*.ds18)
```

**FCB** Indicates the forms control buffer name that JES uses to print the SYSOUT data set. Valid values are up to four characters in length.

**UCS** Indicates the universal character set (UCS) that JES uses when printing the SYSOUT data set. Valid values are up to four characters in length.

**Flash** Indicates the forms overlay used when printing the SYSOUT. Valid values are **Name** (specifies the name, up to four characters, of a forms overlay), **STD** (standard forms overlay based on the overlay that was specified

during JES3 initialization), and **None** (no flashing for the SYSOUT data set).

**Note:** STD only applies to JES3 systems.

**Writer**

Indicates the name of the external writer that processes the SYSOUT data set (rather than JES). Valid values are up to eight characters in length.

4. Specify the appropriate control fields, job selection criteria, and SYSOUT selection criteria and press PF3.
5. An exit confirmation panel displays. Press Enter to confirm your changes.

## Editing an interceptor rule

To edit an interceptor rule:

1. Select option A, Administrative Functions, from the Output Manager main menu and press Enter. The Administrative Functions panel displays.
2. Select option I, Interceptor Rules, and press Enter. The List of Interceptor Rules panel displays.
3. Type E in the CMD field next to the interceptor rule you want to edit and press Enter. The Interceptor Rules panel displays.
4. Edit the appropriate control fields, job selection criteria, and SYSOUT selection criteria and press Enter.
5. Press PF3. An exit confirmation panel displays.
6. Press Enter to save your changes.

## Deleting an interceptor rule

To delete an interceptor rule:

1. Select option A, Administrative Functions, from the Output Manager main menu and press Enter. The Administrative Functions panel displays.
2. Select option I, Interceptor Rules, and press Enter. The List of Interceptor Rules panel displays.
3. Type D in the CMD field next to the interceptor rule you want to delete and press Enter. A delete confirmation panel displays.
4. Press Enter. The rule is deleted and the List of Interceptor Rules panel displays.
5. Press PF3. A change confirmation panel displays.
6. Press Enter to save your changes.

## Linking an interceptor rule to an archive

For information about how to link an interceptor rule to an archive, see “Linking an archive to rules” on page 130.

## Initiating the interceptor process

To initiate the interceptor process, place the following commands in your configuration member:

```
SUBSYS DISCOVER jesid
```

```
SUBSYS INTERCEPT jesid
```

where *jesid* is the JES subsystem name (usually JES2).

For example, if your started task is:

```
//APF      EXEC PGM=CSVAPF00
//APFLIB   DD  DISP=SHR,DSN=BJT.PR0210.LOADLIB
//*
//S1 EXEC PGM=BJTSTART,PARM='IGSVRFY'
//STEPLIB DD  DISP=SHR,DSN=BJT.PR0210.LOADLIB
//        DD  DISP=SHR,DSN=DSN.V710.SDSNLOAD
//BJTOUT   OUTPUT DEFAULT=Y,CLASS=Q
//SYSPRINT DD SYSOUT=*,DCB=(LRECL=132,BLKSIZE=133,RECFM=FBA)
//CONFIGUR DD DISP=SHR,DSN=BJT.WRK0110.JCLLIB(BJTPCMD5)
```

Then you would place the SUBSYS DISCOVER and SUBSYS INTERCEPT commands in member BJT.WRK0110.JCLLIB(BJTPCMD5).

Alternatively, you can initiate the interceptor process via the following modify command:

```
F stcname,cmd
```

where *stcname* is your Output Manager started task name and *cmd* is

```
SUBSYS DISCOVER jesid
SUBSYS INTERCEPT jesid
```

where *jesid* is the JES subsystem name (usually JES2)

## Suspending the interceptor process

To suspend the interceptor process, place the following commands in your configuration member or issue it using the modify command as described above:

```
SUBSYS RESET jesid
```

where *jesid* is the JES subsystem name (usually JES2).

**Note:** This command only works for JES2.

---

## Selector definitions

The use of selector rules requires that you:

- Set up one or more selector definitions.
- Create one or more archives and link each selector definition to a specific archive.
- Activate the rule.

**Note:** You should not use more than 20 selector definitions concurrently to select SYSOUT. Subselector rules should instead be used to refine the selection process. For more information about subselector rules, see “Subselector rules” on page 115.

## Creating a selector definition

To add a selector definition rule:

1. Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
2. Select option S, Selector Definitions, and press Enter. If there are no other selector definitions defined for your Output Manager system, the following pop-up window displays:

```

----- No Selector rules found -----
BJTPDDSV
Command ==>

No Selector rules have been found:
Press ENTER to create a new Selector rule
or CANCEL to exit

```

Figure 40. No Selector Rules Found panel

Press Enter to create a new selector definition. If there are selector definitions defined for your Output Manager system, the List of Selector Definitions panel displays:

```

File View Preferences Help
-----
BJTPDDSE Output Manager - List of Selector Rules          Row 1 of 1
Command ==>                                           SCROLL ==> PAGE
Line commands: Edit, Insert, Delete, Prompt, Link      >
CMD Status Disposition Exists Line Limit Capture Combine Insert
Disabled Delete Replace 0 No No No
***** Bottom of Data *****

```

Figure 41. List of Selector Rules panel

This panel displays a list of selector definitions currently defined for your Output Manager system. For a description of the information shown on this panel, refer to

3. Type I in the CMD field and press Enter. The Selector Rules panel displays:

```

File Link Help
-----
BJTPDDED          IBM Output Manager - Selector Rules
Command ==>

More:  +

Control fields
Disposition . . DELETE (Delete, Keep, Hold, Syshold, Release)
Keep Class . . (Class if not deleted from spool)
Keep Dest . . . (DEST if not deleted from spool)

Error Disp . . HOLD (Delete, Keep, Hold, Syshold, Release)
Error Class . . (Class if not deleted from spool)
Error Dest . . (DEST if not deleted from spool)

Line Limit . . 0 (Max lines to allow in archive)
Limit Disp . . HOLD (Delete, Keep, Hold, Syshold, Release)
Limit Class . . (Class if not deleted from spool)
Limit Dest . . (DEST if not deleted from spool)

Exists . . . . EXTEND (Leave, Replace, Extend)
Status . . . . DISABLED (Enabled or Disabled)
Combine Sysout. No (Combine Sysout into single archive)
Insert Marker . No (Insert marker when combining)

```

Figure 42. Selector Rules panel

This panel is divided into three sections:

- **Control fields**—Control fields identify the actions to be taken when the rule is applied.
- **Job selection criteria**—Job selection criteria identify the conditions under which jobs are selected.
- **SYSOUT selection criteria**—SYSOUT selection criteria identify the conditions under which SYSOUT is selected.

**Note:** Use the PF8 key to page down to view all sections and fields on the Selector Rules panel.

The following control fields display on the Selector Rules panel:

**Disposition**

Indicates what Output Manager does with the SYOSUT when data is archived. Valid values are **Delete** (purges the output off of the JES spool), **Keep** (keeps the data on the spool and does not alter its queue), **Hold** (keeps the output on the JES spool and places it in the hold queue), **Syshold** (keeps the output on the JES spool and places it in the syshold queue), and **Release** (keeps the output on the JES spool and places it in the write queue).

**Keep class**

Indicates the output class to requeue output to when it is not deleted and the archive completed normally.

**Keep dest**

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

**Error disp**

Indicates what to do with the SYSOUT when an output data set fails to be captured. Valid values are **Delete** (purges the output off of the JES spool), **Keep** (keeps the data on the spool and does not alter its queue), **Hold** (keeps the output on the JES spool and places it in the hold queue), **Syshold** (keeps the output on the JES spool and places it in the syshold queue), and **Release** (keeps the output on the JES spool and places it in the write queue).

**Error class**

Indicates the output class to requeue output to when it is not deleted and the archive creation failed.

**Error dest**

Indicates the output destination to requeue output to when it is not deleted and the archive creation failed.

**Line limit**

Indicates the maximum number of lines that can be written to the archive. The default line limit is 0.

**Limit disp**

Indicates the output disposition when an output data set exceeds the specified line count. Valid values are **Delete** (purges the output off of the JES spool), **Keep** (keeps the data on the spool and does not alter its queue), **Hold** (keeps the output on the JES spool and places it in the hold queue), **Syshold** (keeps the output on the JES spool and places it in the syshold queue), and **Release** (keeps the output on the JES spool and places it in the write queue).

**Limit class**

Indicates the output class to requeue output to when it is not deleted and the archive exceeded the specified line count.

**Limit dest**

Indicates the output destination to requeue output to when it is not deleted and the archive exceeded the specified line count.

**Exists**

Indicates what Output manager does if the archive already exists. Valid values are **Replace** (replaces data in the archive with the new data), **Leave** (leaves old data in the archive and do not update it, keeps the new data on the spool), and **Extend** (writes the new data at the end of the old archive data set).

**Status**

Indicates the status of a rule. Valid values are **Enabled** (the rule is enabled) and **Disabled** (the rule is disabled).

**Combine SYSOUT**

Indicates whether or not to combine multiple SYSOUTs from a single job into a single archive. Valid values are **Yes** (combines multiple SYSOUTs from a single job into a single archive) and **No** (does not combine multiple SYSOUTs from a single job into a single archive).

**Insert marker**

Indicates whether or not to insert a marker at the location where the SYSOUTs were combined into a single archive. Valid values are **Yes** (inserts marker) and **No** (does not insert marker).

**Note:** This field is only valid if you specified Yes in the Combine SYSOUT field.

**Archive attr**

(Display only) Indicates the name of a defined archive attribute that is assigned to the rule.

**Selector cnt**

Indicates the number of selectors.

The following job selection criteria display on the Selector Rules panel:

**Job type**

Indicates the type of the job to which the rule applies. Valid values are **All** (all jobs), **Batch** (batch jobs only), **Appc** (only jobs associated with a specific application), **TSO** (only jobs processed on TSO systems), **STC** (only jobs related to the started task).

**Job name**

Indicates the name of the job. Valid values are up to eight characters in length.

**Job ID**

Indicates the JES job number associated with the report. Valid values are up to eight characters in length.

**User ID**

Indicates the RACF user ID of the job that creates the report. Valid values are up to eight characters in length.

The following SYSOUT selection criteria display on the Selector Rules panel:

**SYSOUT class**

Indicates the SYSOUT class associated with the archive report. Valid values are up to 36 characters in length.

**Destination**

Indicates the JES printer destination. Valid values are up to 27 characters in length.

**Form 1-8**

Indicates the name of the form(s) associated with the report. Valid values are up to eight characters in length.

**Prmode 1-4**

Indicates the printer process mode used by Output Manager for selection criteria. You can specify up to four Prmodes.

**Note:** The printer process mode is a JCL parameter that Output Manager uses for selection criteria. If you specify a Prmode of 1–8 characters in your JCL, then Output Manager can select the corresponding SYSOUT. For example, to select the SYSOUT if ds18 is specified as one of the modes, your JCL should include:

```
//ds18 output prmode=testmode
//sysprint dd sysout=a,output=(*.ds18)
```

**FCB** Indicates the forms control buffer name that JES uses to print the SYSOUT data set. Valid values are up to four characters in length.

**UCS** Indicates the universal character set that JES uses when printing the SYSOUT data set. Valid values are up to four characters in length.

**Flash** Indicates the forms overlay used when printing the SYSOUT. Valid values are **Name** (specifies the name of a forms overlay, up to four characters), **STD** (standard forms overlay based on the overlay that was specified during JES3 initialization), **None** (no flashing for the SYSOUT data set).

**Note:** STD only applies to JES3 systems.

#### **Writer**

Indicates the name of the external writer that processes the SYSOUT data set (rather than JES). Valid values are up to eight characters in length.

#### **JES queue**

Indicates the JES queue for archiving. Valid values are **All** (selects all jobs in the JES queue), **External** (only selects jobs assigned to a special, external writer), **Write** (selects jobs that are ready to be written to a printer. Enables you to control which jobs are selected by using JES or SDSF commands to HOLD a dataset), and **Hold** (selects jobs that are held in the JES queue and are not ready to be written).

4. Specify the appropriate control fields, job selection criteria, and SYSOUT selection criteria and press Enter.

**Note:** If you specify EXISTS=REPLACE and COMBINE SYSOUT=NO, you must uniquely identify captured output via the corresponding archive attribute otherwise there is a potential for loss of data.

5. Press PF3.

## **Editing a selector definition rule**

To edit an selector definition rule:

1. Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
2. Select option S, Selector Definitions, and press Enter. The List of Selector Rules panel displays.
3. Type E in the CMD field next to the selector definition you want to edit and press Enter. To insert a new selector definition, type I in the CMD field and press Enter. The List of Selector Rules panel displays:

```

File Link Help
-----
BJTPDDED          IBM Output Manager - Selector Rules
Command ==>>>

More:      +

Control fields
Disposition . . DELETE      (Delete, Keep, Hold, Syshold, Release)
Keep Class . .              (Class if not deleted from spool)
Keep Dest . . . R22BNOR     (DEST if not deleted from spool)

Error Disp . . HOLD        (Delete, Keep, Hold, Syshold, Release)
Error Class . .            (Class if not deleted from spool)
Error Dest . . R22BERR     (DEST if not deleted from spool)

Line Limit . . 0           (Max lines to allow in archive)
Limit Disp . . HOLD        (Delete, Keep, Hold, Syshold, Release)
Limit Class . .           (Class if not deleted from spool)
Limit Dest . . R22BLIM     (DEST if not deleted from spool)

Exists . . . . LEAVE       (Leave, Replace, Extend)
Status . . . . ENABLED    (Enabled or Disabled)
Combine Sysout. YES       (Combine Sysout into single archive)
Insert Marker . YES       (Insert marker when combining)

```

Figure 43. Selector Rules panel

This panel is divided into three sections:

- **Control fields**—Control fields identify the actions to be taken when the rule is applied.
- **Job selection criteria**—Job selection criteria identify the conditions under which jobs are selected.
- **SYSOUT selection criteria**—SYSOUT selection criteria identify the conditions under which SYSOUT is selected.

**Note:** Use the PF8 key to page down to view all sections and fields on the Selector Rules panel.

To view a description of the fields on the Selector Definitions panel, refer to “Creating a selector definition” on page 109.

4. Edit the appropriate control fields, job selection criteria, and SYSOUT selection criteria and press Enter.
5. Press PF3. An exit confirmation panel displays.
6. Press Enter to save your changes.

## Deleting a selector definition

To delete a selector definition:

1. Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
2. Select option S, Selector Definitions, and press Enter. The List of Selector Rules panel displays.
3. Type D in the CMD field next to the selector definition you want to delete and press Enter. A delete confirmation panel displays.
4. Press Enter. The rule is deleted and the List of Selector Rules panel displays.
5. Press PF3. A change confirmation panel displays.
6. Press Enter to save your changes.

## Linking a selector definition to an archive

For information about how to link a selector definition to an archive, see “Linking an archive to rules” on page 130.

### Subselector rules

Subselector rules are a subset of selector definitions. Subselector rules enable report administrators to assign different attributes to SYSOUT selected by the same selector definition.

The fields specified in the selector definition are passed to JES via the SAPI interface. JES returns SYSOUT to Output Manager one SYSOUT at a time. Whenever Output Manager is ready to create a new archive for a SYSOUT data set, it performs a search of any subselector rules associated with the selector definition. If a subselector rule match is found, the control fields (attributes) specified in the subselector rule override those of the selector definition. If no match is found, then the attributes of the selector definition are used.

#### Notes:

1. The selection criteria specified for the selector definition are non-modifiable fields on the subselector rules panel.
2. Additional fields are available for subselector rules that are not available for selector definitions.
3. The order in which you list subselector rules is important. Subselector rules are searched from top to bottom.
4. All specified criteria must match the SYSOUT data for a rule to be considered a match.

To create a subselector rule:

1. Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
2. Select option S, Selector Definitions, and press Enter. The List of Selector Rules panel displays.
3. Type IS in the CMD field next to any selector definition and press Enter. The Subselection Rules panel displays:

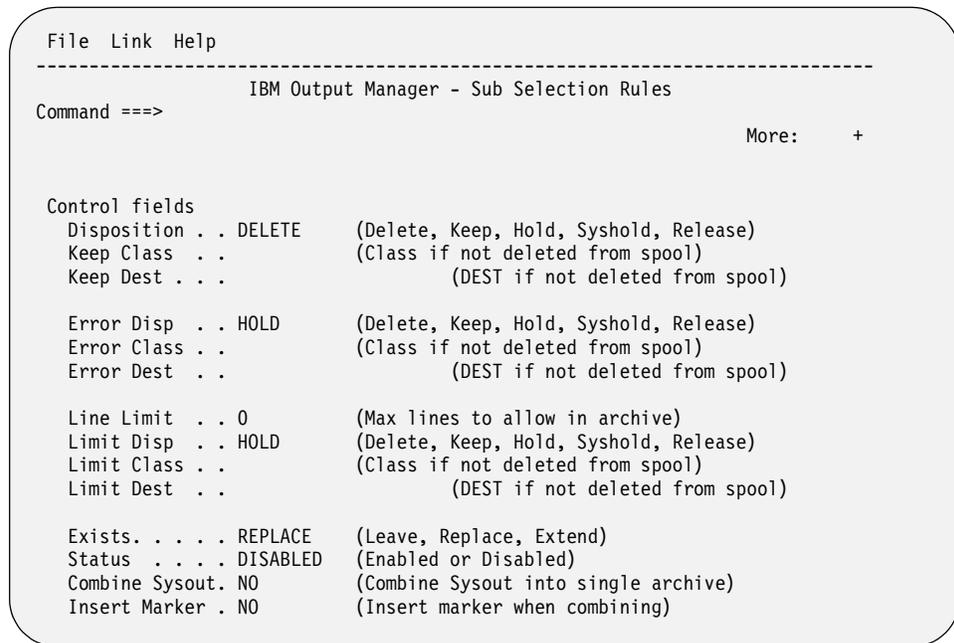


Figure 44. Sub Selection Rules panel

### Disposition

Indicates what Output Manager does with the SYOSUT when data is archived. Valid values are **Delete** (purges the output off of the JES spool), **Keep** (keeps the data on the spool and does not alter its queue), **Hold** (keeps the data on the spool and does not alter its queue), **Syshold** (keeps the output on the JES spool and places it in the syshold queue), and **Release** (keeps the output on the JES spool and places it in the write queue).

### Keep class

Indicates the output class to requeue output to when it is not deleted and the archive completed normally.

### Keep dest

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

### Error Disp

Indicates what Output Manager does with the SYOSUT when an output data set fails to be captured. Valid values are **Delete** (purges the output off of the JES spool), **Keep** (keeps the data on the spool and does not alter its queue), **Hold** (keeps the data on the spool and does not alter its queue), **Syshold** (keeps the output on the JES spool and places it in the syshold queue), and **Release** (keeps the output on the JES spool and places it in the write queue).

### Error class

Indicates the output class to requeue output to when it is not deleted and the archive creation failed.

### Error dest

Indicates the output destination to requeue output to when it is not deleted and the archive creation failed.

### Line limit

Indicates the maximum number of lines that can be written to the archive.

**Limit disp**

Indicates what Output Manager does with the SYOSUT when an output data set exceeds the specified line count. Valid values are **Delete** (purges the output off of the JES spool), **Keep** (keeps the data on the spool and does not alter its queue), **Hold** (keeps the output on the JES spool and places it in the hold queue), **Syshold** (keeps the output on the JES spool and places it in the syshold queue), **Release** (keeps the output on the JES spool and places it in the write queue)

**Limit class**

Indicates the output class to requeue output to when it is not deleted and the archive exceeded the specified line count.

**Limit dest**

Indicates the output destination to requeue output to when it is not deleted and the archive exceeded the specified line count.

**Exists**

Indicates what Output manager does if the archive already exists. Valid values are **Replace** (replaces data in the archive with the new data), **Leave** (leaves old data in the archive and do not update it and keeps the new data on the spool), and **Extend** (writes the new data at the end of the old archive data set).

**Status**

Indicates the status of a rule. Valid values are **Enabled** (the rule is enabled) and **Disabled** (the rule is disabled).

**Combine SYSOUT**

Indicates whether or not to combine multiple SYSOUTs from a single job into a single archive. Valid values are **Yes** (combines multiple SYSOUTs from a single job into a single archive) and **No** (does not combine multiple SYSOUTs from a single job into a single archive).

**Insert marker**

Indicates whether or not to insert a marker at the location where the SYSOUTs were combined into a single archive. Valid values are **Yes** (inserts marker) and **No** (does not insert marker).

**Note:** This field is only valid if you specified Yes in the Combine SYSOUT field.

**Archive attr**

(Display only) Indicates the name of a defined archive attribute that is assigned to the rule.

The following job selection criteria are available on the Sub Selection Rules panel:

**Job type**

Indicates the type of the job to which the rule applies. Valid values are **All** (all jobs), **Batch** (batch jobs only), **Appc** (only jobs associated with a specific application), **TSO** (only jobs processed on TSO systems), **STC** (only jobs related to the started task).

**Job name**

Indicates the name of the job. Valid values are up to eight characters in length.

**Job ID**

Indicates the JES job number associated with the report. Valid values are up to eight characters in length.

**Proc step name**

Indicates the name of the procedure step associated with the report. Valid values are up to eight characters in length.

**Step name**

Indicates the name of the step associated with the report. Valid values are up to eight characters in length.

**Step number**

Indicates the number of the procedure step associated with the report. Valid values are up to eight characters in length.

**DD name**

Indicates the DD name associated with the report. Valid values are up to eight characters in length.

**Programmer name**

Indicates the name of the programmer of the job associated with the report. Valid values are up to 20 characters in length.

**User ID**

Indicates the RACF user ID of the job that creates the report. Valid values are up to eight characters in length.

**Account 1-8**

Indicate the account name(s) or number(s) associated with the report. Valid values are up to eight characters in length.

The following SYSOUT selection criteria are available on the Sub Selection Rules panel:

**SYSOUT class**

Indicates the SYSOUT class associated with the archive report. Valid values are up to 36 characters in length.

**Destination**

Indicates the JES printer destination. Valid values are up to 27 characters in length.

**Form** Indicates the name of the form associated with the report. Valid values are up to eight characters in length.

**Prmode**

Indicates the printer process mode used by Output Manager for selection criteria. You can specify up to four Prmodes.

**Note:** The printer process mode is a JCL parameter that Output Manager uses for selection criteria. If you specify a Prmode of 1–8 characters in your JCL, then Output Manager can select the corresponding SYSOUT. For example, to select the SYSOUT if ds18 is specified as one of the modes, your JCL should include:

```
//ds18 output prmode=testmode
//sysprint dd sysout=a,output=(*.ds18)
```

**FCB** Indicates the forms control buffer name that JES uses to print the SYSOUT data set. Valid values are up to four characters in length.

**UCS** Indicates the universal character set (UCS) that JES uses when printing the SYSOUT data set. Valid values are up to four characters in length.

**Flash** Indicates the forms overlay used when printing the SYSOUT. Valid values are **Name** (specifies the name of a forms overlay, up to four characters), **STD** (standard forms overlay based on the overlay that was specified during JES3 initialization), **None** (no flashing for the SYSOUT data set).

**Note:** STD only applies to JES3 systems.

**Writer**

Indicates the name of the external writer that processes the SYSOUT data set (rather than JES). Valid values are up to eight characters in length.

### JES queue

Indicates the JES queue for archiving. Valid values are **All** (selects all jobs in the JES queue), **External** (only select jobs assigned to a special, external writer; this may or may not be a printer), **Write** (select jobs that are ready to be written to a printer), **Hold** (selects jobs that are held in the JES queue and are not ready to be written).

4. Specify the appropriate criteria and press PF3 to exit.
5. Press PF3. An exist confirmation panel displays.
6. Press Enter to save.

---

## Report selection rules

The use of report selection rules requires that you:

- Set up one or more report selection rules.
- Create a report layout and link the report layout to the appropriate report selection rule.
- Create a custom report and link the custom report to the appropriate report layout.
- Create a distribution list and link the distribution list to the appropriate custom report. For more information, see “Creating a distribution list” on page 167 and “Linking a distribution list to a custom report definition” on page 174.

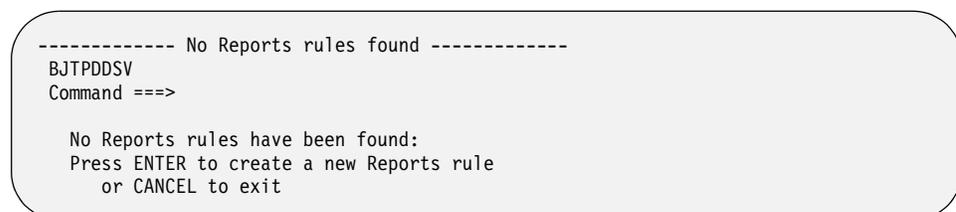
Report selection rules establish selection criteria that determine whether or not an archived report is a candidate for basic or custom report processing. The existence of a report selection rule is sufficient to create a basic report from an archived report. However, to create Custom reports from an archived report, the report selection rule, and any associated custom report definitions must contain a layout that sufficiently maps the pages in the archived report.

**Note:** If no report layout is assigned to a custom report, then a report selection rules is related to a basic report definition via the report name field. The RA command can be used on the report selection rules list to add a report definition and in turn propagate the name.

## Creating a report selection rule

To add a report selection rule:

1. Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
2. Select option R, Report Selection Rules, from the Administrative Functions panel and press Enter. If there are no other report selection rules defined for your Output Manager system, the following pop-up window displays:



*Figure 45. No Report Rules Found panel*

Press Enter to create a new report selection rule. If there are report selection rules defined for your Output Manager system, the Report Rules panel displays:

```

File View Preferences Help
-----
BJTPDDSE Output Manager - List of Report Rules                               Row 1 of 1
Command ==>                                                                SCROLL ==> PAGE
Line commands: Edit, Insert, Delete, Prompt, Link                          >
CMD Status Report Name Layout Name Job Name
Disabled BJTREP1
***** Bottom of Data *****

```

Figure 46. List of Report Rules panel

The following columns display on the List of Report Rules panel:

**Status**

Indicates the status of the report selection rule. Valid values are **Enabled** (rule is enabled) and **Disabled** (the rule is disabled).

**Report name**

Indicates the name of the report to which the rule applies. Valid values are up to 24 characters in length.

**Layout name**

Displays the name of the report layout associated with the report selection rule. If this field is blank, a report layout has not yet been linked to the report selection rule.

**Job name**

Indicates the name of the job. Valid values are up to eight characters in length.

**Step name**

Indicates the name of the step associated with the report. Valid values are up to eight characters in length.

**Proc step name**

Indicates the name of the procedure step associated with the report. Valid values are up to eight characters in length.

**DD name**

Indicates the DD name associated with the report. Valid values are up to eight characters in length.

**Printer attribute**

Displays the name of the printer attribute associated with the report selection rule. If this field is blank, a printer attribute has not yet been linked to the report selection rule.

3. To edit an existing report selection rule, type E in the CMD field next to the report selection rule and press Enter. To insert a new report selection rule, type I in the CMD field and press Enter. The Report Rules panel displays:

```

File Link Help
-----
BJTPDDER      IBM Output Manager - Report Rules
Command ==>

Control fields
Status . . . . Enabled      (Enabled or Disabled)
Layout Name . :
Printer Attr. :                (Printer attributes of report)

Job Selection criteria
Report Name . .
Job Name . . . .
Proc Name . . . .
Step Name . . . .
Proc Step . . . .
Step Number . .
DD Name . . . .

```

Figure 47. Report Rules panel

The following input fields display on the Report Rules panel:

**Status**

Indicates the status of the report selection rule. Valid values are **Enabled** (the rule is enabled) and **Disabled** (the rule is disabled).

**Layout name**

Displays the name of the report layout associated with the report selection rule. If this field is blank, a report layout has not yet been linked to the report selection rule.

**Printer attr**

Displays the name of the printer attribute associated with the report selection rule. If this field is blank, a printer attribute has not yet been linked to the report selection rule.

**Report name**

Indicates the name of the report to which the rule applies. Valid values are up to 24 characters in length.

**Job name**

Indicates the name of the job. Valid values are up to eight characters in length.

**Step name**

Indicates the name of the procedure associated with the report. Valid values are up to eight characters in length.

**Proc step**

Indicates the name of the procedure step associated with the report. Valid values are up to eight characters in length.

**Step number**

Indicates the number of the procedure step associated with the report. Valid values are up to eight characters in length.

**DD name**

Indicates the DD name associated with the report. Valid values are up to eight characters in length.

4. Specify the appropriate criteria and press PF3 to exit.

**Note:** You must specify a job name and a DD name and at least one of the following fields: proc name, step name, proc step, step number.

5. Press PF3. An exit confirmation panel displays.
6. Press Enter to save.

## Editing a report selection rule

To edit a report selection rule:

1. Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
2. Select option R, Report Selection Rules, and press Enter. The List of Report Rules panel displays.
3. Type E in the CMD field next to the report selection rule you want to edit and press Enter. The Report Rules panel displays.
4. Edit the appropriate fields and press Enter.
5. Press PF3. An exit confirmation panel displays.
6. Press Enter to save your changes.

## Deleting a report selection rule

To delete a report selection rule:

1. Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
2. Select option R, Report Selection Rules, and press Enter. The List of Report Rules panel displays.
3. Type D in the CMD field next to the report selection rule you want to delete and press Enter. A delete confirmation panel displays.
4. Press Enter. The rule is deleted and the List of Report Rules panel displays.
5. Press PF3. A change confirmation panel displays.
6. Press Enter to save your changes.

## Linking report selection rules and report layouts

When you configure Output Manager to capture and manage reports, you must link a report selection rule with a report layout and then link a custom report with a report layout.

To associate a report selection rule with a report layout:

1. Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
2. Select option R, Report Selection Rules, from the Administrative Functions panel and press Enter. The List of Report Rules panel displays.
3. Type P, Prompt, in the CMD field next to the report selection rule you want to associate with a layout and press Enter. The Layout Selection panel displays:

```
----- IBM Output Manager - Layout Selection -----  
BJTPLAY8  
Command ==> SCROLL ==> PAGE  
  
Line cmds: Select, Add, View, Edit, Delete  
  
CMD Name  
BJTRL1  
BJTRL2  
***** Bottom of Data *****
```

Figure 48. Layout Selection panel

The following commands are available on the Layout Selection panel:

**Select**

Enables you to select a report layout for linking to the selected rule.

**Add**

Enables you to add a new report layout and subsequently select it for linking to the selected rule.

**View**

Enables you to view a report layout.

**Edit**

Enables you to edit a report layout.

**Delete**

Enables you to delete a report layout.

Type an S in the CMD field next to the layout you want to associate with the rule and press Enter. A / displays in the CMD field.

4. Press PF3. The List of Report Rules panel displays.
5. Press PF11 to scroll right until you locate the Layout Name column on the List of Report Rules panel. Verify that the report layout you selected is listed in this field.
6. Press PF3. An exit confirmation panel displays.
7. Press Enter to save your changes.

## Linking report selection rules to printer attributes

When you configure Output Manager to capture and manage reports, you need to link a report selection rules with printer attributes.

To associate a report selection rule with printer attributes:

1. Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
2. Select option R, Report Selection Rules, from the Administrative Functions panel and press Enter. The List of Report Rules panel displays.
3. Type E, Edit, in the CMD field next to the report selection rule you want to associate with printer attributes and press Enter. The Report Rules panel displays:

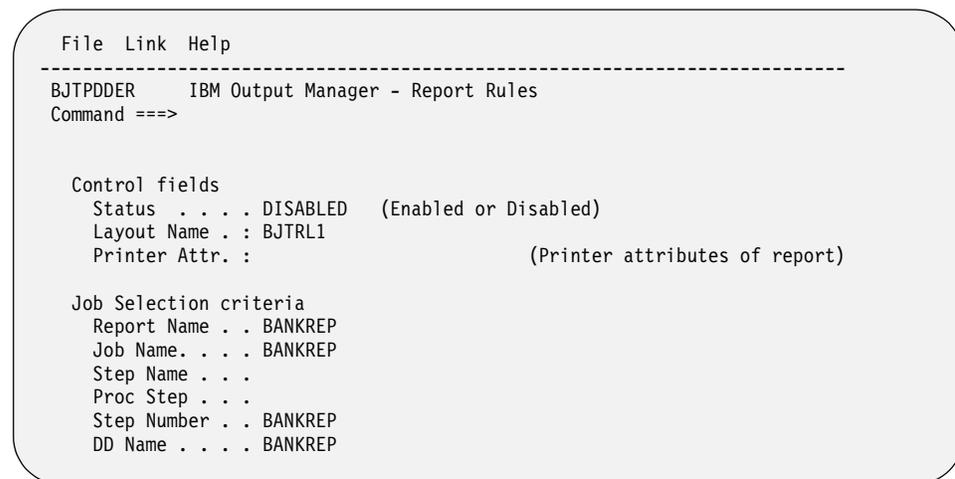


Figure 49. Report Rules panel

4. Place your cursor on the L in the Link menu item and press Enter. The Link drop-down list displays.

- Select option 4, Choose a Printer Attribute, and press Enter. The Printer Attributes Selection panel displays:

```

----- IBM Output Manager - Printer Attribute Selection -----
BJTPPRTP
Command ==>                                SCROLL == => CSR

Line Commands: Select, Insert, View, Edit, Delete

CMD  Name
     PRNTR1
     PRNTR2
***** Bottom of Data *****

```

Figure 50. Printer Attribute Selection panel

- Type S in the CMD field next to the printer attribute you want to select and press Enter. A / displays in the CMD field.
- Press PF3. The Report Rules panel displays and a message appears to confirm your printer attribute selection.

## Accessing report information

Output Manager provides several additional techniques for accessing report information. From the List of Report Rules panel (option A.R on the Output Manager main menu), the following line commands are now supported:

- RD—enables users to drill-down to the Reports panel and show only those custom reports that have the same layout ID as the report selection rule.
- RC—enables users to drill-down to the Captured Reports panel to view all reports that have been captured by the same layout ID as the report selection rule.

---

## Archive attributes

An archive attribute is a set of attributes that Output Manager uses when allocating a sequential file to hold captured SYSOUT.

## Creating archive attributes

To add an archive attribute:

- Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
- Select option A, Archive Attributes, from the Administrative Functions panel and press Enter. If there are no other archive attributes defined for your Output Manager system, the following pop-up window displays:

```

----- No Archive Attributes found -----
BJTPATTV
Command ==>

No archive attributes have been found:
Press ENTER to create a new attributes
or CANCEL to exit

```

Figure 51. No Archive Attributes Found panel

Press Enter to create new attributes. If there are attributes defined for your Output Manager system, the Archive Attributes panel displays:

```

File View Preferences Help
-----
BJTPATTE IBM Output Manager - Archive Attributes          Row 1 of 2
Command ==>                                           SCROLL ==> PAGE
Line commands: Edit, Insert, Delete                    >
CMD  Name          Archive mask
BJTAA1             PDUSERA.BJTP.&JOBNAME.&JOBNUMB
BJTAA2             PDUSERB.WRK0110.&JOBNAME.&JOBNUMB
***** Bottom of Data *****

```

Figure 52. Archive Attributes panel

The following columns display on the Archive Attributes panel:

**Name**

Indicates the name of the archive. Valid values are up to 24 characters in length.

**Archive mask**

Indicates the template mask you want to use to generate the data set name for the archive.

**Retention period**

Indicates how many days to keep the archive. Valid values are numbers from 1 to 9999. Specifying a value of zero, the default, indicates that archive retention will be managed by your existing storage management policies (for example, SMS rules).

**Primary quantity/ Secondary quantity**

Indicate the number of units to allocate for primary/secondary allocation.

**Notes:**

- a. The unit type (M, K, B) is defined in the Average Record Unit field.
- b. The upper limits of primary quantity/secondary quantity values depends on the manner in which you request space (tracks, cylinders, blocks) and the device that you select to hold the data. If you request a value that is too large or too small, the archiving process will fail.
- c. Instead of explicitly coding a value for primary/secondary quantities, consider first checking with your storage management group for guidance in determining the set of data classes and management classes to best suit your archiving needs.

**Space unit**

Indicates the type of space units associated with the archive. Valid values are **Blocks, Tracks, Cylinders, Kilobytes, Megabytes, Bytes, and Records.**

- 3. To edit an existing archive attribute, type E in the CMD field next to the attribute and press Enter. To insert a new archive attribute, type I in the CMD field and press Enter. The Archive Attributes Details panel displays:

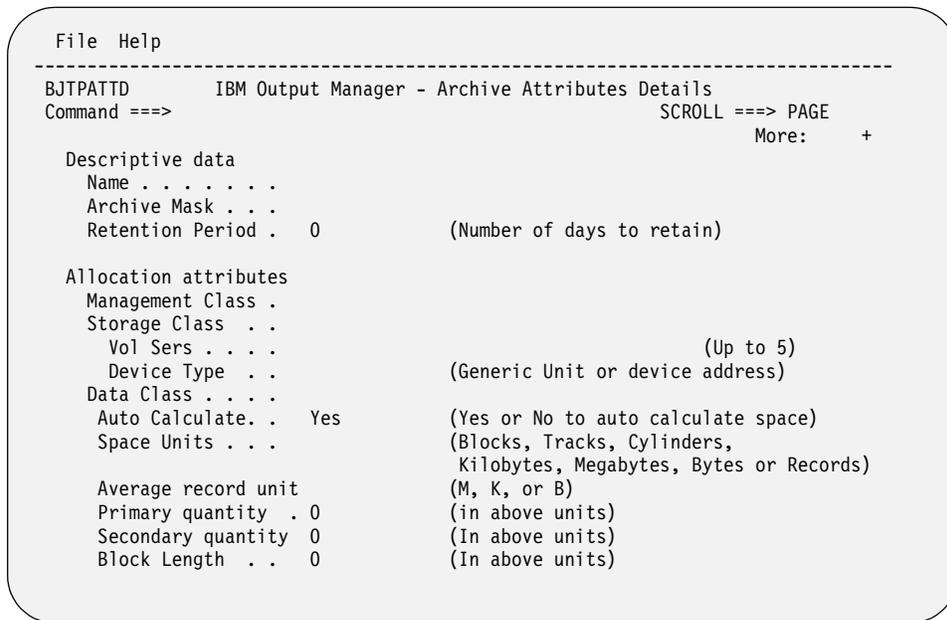


Figure 53. Archive Attributes Details panel

The following input fields are available on the Archive Attributes Details panel:

**Name**

Indicates the name of the archive. Valid values are up to 24 characters in length.

**Archive mask**

Indicates the template mask you want to use to generate the data set name for the archive.

**Retention period**

Indicates how many days to keep the archive. Valid values are numbers from 1 to 9999. Specifying a value of zero, the default, indicates that archive retention will be managed by your existing storage management policies (for example, SMS rules).

**Management class**

Indicates the name of the management class for the archive. Valid values are up to eight characters in length.

**Storage class**

Indicates the name of the storage class for the archive. Valid values are up to eight characters in length.

**Vol sers**

Indicates the volume serial numbers to be associated with the archive. Valid values for each of the five fields are up to six characters in length.

**Device type**

Indicates the generic unit or device address. Valid values are up to eight characters in length.

**Data class**

Indicates the data class of the archive. Valid values are up to eight characters in length.

**Auto calculate**

Indicates whether or not to automatically calculate the space necessary for the archive. valid values are **Yes** (automatically calculates space necessary for the archive) and **No** (does not automatically calculate the space necessary for the archive).

### Space units

Indicates the type of space units associated with the archive. Valid values are **Blocks**, **Tracks**, **Cylinders**, **Kilobytes**, **Megabytes**, **Bytes**, and **Records**.

### Archive record unit

Indicates the size of the average record unit. The last character in the size must be one of the following values **M** (megabytes), **K** (kilobytes), **B** (bytes).

### Primary quantity/ Secondary quantity

Indicate the number of units to allocate for primary/secondary allocation.

#### Notes:

- a. The unit type (M, K, B) is defined in the Average Record Unit field.
- b. The upper limits of primary quantity/secondary quantity values depends on the manner in which you request space (tracks, cylinders, blocks) and the device that you select to hold the data. If you request a value that is too large or too small, the archiving process will fail.
- c. Instead of explicitly coding a value for primary/secondary quantities, consider first checking with your storage management group for guidance in determining the set of data classes and management classes to best suit your archiving needs.

### Block length

Indicates the length of the block, based on the unit type listed in the Average Record Unit field. Valid values are numbers from 0 to 65,535.

### Normal disposition

This field cannot be edited. It indicates that archive attributes write to cataloged data sets.

### Abnormal disposition

Indicates what Output Manager does with the archive if the save to archive fails. Valid values are **Catalog** (the archive is accessible through a catalog) and **Delete** (deletes the archive).

**Note:** IBM strongly recommends that archive attributes write to cataloged data sets. Specifying data sets that are not cataloged may produce unexpected results.

### Release unused space

Indicates whether or not unused space is to be released. Valid values are **Yes** (releases unused space) and **No** (does not release unused space)

4. Specify the appropriate values for the archive and press Enter.
5. Press PF3. An exit confirmation panel displays.
6. Press Enter to save your changes.

## Creating an archive mask

An archive mask is a template used to create a data set name for an archive. An archive mask consists of a character string of up to 44 characters in length. This string should be in the form of a data set name. Variables can be specified in the archive mask. When the archive is being allocated, any variables will have their current values updated.

Variables begin with an ampersand (&) followed by the variable name. If the last character of the variable name is a period (.) then the period is considered part of the variable and is replaced with the variable's current substitution value.

There are two types of symbols, **product symbols** (symbols defined by Output Manager) and **system symbols** (z/OS system symbols).

**Product symbols:** The following list provides a description of each or Output Manager's product symbols:

**&JOBNAME**

The name of the job that produced the SYSOUT.

**&JOBNUMB**

The JES job number .

**&RACFUSER**

The USERID of the job that produced the SYSOUT.

**&USERID**

Synonomous with &RACFUSER.

**&ACCT01 THRU &ACCT08**

Any one of the first eight accounting subfields from the ACCOUNT parameter of the job card.

**&STEPNAM**

The name of the step that produced the SYSOUT.

**&PROCSTEP**

The name of the PROCSTEP that produced the SYSOUT.

**&DDNAME**

The DDNAME the SYSOUT was produced on

**&STEPNUM**

The step number of the step producing the SYSOUT. This is an OM-generated number in the form of STEP $nnn$  where  $nnn$  is the physical step number.

**&OUTCLASS**

The SYSOUT class the SYSOUT was written to.

**&GDG**

This is a special variable. This variable is not used as a substitution variable, instead it is used to indicate that Output Manager is to allocate the next generation of a GDG data set. &GDG must appear at the end of the archive mask and be immediately preceded by a period (.). The mask that is used for substitution will be the entire string up to but not including the GDG.

**Note:** If the SYSOUT being captured are the JDS data sets, for example the JESMSG LG, JESYSMSG, JESJCL, then the &DDNAME value is JESDSETS, the &STEPNAME value is JES2, and the &PROCSTEP value is NOPRO CST.

**System symbols:** System symbols are divided into two classes, dynamic and static. **Static system symbols** are symbols whose values are set when z/OS initializes and retain their value until z/OS is re-initialized (IPL'd) or the values are explicitly altered by an operator command. The following z/OS operator command can be issued to list the current set of static system symbols at your site:

```
D SYMBOLS
```

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

**Dynamic system symbols** are symbols whose values change over time. A list of defined z/OS dynamic system symbols is shown below. This list may vary for different releases of z/OS. For a current list, refer to the *MVS Initialization and Tuning Reference* for your release of z/OS.

**The following list is from the z/OS 1.4 MVS Initialization and Tuning Reference. It may not apply to your site if you use a different version or release of z/OS.**

**&DAY**

The day of the month, based on Greenwich Mean Time (GMT). Values are two decimal digits in the range 01-31. Use &LDAY for local time.

**&HHMMSS**

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

**&HR**

The hour of the date based on GMT. Values are two decimal digits in the range 00-23. Use &LHR for local hour.

**&JDAY**

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

**&MIN**

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

**&MON**

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

**&SEC**

The second of the minute based on GMT. Values are shown in two decimal digits in the range 00 to 59.

**&WDAY**

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

**&YR2**

The year based on GMT. Values are shown in four decimal digits in the range 0000 to 9999.

**&YYMMDD**

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

**Note:** There is a z/OS dynamic system symbol &JOBNAAME, however the product symbol supersedes the dynamic system symbol.

**Examples:** The following examples illustrate various ways symbols can be used to construct archive data set names:

1. The archive data sets are to be named according to the jobname and job number:  
OMTEST. &JOBNAME. .&JOBNUMB
2. The archive data sets are to be included in a jobname based GDG:  
OMTEST. &JOBNAME. .&GDG
3. The archive data sets need to be unique by the date:  
OMTEST. &JOBNAME. .&LYYMMDD. .&LHHMMSS

## Editing archive attributes

To edit archive attributes:

1. Access the Archive Attributes panel as described in "Creating archive attributes" on page 124.
2. Edit the appropriate fields and press Enter.
3. Press PF3. An exit confirmation panel displays.
4. Press Enter to save your changes.

## Deleting archive attributes

To delete archive attributes:

1. Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
2. Select option A, Archive Attributes, and press Enter. The Archive Attributes panel displays.
3. Type D in the CMD field next to the archive attributes you want to delete and press Enter. A delete confirmation panel displays.
4. Press Enter. The rule is deleted and the Archive Attributes panel displays.
5. Press PF3. A change confirmation panel displays.
6. Press Enter to save your changes.

## Linking an archive to rules

To link an archive to a rule so SYSOUT data is saved to the correct archive:

1. Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
2. Select option I, Interceptor Rules or option S, Selector Definitions (depending on the type of rule you want to create) and press Enter. The List of Interceptor/Selector Rules panel displays.
3. Type P, Prompt, in the CMD field next to a rule on the List of Interceptor/Selector Rules panel and press Enter. The Archive Attribute Selection panel displays:

```
----- IBM Output Manager - Archive Attribute Selection -----
BJTPATTP
Command ==>                                SCROLL == => PAGE

Line cmds: Select, Add, View, Edit, Delete

CMD  Name
     BJTAA1
     BJTAA2
     BJTAA3
***** Bottom of Data *****
```

Figure 54. Archive Attribute Selection panel

**Note:** If no archives are defined for your system, Output Manager will prompt you to add one. You can use the A, Add, line command from the Archive Attribute Selection panel to create one.

The following line commands are available on the Archive Attribute Selection panel:

**Select (Line command S)**

Enables you to select an archive attribute for linking to the selected rule.

**Add (Line command A)**

Enables you to add a new archive attribute and subsequently select it for linking to the selected rule

**View (Line command V)**

Enables you to view an archive attribute.

### **Edit (Line command E)**

Enables you to edit an archive attribute.

### **Delete (Line command D)**

Enables you to delete an archive attribute.

4. Type S in the CMD field next to the archive with which you want to associate the rule and press Enter. A / displays in the CMD field.

**Note:** As an alternative to using the P, Prompt command described in steps 3 and 4 above, you can also use the Links drop-down menu option 1, Choose Archive Attribute (available on Interceptor/Selector Rules panels) to link an archive to a rule.

5. Press PF3. The List of Interceptor/Selector Rules panel displays.
6. Press PF11 to scroll right until you locate the Archive Attribute column on the List of Interceptor/Selector Rules panel. Verify that the archive you selected is listed in the Archive Attribute column.
7. Press PF3. An exit confirmation panel displays.
8. Press Enter to save your changes.



---

## Chapter 11. Custom report definitions

This chapter provides information necessary for setting up and implementing custom report definitions.

---

### About custom report definitions

A **custom report** is a subset of the **captured report**. A **custom report definition** defines either a custom or basic report. If a custom report definition specifies no selection criteria, then a basic report is generated. If a custom report definition specifies selection criteria, then when those criteria are met, it triggers the generation of a custom report.

A custom report definition works in conjunction with a report layout. A report layout contains information about the physical layout of the report as produced by the application. The custom report definition defines the value(s) and field(s) on a report layout that, when matched against a captured report and its report layout, produce a custom report according to the specifications in the custom report definition.

Usually more than one custom report will be defined for each basic report. For example, if a bank with several branches requires that each branch receives its own custom report containing only report information for that location, one custom report definition will be required for each branch and one report layout can be used for all branches.

When a captured SYSOUT matches the job information in a report selection rule, the report layout that you created is read into memory, along with all of the custom report definitions for this basic report. Each page of the captured report, as defined by the report layout, is compared to the criteria in each of the custom report definitions to determine if this page is part of a custom report. What happens next depends upon whether the page matches any of the custom reports:

- If a page matches against a custom report definition, the page is placed in the custom report.
- If the page does not match against any of the custom report definitions, it is placed in an **<undefined>** report. An **<undefined>** report is a report constructed by Output Manager to catch the SYSOUT pages that are not included in a custom report (it is a collection of all of the "unused" pages from this SYSOUT).

Another possible report is referred to as **<no report>**. When the last page of the SYSOUT has been completed, a final scan is performed to see if any pages were found for each of the defined custom reports. If there were no pages for a specific custom report, a special virtual report with no data will be created. It will be listed under Captured Reports on the View Reports panel (option V.R from the main menu) as **<no report>**.

Although there is nothing for you to view, **<no report>** serves as a visual reminder that the application that normally produces this report did run, however no pages that matched the selection criteria for this specific custom report were found. This may be a normal or an exceptional condition, based upon the application. A **<no report>** helps you identify which specific custom reports may need more attention.

---

## Report Types

### Basic Reports

A *basic* report identifies the complete contents of an archive. With basic reports, you essentially assign a report name to a captured archive. However, basic reports are limited in that you cannot instruct Output Manager to print and distribute a Basic report to select recipients during archive capture. The only time you can direct a Basic report to one or more distribution lists is while printing from the Output Manager screens for "Captured Reports" and "Archived Reports".

- To display the Captured Reports screen, choose option V.R (View Reports, Reports) from the Output Manager main menu.
- To display the Archived Reports screen, choose option V.A (View Reports, Archives) from the Output Manager main menu.

To define a basic report, you only need to define a Report Selection Rule. To do this, select the Report Selection Rule option on the Administrative Functions menu (option A.R from the Output Manager main menu).

### Custom Reports

A *custom* report can identify the complete contents or a portion of an archive. It essentially allows Output Manager to divide a single "physical" archive into one or more "logical" custom reports. You can view or print custom reports from the Output Manager screens for Captured Reports and Archived Reports.

- To display the Captured Reports screen, choose option V.R (View Reports, Reports) from the Output Manager main menu.
- To display the Archived Reports screen, choose option V.A (View Reports, Archives) from the Output Manager main menu.

Unlike basic reports, you can optionally direct custom reports to a distribution list in order to route printed reports to the appropriate recipients. In addition, for recipients in the distribution list that have indicated they wish to receive hardcopy, you can instruct Output Manager to identify and selectively print custom reports while it captures the archive (Real Time Print).

The minimum requirements for defining a custom report are:

- Report Layout (option A.L from the Output Manager main menu)
- Custom Report Definition (option A.C from the main menu)
- Report Selection Rule (option A.R from the main menu)

In addition, if you will be distributing a printed custom report, you will need to define the following components:

- Recipients (option A.J from the main menu)
- Distribution list containing recipients (option A.D from the main menu)

---

## Report Components

Defining basic and custom reports involves adding or modifying at least one of the following components:

Component	Required for:	Description
Report Layout (option A.L)	Custom reports	Defines report pages, such as what fields appear where on a page.
Recipient IDs (option A.J)	Real Time printing of custom reports	Identifies individuals that can potentially be part of a distribution list.
Distribution List (option A.D)	Real Time printing of custom reports	Groups recipients into a named list and identifies those recipients that require hardcopy at archive capture time (Real Time printing).
Custom Report Definition (option A.C)	Custom reports	Specifies page conditions that must be met in order to assign a page to a report, and identifies the distribution list to be used for Real Time printing requests.
Report Selection Rule (option A.R)	Basic and custom reports	Identifies criteria used to select an archive for basic and custom report processing.

Although you can manipulate the components in any order, it is recommended that you define the components in the order they are presented in the above table. This provides the most efficient process for creating a report.

For example, if you chose to define a Custom Report Definition first, you would have to return to this definition later to add a report layout and a distribution list, after you have created them. You can create the components in that order, but it is less efficient.

## Report Layout

A *report layout* acts as a map of a page. It identifies sections on a page by associating "names" with their position and size. A section's *position* is the row and column of the upper left hand corner of the section. Its *size* is the width and height of the section.

Each layout includes the following hierarchical definitions:

1. Page - one or more pages in the layout
2. Area - one or more areas for each page
3. Field - one or more fields for each area.

### Page Definition

A *page* definition is an administrative component used for grouping, and has no geometrical positioning. However, you can use the page to group area and field definitions for different kinds of pages that might appear in the same SYSOUT represented by this layout.

### Area Definition

An *area* definition defines a "rectangle" on a page. You provide the *position* of the rectangle by specifying the row and column of its upper left hand corner. You provide the *size* of the rectangle by specifying its width and height. An area rectangle can represent an entire page or a single line.

## Field Definition

A *field* definition defines the position of an actual field on the page, relative to the area that contains the field. You provide the *position* of the field by specifying the row and column of its upper left hand corner, relative to the rectangle containing the field. You provide the *size* of the field by specifying its width and height.

## Recipient

A *recipient* is a unique individual who needs to receive a printout of select custom reports. Recipient information can include identification and addressing information that will print along with the custom report to assist in its delivery.

**Note:** It is recommended that you include the TSO UserID as part of the recipient ID information. Otherwise, the recipient will not be able to invoke the Print line command for local printing.

When you create a recipient ID, you are creating a record in the recipient table that identifies a specific person. The only reference to entries in this table is through a distribution list maintained in the distribution list table. A single recipient entry can be referenced by multiple distribution lists. For example, recipient Julie Jones could be part of the Accounting distribution list and the Payroll distribution list.

## Distribution list

A *distribution list* groups a collection of recipients into a single named object that can be referenced by one or more custom reports. For example, you may have a distribution list named Sales Reps. This list in turn would identify entries for Tom, George, Susan, and Heather. A recipient can be part of multiple distribution lists. Currently, the maximum number of recipients allowed in a single distribution list is 127.

A single custom report can reference only one distribution list. When defining a custom report, the distribution list name is what you include to direct the report to recipients. When you print a report, SYSOUT will be generated for all the recipients in the distribution list. However, it is important to note that there is really only one report on the JES spool, even if SDSF shows 27 SYSOUTs for 27 recipients. Do not be alarmed in thinking that there are 27 copies of a million-line report on the spool. There is only one copy with 27 destinations.

**Note:** A basic report does not have a distribution list because the only connection to the distribution list is through a custom report. Currently, to assign a distribution list to a basic report, you would need to define the custom report without any conditions, effectively causing the custom report to select the entire SYSOUT, just like a basic report.

## Custom report definition

A *custom report definition* identifies the unique conditions that, when present, associate a page to a custom report. When defining a custom report, you specify sets of conditions using the field names defined in the layout.

**Note:** You can define a custom report without any conditions, in which case the custom report behaves like a basic report, except with the ability to route the report to a distribution list.

You specify "and" and "or" conditions by defining one or more field names, logical operators, and comparison values. When conditions are met, such as when the data at

the field position successfully compares to the value specified in the custom report definition, the page is assigned to the custom report for processing.

## Report selection rule

A *report selection rule* contains the selection criteria that must be met to identify an archive as a basic report, and makes that archive available for possible custom report processing.

---

## Designing a report layout

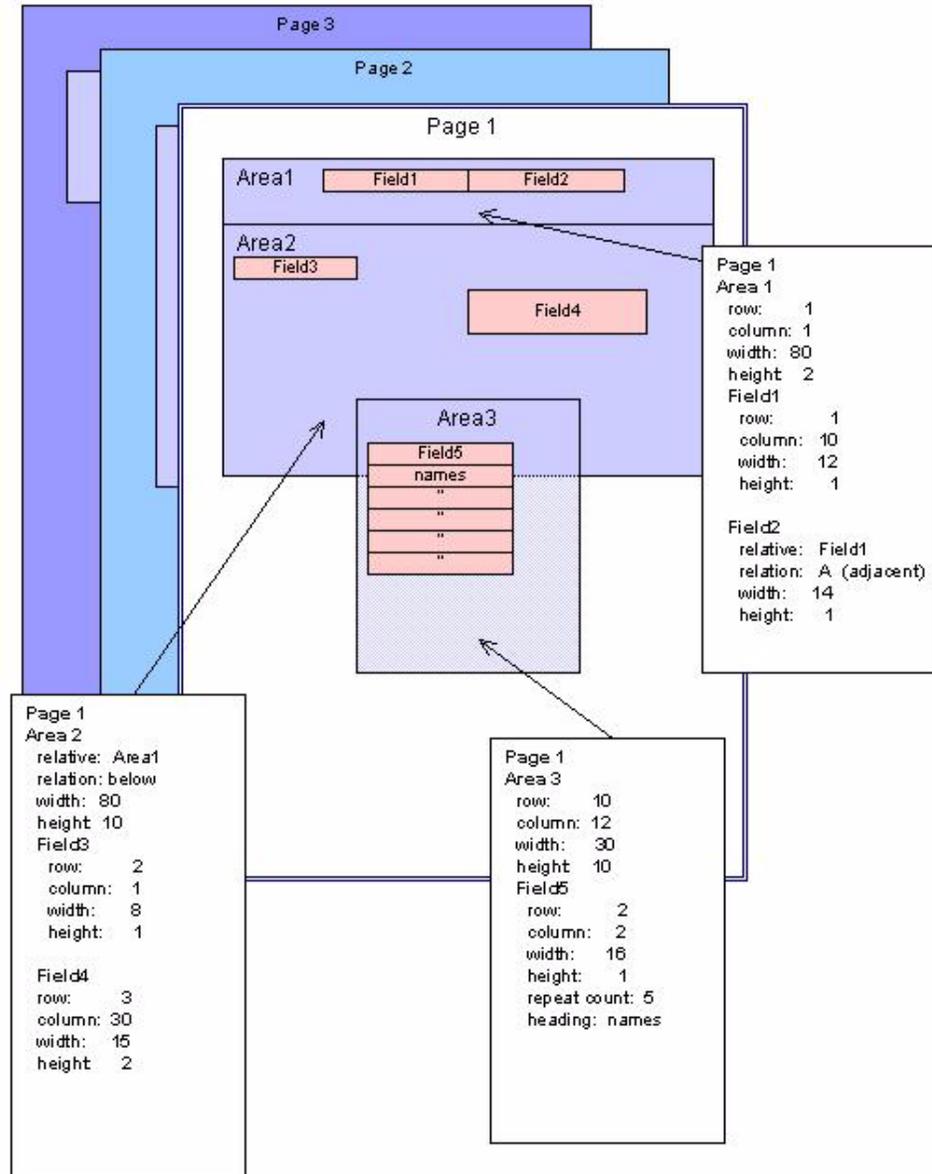
The first step in creating a custom report is to design a *report layout* that shows how the original report looks as produced by the application. A layout is similar to a map that shows where data is placed on the page. In the layout, you need to define fields that will be used to associate pages containing these fields to a custom report.

There are three sections that you can define for a layout: a page, one or more areas for that page, and one or more fields for each area.

- *Page* - A page is the top level. You define a unique style for a page. You can also have more than one page if there are different styles in the same report (SYSOUT). For example, you might have a "letter" page that you use for form letters and an "invoice" page for the bill you send to customers.
- *Area* - An area is the second level. Areas are like rectangles on a page that you define. For example, you could define Area 1 as the "title" area that contains the first two lines of the report and Area 2 as the "subtitle" area that contains the next two lines (3 and 4).
- *Field* - A field is the last level. A "field" is a specific point in an area. For example, for Area 1 you could define a "Report ID" field that starts at line 2, column 80, while in Area 2 you define a "Branch Name" field that starts at line 4 in column 100, and a "Branch ID" field that starts in column 106.

You must familiarize yourself with the report (SYSOUT) so that you can properly establish position and size information for fields you define in the layout.

The following diagram shows a sample page layout with several areas and fields within areas. The diagram also illustrates how to specify related fields (Field1 and Field2) in an area, and related areas (Area1 and Area2) on the same page.



The next section describes how to define areas and fields on a page.

## Using the Report Layout screen

To create a report layout, choose option L, **Report Layout**, on the Administrative Functions menu (option A.L from the Output Manager main menu). The screen you see next depends upon whether you have used the Report Layout screen before.

### Setting preferences

The first time you choose the Report Layout option, you will be prompted to set preferences for using the Report Layout screen. The following screen displays:

```

+--- IBM Output Management Tool - Report layout Preferences ----+
|
| Command ==> _____
|
| Enter your preferences below and then press ENTER
| to save. Press CANCEL to leave as is.
|
| Dialog Exit . . . . Prompt   (Save, Prompt, Nosave)
| Delete Entry. . . . Prompt__ (Prompt, Noprompt)
|
| Press END to save or CANCEL to bypass
|

```

Make entries in the fields, as described in the following table.

Option	Description
Dialog Exit	<p>This is the top level of the exit process, taking you out of the dialog completely. Type one of the following values to indicate whether you want to save data to the DB2 table when you exit the dialog:</p> <ul style="list-style-type: none"> <li>• <b>Save</b> - Always save the changes to disk.</li> <li>• <b>Prompt</b> - Display a window asking if you want to save the changes to disk when you leave this session (default).</li> <li>• <b>No Save</b> - Do not save any changes to disk.</li> </ul>
Delete Entry	<p>Type one of the following values to indicate what to do when a rule is chosen for deletion:</p> <ul style="list-style-type: none"> <li>• <b>Prompt</b> - Display a window asking if you want to delete the rule (default).</li> <li>• <b>No Prompt</b> - Delete the rule without asking for a confirmation.</li> </ul> <p>Deletions are not processed until you leave the dialog completely.</p>

When you are done, press Enter then PF3 (End) to save your entries.

### Accessing the layout screen

The following screen displays after you set preferences, the first time you choose the Report Layout option, or any time you use the I (insert) line command:

**Note:** If one or more layouts already exist, a list of layouts displays.

- If you enter E (edit) next to a specific layout name, you will see the information associated with that layout. Refer to “Viewing existing layouts” on page 145 for more information.

- If you want to create a new layout, type the I (insert) line command next to any layout name. The screen below will display.

```

File Preferences Help
-----
          IBM Output Manager - Layout                      Row 1 of 3
Command ==>>                                           SCROLL ==>> PAGE
                                                    >
Layout name . . . _____
Print control . . DCB____                          (DCB, ASA, Machine)
Line count . . . 0__                               (Number of lines per page)
Description . . . _____

Line Commands: Edit, Insert, Delete, Insert Area(IA), Insert Page(IP)
CMD Name      Type   Page   Area   Relative section  Relative position
___ Page 1    Page
___ Area 1    Area   Page 1
___ Field 1   Field  Page 1   Area 1
***** Bottom of Data *****

```

The table below lists the fields you can modify on this screen:

Option	Description
Layout name	Type up to 24 characters to assign a name to this layout.
Print control	Indicate the type of printer control that will be used with this report layout: <ul style="list-style-type: none"> <li>• <b>DCB</b> - Use the spacing assigned to the report by the application. This is the default.</li> <li>• <b>ASA</b> - Use ANSI-standard spacing.</li> <li>• <b>Machine</b> - Use machine carriage control.</li> </ul> For most applications, specifying DCB is sufficient. Only very special circumstances will require that you specify any other option.
Line count	Type a number between 1 and 999 to indicate how many lines you want to appear on each page. When specified, this value is used by Output Manager to determine page boundaries, instead of the print control character. <p>A value of zero (0) means that you want the page boundaries controlled by the print control character, which is all that is needed for most applications,. However, this option can be used when no print control character exists in the report.</p>
Description	Type up to 60 characters to describe this report layout.

When you have finished entering data in these fields, you can then begin the process of defining the layout. Use the line commands on the bottom half of the screen to display the screens for creating pages, areas, and fields.

## Line commands for Layout screen

There are several line commands you can use on the bottom half of the Layout screen.

- E - Change an existing section of the report layout.
- I - Insert a new section to the layout.
- IA - Add a new area to the layout.
- IP - Add a new page to the layout.
- D - Delete a specific section of the layout.

If you use one of the "insert" line commands, another screen displays where you can add more details to your layout. The specific screen that displays depends upon which insert command you use and which section of the layout you are on when you type the line command.

## Creating a page

If you type **IP** (insert page) in the bottom half of the Layout screen, the following screen displays:

```

File  Preferences  Help
-----
                IBM Output Manager - Layout Page                No rows to dis
Command ==>> _____ SCROLL ==>> PAGE

Layout name . . : IVP
Print control . . : DCB                                (DCB, ASA, Machine)
Line count . . : 0                                    (Number of lines per page)
Page name . . . .

CMD  Name      Type   Area      Relative section  Relative position  Column

```

The only field you can modify on this screen is Page Name:

Option	Description
Page name	Type up to eight (8) characters for the name you want to assign to this page.

After you have typed a name for this page, press Enter, then PF3 (End) to exit this screen. The page name will display on the report layout screen, indicating that the page you just created is now part of the layout.

## Creating an area

If you type **IA** (insert area) in the bottom half of the Layout screen, the following screen displays:

**Note:** This screen also displays if you type the **I** (insert) line command next to a page.

```

File  Preferences  Help
-----
          IBM Output Manager - Layout Area          No rows to dis
Command ===>          SCROLL ===> PAGE

Layout name . . . : IVP
Page name . . . . : Page 1
Area name . . . . : _____
Area row . . . . 0_ Area column . 0_ Relative area name . _____
Area width . . . 0_ Area height . 0_ Relationship . . . . _____

CMD Name      Type      Relative section  Relative position  Row  Column  Width
  
```

The table below lists the fields you can edit on the Layout Area screen:

Option	Description
Area name	(Required) Type up to eight (8) characters to assign a name to this area.
Area row	(Required) Type a number between 1 and 999 to indicate the starting row (upper left margin) of this area.
Area column	(Required) Type a number between 1 and 999 to indicate the column number where the area starts (the upper left corner).
Relative area name	Type up to eight (8) characters for the name of a previously defined area that you wish to use to assist in positioning this area. Otherwise, leave it blank.  <b>Note:</b> If you type the name of an area in this field, be sure to make an entry in the Relationship field to indicate how the two areas are related. If you do not specify a Relationship type, the origin (row, column) of this area will be the same as that of the area you list in the Relative Area Name field.
Area width	(Required) Type a number between 1 and 999 to indicate the maximum width of the lines in the area. A value of zero (0) indicates that there is no limit to the width, except for the limit imposed by the page size.
Area height	(Required) Type a number between 1 and 999 to indicate the maximum number of lines required for this area. A value of zero (0) indicates that there is no limit to the height, except for the limit imposed by the page size.

Option	Description
Relationship	<p>Type up to eight (8) characters to indicate how the "relative area name" is tied to the "area name." If you are uncertain, leave this field blank. Valid relationships include:</p> <ul style="list-style-type: none"> <li>• A - adjacent, meaning the same row as the related area, but the next (adjacent) column</li> <li>• B - below, meaning the first row after the related area</li> <li>• D - diagonal, meaning the next row and next column as the related area.</li> </ul> <p>If you specify a Relative Area Name and a Relationship, the origin is the upper-left hand corner of the area named in the relationship. For example, if you have AREA1 defined at Row 1, Column 1, with a height of 2, and you specify AREA2 "below" AREA1, then AREA2 is effectively defined at Row 3, Column 1. The adjacent and diagonal relationships work in a similar manner, except that the relative position (row, column) will be different. In each case, the new area starts beyond the boundaries of the related area.</p> <p>If you do not specify a relationship, the origin of AREA2 will be the same as that of AREA1, which in the example above is Row 1, Column 1.</p> <p>The purpose of the Relative Area Name and Relationship fields is to provide a short cut for defining a area/field position. If you have a series of areas or fields that can be defined using these relationships, you do not have to specify as much information for each area/field definition.</p>

**Note:** You must define the size of the area (row, column, width, and height) to be able to assign a field to an area. Otherwise, the area will default to a position and size that encompasses the entire page.

When you are done, press Enter, then PF3 (End) to exit this screen. The area name will display on the report layout screen under the page name that is associated with this area. The area you created is now part of the layout.

### Creating a field

There are two ways to create a new field for an area:

- Type **I** (Insert) next to an area name listed in the bottom half of the Layout screen. Another screen displays where you can make entries to define a new field for this area.
- Type **I** (Insert) next to a field name listed in the bottom half of the Layout screen. Another screen displays where you can make entries to define a new field for this area. The new field is associated with the same area as the original field.

The Layout Field screen displays when you insert or edit a field.

```

File  Preferences  Help
-----
                        IBM Output Manager - Layout Field

Command ==> _____ SCROLL ==> ____

Layout name . . . : IVP
Page name . . . . : Page 1
Area name . . . . : Area 1
Area row . . . . : 0      Area column : 0      Relative area name :
Area width . . . : 0      Area height : 0      Relationship . . . :

Field information

Name . . . . . _____
Relative field name . . . . . _____
Relative field relationship . _____ (Diagonal, Below, Adjacent)
Starting row . . . . . 0__
Starting column . . . . . 0__
Width . . . . . 0__
Height . . . . . 0__
Number of times to repeat . . 0__
Constant data at position . . No      (No, Yes)
Heading name . . . . . _____

```

The Area fields at the top of the Layout Field screen cannot be modified. However, you can make entries in the fields listed under the "Field Information" heading.

Option	Description
Name	Type up to eight (8) characters to assign a name to this field.
Relative field name	Type up to eight (8) characters for the name of a previously defined field that you wish to use to assist in positioning this field.
Relative field relationship	Indicate where the relative field is located in comparison to the primary field. Valid entries are: <ul style="list-style-type: none"> <li>• <b>A</b> - adjacent, meaning "next to"</li> <li>• <b>B</b> - below</li> <li>• <b>D</b> - diagonal</li> </ul>
Starting row	Type a number between 1 and 999 to indicate the row where this field starts.
Starting column	Type a number between 1 and 999 to indicate the column number where this field starts.

Option	Description
Width	Type a number between 1 and 999 to indicate the maximum width of the field. A value of zero (0) indicates that there is no limit to the length, except for the limit imposed by the Area.
Height	Type a number between 1 and 999 to indicate the maximum number of lines required for this field. A value of zero (0) indicates that there is no limit to the number of lines, except for the limit imposed by the Area.
Number of times to repeat	Type a number between 0 and 999 to indicate how many times this field should be repeated in the layout.
Constant data at position	Indicate with Y/N whether there is "constant" data, which is data that will not move or change, associated with this field.
Heading name	Type up to seven characters for a heading for this field.

### Viewing existing layouts

To view an existing report layout, choose option L, **Report Layouts**, on the Administrative Functions screen (option A.L from the Output Manager main menu), and press Enter.

**Note:** If no layouts exist, you will be prompted to either create a new layout or cancel.

The following example shows what the screen looks like if layouts already exist:

```

File  Preferences  Help
-----
                IBM Output Manager - Layouts                                Row 1 of 1
Command ==>>>                                SCROLL ==>> PAGE

Line Commands: Edit, Insert, Delete, Select                                >
CMD  Name                                     Print Control  Line Count
  IVP                                     DCB            0
  LAYOUT_L0000002                         DCB            0
  LAYOUT_L0000003                         DCB            0
  LAYOUT_L0000004                         DCB            0
  LAYOUT_L0000005                         DCB            0
  LAYOUT_L0000006                         DCB            0
  LAYOUT_L0000007                         DCB            0
  LAYOUT_L0000008                         DCB            0
  LAYOUT_L0000009                         DCB            0
  LAYOUT_L0000010                         DCB            0
  LAYOUT_L0000011                         DCB            0
  LAYOUT_L0000012                         DCB            0
  LAYOUT_L0000013                         DCB            0
  LAYOUT_L0000014                         DCB            0
  LAYOUT_L0000015                         DCB            0
  LAYOUT_L0000016                         DCB            0

```

The following read-only fields are on the Layouts screen:

Option	Description
Name	The name of this report layout.
Print control	The type of printer control that will be used with this report layout: <ul style="list-style-type: none"> <li>• DCB - Use the spacing assigned to the report by the application.</li> <li>• ASA - Use ANSI-standard spacing.</li> <li>• Machine - Use machine carriage control.</li> </ul>
Line count	The number of lines that are allowed for each page.
Description	The description of this report layout. You must Page Right (F11) to view this field.

## Line Commands for selection screen

There are several line commands you can use to select a layout. These commands are:

- **D** - Delete this report layout.
- **E** - Edit this report layout.
- **I** - Insert a new report layout.
- **S** - Select this layout for viewing.

## Deleting a layout

If you type the D (delete) line command next to a layout, you will be asked to confirm this deletion. The following window displays:

```

File  Preferences  Help

+----- Output Manager - Delete confirmation -----+
| Command ==> _____ |
| Ready to delete report layout. |
| Press ENTER to delete |
| or CANCEL to keep. |
+-----+

```

Press Enter if you want to delete this layout. Otherwise, type CANCEL to keep the layout.

### Edit or select a report layout

If you enter E (edit) or S (select) next to a specific layout name, you will see the information associated with that layout. An example is shown below:

```

File  Preferences  Help
-----
                IBM Output Manager - Layout                Row 1 of 5
Command ==> _____ SCROLL ==> PAGE
                                                                    >
Layout name . . . IVP
Print control . . DCB                (DCB, ASA, Machine)
Line count . . . 0                (Number of lines per page)
Description . . . Sample bank report
Line Commands: Edit, Insert, Delete, Insert Area(IA), Insert Page(IP)
CMD  Name      Type  Page  Area  Relative section  Relative position
   Page 1      Page
   Area 1      Area  Page 1
   header      Field  Page 1  Area 1
   branchhd    Field  Page 1  Area 1
   branchid    Field  Page 1  Area 1
***** Bottom of Data *****

```

You can then edit or add to this layout using the line commands listed on the screen. Refer to “Line commands for Layout screen” on page 141 for more information.

### Insert a new layout

If you type I (insert) next to a layout name, the following screen displays, which you can modify to create a layout:

```

File  Preferences  Help
-----
                IBM Output Manager - Layouts

Command ==>> _____ SCROLL ==>> PAGE

Layout name . . . >
Print control . . DCB                (DCB, ASA, Machine)
Line count . . . 0                    (Number of lines per page)
Description . . .

Line Commands: Edit, Insert, Delete, Insert Area(IA), Insert Page(IP)

CMD  Name      Type   Page   Area   Relative section  Relative position
___  Page 1    Page
___  Area 1    Area   Page 1
___  Field 1   Field   Page 1   Area 1

***** Bottom of Data *****

```

For more information on what to enter in the fields, refer to “Accessing the layout screen” on page 139.

---

## Capturing reports

The process of capturing reports is essentially recording positioning data to reflect the location of pages that contain data assigned to a specific report. For basic reports, this is the complete archive. For custom reports, information can represent the entire archive or a subset of pages in the archive.

All attempts to access reports (View or Print) involve using this "positioning" data against the archive to present a logical report. Although you may have a basic report and 30 custom reports defined against a single archive, the only permanent space allocation is that of the archive itself.

---

## Creating a Custom Report Definition

The first time you choose option C, **Custom Reports**, on the Administrative Functions menu (A.C from the Output Manager main menu), a window displays asking if you want to create a custom report. If you press Enter to continue, the following screen displays:

```

File Links Preferences Help
-----
          IBM Output Manager - Report                      No rows to dis
Command ==> _____ SCROLL ==> PAGE
Report name . . . _____
Contiguous . . . Yes                      (Yes or No)
Description . . . _____
Layout . . . . :
Distribution . . :
Line Commands: Edit, Insert, Delete
CMD  Connector  Field  Condition  Value

```

**Note:** You also see this screen if you use the I (insert) line command on the Custom Reports screen.

The table below describes the first five fields on this screen:

Option	Description
Report name	Type up to 24 characters for the name of the custom report.
Contiguous	Indicate whether the report pages can be viewed consecutively (Yes) or whether the pages are scattered throughout the report (No).
Description	Type up to 60 characters to describe this custom report.
Layout	When a layout is assigned to this report through the <b>Links</b> menu at the top of the screen, the name of the layout displays in this field.
Distribution	When a distribution list is assigned to this report through the <b>Links</b> menu at the top of the screen, the name of the distribution list displays in this field.

## Specifying field-condition-value

Next, you must specify the conditions that must be true to create this custom report. This is referred to as the *custom report definition*. You do this by typing the name of a field from the report layout, an operand, and a value. For example, if the field LOCATION is equal to (EQ) the value of SPRINGFIELD, then generate this custom report. Only fields that were defined in the report layout can be used in the custom report definition.

To enter values for field conditions, type **ADD** in the Command line and press Enter. The following screen displays:



lines in the group with an "and" connector. If you then use the (I)nsert line command to add more fields, the first group of fields is connected to the second set of fields with an "or" connector.

Look at the following example.

```
+----- Report Condition Entry -----+
Command ==>
      Field   Condition  Value
      BRANCHNM  EQ      BRANCH
      BRANCHID  EQ      CHERRY
```

On this screen, there are two entries defined for this group. The first entry shows that field BRANCHNM must be equal to BRANCH. The second entry shows that the field BRANCHID must be equal to CHERRY. These two entries are connected with an implied "and", so that both entries must be true for this page to be part of the report.

Now, let's assume you added two more entries in a different group, as shown below:

```
+----- Report Condition Entry -----+
Command ==>
      Field   Condition  Value
      BRANCHNM  EQ      BRANCH
      BRANCHID  EQ      WOOD
```

In the second group, the first entry shows field BRANCHNM must be equal to BRANCH and the BRANCHID must be equal to WOOD in order for this page to be part of the report.

After making and saving all four of these entries, the Custom Report screen would look like this:

```

File Links Preferences Help
-----
                    IBM Output Manager - Report                    Row 1 of 4
Command ==>>>                                SCROLL ==>> PAGE
Report name . . . Bank - report #1
Contiguous . . . Yes                            (Yes or No)
Description . . . Monthly report
Layout . . . . :
Distribution . . :
Line Commands: Edit, Insert, Delete
CMD  Connector  Field    Condition  Value
      BRANCHNM  EQ      BRANCH
      and      BRANCHID EQ      CHERRY
      or      BRANCHNM  EQ      BRANCH
      and      BRANCHID EQ      WOOD
***** BOTTOM OF DATA *****
                                     +-----+
                                     | Entry saved |
                                     +-----+

```

Notice that the first two fields are connected with an "and", while the last two fields are connected with an "and". What connects the first set of fields to the second set of fields is an "or". This indicates that if BRANCHNM=BRANCH *and* BRANCHID=CHERRY **OR** if BRANCHNM=BRANCH *and* BRANCHID=WOOD, this page is part of the report.

## Line Commands

You can modify the field information using the following line commands:

- **E** - Edit. Displays existing field information for you to change as needed.
- **I** - Insert. Displays blank fields so you can add new field information.
- **D** - Delete. Displays a prompt to ensure you want to delete this field information.

---

## Combining a layout, report, and distribution list

To generate a custom report, you must associate a report layout with a specific custom report, and a custom report with a specific report selection rule.

### Tie a report to a layout

To use the custom report, you must associate this report with a specific report layout. To do this, follow these steps:

1. Choose option **C, Custom Reports**, on the Administrative Functions menu (option A.C from the Output Manager main menu).





```

File Links Preferences Help
-----
                    IBM Output Manager - Report                    Row 1 of 3
Command ==>                                SCROLL ==> PAGE

Report name . . . Ash
Contiguous . . . Yes                                (Yes or No)
Description . . . Ash Branch
Layout . . . . : IVP
Distribution . . :

Line Commands: Edit, Insert, Delete

CMD  Connector  Field      Condition  Value
                                header    EQ        Tree House Bank Confidential
                                and      branchhd EQ        Branch
                                and      branchid EQ        Ash

***** BOTTOM OF DATA *****

```

- Place the cursor on the "L" in the **Links** pull-down menu at the top of the screen, and press Enter. The following menu displays:

```

File Links Preferences Help
-----
+-----+
| 1. Choose a Layout |                                Row 1 of 3
| 2. Choose a Distribution List |          SCROLL ==> PAGE
| 3. Edit the Layout |
| 4. Edit the Distribution List |
+-----+                                (Yes or No)
Description . . . Ash Branch
Layout . . . . : IVP
Distribution . . :

Line Commands: Edit, Insert, Delete
CMD  Connector  Field      Condition  Value
                                header    EQ        Tree House Bank Confidential
                                and      branchhd EQ        Branch
                                and      branchid EQ        Ash

***** BOTTOM OF DATA *****

```

- Type **2** to select **Choose a Distribution List**, and press Enter. Another screen displays that contains distribution lists.



```

File
-----
          IBM Output Manager - Report Rules

Command ==> _____

Control fields

Status . . . . Enabled_ (Enabled or Disabled)

Layout Name . : _____

Job Selection criteria

Report Name . . _____

Job Name . . . . _____

Proc Name . . . . _____

Step Name . . . . _____

Proc Step . . . . _____

Step Number . . _____

Program . . . . _____ (from the EXEC PGM= in the JCL)

DD Name . . . . _____

```

The table below lists the fields you can modify on this screen. You must specify a job name and DD name, and at least one of the following fields:

- Proc Name
- Step Name
- Proc Step
- Step Number

Option	Description
Status	Indicate whether this rule is active (enabled) or inactive (disabled).
Layout Name	(Display only) This field remains blank until you create a layout and link it to this report rule. For instructions, refer to "Assigning a layout to the report rule" on page 160.
Report Name	Type up to 24 characters for a report name. This is a required field.
Job Name	Type up to eight (8) characters for the job name of the job that is associated with this report. This is a required field.
Proc Name	Type up to eight (8) characters for the name of the procedure that is associated with this report.
Step Name	Type up to eight (8) characters for the name of the step in the job that is associated with this report.

Option	Description
Proc Step	Type up to eight (8) characters for the name of the step in the procedure that is associated with this report.
Step Number	Type up to eight (8) characters for the number of the step that is associated with this report.
Program	Type up to eight (8) characters for the name of the program that is specified in the EXEC PGM= statement in the JCL.
DD Name	Type up to eight (8) characters for the name of the DD statement that is associated with this report. This is a required field.

When you have finished entering data in these fields, press Enter to save your entries. The List of Report Rules screen displays and your new rule should appear in the list on this screen. Page right to see more columns. An example is shown below:

```

File View Preferences Help
-----
      IBM Output Manager - List of Report Rules                      Row 1 of 3
Command ==> _____ SCROLL ==> PAGE
Line commands: Edit, Insert, Delete, Prompt, Link                    >

CMD  Status   Disposition  Exists  Line Limit  Capture  Combine  Insert
____ Disabled  Keep         Replace    0      No         No        No
____ Enabled   Delete       Replace    0      No         No        No
____ Enabled   Delete       Replace    0      No         No        No

```

## Line commands for Rules screen

The following line commands are available on the List of Report Rules screen:

- **E** - Edit an existing report selection rule.
- **I** - Insert a new report selection rule.
- **D** - Delete an existing report selection rule.
- **P** - Tie a rule to an existing report layout.
- **L** - Link (jump) to the layout assigned to this rule.
- **RD** - Displays report associated with the report rule.
- **RC** - Displays custom reports associated with the report rule.

## Editing a rule

When you type the **E** (edit) line command next to a rule on the List of Report Rules screen, and press Enter, the Report Rules screen displays the information already associated with this rule. A sample screen is shown below.

```

File
-----
                IBM Output Manager - Report Rules

Command ==> _____

Control fields

    Status . . . Enabled_ (Enabled or Disabled)

    Layout Name . : IVP

Job Selection criteria

    Report Name . . Bank report_____

    Job Name. . . . BJTBANKR

    Proc Name . . . _____

    Step Name . . . PRINT___

    Proc Step . . . _____

    Step Number . . _____

    Program . . . . _____ (from the EXEC PGM= in the JCL)

    DD Name . . . . SYSUT2__

```

You can make changes to the Status field and to the fields listed under Job Selection Criteria. For more information on these fields, refer to "Report Selection Rules" on page 156.

## Inserting a rule

When you type the I (Insert) line command next to a rule on the List of Report Rules screen, and press Enter, a "blank" Report Rules screen displays. A sample screen is shown below.

```

File
-----
          IBM Output Manager - Report Rules

Command ==> _____

Control fields

  Status . . . . Enabled_ (Enabled or Disabled)

  Layout Name . :

Job Selection criteria

  Report Name . . _____

  Job Name . . . . _____

  Proc Name . . . . _____

  Step Name . . . . _____

  Proc Step . . . . _____

  Step Number . . _____

  Program . . . . _____ (from the EXEC PGM= in the JCL)

  DD Name . . . . _____

```

You can create a new rule by entering information in the Job Selection criteria fields. For more information on these fields, refer to “Report Selection Rules” on page 156.

## Deleting a rule

When you type the **D** (Delete) line command next to a rule on the List of Report Rules screen, and press Enter, the rule is deleted.

## Assigning a layout to the report rule

To assign a layout to the report rule, type the **P** (Prompt) line command next to a rule and press Enter. The Layout Selection screen displays. An example is shown below:

```

+----- IBM Output Manager - Layout Selection -----+
Command ==> _____ SCROLL ==> PAGE

line cmds: Select, Add, View, Edit, Delete

CMD  Name
____ doc test
____ ivp testing
____ IVP
____ LAYOUT_L0000003
____ LAYOUT_L0000004
____ LAYOUT_L0000005
____ LAYOUT_L0000006
____ LAYOUT_L0000007
____ LAYOUT_L0000008
____ LAYOUT_L0000009
____ LAYOUT_L0000010
____ LAYOUT_L0000011
____ LAYOUT_L0000012
____ LAYOUT_L0000013
+-----+

```

Follow these steps:

1. Type **S** (Select) next to the layout you want to associate with this rule, and press Enter. The "S" changes to a slash (/) to indicate that the layout was selected.
2. Press PF3 (End) to continue. The List of Report Rules screen displays again, where you can Page Right to verify that the layout was tied to the rule.
3. Press PF3 (End) to leave this screen, then press Enter to save the rule.

## Displaying an assigned layout

Once you have associated a report layout to the report selection rule, you can then use the L (Link) line command to quickly jump from the rule to the layout. For example, if the WEEKLY TEST rule is associated with the TEST DATA layout, typing an "L" next to the WEEKLY TEST rule causes the TESTDATA layout to display. You can then view the layout or make changes to it as needed.

**Note:** If you have not selected a layout for the report selection rule prior to using the L (Link) line command, a blank Layout screen displays. You can then create a new layout or specify the name of an existing layout to associate with this rule.

## Accessing reports captured for a custom report

On the *Custom Reports* panel (option A.C on the Output Manager main menu), the following line command is now available:

- R—enables users to drill-down to the *Reports* panel to view all reports captured for the custom report.



---

## Chapter 12. Printing-related functions

Output Manager's printing-related functions include recipient IDs, distribution lists, printer attributes, banner pages, and printing options.

---

### Recipient IDs

A **recipient ID** (or **recipient**) holds information about how to process reports for an individual or generic location. Recipient information consists of a set of OS/390 MVS JCL parameters that are passed to the OUTPUT JCL statement when Output Manager builds the jobs necessary to generate and print reports for a distribution list and its recipients.

Recipient parameters can be broken down into two main groups:

- **Descriptive information:** Includes information that describes the recipient such as name, user ID, department, room, building, address, and whether or not the name is generated as an output card.
- **Report behavior information:** Includes information that describes how the report is handled for the recipient such as the JES printer destination used for the recipient's reports, the SYSOUT class used to print the recipient's reports, as well as the number of copies, duplex mode, bursting settings, label printing settings, and printer attribute usage for reports sent to the recipient.

**Notes:**

1. The input field descriptions contained in this section list brief descriptions of the available recipient parameters. If you would like to obtain more-detailed information about these parameters, please refer to the *OS/390 MVS JCL Reference Manual*.
2. Reports cannot be sent to individual recipients, they can only be sent to distribution lists.

### Creating a recipient

To create a new recipient:

1. Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
2. Select option J, Recipient IDs, from the Administrative Functions panel and press Enter. If there are no recipient IDs defined for your Output Manager system, the following pop-up window displays:

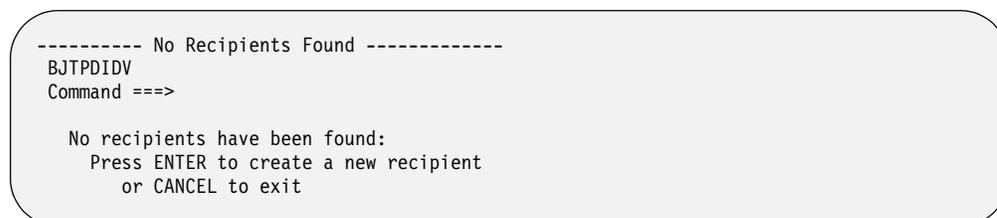


Figure 55. No Recipients Found panel

Press Enter to create a new recipient. If there are recipient IDs for your Output Manager system, the Recipient IDs panel displays:

```

File View Preferences Help
-----
BJTPDIDE      IBM Output Manager - Recipient IDs      Row 1 of 1
Command ==>>                                SCROLL ==>> PAGE
Line Commands: Select, Insert, View, Edit, Delete
CMD Name                                           Name Out
Recipient 1
***** Bottom of Data *****

```

Figure 56. Recipient IDs panel

The following line commands are available on the Recipient IDs panel:

**Select (Line command S)**

Displays the Recipient Details panel where you can view details for the selected recipient.

**Insert (Line command I)**

Displays the Recipient Details panel where you can specify details for a new recipient.

**View (Line command V)**

Displays the Recipient Details panel where you can view the details of a recipient.

**Edit (Line command E)**

Displays the Recipient Details panel where you can edit the details of a recipient.

**Delete (Line command D)**

Displays a delete confirmation window where you can confirm the deletion of the recipient.

The columns that display on the Recipient IDs panel depend on the settings you specify using the View drop-down menu. The columns correspond to the input and display fields described under Figure 57 on page 164.

- To insert a new recipient, type I in the CMD field and press Enter. The Recipient Details panel displays:

```

File Links Help
-----
BJTPDIDD      IBM Output Manager - Recipient Details      SCROLL ==>>
Command ==>>                                More:      +

Descriptive data
Name . . .
Name Out                (Yes,No ... generate name as outputcard)
Userid                  (MVS Userid)
Department
Room . . .
Building
Address .

Report behaviors
Dest . . .                (Jes printer destination)
Class . .                (SYSOUT class to print to)
Groupid . .              (... to group like reports together)
Copies . . 0              (Number of copies to print)
Duplex . .                (No,Normal,Tumble)
Burst . .                (Yes,No ... Physically burst on 3800)
Label . .                (Yes,No ... Security label)
Sys Area .              (Yes,No ... System area)
Attr Usage None          (Reprint, Print, Real, None, All)
                          (Requested, Custom, Mixed)
Print Attr:              (Printer attributes)

```

Figure 57. Recipient Details panel

The input fields that display on the Recipient Details panel correspond to parameters that are passed into the OUTPUT JCL statement. The following list contains brief descriptions of the input fields that display on the Recipient Details panel. For more detailed information about these parameters, refer to the *OS/390 MVS JCL Reference Manual*.

**Name**

(Required) The name of the recipient. Valid values are up to 60 characters in length. Corresponds to the NAME parameter.

**Name Out**

Indicates whether or not descriptive name data is to be generated when printing a report. Descriptive data often appears on JES banner pages (although its display is installation-dependent). Valid values are **Yes** (generates name as an output card) and **No** (does not generate name as an output card).

**User ID**

The MVS user ID of the recipient. Valid values are up to eight characters in length.

**Department**

The department name or ID for the recipient. Valid values are 1 to 60 EBCDIC text characters. Corresponds to the DEPT parameter.

**Room** The room or office number for the recipient. Valid values are 1 to 60 EBCDIC text characters. Corresponds to the ROOM parameter.

**Building**

The office building in which the recipient resides. Valid values are 1 to 60 EBCDIC text characters. Corresponds to the BUILDING parameter.

**Address**

The recipient's mailing address. Valid values are up to four lines, each line consisting of 1 to 60 EBCDIC text characters. Corresponds to the ADDRESS parameter.

**Dest**

Specifies the destination for the sysout data set. This parameter can send a sysout data set to a remote or local terminal, a node, a node and remote work station, a local device or group of devices, or a node and userid. Corresponds to the DEST parameter.

**Class**

Assigns the sysout data set to an output class. Valid values are one character, A through Z or 0 through 9. Corresponds to the CLASS parameter.

**Groupid**

Specifies that the sysout data set belongs to an output group. Valid values are up to eight characters in length. The data sets in an output group are processed together in the same location and time. Data sets to be grouped should have similar characteristics: the same output class, destination, process mode, and external writer name. Valid values are up to eight characters in length. Corresponds to the GROUPLD parameter.

**Note:** The Groupid parameter is supported only on JES2 systems.

**Copies**

The number of copies of the sysout data set that are to be printed. Valid values are from 0 (default) to 999. If you specify a value of zero, the report will not be printed but will be distributed online. Corresponds to the COPIES parameter.

**Duplex**

The mode in which the report is to be printed. Valid values are **No** (does not print the report on both sides of the sheet), **Normal** (prints the report on both sides of the sheet so that the sheets can be bound on the long edge of the paper) and **Tumble** (prints the report on both sides of the sheet so that the sheets can be bound on the short edge of the paper). Corresponds to the DUPLEX parameter.

**Burst**

Indicates whether the output pages are separated by a trimmer/stacker device or left in a continuous fanfold. Valid values are **Yes** (requests that the printed output is to be burst into separate sheets) and **No** (requests that the printed output is to be bin a continuous fanfold). Corresponds to the BURST parameter.

**Note:** The burst option only applies for data sets printed on a 3800 Printing Subsystem equipped with a burster-trimmer-stacker.

**Label**

Indicates whether or not to print a security label with this report. Valid values are **Yes** (prints a security label) and **No** (does not print a security label).

**Sys Area**

Indicates whether the system should reserve an area on each page of printed output for the security label. The security label represents a security level and categories as defined to RACF. Valid values are **Yes** (reserves area on each page for security label) and **No** (does not reserve area on each page for 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**

Indicates when the printer attribute is to be used for the recipient. Valid values are **Reprint, Print, Real, None, All, Requested, Custom, Mixed**. For more information about these values, see Table 6 on page 175.

**Rept Title**

The report title. Valid values are up to 60 characters in length.

The following display-only fields are shown on the Recipient Details panel:

**Print Attr**

Displays the printer attributes associated with the recipient.

4. Type the appropriate information in the fields for the new recipient.
5. Exit and confirm changes as needed.

## Editing a recipient

To edit a recipient:

1. Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
2. Select option J, Recipient IDs, and press Enter. The Recipient IDs panel displays.
3. Type E in the CMD field next to the recipient ID you want to edit and press Enter. The Recipient Details panel displays.
4. Edit the appropriate recipient details as necessary. For information about the fields available on the Recipient Details panel, see the field descriptions that accompany Figure 57 on page 164.

- When you have finished editing recipient details, exit and confirm changes as needed.

## Deleting a recipient

To delete a recipient:

- Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
- Select option J, Recipient IDs, and press Enter. The Recipient IDs panel displays.
- Type D in the CMD field next to the recipient ID you want to delete and press Enter. A delete confirmation panel displays.
- Press Enter. The recipient is deleted and the Recipient IDs panel displays.

## Adding a recipient to a distribution list

To add a recipient to a distribution list, refer to “Adding recipients to a distribution list” on page 173.

---

## Distribution lists

A **distribution list** consists of a group of recipients. Distribution lists can be linked to custom report definitions.

**Note:** Reports cannot be sent to individual recipients, they can only be sent to distribution lists.

## Creating a distribution list

To create a distribution list:

- Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
- Select option D, Distribution Lists, from the Administrative Functions panel and press Enter. If there are no distribution lists defined for your Output Manager system, the Create a Distribution List panel displays (skip to Step 4 on page 168). If there are distribution lists defined for your Output Manager system, the List of Distribution Lists panel displays:

```

File Help
-----
BJTPDSTE IBM Output Manager - List of Distribution Lists          Row 1 of 1
Command ==>                                                    SCROLL ==> PAGE
Line Commands: Edit, Insert, Delete, Select
CMD  Description
      Denver distribution list
***** Bottom of Data *****

```

Figure 58. List of Distribution Lists panel

The following line commands are available on the List of Distribution Lists panel:

### Edit (Line command E)

Displays the Update a Distribution List window where you can update the descriptive name of a distribution list.

### Insert (Line command I)

Displays the Create a Distribution List window where you can specify a descriptive name for a new distribution list.

**Delete (Line command D)**

Displays the Delete a Distribution List window where you can confirm the deletion of a distribution list.

**Select (Line command S)**

Displays the Distribution List panel that shows information about the recipients assigned to the selected distribution list. If no recipients are currently assigned to the selected distribution list, then the Select line command displays the Recipient Selection panel where you can select recipients for addition to the distribution list.

- 3. Type I in the CMD field and press Enter. The Create a Distribution List panel displays:

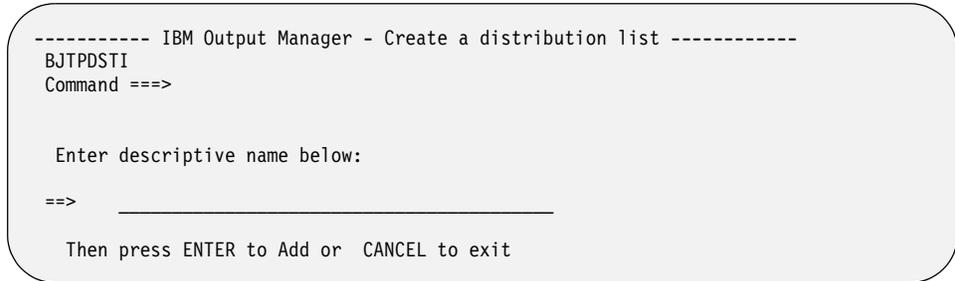


Figure 59. Create a Distribution List panel

- 4. Type a description for the distribution list you are creating and press Enter to add the distribution list. The List of Distribution Lists panel displays, showing the newly created distribution list.
- 5. You can now add recipients to your distribution list. To do so, type S in the CMD next to the distribution list you created. The Recipient Selection panel displays:

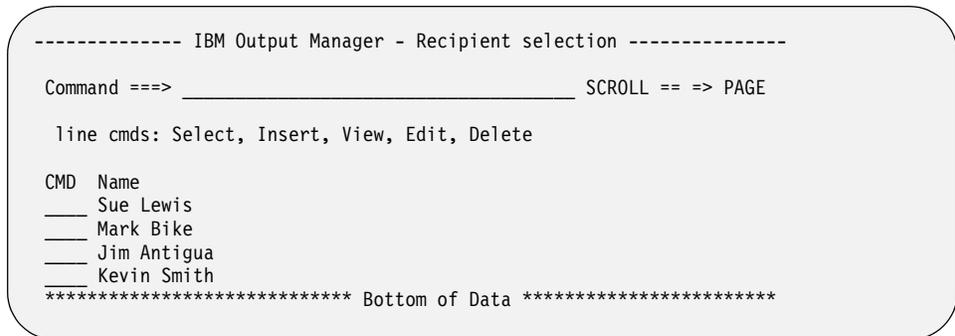


Figure 60. Recipient Selection panel

The following line commands are available on the Recipient Selection panel:

**Select (Line command S)**

Selects a recipient to add to the distribution list. Places a / in the CMD field next to the recipient and adds the recipient to the distribution list when you exit the Recipient Selection panel.

**Insert (Line command I)**

Displays the Recipient Details panel where you can specify the information for a new recipient.

**View (Line command V)**

Displays the Recipient Details panel where you can view information about a recipient.

### **Edit (Line command E)**

Displays the Recipient Details panel where you can edit information about a recipient.

### **Delete (Line command D)**

Displays the Delete Confirmation panel where you can confirm the deletion of a recipient from the Output Manager system.

6. Type S in the CMD field next to the recipient you want to add to the distribution list and press Enter. A / displays in the CMD field next to the selected recipient.
7. Press PF3. The Distribution List panel displays and shows the recipient(s) you selected. A message displays indicating the recipient(s) has been added to the distribution list.
8. Exit and confirm changes as needed.

## **Editing a distribution list**

To edit the description of a distribution list:

1. Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
2. Select option D, Distribution Lists, from the Administrative Functions panel and press Enter. The List of Distribution Lists panel displays:

```
File Help
-----
BJTPDSTE IBM Output Manager - List of Distribution Lists Row 1 of 1
Command ==> SCROLL ==> PAGE
Line Commands: Edit, Insert, Delete, Select
CMD Description
Denver distribution list
***** Bottom of Data *****
```

*Figure 61. List of Distribution Lists panel*

3. Type an E in the CMD field next to the distribution list you want to edit. The Update a Distribution List panel displays:

```
----- IBM Output Manager - Update a distribution list -----
BJTPDSTI
Command ==>

Update descriptive name below:

==> Denver distribution list

Then press ENTER to Update CANCEL to exit
```

*Figure 62. Update a Distribution List panel*

4. Edit the description of the distribution list and press Enter. The distribution list is updated and the List of Distribution Lists panel displays.
5. Exit and confirm changes as needed.

## **Selecting a distribution list**

Selecting a distribution list enables you to:

- Select recipients in order to access recipient details.

- Add recipients to the distribution list.
- Remove recipients from the distribution list.
- View the current distribution list.

To select and modify a distribution list:

1. Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
2. Select option D, Distribution Lists, from the Administrative Functions panel and press Enter. The List of Distribution Lists panel displays:

```

File Help
-----
BJTPDSTE  IBM Output Manager - List of Distribution Lists      Row 1 of 1
Command ==>                                           SCROLL ==> PAGE
Line Commands: Edit, Insert, Delete, Select
CMD Description
          Denver distribution list
***** Bottom of Data *****

```

Figure 63. List of Distribution Lists panel

3. Type S in the CMD field next to the distribution list you want to select. If the distribution currently contains no recipients, the The Recipient Selection panel displays where you can select recipients to add to the distribution list. If the distribution list contains recipients, the Distribution List panel displays:

```

File Help
-----
BJTPDSTL   IBM Output Manager - Distribution List          Row 1 of 1
Command ==>                                           SCROLL ==> PAGE
List Name: Denver distribution list                      >
Line Commands: Select, Insert, Remove, Edit, View, set Hardcopy
CMD Type    Name
          Recipient Recipient 1
***** Bottom of Data *****

```

Figure 64. Distribution List panel

The following commands are available on the Distribution List panel:

**Select (Line command S)**

Displays the Recipient Details panel where you can view information about the selected recipient.

**Insert (Line command I)**

Displays the Recipient Selection panel where you can select a recipient for addition to the distribution list or insert, view, edit, or delete recipient IDs.

**Remove (Line command R)**

Removes the recipient from the distribution list.

**Edit (Line command E)**

Displays the Recipient Details panel where you can modify the information for a recipient.

**View (Line command V)**

Displays the Recipient Details panel where you can view the information for a recipient.

**set Hardcopy (Line command H)**

Displays the Set Hardcopy panel where you can select the appropriate hardcopy option for a recipient.

4. You can now use the available commands to work with the distribution list.

## Setting the hardcopy option

The hardcopy option enables you to specify whether or not recipients (either individually or by distribution list) are to receive a printed version of a report. If you set the hardcopy for an entire distribution list, you do not need to set the hardcopy option for each recipient on that list. You can, however, override the distribution list's hardcopy option for an individual recipient, if needed, by setting a different hardcopy option for the individual recipient.

To assign a default hardcopy setting for a distribution list:

1. Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
2. Select option D, Distribution Lists, from the Administrative Functions panel and press Enter. The List of Distribution Lists panel displays.
3. Type S in the CMD field next to the distribution list for which you want to set the hardcopy option. The Distribution List panel displays:

```

File Help
-----
BJTPDSTL      IBM Output Manager - Distribution List      Row 1 of 1
Command ==>          SCROLL ==> PAGE
List Name: Denver distribution list
Line Commands: Select, Insert, Remove, Edit, View, set Hardcopy
CMD Type      Name
Recipient Recipient 1
***** Bottom of Data *****

```

Figure 65. Distribution List panel

4. Place your cursor in the F in the File menu option at the top of the panel and press Enter. A drop-down menu displays.
5. Type 2, Hardcopy, and press Enter. The Default Hardcopy panel displays:

```

----- IBM Output Manager - Default Hardcopy -----
BJTPDSTH
Command ==>

The current hardcopy setting for the list is...: No

Choose one of the following options:

      1 Set default hardcopy to Yes
      2 Set default hardcopy to No

```

Figure 66. Default Hardcopy panel

The following options are available on the Default Hardcopy panel:

### Set hardcopy to Yes (Option 1)

Creates a hardcopy of the report for each recipient on the distribution list.

### Set hardcopy to No (Option 2)

Does not create a hardcopy of the report for each recipient on the distribution list.

6. To set the hardcopy to print a report for each recipient in the distribution list, type 1 in the Current Hardcopy Setting field. To prevent the printing of hard copies for each recipient in the distribution list, type 2 in the Current Hardcopy Setting field.

7. Press Enter. The hardcopy setting is applied and the Distribution List panel displays.
8. Exit and confirm changes as needed.

To assign a hardcopy setting for an individual recipient:

1. Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
2. Select option D, Distribution Lists, from the Administrative Functions panel and press Enter. The List of Distribution Lists panel displays.
3. Type S in the CMD field next to the distribution list for which you want to set the hardcopy option. The Distribution List panel displays:

```

File Help
-----
BJTPDSTL      IBM Output Manager - Distribution List      Row 1 of 1
Command ==>>                                SCROLL ==>> PAGE
List Name: Denver distribution list                >
Line Commands: Select, Insert, Remove, Edit, View, set Hardcopy
CMD Type      Name
Recipient Recipient 1
***** Bottom of Data *****

```

Figure 67. Distribution List panel

4. Type H in the CMD field next to the recipient for which you want to set the hardcopy option. The Set Hardcopy panel displays:

```

----- IBM Output Manager - Set Hardcopy -----
BJTPDSTS
Command ==>>

The current hardcopy setting for this recipient is..: <Not Set>

Choose one of the following options:

    1 Set hardcopy to Yes
    2 Set hardcopy to No
    3 Allow hardcopy to be list default

```

Figure 68. Set Hardcopy panel

The Set Hardcopy panel enables you to specify whether a recipient should receive a hardcopy (printout) of any report associated with a distribution list to which the recipient belongs.

The following options are available on the Set Hardcopy panel:

**Set hardcopy to Yes (Option 1)**

Creates a hardcopy of the recipient's reports. Overrides the hardcopy option specified for the distribution lists.

**Set hardcopy to No (Option 2)**

Does not create a hardcopies of the recipient's reports. Overrides the hardcopy option specified for the distribution lists.

**Allow Hardcopy to be list default (Option 3)**

Sets the recipient's hardcopy option to default to the value specified for the distribution list to which the report is sent.

5. Type the appropriate option in the Command line and press Enter. The hardcopy setting is applied and the Distribution List panel displays. A message confirms the hardcopy option change.
6. Exit and confirm changes as needed.

## Deleting a distribution list

To delete a distribution list:

1. Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
2. Select option D, Distribution Lists, from the Administrative Functions panel and press Enter. The List of Distribution Lists panel displays.
3. Type D in the CMD field next to the distribution list you want to delete. A delete confirmation panel displays.
4. Exit and confirm changes as needed.

## Adding recipients to a distribution list

To add recipients to a distribution list:

1. Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
2. Select option D, Distribution Lists, from the Administrative Functions panel and press Enter. The List of Distribution Lists panel displays.
3. Type S in the CMD next to the distribution list to which you want to add recipients. If the distribution list you selected does not yet have any recipients, the Recipient Selection panel displays:

```

----- IBM Output Manager - Recipient selection -----
Command ==> _____ SCROLL == => PAGE

line cmds: Select, Add, View, Edit, Delete

CMD  Name
____ Sue Lewis
____ Mark Bike
____ Jim Antigua
____ Kevin Smith
***** Bottom of Data *****

```

Figure 69. Recipient Selection panel

If the distribution list you selected has recipients, the Distribution List panel displays:

```

File Help
-----
                IBM Output Manager - Distribution List                Row 1 of 1
Command ==> _____ SCROLL ==> CSR
List Name: London Distribution List
Line Commands: Select, Insert, Remove, Edit, View, set Hardcopy
CMD  Type      Name
     Recipient Tom Jones
***** Bottom of Data *****

```

Figure 70. Distribution List panel

- Type I in the CMD field and press enter. The Recipient Selection panel displays.
- Type S, in the CMD field next to the recipient you want to add to the distribution list and press Enter. A / displays in the CMD field.
  - Exit and confirm changes as needed.

## Removing recipients from a distribution list

To remove recipients from a distribution list:

- Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
- Select option D, Distribution Lists, from the Administrative Functions panel and press Enter. The List of Distribution Lists panel displays.
- Type S in the CMD next to the distribution list from which you want to remove recipients. The Distribution List panel displays:

```

File Help
-----
                IBM Output Manager - Distribution List                Row 1 of 1
Command ==>                                SCROLL ==> CSR
List Name: London Distribution List
Line Commands: Select, Insert, Remove, Edit, View, set Hardcopy
CMD Type      Name
      Recipient Tom Jones
***** Bottom of Data *****

```

Figure 71. Distribution List panel

- Type R in the CMD field next to the recipient you want to remove from the distribution list and press Enter. The recipient is removed from the distribution list.
- Note:** If you delete all recipients from a distribution list and then want to add new recipients, you must exit the Distribution List panel, confirm changes, reselect the distribution list using the S line command, and then add recipients.
- Exit and confirm changes as needed.

## Linking a distribution list to a custom report definition

To link a distribution list to a custom report definition:

- Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
- Select option C, Custom Reports, from the Administrative Functions panel and press Enter. The Reports panel displays.
- Type E in the CMD field next to the custom report to which you want to assign a distribution list. The Report panel displays.
- Place the cursor on the L of the Links pull-down menu at the top of the panel and press Enter. The Links menu options display.
- Select option 2, Choose a Distribution List, and press Enter. The Distribution List Selection panel displays:

```

----- IBM Output Manager - Distribution List Selection -----
Command ==>                                SCROLL ==> PAGE

Line cmds: Select, Insert, Edit, Delete

CMD  Description
      Denver distribution list
***** Bottom of Data *****

```

6. Type S in the CMD field next to the distribution list you want to link to the custom report and press Enter. A / displays in the CMD field.
7. Press PF3. The Report panel displays. Verify that the distribution list you selected is displayed in the Distribution field.
8. Exit and confirm changes as needed.

## Printer attributes

**Printer attributes** hold information about how to print reports such as general printing attributes, PSF-related attributes, and attributes associated with printing on a 3800 series printer. Printer attribute information consists of a set of OS/390 MVS JCL parameters that are passed into the OUTPUT JCL statement when Output Manager builds the jobs necessary to generate and print reports.

You can define attributes for a printer and specify the available attributes as needed. Printer attributes fall into the following categories:

- General attributes (such as a printer name)
- Attributes associated with printing on a 3800 series printer
- PSF-related attributes
- Miscellaneous attributes

**Note:** The input field descriptions contained in this section list brief descriptions of the available printer attribute parameters. If you would like to obtain more-detailed information about these parameters, please refer to the *OS/390 MVS JCL Reference Manual*.

Printer attributes are primarily assigned to report selection rules, since printer attributes are most-closely aligned with physicality of printing and are thus best kept at the report level. The assignment of a printer attribute to a report selection rule is optional.

You can also assign printer attributes to recipients. When a printer attribute is assigned to a recipient, there is an additional field (the Attr Usage field) that must be set to indicate when the recipient printer attribute is to be utilized. The Attr Usage field indicates when the printer attribute is to be used for the recipient.

There are three ways to print: **real time**, **reprint request**, and **print request**. Thus, the Attr Usage field being set as shown in Table 6 tells Output Manager under what conditions the recipients printer attribute would be used:

*Table 6. Conditions under which printer attributes are used*

Attr usage value	Real time	Reprint	Print
Reprint	N	Y	N
Print	N	N	Y
Real	Y	N	N

Table 6. Conditions under which printer attributes are used

Attr usage value	Real time	Reprint	Print
None	N	N	N
All	Y	Y	Y
Requested	N	Y	Y
Custom	Y	Y	N
Mixed	Y	N	Y

## Creating printer attributes

To create printer attributes:

1. Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
2. Select option K, Printer Attributes, on the Administrative Functions panel and press Enter. If there are no printer attributes currently in your Output Manager system, the following pop-up window displays:

```

----- No Printer Attributes -----
Command ==>

No printer attributes have been found:
Press ENTER to create a new recipient
or CANCEL to exit
    
```

Figure 72. No Printer Attributes panel

Press Enter to create a new printer attribute. If there are printer attributes defined for your Output Manager system, the Printer Attributes panel displays:

```

File View Preferences Help
-----
BJTTPRTE BM Output Manager - Printer Attributes          Row 1 of 1
Command ==>                                           SCROLL ==> PAGE
Line Commands: Edit, Insert, Delete, Select          >
CMD Name      FCB  Form Name UCS  Control Disp  Cond Disp
PRNT01
***** Bottom of Data *****
    
```

Figure 73. Printer Attributes panel

3. Type I in the CMD field and press Enter. The Printer Attributes Detail panel displays:

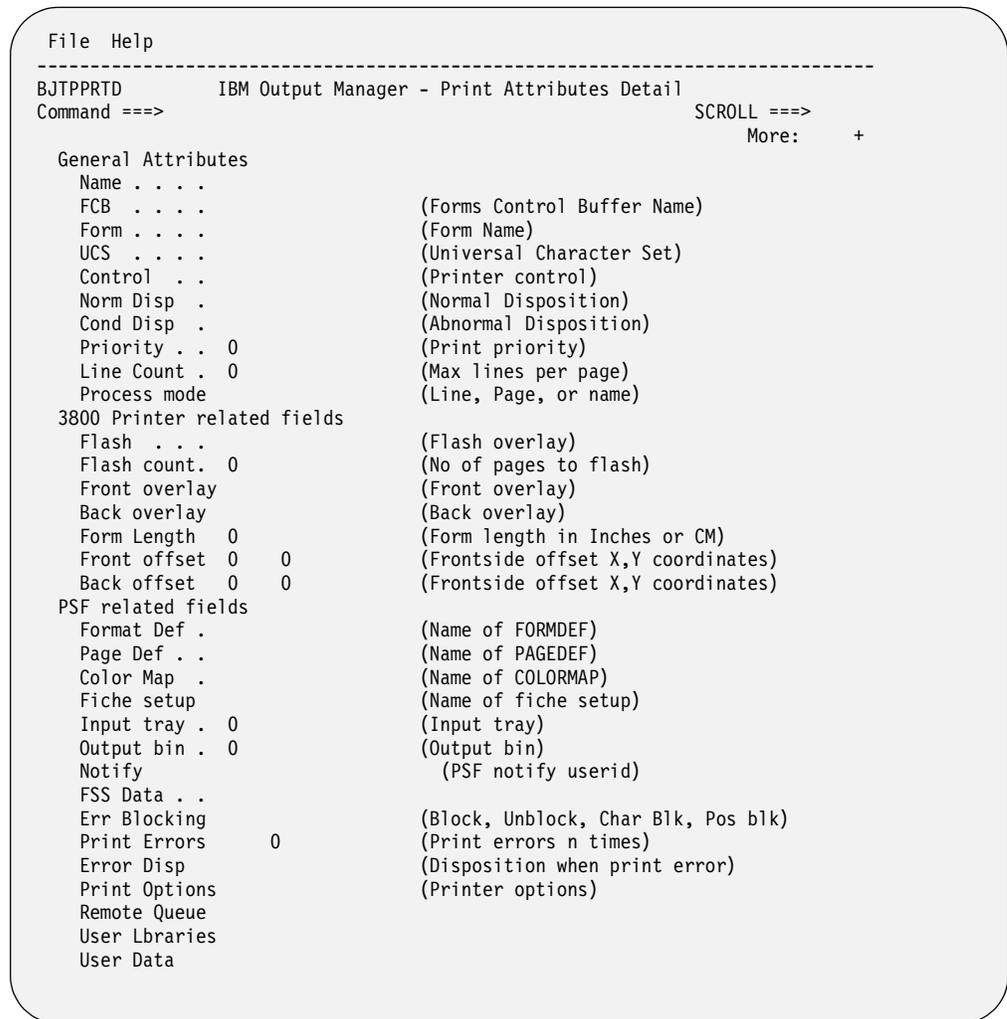


Figure 74. Print Attributes Detail panel

Miscellaneous fields		
Char arg tbl		(Character Argument Table)
Checkpoint lines	0	(Lines per page for checkpoint)
Checkpoint pages	0	(Page count to checkpoint after)
Checkpoint secnd	0	(Number of seconds between checkpoints)
Compact table		(Compaction table name)
Left Margin	0	(3211 printer left margin)
Right Margin	0	(3211 printer right margin)
Overflow		(JES3 overflow check)
Retain succes		(How long to retain succesfully xmitted)
Retain failed		(How long to retain failed xmitted)
Retry limit	0	(Limit on retry attempts for xmit)
Retry time		(How long to retry xmitting)
Table ref chr		(Data contains table reference char)
Copy Module	0	(Copy modification module, TRC)
Checkpoint lines	0	(Lines per page for checkpoint)
Checkpoint pages	0	(Page count to checkpoint after)
Checkpoint secnd	0	(Number of seconds between checkpoints)
Compact table		(Compaction table name)
Left Margin	0	(3211 printer left margin)
Right Margin	0	(3211 printer right margin)
Overflow		(JES3 overflow check)
Retain succes		(How long to retain succesfully xmitted)
Retain failed		(How long to retain failed xmitted)
Retry limit	0	(Limit on retry attempts for xmit)
Retry time		(How long to retry xmitting)
Table ref chr		(Data contains table reference char)
Copy Module	0	(Copy modification module, TRC)
Port Number	0	(FSS printer port number)
Resolution		(P240, P300 - Resolution format)
Threshold	. 0	(JES3 threshold limit)
Writer	. . .	(External writer)

Figure 75. Print Attributes Detail panel (continued)

The following input fields display on the Print Attributes Detail panel:

**Name**

The name to print on the separator pages of the output. Valid values are 1 to 60 EBCDIC text characters. Corresponds to the NAME parameter.

**FCB**

The forms control buffer (FCB) name that JES is to use to print a SYSOUT data set. Valid values are one to four alphanumeric or national (\$, #, @) characters. Corresponds to the FCB parameter.

**Form**

The form name on which the SYSOUT data set is to be printed or punched. Valid values are 1 to 8 alphanumeric or national (\$, #, @) characters. Corresponds to the FORMS parameter.

**UCS**

The universal character set that JES is to use when printing the SYSOUT data set. Valid values are one to four alphanumeric or national (\$, #, @) characters. Corresponds to the UCS parameter.

**Control**

Indicates the printer control that defines the spacing for the output. Valid values are **Program** (each logical record starts with a carriage control character) **Single** (prints the output with single spacing), **Double** (prints the output with double-spacing), **Triple** (prints the output with triple-spacing). Corresponds to the CONTROL parameter.

**Norm disp**

The normal disposition of the SYSOUT data set. Valid values are **Keep** (prints the SYSOUT data set and, after printing, changes the disposition to LEAVE), **Purge** (deletes the SYSOUT data set without printing), **Hold** (holds the SYSOUT data set until the user or operator releases it, changes the disposition to WRITE, or purges it), **Leave** (after the user or operator releases the SYSOUT data set, the disposition of the data set changes to KEEP; if LEAVE output is not released, the system holds it until someone purges the data set from the system).

### Cond disp

Indicates what happens with the SYSOUT in the event of a failure. Valid values are **Keep** (prints the SYSOUT data set and, after printing, changes the disposition to LEAVE), **Purge** (deletes the SYSOUT data set without printing), **Hold** (holds the SYSOUT data set until the user or operator releases it, changes the disposition to WRITE, or purges it), **Leave** (after the user or operator releases the SYSOUT data set, the disposition of the data set changes to KEEP; if LEAVE output is not released, the system holds it until someone purges the data set from the system).

### Priority

The print priority, where a higher number indicates that the data set is to be printed sooner. Valid values are from 0 to 255.

### Line count

The maximum number of lines JES2 is to print on each output page. Valid values are from 0 to 255. Corresponds to the LINECT parameter.

**Note:** Line count only applies to JES2 systems.

### Process mode

The process mode to be used for printing the SYSOUT data set. Valid values are **Line** (the data set uses a line-mode printer), **Page** (the data set uses a page-mode printer), and **Name** (the name of the process mode up to eight characters in length).

**Flash** The type of forms overlay is to be used when printing the SYSOUT data set. Valid values are **Name** (the name of the forms overlay to be used when printing the SYSOUT data set, up to four characters in length), **STD** (standard forms overlay, based on the overlay that was specified during JES3 initialization), and **None** (no flashing for the SYSOUT data set). Corresponds to the FLASH parameter.

**Note:** STD only applies to JES3 systems.

### Flash count

The number of copies to flash with the overlay. Valid values are from 0 to 255. A value of zero indicates that no copies should be flashed with the overlay.

### Front overlay

The name of the front overlay that is to be included on the front side of each printed sheet for the data set. Valid values are up to eight characters in length.

### Back overlay

The name of the back overlay that is to be included on the back side of each printed sheet for the data set. Valid values are up to eight characters in length.

### Form length

The length of pages to print without reconfiguring the printer and the units (inches or centimeters) for the page length. The first field accepts the page length in the form of *nn.mmm* where *nn* is a one- or two-digit number and *mmm* represents up to three digits after the decimal point. The second field accepts the units of measure, **CM** (centimeters) or **IN** (inches). For example, if you typed a value of 12.567 CM the page length of 12.567 centimeters would be sent to the printer. If you typed a values 7 IN, a page length of 7 inches would be sent to the printer. Corresponds to the FORMLEN parameter.

**Note:** If you use a decimal point, you must specify at least one digit to the left of the decimal, such as 0.25 or 3.5.

### 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.

### 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.

**Format def**

Identifies a library member that contains statements to tell the Print Services Facility (PSF) how to print the sysout data set on a page-mode printer (such as the 3800 Printing Subsystem Model 3). The statements can specify the following:

- Overlay forms to be used during printing
- Location on the page where overlays are to be placed
- Suppressions that can be activated for specified page formats

The member must be in the library named in the cataloged procedure that was used to initialize the PSF, or in a library specified in the USERLIB parameter. Corresponds to the FORMDEF parameter.

**Note:** The Format def parameter applies only for data sets printed on a page-mode printer (such as a 3800 Model 3).

**Page def**

Use the PAGEDEF parameter to identify a library member that contains statements to tell the Print Services Facility (PSF) how to print the sysout data set on a page-mode printer (such as the 3800 Printing Subsystem Model 3). The data set may be sysout or a data set that is allocated directly to a printer. The statements can specify the following:

- Logical page length and width
- Fonts
- Page segments
- Multiple page types or formats
- Lines within a page
- Multiple logical pages on a physical page

The member must be in the library named in the cataloged procedure that was used to initialize the PSF, or in a library specified in the USERLIB parameter. Corresponds to the PAGEDEF parameter.

**Note:** The Page def parameter applies only for data sets printed on a page-mode printer (such as a 3800 Model 3).

**Color map**

Specifies the AFP Resource (object) for the data set that contains color translation information. Valid values are up to eight characters in length. Corresponds to the COLORMAP parameter.

**Fiche setup**

The name of the fiche setup. Valid values are up to eight characters in length.

**Input tray**

The number associated with the input tray. Valid values are from 1 to 255. Corresponds to the INTRAY parameter.

**Output bin**

The number associated with the output bin where the SYSOUT data set should be sent. If no bin is specified, the output will be placed in a default output bin. Valid values are one to five decimal digits in length in the range of 1 to 65,535. Corresponds to the OUTBIN parameter.

**Notify**

The user IDs (up to four user IDs, 17 characters total) of the people you want to notify when the output is printed. If you are specifying two or more user IDs, you must type a node name in parentheses before each user ID. Use the format of [node.]user id. Corresponds to the NOTIFY parameter.

### FSS data

The functional subsystem (FSS) data. This parameter is passed from a spooling product to a functional subsystem application (FSA) or other de-spooler. Valid values are up to 127 characters in length. Corresponds to the FSSDATA parameter.

### Err blocking

Indicates how to handle positional and invalid character errors. There are two type of errors that can either be reported normally or blocked, **print-positioning errors** (these 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** (these errors occur when a text character is not part of a font set). Valid values are **Block** (print-positioning errors and invalid character errors are not reported to PSF), **Unblock** (print-positioning errors and invalid-character errors are reported to PSF), **Char Blk** (invalid character errors are blocked, but print-positioning errors are reported), and **Pos Blk** (positioning errors are blocked, but invalid character errors are reported).

### Print errors

In the first field, type "Yes" or "No" to indicate whether all error messages should be printed at the end of the output data set. If you type "No", the only messages that are printed are those that force an early termination of the print job. In the second field, type a number from 0 - 999 to indicate the maximum number of error messages to allow before cancelling the printing of the current data set. A value of zero (0) is treated as infinite. This message count includes all error messages that are generated by PSF, even if you specified "No" in the first field to prevent the printing of error messages.

### Error disp

Indicates what to do if an error occurs during printing that forces the termination of the print job. Valid values are **Quit** (releases the data set back to JES as complete, even if an early termination error occurs during printing) and **Hold** (keeps the data on the spool until a system operator releases it).

### Remote queue

The name of the data set that contains additional print options. Valid values are up to 16 characters in length.

### User libraries

The libraries containing AFP resources to be used by Print Services Facility (PSF) when processing sysout data sets. Valid values are up to 125 characters in length. Corresponds to the USERLIB parameter.

### User data

The names of one to eight libraries containing AFP resources to be used by the printer when processing SYSOUT data sets. The system searches the libraries listed in the "User Libraries" field before using any system-defined resources. Valid values are up to 352 characters in length. Corresponds to the USERDATA parameter.

**Note:** You can also use the page definitions and form definitions in combination with the user libraries. To do this, type a name in the "Format Def" and "Page Def" fields. The system will search the user libraries for the page or format definitions before continuing onto the system libraries.

### Char arg tbl

The font name used to print the SYSOUT data set. Valid values are up to four characters in length.

**Note:** You can specify up to four font names for the character arrangement table.

### Checkpoint lines

The maximum number of lines in a logical page. JES uses this value, with the CKPTPAGE parameter, to determine when to take checkpoints while printing the sysout data set or transmitting the systems network architecture (SNA) data set. Valid values are from 0 to 32,767. Corresponds to the CKPTLINE parameter.

### Checkpoint pages

Specifies the number of logical pages:

- To be printed before JES takes a checkpoint
- To be transmitted as a single systems network architecture (SNA) chain to an SNA work station before JES takes a checkpoint

Valid values are from 0 to 32,767. Corresponds to the CKPTPAGE parameter.

### Checkpoint secnd

The number of seconds that are to elapse between checkpoints of the sysout data set that JES is printing. Valid values are from 0 to 32,767. 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. Valid values are up to eight) characters in length. Corresponds to the COMPACT parameter.

### Left margin

The left margin for a 3211 printer. Valid values are from 0 to 99. The default value is 1, for flush left, indicating full-width lines.

**Note:** Do not type a value in both the Left Margin and the Right Margin fields. They are mutually exclusive so you should only specify one or the other.

### Right margin

The right margin for a 3211 printer. Valid values are from 0 to 99. The default is one (1) for flush right, indicating full-width lines.

**Note:** Do not type a value in both the Left Margin and the Right Margin fields. They are mutually exclusive so you should only specify one or the other.

### Overflow

Indicates whether the printer program (JES3 output writer) should check for forms overflow (by sensing channel 12 as defined in the FCB that is used for printing the output). Valid values are **Yes** (the printer should eject whenever an end-of-forms indicator is encountered) and **No** (do not check for forms overflow). Corresponds to the OVFL parameter.

### Retain success

Indicates how long to retain the data set that has been successfully transmitted. Use the format HHHH:MM:SS to indicate hours, minutes, and seconds, or specify the keyword FOREVER to retain the data set indefinitely. or example, if you want to release the data set to JES two hours after a successful transmission, type the following value in the "Retain success" field: 0002:00:00. Corresponds to the RETAINS parameter.

### Retain failed

Indicates how long to retain the data set that has not been successfully transmitted. Use the format HHHH:MM:SS to indicate hours, minutes, and seconds, or type the keyword 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 the following value in the "Retain failed" field:0003:00:00. Corresponds to the RETAINF parameter.

**Retry limit**

The maximum number of attempts to transmit a data set before the RETAIN keyword options take effect. Valid values are any integer from 0 to 32,767. Corresponds to the RETRYL parameter.

**Note:** If the retries are unsuccessful, the value associated with the "Retain failed" field will be used to determine what to do next.

**Retry time**

Indicates how long to wait between each attempt to transmit this data. The format is HHHH:MM:SS to indicate hours, minutes, and seconds. Corresponds to the RETRYT parameter.

**Table ref chr**

Indicates whether the logical record for each output line in the sysout data set contains table reference character (TRC) codes or not. Valid values are **Yes** (the data contains TRC codes) and **No** (the data does not contain TRC codes). Corresponds to the TRC parameter.

**Note:** The TRC code indicates which font in the Char Arg Tbl field should be used to print the record.

**Copy module**

The name of the copy modification module. Valid values are up to four characters in length. To indicate table reference character codes, specify TRC in this field.

**Port number**

The TCP/IP port number where FSS connects to the printer. Valid values are from 1 to 65,535.

**Resolution**

The type of resolution used to format the print data set. Valid values are **P240** (formatted with 240 pels per inch) and **P300** (formatted with 300 pels per inch).

**Threshold**

The maximum size of the SYSOUT data set for the JES3 threshold. If the size of the data set exceeds the threshold value, JES3 creates a new unit of work and queues it for printing. This may cause copies of the SYSOUT data set to be printed simultaneously on different printers. Corresponds to the THRESHOLD parameter.

**Writer**

The name of the external writer to process the SYSOUT data set (rather than JES). Valid values are up to eight characters in length. Corresponds to the WRITER parameter.

4. Specify the appropriate printer attributes and press Enter.
5. Exit and confirm changes as needed.

## Editing printer attributes

To edit printer attributes:

1. Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
2. Select option K, Printer Attributes, from the Administrative Functions panel and press Enter. The Printer Attributes panel displays.
3. Type E in the CMD field next to the printer attribute you want to edit and press Enter. The Print Attributes Detail panel displays.
4. Edit the appropriate fields and press Enter. For information about the fields that display on the Print Attributes Detail panel, see the field descriptions that accompany Figure 74 on page 177.

- When you have finished editing the printer attribute, exit and confirm changes as needed.

## Deleting printer attributes

To delete printer attributes:

- Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
- Select option K, Printer Attributes, from the Administrative Functions panel and press Enter. The Printer Attributes panel displays:

```

File View Preferences Help
-----
BJTPPRTE IBM Output Manager - Printer Attributes          Row 1 of 1
Command ==>>                                           SCROLL ==> PAGE
Line Commands: Edit, Insert, Delete, Select              >
CMD  Name          FCB  Form Name UCS  Control Disp  Cond Disp
PRNT01
***** Bottom of Data *****

```

Figure 76. Printer Attributes panel

- Type an D in the CMD field next to the printer attribute you want to delete. A delete confirmation panel displays
- Press Enter to confirm the deletion. A message displays confirming the deletion.

## Linking printer attributes to recipients

To link printer attributes to recipients:

- Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
- Select option J, Recipient IDs, from the Administrative Functions panel and press Enter. The Recipient IDs panel displays.
- Type S, Select, next to the recipient ID to which you want to link printer attributes. The Recipient Details panel displays.
- Place the cursor on the L of the Links pull-down menu at the top of the panel and press Enter. The Links menu options display.
- Select option 1, Choose Printer Attribute, and press Enter. The Printer Attribute Selection panel displays:

```

----- IBM Output Manager - Printer Attribute Selection -----
BJTPPRTP
Command ==>>                                           SCROLL == => PAGE

Line Commands:  Select, Add, View, Edit, Delete

CMD  Name
     HPLJ5si
     HPLJ01
***** Bottom of Data *****

```

Figure 77. Printer Attributes Selection panel

- Type S next to the printer attribute you want to link to the recipient and press Enter. A / displays in the CMD field.

7. Press PF3. The Recipient Details panel displays with a message indicating that the printer attribute has been assigned to the recipient.
8. Exit and confirm changes as needed.

## Banner pages

Banner pages enable you to provide additional information with your printed reports. For example, a banner page might contain information such as a description of a report, routing procedures, or delivery instructions.

The source information for a banner page resides in a partitioned data set (PDS). Output Manager loads the member into a DB2 table so as to make it available for print processing.

### Creating a banner page

To create a banner page:

1. Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
2. Select option B, Banner Pages, from the Administrative Functions panel and press Enter. If there are no banner pages defined for your Output Manager system, the following pop-up window displays:

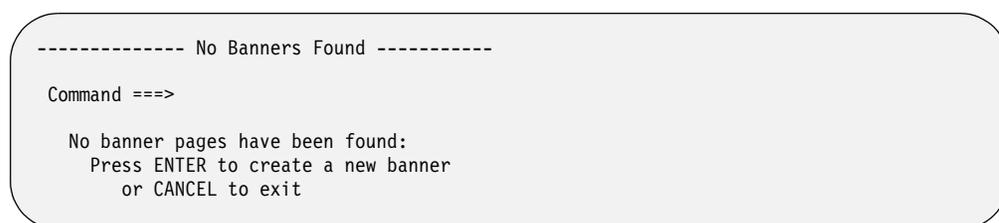


Figure 78. No Banners Found panel

Press Enter to create a new banner page. If there are banner pages for your Output Manager system, the Banners panel displays:

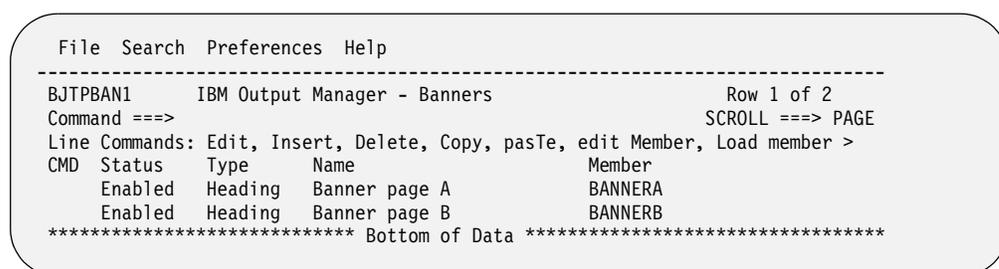


Figure 79. Banners panel

The following commands are available on the Banners panel:

#### Edit (Line command E)

Displays the Update a Banner Page panel where you can modify a banner page's name, member name, data set name, status or type.

#### Insert (Line command I)

Displays the Create a Banner Page panel where you can specify the information needed for a new banner page.

#### Delete (Line command D)

Deletes the banner page.

**Copy** Copies the contents of the active panel to the clipboard. For more information about the copy command, see “Copy, cut, and paste” on page 69.

**pasTe** Pastes the contents of the clipboard into the active panel. For more information about the paste command, see “Copy, cut, and paste” on page 69.

**edit Member (Line command M)**  
Enables you to edit the banner page member.

**Load member (Line command L)**  
Enables you to load the banner page member for use with Output Manager.

3. To edit an existing banner page, type E in the CMD field next to the appropriate banner page. To insert a new banner page, type I in the CMD field and press Enter. The Create a Banner Page panel displays:

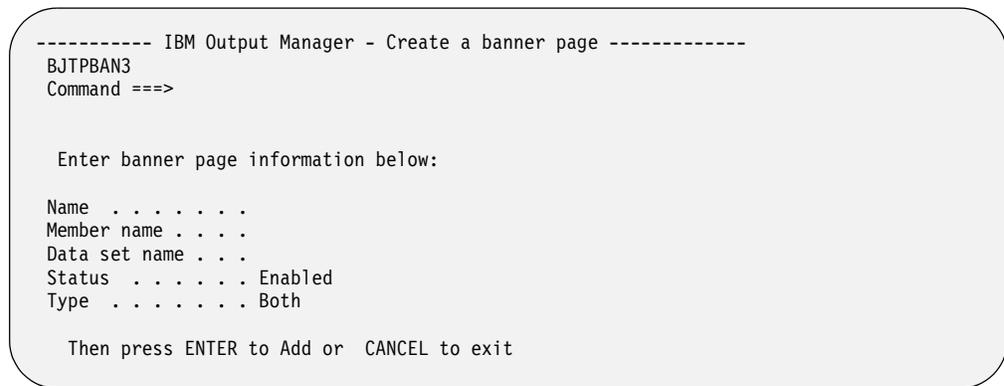


Figure 80. Create a Banner Page panel

The fields that display on the Create a Banner Page panel include:

**Name**  
The name of the banner page. Valid values are up to 24 characters in length.

**Member name**  
The name of the banner page member. Valid values are up to eight characters in length.

**Data set name**  
The data set name that contains the banner page member. Valid values are up to 24 characters in length.

**Status**  
The status of the banner page. Valid values are **Enabled** (the banner page is enabled in the Output Manager system) and **Disabled** (the banner page is not enabled in the Output Manager system).

**Type** Indicates the type of banner page. Valid values are Heading (prints banner page before the report only), Trailing (prints banner page after the report only), and Both (prints banner page before and after the report).

4. Type a name, member name, a data set name for the new banner page, and specify the type of banner and press Enter. An exit confirmation panel displays.
5. Press Enter to save your changes. The Banners page displays with the new banner page added to the list.

## Editing a banner page

To edit a banner page:

1. Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
2. Select option B, Banner Pages, from the Administrative Functions panel and press Enter. The Banners page displays.
3. Type E in the CMD field next to the banner page you want edit and press Enter. The Update a Banner Page panel displays:

```
----- IBM Output Manager - Update a banner page -----
BJTPBAN3
Command ==>

Update banner page information below:

Name . . . . . BANNER
Member name . . . . BANNER
Data set name . . . 'PDTAYL.DEV.IPCSPRNT'
Status . . . . . Enabled
Type . . . . . Both

Then press ENTER to Update CANCEL to exit
```

Figure 81. Update a Banner Page panel

4. Edit banner page information as needed and press Enter. The Banners panel displays with a message indicating that the banner page has been updated.

## Deleting a banner page

To delete a banner page:

1. Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
2. Select option B, Banner Pages, from the Administrative Functions panel and press Enter. The Banners page displays.
3. Type D in the CMD field next to the banner page you want to delete and press Enter. A delete confirmation panel displays.
4. Press Enter to confirm the deletion.

## Editing a banner page member

Output Manager enables you to edit banner page source information from the product interface via the Edit Member option on the Banners panel. Using this option, you can open an ISPF edit session and edit the member as needed. Upon exiting, you return to the Banners panel and your changes are saved to the member.

**Note:** The edit member command does not make information in the member available for Output Manager processing. To make information available for Output Manager processing, you must load the member into the Output Manager system. For more information, see “Loading a banner page member.”

To edit a banner page member:

1. Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.

2. Select option B, Banner Pages, from the Administrative Functions panel and press Enter. The Banners page displays.
3. Type M in the CMD field next to the banner page for which you want to edit the underlying member and press Enter. The source member is placed in an ISPF edit session where you can edit it as needed.
4. When you have finished editing the banner page member, press PF3. The banner page member is updated and the Banners panel displays.

## Loading a banner page member

Source information for a banner page resides in a partitioned data set member. However, Output Manager does not print banner pages directly from this member and instead requires that the data be loaded into a DB2 table. The load member command enables you to load the banner page text into the appropriate place in the DB2 table, thus making it available for processing.

### Notes:

1. The load process also happens whenever a banner page row is inserted or updated.
2. The load member command does not enable you to edit the banner member. If you want to edit the banner member, you must use the edit member command. For more information, see “Editing a banner page member.”

To load a banner page member:

1. Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
2. Select option B, Banner Pages, from the Administrative Functions panel and press Enter. The Banners page displays.
3. Type L in the CMD field next to the banner page member you want to load into the and press Enter. A load confirmation panel displays.
4. Press Enter to confirm the load.

## Linking a banner page to a custom report

To link a banner page to a custom report:

1. Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
2. Select option C, Custom reports, from the Administrative Functions panel and press Enter. The Reports panel displays.
3. Type E next to the custom report to which you want to assign a distribution list. The Report panel displays.
4. Place the cursor on the L of the Links pull-down menu at the top of the panel and press Enter. The Links menu options display.
5. Select option 3, Choose a Banner Page, and press Enter. The Banners panel displays.
6. Type S in the CMD field next to the banner page that you want to associate with the custom report and press Enter. A / displays in the CMD field.
7. Press PF3. The Report panel displays.
8. Verify that the banner page you selected is displayed in the Banner Page field.
9. Exit and confirm changes as needed.

---

## Reprinting

Reprinting enables report administrators to print a custom report again using the same print options as when it was initially printed. Reprinting is used in situations in which the entire print run must be reproduced, due to loss, damage, or failure of the initial print run, for example.

To reprint a custom report:

1. Select option V, View Reports, from the IBM Output Manager main menu and press Enter. The View Selection panel displays.
2. Select either option R, Reports, or option A, Archives, and press Enter. The Captured Reports or Archived Reports panel displays.
3. Type R in the CMD field next to the report you want to reprint and press Enter. The report is queued for reprinting.

**Note:** If you would like a confirmation panel to display before the report is queued for reprinting, append the R command with the letter C, for example, type RC in the CMD field next to the report you want to reprint and press Enter. A reprint confirmation panel displays.

---

## Reprint override

Reprint override enables report administrators to print a custom report again, but also to temporarily alter the distribution list.

To reprint override:

1. Select option V, View Reports, from the IBM Output Manager main menu and press Enter. The View Selection panel displays.
2. Select either option R, Reports, or option A, Archives, and press Enter. The Captured Reports or Archived Reports panel displays.
3. Type RO in the CMD field next to the report you want to reprint and press Enter. The report is queued for reprinting.

**Note:** If you would like a confirmation panel to display before the report is queued for reprint override, append the RO command with the letter C, for example, type ROC in the CMD field next to the report you want to reprint and press Enter. A reprint confirmation panel displays.

---

## Reprint distribution

Reprint distribution enables report administrators to reprint a report and direct it to the distribution list assigned to that custom report.

To reprint distribution:

1. Select option V, View Reports, from the IBM Output Manager main menu and press Enter. The View Selection panel displays.
2. Select either option R, Reports, or option A, Archives, and press Enter. The Captured Reports or Archived Reports panel displays.
3. Type RD in the CMD field next to the report you want to reprint distribution and press Enter. The report is queued for reprinting.

**Note:** If you would like a confirmation panel to display before the report is queued for reprint distribution, append the RD command with the letter C, for example, type RDC in the CMD field next to the report you want to reprint and press Enter. A reprint confirmation panel displays.

---

## Reprint distribution override

Reprint distribution enables report administrators to temporarily direct a report to an alternate distribution list.

To reprint distribution override:

1. Select option V, View Reports, from the IBM Output Manager main menu and press Enter. The View Selection panel displays.
2. Select either option R, Reports, or option A, Archives, and press Enter. The Captured Reports or Archived Reports panel displays.
3. Type RDO in the CMD field next to the report you want to reprint distribution override and press Enter. The report is queued for reprinting.

**Note:** If you would like a confirmation panel to display before the report is queued for reprint distribution override, append the RDO command with the letter C, for example, type RDOC in the CMD field next to the report you want to reprint and press Enter. A reprint confirmation panel displays.

---

## Chapter 13. General product functions

Output Manager's general product functions include activity monitoring, product status, and user messaging.

---

### Activity monitor

As Output Manager operates, numerous events occur such as allocating an archive, opening an archive, querying the rules table. Events are grouped together according to their relationship to one another into activities classes such as job selection, archiving of spool datasets, printing of reports, and online viewing of archives.

Each event can be either normal or exceptional and contain primarily text data although some diagnostic information may also be captured. If an activity contains one or more exceptional events, then the activity is flagged as exceptional. Exceptional events and activities are logged in a dynamically allocated SYSOUT file, a DB2 table, or both. These logs enable you to better diagnose start up problems when there are problems with the DB2 interface.

Output Manager also includes an activity class control table which controls the volume of activities that are logged. Each class has a unique set of counters and settings to control where the data is to be logged and how many of each class of activities (both normal and exceptional) are to be logged.

### Viewing activities

To view activities:

1. Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
2. Select option V, Activity Monitor, from the Administrative Functions panel and press Enter. The Activity Monitor panel displays:

```
File View Help
-----
      IBM Output Manager - Activity List                               Row 1 of 75
Command ==> _____ SCROLL ==> PAGE
Line Commands: Select
CMD Exceptions Activity Events Comp code
--- *Exception Archive Query 6 0
--- Command: 2 0
--- Command: 2 0
--- Command: 2 0
--- *Exception Command: 2 0
--- Subsystem Start 0 0
--- Command: 1 0
--- Subsystem Start 0 0
--- Rules service 6 0
--- Archive Query 6 0
--- Rules service 6 0
```

*Figure 82. Activity List panel*

The following columns display on the Activity List panel:

**Exceptions**

Indicates whether an exception has occurred for an activity. If an exception has occurred for an activity, \*Exception is displayed in this column. If no exception has occurred for an activity this column is blank.

**Activity**

Indicates the activity that was recorded. Activities include:

- Archive query
- Command
- Rules service
- Subtask start
- Subsystem start
- Task manager

**Events**

The number of events that occurred for an activity.

**Comp code**

The return code that resulted from the activity.

**Date** The date the activity occurred in YYYY/MM/DD format.

**Time** The time the activity occurred in HH:MM:SS format.

**Userid**

The ID of the user who initiated the activity.

**Termid**

The ID of the terminal or subsystem used to process the activity.

## Selecting events

To select an events:

1. Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
2. Select option V, Activity Monitor, from the Administrative Functions panel and press Enter. The Activity Monitor panel displays.
3. Type S in the CMD field next to the activity for which you want to view events and press Enter. The Activity Events panel displays:

```

File Help
-----
BJTPACTE Output Manager - Activity Events                               Row 1 of 93
Command ===>                                                         SCROLL ===> PAGE
Line Commands: Select                                               < +>
Event
03F4 008DD260 Create new task
03F4 008DD260 Attach service task
R7=0AC4F060 80 00
03F4 008DD260 Wait for task start
008DD020
03F4 008DD260 Attach complete
R4=00000000 E9 00
03F4 008DD260 Start service task
R7=0AC4F060 E9 00
03F4 008DD260 Create new task
03F4 008DD260 Attach service task
R7=0AC4FF00 80 00
03F4 008DD260 Wait for task start
008FB690
03F4 008DD260 Attach complete
R4=00000000 E9 00
03F4 008DD260 Start service task
R7=0AC4FF00 E9 00

```

**Note:** Use the PF11 key to scroll right to view all details about the activity events.

## View options

The View drop-down menu on the *Activity List* panel enables you to access several different views of activity information.

To select an alternate view of activity information:

1. Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
2. Select option V, Activity Monitor, from the Administrative Functions panel and press Enter. The Activity Monitor panel displays.
3. Place your cursor on the V in the View menu item at the top of the Activity Monitor panel and press Enter. The View drop-down menu displays.
4. Type the number corresponding to the view option you want to access and press Enter. The table below describes each type of view available:

*Table 7. Activity view types*

Field	Description
1. Exceptions	Enables you to view only the activities that hold exceptions.
2. Normal	Enables you to view only normal activities.
3. All	Enables you to view normal and exceptional activities. This option resets the date selection.
4. After	Displays a panel where you can specify a date and time after which all activities will be shown. For more information, see “Viewing activities after a specified date and time” on page 194.
5. Active or log	Enables you to toggle the display between activities that are logged and those that are currently active. All other criteria stay effective while toggling.

Table 7. Activity view types (continued)

Field	Description
6. Class table	Enables you to view a list of defined activities that Output Manager tracks. Each activity is selectable and you can update the controls that affect the logging of activities. Additionally, you can specify a number for a counter to indicate when to stop recording activities for the class. The class table is persistent and remains in effect across startups of Output Manager. For more information, see “Viewing the activity class table” on page 195.

## Viewing activities after a specified date and time

To view activities after a specified date and time:

1. Select option A, Administrative Functions, from the *IBM Output Manager* main menu and press Enter. The *Administrative Functions* panel displays.
2. Select option V, Activity Monitor, from the *Administrative Functions* panel and press Enter. The *Activity Monitor* panel displays.
3. Place your cursor on the V in View in the menu at the top of the *Activity Monitor* panel and press Enter. The View drop-down menu displays.
4. Select option 4, After, and press Enter. The *Select Activities After* panel displays:

```

----- IBM Output Manager - Select Activities After -----
BJTPGEN1
Command ==>

Enter date and time to select activities that occurred after
the selected date and time

Date . . . .      (MM/DD/YYYY None means today)
Time . . . .      (HH:MM:SS None means last midnight)

Reset . . .      (Yes, select all activities)

Then Press END to save or CANCEL to abandon.

```

Table 8. Select activities after field descriptions

Field	Description
Date	Indicates the date after which activities are to be displayed. If this field is blank, activities after the current day are displayed.
Time	Indicates the time after which activities are to be displayed. If this field is blank, the time after criteria defaults to the previous midnight.
Reset	Indicates whether or not to reset the date and time so that all activities are selected. Valid values are: <ul style="list-style-type: none"> <li>• Yes—Resets date and time so that all activities are shown.</li> <li>• Blank—Uses the specified date and time. If no date or time is specified, the date/time defaults to the current day's date starting at midnight, for all activities</li> </ul>

## Viewing the activity class table

To view the activity class table:

1. Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
2. Select option V, Activity Monitor, from the Administrative Functions panel and press Enter. The Activity Monitor panel displays.
3. Place your cursor on the V in View in the menu at the top of the Activity Monitor panel and press Enter. The View drop-down menu displays.
4. Select option 6, Class Table, and press Enter. The Activities List panel displays:

```

File View Help
-----
      IBM Output Manager - Activity List                               Row 1 of 11
Command ==>                                                         SCROLL ==> PAGE
Line Commands: Select
CMD Activity
Task Manager                NOR DB2 NOR SEQ EXC DB2 EXC SEQ
Subtask Start              Yes   Yes   Yes   Yes
Command:                   Yes   Yes   Yes   Yes
Status request             Yes   Yes   Yes   Yes
Rules service              Yes   Yes   Yes   Yes
Subsystem Start           Yes   Yes   Yes   Yes
Selector Start            Yes   Yes   Yes   Yes
Archive JES Dataset       Yes   Yes   Yes   Yes
Archive Query             Yes   Yes   Yes   Yes
View Archive              Yes   Yes   Yes   Yes
Pre Spool Intercept       Yes   Yes   Yes   Yes
***** Bottom of Data *****

```

5. Type S next to an activity of interest and press Enter. The Class Table Entry Update panel displays:

```

----- IBM Output Manager - Class Table Entry Update -----
BJTPGEN2
Command ==>

Enter logging options and thresholds for:
Task Manager

Log normal events to:
DB2 . . . . . Yes (Yes or No)
Sequential. . Yes (Yes or No)

Log Exceptions to:
DB2 . . . . . Yes (Yes or No)
Sequential. . Yes (Yes or No)

Quit logging events after:
Normal. . . . . 0 (Normal event threshold)
Sequential. . . 0 (Exception event threshold)

Then Press END to save or CANCEL to abandon.

```

6. Specify the logging procedures you want to apply to the selected activity and press PF3. The Activity List panel displays with a message indicating that the class table has been updated.

---

## Product status

Output Manager's product status option enables you to view information about system-level processes, statistics, selection criteria, and active processes for your Output Manager system.

## Viewing product status

To view product status:

1. Select option A, Administrative Functions, from the IBM Output Manager main menu and press Enter. The Administrative Functions panel displays.
2. Select option Q, Product Status, from the Administrative Functions panel and press Enter. The Product Status panel displays:

```

File  Rules  Processes  Preferences  Help
-----
BJTPSTAT          IBM Output Manager - Product Status
Command ==>

                                     More:  +

System Level Section:
Product name . . . . . : BJTP          DB2 Subsystem . . . . . : W71A
                                     DB2 Plan name . . . . . : BJTPPLAN
Started Task Name . . . : BJTP        STC Userid . . . . .   : BJTSTC
Saf ID . . . . .      : BJT          SAF Class . . . . .    : FACILITY

Statistics section:
Active since . . . . . : 04/10/2003 - 15:28:18
Pre spool attempts . . : 0             (Number of attempts to capture jobs)
Pre spool captures . . : 0             (Number of jobs captured)
Selector attempts . . . : 0            (Number of attempts to select jobs)
Selector jobs . . . . . : 0            (Number of jobs processed)
System Exceptions . . . : 0            (Number of system level exceptions)
Customer Exceptions . . : 0            (Number of installation exceptions)

Selection criteria:
Pre spool rules . . . . : 2            (Number active, select RULES to view)
Post spool rules . . . . : 1           (Number active, select RULES to view)
Custom report rules . . : 3           (Number active, select RULES to view)

Active Processes:
Archives . . . . .      : 5            (Number of archive processes)
Selectors . . . . .     : 1            (Number of selector processes)
Data base threads . . . : 2            (Number of data base threads)
Service processes . . . : 1            (Number of service processes)
Log threads . . . . .   : 1            (Number of log threads)

```

Table 9. Product status field descriptions

Field	Description
<i>System Level Section</i>	
Product Name	Indicates the name of the product instance on which Output Manager (the product) is running.
DB2 Subsystem	Indicates the DB2 subsystem on which the product is running.
DB2 Plan name	Indicates the name of the DB2 plan that the product uses.
Started Task Name	Indicates the name of the started task used to start Output Manager.
STC Userid	Indicates the user ID assigned to the started task.
<i>Statistics section</i>	
Active since	Indicates the date and time that the started task was started for Output Manager. The date is in the format YYYY/MM/DD. The time is in the format of HH:MM:SS.
Prespool attempts	Indicates the number of times an attempt was made to capture a SYSOUT job before it reached the spool (prespool).

Table 9. Product status field descriptions (continued)

Field	Description
Prespool captures	Indicates the number of times a prespool job was captured successfully.
Selector attempts	Indicates the number of times an attempt was made to capture a SYSOUT job after it reached the spool (post spool).
Selector jobs	Indicates the number of times a post-spool job was processed successfully.
System Exceptions	Indicates the number of system level exceptions that occurred since this task was started.
Customer Exceptions	Indicates the number of customer exceptions that occurred since the task was started.
<i>Selection Criteria</i>	
Pre spool rules	Indicates the number of active (enabled) rules used to identify which SYSOUT to capture before it goes to the spool.
Post spool rules	Indicates the number of active (enabled) rules used to identify which SYSOUT to capture when it is taken off the spool.
Custom report rules	Indicates the number of active (enabled) rules used to identify which SYSOUT to capture post-spool for a custom report.
<i>Active Processes</i>	
Archives	Indicates the number of archive processes completed since this task was started.
Selectors	Indicates the number of selector rules processed since this task was started.
Data base threads	Indicates the number of data base threads used since this task was started.
Service processes	Indicates the number of service processes used since this task was started.
Log threads	Indicates the number of log threads used since this task was started.

---

## User messages

Output Managers user messaging functionality enables you to create and configure messages that appear upon launching the product. There are four types of messages available in Output Manager:

- System message—A system message is seen by all users.
- User message—A user message is seen by users only.
- Admin message—An administrator message is seen by administrators only.
- Auditor message—An auditor message is seen by auditors only.

## Working with user messages

To view user messages in place for your Output Manager system:

1. Select option A, Administrative Functions, from the *IBM Output Manager* main menu and press Enter. The *Administrative Functions* panel displays.

2. Select option M, User Messages, from the *Administrative Functions* panel and press Enter. The *User Messages* panel displays:

```

File Help
-----
                    IBM Output Manager - User Messages
Command ==>

                                Product name: BJTP

Select message type to set or view

    S  Set system message      Seen by all users
    U  Set user message        Seen by users only
    A  Set Admin message       Seen by administrators
    W  Set Auditor message     Seen by auditors

    X  Exit

```

Table 10. User messages options

Option	Description
Set system message	Enables you to edit a system message that is seen by all users. To set a system message type S and press Enter.
Set user message	Enables you to edit a user message that is seen by users only. To set a user message type U and press Enter.
Set admin message	Enables you to edit an administrative message that is seen by administrators only. To set an admin message, type A and press Enter.
Set auditor message	Enables you to edit an auditor message that is seen by auditors only. To set an auditor message, type W and press Enter.

3. Select the option that corresponds to the type of message you want to edit and press Enter. A message text panel opens. For example, if you select option S, Set System Message, the appropriate message text panel opens:

```

----- IBM Output Manager - message text -----
Command ==>

Current SYSTEM message, if any, is displayed below.
Enter new message text below, and press ENTER to update

Make message persistent Yes (Yes - Message displayed each time)
                           (No - Message displayed once)

This is the BJT Test System
Please report any problems to the developers immediately

```

4. If you want the message to display each time the user launches Output Manager, set the Make Message Persistent field to Yes. If you want the message to display only the first time the user launches Output Manager, set the Make Message Persistent field to No .
5. Edit message text as needed.
6. Press Enter to update the message. An update confirmation message displays.
7. Press Enter. The message is updated.

---

## Part 5. Reference

This part contains reference information for Output Manager.

Chapter 14. Administrative tutorial

Chapter 15. Maintenance tasks

- “Catalog synchronization” on page 227
- Activity log maintenance

Chapter 16. Variables

- “Variable descriptions” on page 231
- “Assigning” on page 232
- “Using variables in banner pages” on page 232



---

## Chapter 14. Administrative tutorial

This chapter provides an overview of how a report administrator configures the product to capture and manage report data. SBJTSAMP member BJTBANKR contains the sample bank report used throughout this tutorial. SBJTSAMP member BJTBANKP contains the JCL used to print the sample bank report.

Table 11. Overview of tutorial steps

Step	Reference
Step 1: Start Output Manager	For more information, see "Step 1: Start Output Manager."
Step 2: Set preferences	For more information, see "Step 2: Set preferences" on page 202.
Step 3: Create SYSOUT rules	For more information, see "Step 3: Create SYSOUT rules" on page 205.
Step 4: Define archive attributes	For more information, see "Step 4: Define archive attributes" on page 206.
Step 5: Combine rules and archives	For more information, see "Step 5: Combine rules and archives" on page 210.
Step 6: Activate the rules	For more information, see "Step 6: Activate the rules" on page 211.
Step 7: Create a report layout	For more information, see "Step 7: Create a report layout" on page 211.
Step 8: Create a custom report definition	For more information, see "Step 8: Create a custom report definition" on page 214.
Step 9: Create a report selection rule	For more information, see "Step 9: Create a report selection rule" on page 217.
Step 10: Combine rules, layouts, and reports	For more information, see "Step 10: Combine rules, layouts, and reports" on page 218.
Step 11: Configure recipient IDs	For more information, see "Step 11: Configure recipient IDs" on page 219.
Step 12: Set up a distribution list	For more information, see "Step 12: Set up a distribution list" on page 222.
Step 13: Set up a banner page	For more information, see "Step 13: Set up a banner page" on page 224.

---

### Step 1: Start Output Manager

To access the *IBM Output Manager* main menu, invoke the BJTEXEC using the EXEC your report administrator has designated for administrative use. For example, if your site uses the sample EXEC shipped with the Output Manager product, you might use the command `TS0 BJTA` to launch the product. If you are unsure of the correct EXEC to use to launch the product, contact your report administrator.

**Note:** At your site, Output Manager may be located on an installation-specific menu. If necessary, contact your report administrator for information about how to navigate to the proper menu to launch Output Manager.

After you launch the product, the *IBM Output Manager* main menu displays:

```

View Administration Preferences Help
-----
BJTPMAIN                               IBM Output Manager
Command ==>

                                Product name: BJTP
P Preferences                       Terminal and user parameters
V View Reports                       Create and change reports
A Administrative Functions           Administer rules and reports
I Installation Verification           Verify installation

X Exit

-----
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IBM is a registered trademark of International
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-----

```

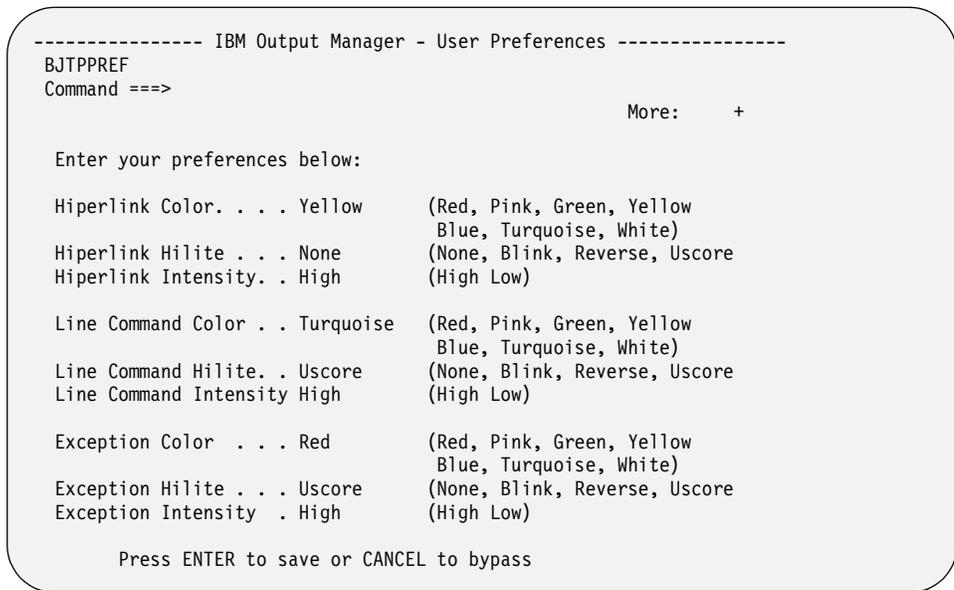
Table 12. *IBM Output Manager* main menu options

Option	Description
P-Preferences	Enables you to set terminal preferences such as the use of color, highlighting, brightness, and intensity for hiperlinks, line commands, and exceptions. For more information, see
V-View reports	Enables you to view and print captured and archived reports. For more information, see
A-Administrative functions	Enables you to define, retrieve, and maintain report information through a variety of functions. For more information, see
I-Installation verification	Enables you to verify that Output Manager was installed properly on your system and is ready for use. For more information, refer to .
X-Exit	Enables you to exit Output Manager and return to the ISPF main menu.

## Step 2: Set preferences

Output Manager enables you to set a variety of display preferences to uniquely identify hiperlinks, line commands, and exceptions. To set preferences:

1. Select option P, Preferences, from the *IBM Output Manager* main menu and press Enter. The *User Preferences* panel displays:



**Note:** You can also access the *User Preferences* panel via option P on the *View Selection* panel or from various drop-down menus throughout the product.

Table 13. *User Preferences* field descriptions

Field	Description
Hiperlink color	Identifies the color used to denote a hiperlink. <b>Note:</b> A hiperlink is a link between BJT objects. Such a link is a rule that points the archive attribute field to an entry in the archive attributes table.  Valid options are: <ul style="list-style-type: none"> <li>• Red</li> <li>• Pink</li> <li>• Green</li> <li>• Yellow</li> <li>• Blue</li> <li>• Turquoise</li> <li>• White</li> </ul>
Hiperlink highlight	Identifies the highlight method used to denote a hiperlink. Valid options are: <ul style="list-style-type: none"> <li>• None</li> <li>• Blink</li> <li>• Reverse</li> <li>• Uscore</li> </ul>
Hiperlink intensity	Identifies the highlight intensity used to denote a hiperlink. Valid options are: <ul style="list-style-type: none"> <li>• High</li> <li>• Low</li> </ul>

Table 13. User Preferences field descriptions

Field	Description
Line command color	Identifies the color used to denote a line command. Valid options are: <ul style="list-style-type: none"> <li>• Red</li> <li>• Pink</li> <li>• Green</li> <li>• Yellow</li> <li>• Blue</li> <li>• Turquoise</li> <li>• White</li> </ul>
Line command highlight	Identifies the highlight method used to denote a line command. Valid options are: <ul style="list-style-type: none"> <li>• None</li> <li>• Blink</li> <li>• Reverse</li> <li>• Uscore</li> </ul>
Line command intensity	Identifies the highlight intensity used to denote a line command. Valid options are: <ul style="list-style-type: none"> <li>• High</li> <li>• Low</li> </ul>
Exception color	Identifies the color used to denote an exception. Valid options are: <ul style="list-style-type: none"> <li>• Red</li> <li>• Pink</li> <li>• Green</li> <li>• Yellow</li> <li>• Blue</li> <li>• Turquoise</li> <li>• White</li> </ul>
Exception highlight	Identifies the highlight method used to denote an exception. Valid options are: <ul style="list-style-type: none"> <li>• None</li> <li>• Blink</li> <li>• Reverse</li> <li>• Uscore</li> </ul>
Exception intensity	Identifies the highlight intensity used to denote an exception. Valid options are: <ul style="list-style-type: none"> <li>• High</li> <li>• Low</li> </ul>

2. Specify the desired preferences and press Enter to save.

## Step 3: Create SYSOUT rules

In this step, you will create SYSOUT rules which enable you to control what happens when various SYSOUT data are captured by Output Manager.

There are two types of rules you can establish for selecting SYSOUT:

- **Interceptor rules**—Interceptor rules are rules that (1) specify the criteria by which SYSOUT is captured prior to its reaching the spool and (2) define what to do with captured SYSOUT, such as what to do with the SYSOUT when it is archived.
- **Selector definitions**—Selector definitions are rules that (1) specify the criteria by which specific output types are selected directly off the spool and (2) define what to do with captured output, such as what to do with the output when it is archived.

To create SYSOUT rules:

1. Select option A, Administrative Functions, from the *IBM Output Manager* main menu and press Enter. The *Administrative Functions* panel displays:

```
Rules Custom Reports Printing General Preferences Help
-----
BJTPADMN          IBM Output Manager - Administrative Functions
Command ==>>>

                                     More:  +
                                     Product name: BJTP
Sysout identification and archive data set attributes
I  Interceptor Rules          Pre spool criteria
S  Selector Definitions       Set selector criteria
R  Report Selection Rules     Custom report selection rules
A  Archive Attributes         Maintain archive attributes
Custom report definitions
L  Report Layouts             Define layout of basic reports
C  Custom Reports             Custom report definitions
Printing-related functions
J  Recipient Ids              Maintain recipient Ids
D  Distribution Lists         Maintain distribution lists
K  Printer Attributes         Maintain printer attributes
B  Banner Pages               Maintain banner pages
General product functions
V  Activity Monitor           View activities and exceptions
Q  Product Status             Current status of the product
M  User messages              Set or view user messages
```

2. Select option I, Interceptor Rules or option S, Selector Definitions (depending on the type of rule you want to create) and press Enter. If there are no other rules defined for your Output Manager system, the following pop-up window displays:

```
----- No Interceptor rules found -----
BJTPDDSV
Command ==>>>

No Interceptor rules have been found:
Press ENTER to create a new Interceptor rule
or CANCEL to exit
```

Press Enter to create a new rule. If there are rules defined for your Output Manager system, the *List of Interceptor/Selector Rules* panel displays:

```

File View Preferences Help
-----
BJTPDDSE Output Manager - List of Interceptor Rules          Row 1 of 1
Command ==>                                               SCROLL ==> PAGE
Line commands: Edit, Insert, Delete, Prompt, Link          >
CMD Status Disposition Exists Line Limit Capture Combine Insert
      Disabled Delete      Replace      0 No      No No
***** Bottom of Data *****

```

3. To edit an existing rule, type E in the CMD field next to the rule and press Enter. To insert a new rule, type I in the CMD field and press Enter. The *Interceptor/Selector Rules* panel displays:

```

File Link Help
-----
BJTPDDED          IBM Output Manager - Interceptor Rules
Command ==>
                                                    More:  +

Control fields
Disposition . . Delete      (Delete, Keep)
Exists . . . . Replace     (Leave, Replace, Extend)
Status . . . . Disabled    (Enabled or Disabled)
Line Limit . . 0          (Max lines to allow in archive)
Combine Sysout. No       (Combine Sysout into single archive)
Insert Marker . No      (Insert marker when combining)
Capture Attrs : No      (Yes or No)
Archive Attr. :

Job Selection criteria
Job Type. . . . All      (All, Batch, Appc, Tso, Stc)
Job Class . . .
Job Name. . . .
Job ID. . . .

```

This panel is divided into three sections:

- **Control fields**—Control fields identify the actions to be taken when the rule is applied.
- **Job selection criteria**—Job selection criteria identify the conditions under which jobs are selected.
- **SYSOUT selection criteria**—SYSOUT selection criteria identify the conditions under which SYSOUT is selected.

**Note:** Use the PF8 key to page down to view all sections and fields on the *Interceptor/Selector Rules* panel.

4. Specify the appropriate control fields, job selection criteria, and SYSOUT selection criteria and press Enter.

**Note:** If you specify EXISTS=REPLACE and COMBINE SYSOUT=NO, you must uniquely identify captured output via the corresponding archive attribute otherwise there is a potential for loss of data.

5. Press PF3.

## Step 4: Define archive attributes

In this step, you will provide detailed information about the archive that is to hold SYSOUT data. When Output Manager captures SYSOUT, it creates an archive data set. To create the archive data set, Output Manager needs the following information:

- What to call the data set (the data set name or DSN)
- Where to allocated the data set (the unit name or SMS storage class)

- How much space to reserve for the archive

This information is defined in an archive attribute. An archive attribute is a set of attributes that Output Manager uses when allocating a sequential file to hold captured SYSOUT. A report administrator creates a set of archive attributes and links them to interceptor and selector rules.

When SYSOUT is intercepted or selected, archive attributes define how to name the archive data set that is to be created, where to allocate it, and how much space to reserve for the archive. Each archive attribute uses an archive mask, or template, to create the data set name for the archive.

To define an archive attribute:

1. Select option A, Administrative Functions, from the *IBM Output Manager* main menu and press Enter. The *Administrative Functions* panel displays.
2. Select option A, Archive Attributes, from the *Administrative Functions* panel and press Enter. If there are no other archive attributes defined for your Output Manager system, the following pop-up window displays:

```

----- No Archive Attributes found -----
BJTPATTV
Command ==>

No archive attributes have been found:
Press ENTER to create a new attributes
or CANCEL to exit

```

Press Enter to create new attributes. If there are attributes defined for your Output Manager system, the *Archive Attributes* panel displays:

```

File View Preferences Help
-----
BJTPATTE IBM Output Manager - Archive Attributes          Row 1 of 2
Command ==>                                           SCROLL ==> PAGE
Line commands: Edit, Insert, Delete                    >
CMD Name          Archive mask
  BJTAA1          PDUSERA.BJTP.&JOBNAME.&JOBNUMB
  BJTAA2          PDUSERB.WRK0110.&JOBNAME.&JOBNUMB
***** Bottom of Data *****

```

3. To edit an existing archive attribute, type E in the CMD field next to the attribute and press Enter. To insert a new archive attribute, type I in the CMD field and press Enter. The *Archive Attributes Details* panel displays:

```

File Help
-----
BJTPATTD      IBM Output Manager - Archive Attributes Details
Command ==>>          SCROLL ==>> PAGE
                               More:   +

Descriptive data
Name . . . . .
Archive Mask . . .
Retention Period . 0          (Number of days to retain)

Allocation attributes
Management Class .
Storage Class . .
Vol Sers . . . . .          (Up to 5)
Device Type . .          (Generic Unit or device address)
Data Class . . . .
Space Units . . . .        (Blocks, Tracks, Cylinders,
                           Kilobytes, Megabytes, Bytes or Records)

Average record unit
Primary quantity . 0        (in above units)
Secondary quantity 0       (In above units)
Block Length . . 0         (In above units)

Archive disposition

```

*Table 14. Archive attributes details field descriptions*

Field	Description
Name	Indicates the name of the archive. Valid values are up to 24 characters in length.
Archive mask	Indicates the template mask you want to use to generate the data set name for the archive.
Retention period	Indicates how many days to keep the archive. Valid values are numbers from 1 to 9999. Specifying a value of zero, the default, indicates that archive retention will be managed by your existing storage management policies (for example, SMS rules).
Management class	Indicates the name of the management class for the archive. Valid values are up to eight characters in length.
Storage class	Indicates the name of the storage class for the archive. Valid values are up to eight characters in length.
Vol sers	Indicates the volume serial numbers to be associated with the archive. Valid values for each of the five fields are up to six characters in length.
Device type	Indicates the generic unit or device address. Valid values are up to eight characters in length.
Data class	Indicates the data class of the archive. Valid values are up to eight characters in length.

Table 14. Archive attributes details field descriptions (continued)

Field	Description
Space units	<p>Indicates the type of space units associated with the archive. Valid values are:</p> <ul style="list-style-type: none"> <li>• Blocks</li> <li>• Tracks</li> <li>• Cylinders</li> <li>• Kilobytes</li> <li>• Megabytes</li> <li>• Bytes</li> <li>• Records</li> </ul>
Average record unit	<p>Indicates the size of the average record unit. The last character in the size must be one of the following values:</p> <ul style="list-style-type: none"> <li>• M–Megabytes</li> <li>• K–Kilobytes</li> <li>• B–Bytes</li> </ul>
Primary quantity/ Secondary quantity	<p>Indicate the number of units to allocate for primary/secondary allocation.</p> <p><b>Notes:</b></p> <ol style="list-style-type: none"> <li>1. The unit type (M, K, B) is defined in the Average Record Unit field.</li> <li>2. The upper limits of primary quantity/secondary quantity values depends on the manner in which you request space (tracks, cylinders, blocks) and the device that you select to hold the data. If you request a value that is too large or too small, the archiving process will fail.</li> <li>3. Instead of explicitly coding a value for primary/secondary quantities, consider first checking with your storage management group for guidance in determining the set of data classes and management classes to best suit your archiving needs.</li> </ol>
Block length	<p>Indicates the length of the block, based on the unit type listed in the Average Record Unit field. Valid values are numbers from 0 to 65,535.</p>
Normal disposition	<p>This field cannot be edited. It indicates that archive attributes write to cataloged data sets.</p>
Abnormal disposition	<p>Indicates what Output Manager does with the archive if the <i>save to archive</i> fails. Valid values are:</p> <ul style="list-style-type: none"> <li>• Catalog–The archive is accessible through a catalog.</li> <li>• Keep–Saves the archive.</li> <li>• Delete–Deletes the archive.</li> </ul> <p><b>Note:</b> IBM strongly recommends that archive attributes write to cataloged data sets. Specifying data sets that are not cataloged may produce unexpected results.</p>

Table 14. Archive attributes details field descriptions (continued)

Field	Description
Release unused space	Indicates whether or not unused space is to be released. Valid values are: <ul style="list-style-type: none"> <li>• Yes—Releases unused space.</li> <li>• No—Does not release unused space.</li> </ul>

4. Specify the appropriate values for the archive and press Enter.
5. Press PF3.

## Step 5: Combine rules and archives

In this step, you associate each rule with a specific archive so SYSOUT data is saved to the correct archive. To associate a rule with an archive:

1. Select option A, Administrative Functions, from the *IBM Output Manager* main menu and press Enter. The *Administrative Functions* panel displays.
2. Select option I, Interceptor Rules or option S, Selector Definitions (depending on the type of rule you want to create) and press Enter. The *List of Interceptor/Selector Rules* panel displays.
3. Type P, Prompt, in the CMD field next to a rule on the *List of Interceptor/Selector Rules* panel and press Enter. The *Archive Attribute Selection* panel displays:

```

----- IBM Output Manager - Archive Attribute Selection -----
BJTPATTP
Command ==>                                SCROLL == => PAGE

Line cmds: Select, Add, View, Edit, Delete

CMD  Name
     BJTAA1
     BJTAA2
     BJTAA3
***** Bottom of Data *****

```

### Notes:

- a. If no archives are defined for your system, Output Manager will prompt you to add one. You can use the A, Add, line command from the Archive Attribute Selection panel to create one.
  - b. You can also access the *Archive Attribute Selection* panel from the *List of Interceptor/Selector Rules* panel via the Link the drop-down menu option 1, Choose Archive Attribute.
4. Type S in the CMD field next to the archive with which you want to associate the rule and press Enter. A / displays in the CMD field.
  5. Press PF3. The *List of Interceptor/Selector Rules* panel displays.
  6. Press PF11 to scroll right until you locate the *Archive Attribute* column on the *List of Interceptor/Selector Rules* panel. Verify that the archive you selected is listed in the *Archive Attribute* column.
  7. Press PF3. An exit confirmation panel displays.
  8. Press Enter to save your changes.

## Step 6: Activate the rules

After you associate archives with rules, you must activate the rules. To activate the rules:

1. Access one of the three Output Manager rules screens by selecting one of the following options from the *IBM Output Manager* main menu: AI, AS, or AR.  
**Note:** If you make changes to rules, you must enter the SAVE command prior to using the ACTIVATE command. Rules are not automatically saved prior to execution of the ACTIVATE command and changes that have not been saved prior to issuing the ACTIVATE command will be lost.
2. Type ACTIVATE in the command line and press Enter. The *Rules Activation Confirmation* panel displays.
3. Press Enter. The ACTIVATE command is scheduled to run in the product address space and the *Rules Activation Results* panel displays.
4. Press Enter to remove the *Rules Activation Results* panel and return to the originating rules panel.

## Step 7: Create a report layout

In this step, you create a report layout. A report layout provides you with a way of describing how an original report looks as produced by an application. A report layout has three sub-components: pages, areas, and fields, where pages contain areas, areas contain fields, and fields are specific data on a report.

To create a report layout:

1. Select option A, Administrative Functions, from the *IBM Output Manager* main menu and press Enter. The *Administrative Functions* panel displays.
2. Select option L, Report Layouts, from the *Administrative Functions* panel and press Enter. The *Layouts* panel displays:

```
File Help
-----
BJTPLAY9  IBM Output Manager - Layouts                Row 1 of 1
Command ==>                                       SCROLL ==> PAGE
Line Commands: Edit, Insert, Delete, Select      >
CMD Name          Print Control  Line Count
   Bank reports          DCB              0
***** Bottom of Data *****
```

3. Type I, Insert, in the CMD field and press Enter. The *Layout* panel displays:

```
File Preferences Help
-----
BJTPLAY7  IBM Output Manager - Layout                Row 1 of 3
Command ==>                                       SCROLL ==> PAGE
>
Layout name . . .
Print control . . DCB                          (DCB, ASA, Machine)
Line count . . . 0                             (Number of lines per page)
Description . . .
Line Commands: Edit, Insert, Delete, Insert Area(IA), Insert Page(IP)
CMD Name      Type      Page      Area      Relative section  Relative position
   Page 1     Page
   Area 1     Area   Page 1
   Field 1    Field  Page 1   Area 1
***** Bottom of Data *****
```

4. Specify a name for the layout in the *Layout name* field.

5. Use the line commands to add pages, areas, and fields to design your report.
  - You can have one or more pages in a report layout, each with a unique style. For example, you might have a letter page and an invoice page that are part of the same report.
  - On each page, you can organize information on the page by defining specific areas, such as a heading area or a title area. An area is a rectangle on a page that you define by specifying the starting column and row, line width, and number of lines (height).
  - A field is a section of an area that defines where data starts, such as a column heading, a date field, or a report ID. For example, in Area 1, you might have a field called Report Title. In Area 2, you might have a field called Report ID and another called Branch ID.

**To insert a page:**

- a. Type IP, Insert Page, in the CMD field on the *Layout* panel and press Enter. The *Layout Page* panel displays:

```

File Preferences Help
-----
BJTPLAY6   IBM Output Manager - Layout Page           No rows to dis
Command ==>                                SCROLL ==> PAGE

Layout name . . : BJTRL1
Print control . . : DCB                               (DCB, ASA, Machine)
Line count . . : 0                                   (Number of lines per page)
Page name . . . .

CMD Name      Type      Area      Relative section  Relative position  Row

```

*Table 15. Layout page field descriptions*

Field	Description
Layout name	Indicates the name of the report layout. Valid values are up to 24 characters in length.
Print control	Indicates the type of printer control to be used with the report layout. Valid values are: <ul style="list-style-type: none"> <li>• DCB—Uses the spacing assigned to the report by the application.</li> <li>• ASA—Uses the ANSI-standard spacing.</li> <li>• Machine—Uses machine carriage control.</li> </ul>
Line count	Indicates the number of lines that are to appear on each page. When specified, Output Manager uses this value to determine page boundaries. Valid values are numbers from 1 to 999. If you specify zero (0), page boundaries are controlled by the print control character (this is sufficient for most applications). However, this option can be used when no print control character exists in the report.
Page name	Indicates the name of the page. Valid values are up to eight characters in length.

- b. Type a name for the page in the Page Name field and press Enter.
- c. Press PF3. The *Layout* panel displays.

**To insert an area:**

- a. Type IA, Insert Area, in the CMD field on the *Layout* panel and press Enter. The *Layout Area* panel displays:

```

File  Preferences  Help
-----
BJTPLAY5  IBM Output Manager - Layout Area          No rows to dis
Command ==>>                                SCROLL ==>> PAGE

Layout name . . . : BJTRL1
Page name . . . . : COVER
Area name . . . .
Area row . . . . 0   Area column . 0           Relative area name .
Area width . . . 0   Area height . 0          Relationship . . . .

CMD  Name      Type   Relative section  Relative position  Row   Column  Width

```

Table 16. *Layout area field descriptions*

Field	Description
Layout name	Displays the name of the corresponding report layout.
Page name	Displays the name of the page on which the area resides.
Area name	Indicates the name of the area. Valid values are up to eight characters in length.
Area row	Indicates the row in which the area starts (upper left margin). Valid values are numbers from 1 to 999.
Area width	Indicates the maximum width of the lines in the area. A value of zero indicates no width limit except for that imposed by the page size. Valid values are numbers from 1 to 999.
Area column	Indicates the column number where the area starts (upper left corner). Valid values are numbers from 1 to 999.
Area height	Indicates the maximum number of lines required for the area. Valid values are numbers from 1 to 999. A value of zero indicates no height limit except for that imposed by page size.
Relative area name	Indicates the name of a previously defined area you want to use to assist in the positioning of the current area. Valid values up to eight characters in length. If you do not want to use a previously defined area in the positioning of the current area, leave this field blank.  <b>Note:</b> If you type a name of an area in the <i>Relative area name</i> field, you must define the relationship between the areas in the Relationship field. If you do not specify a relationship, the origin (row, column) of this area will be the same as that of the area you listed in the Relative Area Name field.
Relationship	Indicates how the Relative Area Name and the Area Name are related. Valid relationships are: <ul style="list-style-type: none"> <li>• A-Adjacent. The area is in the same row as the related area but in the adjacent column.</li> <li>• B-Below. The area is in the first row after the related area.</li> <li>• D-Diagonal. The area is in the next row and next column with respect to the related area.</li> </ul>

- b. Specify the area name as well as its row, column, width, and height and press Enter.

c. Press PF3. The *Layout* panel displays and the new area is shown in the table.

**To insert an field:**

a. Type I, Insert, in the CMD field next to an area on the *Layout* panel and press Enter. The *Layout Field* panel displays:

```
File Preferences Help
-----
BJTPLAY4          IBM Output Manager - Layout Field
Command ==>>>                                SCROLL ==>>>

Layout name . . . : BJTRL1
Page name . . . . : PAGE 1
Area name . . . . : AREA 3
Area row . . . . : 0      Area column : 0      Relative area name :
Area width . . . . : 0     Area height : 0     Relationship . . . . :

Field information
Name . . . . .
Relative field name . . . . .
Relative field relationship . . . . . (Diagonal, Below, Adjacent)
Starting row . . . . . 0
Starting column . . . . . 0
Width . . . . . 0
Height . . . . . 0
Number of times to repeat . . 0
Constant data at position . . No      (No, Yes)
Heading name . . . . .
```

- b. Specify the appropriate field values and press Enter.
- c. Press PF3. The *Layout* panel displays and the new area is shown in the table.

---

## Step 8: Create a custom report definition

In this step, you will create a custom report definition. A custom report definition specifies conditions that must be met to create a custom report. When defining a custom report, you specify sets of conditions using the field names defined in the report layout. For a custom report to be created (1) the report layout assigned to the custom report definition must match the one assigned to the report selection rule and (2) the fields listed in the custom report definition must match those listed in the report layout. (3) Optionally, a distribution list can be assigned to a custom report definition so the report is sent to the recipients in the distribution list.

To create a custom report definition:

1. Select option A, Administrative Functions, from the *IBM Output Manager* main menu and press Enter. The *Administrative Functions* panel displays.
2. Select option C, Custom Reports, from the *Administrative Functions* panel and press Enter. If there are no custom report definitions defined for your Output Manager system, the following pop-up window displays:

```
----- No custom reports found -----
BJTPRPTV
Command ==>>>

No custom reports have been found:
Press ENTER to create a new report
or CANCEL to exit
```

Press Enter to create a new custom report. If there are custom report for your Output Manager system, the *Reports* panel displays:

```

File Search Preferences Help
-----
BJTPRPT9      IBM Output Manager - Reports                Row 1 of 1
Command ==>                                     SCROLL ==> PAGE
Line Commands: Edit, Insert, Delete, Captured Reports
CMD Status   Name                               Type   Contiguous
      Enabled Bank Report                        Basic  Yes
***** Bottom of Data *****

```

3. To edit an existing custom report, type E in the CMD field next to the appropriate custom report and press Enter. To insert a new custom report, type I in the CMD field and press Enter. The *Report* panel displays:

```

File Links Preferences Special Instructions Help
-----
BJTPRPT7      IBM Output Manager - Report                No rows to dis
Command ==>                                     SCROLL ==> PAGE

Status . . . . Enabled                      (Enabled or Disabled)
Report name . . .
Contiguous . . . Yes                        (Yes or No)
Description . . .
Layout . . . . :
Distribution . . :
Banner Page . . :
Line Commands: Edit, Insert, Delete
CMD Connector Field Condition Value

```

4. Specify a report name.
5. Specify a custom report definition. To do so:
  - a. Type ADD in the command line on the *Report* panel and press Enter. The *Report Condition Entry* pop-up displays:

```

----- Report Condition Entry -----
BJTPRPT6
Command ==>

      Field   Condition  Value
-----
_____
_____
_____

```

- b. Create a report condition by specifying the field, condition, and value that must be true for the custom report to be created. For example, if you want to set up the condition that if the field LOCATION is equal to the value SPRINGFIELD then the custom report is created, you would specify LOCATION in the field column, EQ in the condition column, and SPRINGFIELD in the value column as shown below:

```

----- Report Condition Entry -----
BJTPRPT6
Command ==>

      Field   Condition  Value
-----
LOCATION      EQ          SPRINGFIELD
_____
_____
_____

```

**Note:** Only fields defined in the report layout can be used in the custom report definition.

Create as many conditions as are necessary to accurately identify the reports for which the custom report will be created. The following table provides additional detail about creating custom report definitions:

Table 17. Report condition entry field descriptions

Field	Description
Field	Indicates the name of the field in the report for which the report condition applies. Valid values are up to eight characters in length.
Condition	Indicates the condition or qualifier. Valid values are: <ul style="list-style-type: none"> <li>• EQ—Equal to.</li> <li>• GT—Greater than.</li> <li>• GE—Greater than or equal to.</li> <li>• LT—Less than.</li> <li>• LE—Less than or equal to.</li> <li>• NE—Not equal to.</li> </ul>
Value	Indicates the value associated with the field. Valid values are up to 40 characters in length.

You can enter up to eight field/condition/value entries. Each line is connected to the others with an *and* connector. If you use the insert line command to add more fields, the first group of fields is connected to the second set with an *or* connector.

**Example:** The following report condition entry:

```

----- Report Condition Entry -----
BJTPRPT6
Command ==>

      Field  Condition  Value
  BRANCHA   EQ         SPRINGFIELD
  BRANCHID  EQ         456123
  _____  _____  _____
  _____  _____  _____
  _____  _____  _____
  
```

establishes that the field BRANCHA must be equal to SPRINGFIELD and the field BRANCHID must be equal to 456123. If you exited the report condition entry (PF3) and then added another report condition as follows:

```

----- Report Condition Entry -----
BJTPRPT6
Command ==>

      Field  Condition  Value
  BRANCHA   EQ         PEORIA
  BRANCHID  EQ         123456
  _____  _____  _____
  _____  _____  _____
  _____  _____  _____
  
```

The custom report screen would display the following:

```

File Links Preferences Special Instructions Help
-----
BJTPRPT7      IBM Output Manager - Report                      Row 1 of 4
Command ==>                                     SCROLL ==> PAGE

Status . . . . Enabled                          (Enabled or Disabled)
Report name . . . Custom Report 1
Contiguous . . . Yes                            (Yes or No)
Description . . .
Layout . . . . :
Distribution . :
Banner Page . . :
Line Commands: Edit, Insert, Delete
CMD  Connector  Field      Condition  Value
      and       BRANCHA   EQ         springfield
      and       BRANCHID EQ         456123
      or        BRANCHA   EQ         peoria
      and       BRANCHID EQ         123456
***** BOTTOM OF DATA *****

```

The first two line items are connected with an *and* connector, the last two line items are also connected with an *and* connector, and the two sets of fields are connected with an *or* connector. The custom report definitions in this example indicate that if BRANCHA=SPRINGFIELD and BRANCHID=456123 OR if BRANCHA=PEORIA and BRANCHID=123456, then the page is part of the report.

## Step 9: Create a report selection rule

In this step, you create a report selection rule for processing a specific custom report. A report selection rule is a rule that (1) specifies the criteria (such as the job, proc, program, DD name and step) against which captured reports are matched to determine if they should be processed into basic reports and (2) identifies the report layout, that if used by a custom report definition, initiates the creation of a custom report from a basic report.

To create a report selection rule:

1. Select option A, Administrative Functions, from the *IBM Output Manager* main menu and press Enter. The *Administrative Functions* panel displays.
2. Select option R, Report Selection Rules, from the *Administrative Functions* panel and press Enter. If there are no other report selection rules defined for your Output Manager system, the following pop-up window displays:

```

----- No Reports rules found -----
BJTPDDSV
Command ==>

No Reports rules have been found:
Press ENTER to create a new Reports rule
or CANCEL to exit

```

Press Enter to create a new report selection rule. If there are report selection rules defined for your Output Manager system, the *Report Rules* panel displays:

```

File View Preferences Help
-----
BJTPDDSE Output Manager - List of Report Rules          Row 1 of 1
Command ==>                                           SCROLL ==> PAGE
Line commands: Edit, Insert, Delete, Prompt, Link
>
CMD  Status  Report Name      Layout Name      Job Name
Disabled
***** Bottom of Data *****

```

- To edit an existing report selection rule, type E in the CMD field next to the report selection rule and press Enter. To insert a new report selection rule, type I in the CMD field and press Enter. The *Report Rules* panel displays:

```

File Link Help
-----
BJTPDDER   IBM Output Manager - Report Rules
Command ==>

Control fields
Status . . . Enabled   (Enabled or Disabled)
Layout Name . :
Printer Attr. :           (Printer attributes of report)

Job Selection criteria
Report Name . .
Job Name . . .
Proc Name . . .
Step Name . . .
Proc Step . . .
Step Number . .
DD Name . . .

```

- Specify the appropriate criteria and press PF3 to exit.
- Press Enter to save.

---

## Step 10: Combine rules, layouts, and reports

In this step, you first associate a report selection rule to a report layout and then associate a custom report with a report layout.

To associate a report selection rule with a report layout:

- Select option A, *Administrative Functions*, from the *IBM Output Manager* main menu and press Enter. The *Administrative Functions* panel displays.
- Select option R, *Report Selection Rules*, from the *Administrative Functions* panel and press Enter. The *List of Report Rules* panel displays.
- Type P, *Prompt*, in the CMD field next to the report selection rule you want to associate with a layout and press Enter. The *Layout Selection* panel displays:

```

----- IBM Output Manager - Layout Selection -----
BJTPLAY8
Command ==>                                SCROLL ==> PAGE

Line cmds: Select, Add, View, Edit, Delete

CMD  Name
     BJTRL1
     BJTRL2
***** Bottom of Data *****

```

Type an S in the CMD field next to the layout you want to associate with the rule and press Enter. A / displays in the CMD field.

- Press PF3. The *List or Report Rules* panel displays.
- Press PF11 to scroll right until you locate the Layout Name column on the *List or Report Rules* panel. Verify that the report layout you selected is listed in this field.
- Press PF3. An exit confirmation panel displays.
- Press Enter to save your changes.

To associate a custom report with a report layout:

1. Select option A, Administrative Functions, from the *IBM Output Manager* main menu and press Enter. The *Administrative Functions* panel displays.
2. Select option C, Custom Reports, from the *Administrative Functions* panel and press Enter. The *Reports* panel displays.
3. Type E, Edit, in the CMD field next to the custom report you want to associated with a report layout and press Enter. The *Report* panel displays:

```

File Links Preferences Special Instructions Help
-----
BJTPRPT7      IBM Output Manager - Report      No rows to dis
Command ===>                                SCROLL ===> PAGE

Status . . . . Enabled                (Enabled or Disabled)
Report name . . . Bank Report
Contiguous . . . Yes                  (Yes or No)
Description . . .
Layout . . . . :
Distribution . . :
Banner Page . . :
Line Commands: Edit, Insert, Delete
CMD Connector Field Condition Value

```

Place the cursor on the L of the *Links* drop-down menu at the top of the panel and press Enter. The *Links* drop-down menu displays.

4. Select option 1, Choose a layout, and press Enter. The *Layout Selection* panel displays:

```

----- IBM Output Manager - Layout Selection -----
BJTPLAY8
Command ===>                                SCROLL ===> PAGE

Line cmds: Select, Add, View, Edit, Delete

CMD Name
  Bank reports
  BJTRL1
***** Bottom of Data *****

```

5. Type S in the CMD field next to the report layout you want to associate with the custom report and press Enter. A / displays in the CMD field.
6. Press PF3. The *Report* panel displays with the following message:

```

Layout has been assigned to this custom report

```

7. Verify that the report layout you selected is listed in the Layout field.
8. Press PF3. An exit confirmation panel displays.
9. Press Enter to save your changes.

## Step 11: Configure recipient IDs

In this step, you will configure recipient IDs. Recipient IDs hold information about an individual or generic location such as name, address, building, printer destination, SYSOUT class, or USERID that is available to receive reports.

To create a new recipient ID:

1. Select option A, Administrative Functions, from the *IBM Output Manager* main menu and press Enter. The *Administrative Functions* panel displays.

- Select option J, Recipient IDs, from the *Administrative Functions* panel and press Enter. If there are no recipient IDs defined for your Output Manager system, the following pop-up window displays:

```

----- No Recipients Found -----
BJTPDIDV
Command ==>

No recipients have been found:
Press ENTER to create a new recipient
or CANCEL to exit

```

Press Enter to create a new recipient. If there are recipient IDs for your Output Manager system, the *Recipient IDs* panel displays:

```

File View Preferences Help
-----
BJTPDIDE      IBM Output Manager - Recipient IDs      Row 1 of 1
Command ==>                                     SCROLL ==> PAGE
Line Commands: Edit, Insert, Delete, Select      >
CMD Name                                           Name Out
Recipient 1
***** Bottom of Data *****

```

- To edit an existing recipient, type E in the CMD field next to the recipient and press Enter. To insert a new recipient, type I in the CMD field and press Enter. The *Recipient Details* panel displays:

```

File Links Help
-----
BJTPDIDD      IBM Output Manager - Recipient Details
Command ==>                                     SCROLL ==>
More:      +

Descriptive data
Name . . .
Name Out      (Yes,No ... generate name as outputcard)
Userid      (MVS Userid)
Department
Room . . .
Building
Address .

Report behaviors
Dest . . .      (Jes printer destination)
Class . .      (SYSOUT class to print to)
Groupid. .      (... to group like reports together)
Copies . . 0    (Number of copies to print)
Duplex . .      (No,Normal,Tumble)
Burst . .      (Yes,No ... Physically burst on 3800)

```

Table 18. Recipient details field descriptions

Field	Description
Name	Indicates the name of the recipient. Valid values are up to 60 characters in length.
Name out	Indicates whether or not descriptive data is to be used when printing a report. Descriptive data generally appears on JES banner pages (though this display is installation-dependent).
User ID	Indicates the MVS user ID associated with the recipient. Valid values are up to eight characters in length.
Department	Indicates the department name or ID for the recipient. Valid values are up to 60 characters in length.

Table 18. Recipient details field descriptions (continued)

Field	Description
Room	Indicates the room or office number for the recipient. Valid values are up to 60 characters in length.
Building	Indicates the office building in which the recipient resides. Valid values are up to 60 characters in length.
Address	Indicates the recipient's mailing address. Valid values are up to four lines, each 60 characters in length.
Dest	Indicates the JES printer destination. Valid values are up to 27 characters in length.
Class	Indicates the SYOSUT class used to print the report. Valid values are one character in length.
GroupID	Indicates the group name if similar reports are to be grouped together. Valid values are up to eight characters in length.
Copies	Indicates the number of copies to print. Valid values are from 0 to 999. If you specify a value of zero, the report will not be printed but will be distributed online.
Duplex	Indicates the mode in which the report is to be printed. Valid values are: <ul style="list-style-type: none"> <li>• No—Does not print the report in duplex mode.</li> <li>• Normal—Prints the report in duplex mode so that the sheets can be bound on the long edge of the paper.</li> <li>• Tumble—Prints the report in duplex mode so that the sheets can be bound on the short edge of the paper.</li> </ul>
Burst	Indicates whether or not to separate (burst) the report into smaller reports based on a specific criteria. For example, you can split a bank report based on branch number. Valid values are: <ul style="list-style-type: none"> <li>• Yes—Bursts reports into smaller reports.</li> <li>• No—Does not burst reports into smaller reports.</li> </ul>
Label	Indicates whether or not to print a security label with this report. Valid values are: <ul style="list-style-type: none"> <li>• Yes—Prints a security label with the report.</li> <li>• No—Does not print a security label with the report.</li> </ul>
Sys area	Indicates whether or not to print a system area label with the report. Valid values are: <ul style="list-style-type: none"> <li>• Yes—Prints a system area label with the report.</li> <li>• No—Does not print a system area label with the report.</li> </ul>
Print attr	Displays the printer attributes associated with the recipient.
Attr usage	Indicates when the printer attribute is to be used for the recipient.
Rept title	Indicates the report title. Valid values are up to 60 characters in length.

4. Type the appropriate information in the fields for the new recipient and press PF3. An exit confirmation panel displays.

**Note:** You are not required to fill in every field on this panel.

5. Press Enter to save your changes.

---

## Step 12: Set up a distribution list

In this step you will create a distribution list. A distribution list is a group of recipients that are linked to a custom report definition and control the real time, reprint, or reprint with distribution functions.

To create a distribution list:

1. Select option A, Administrative Functions, from the *IBM Output Manager* main menu and press Enter. The *Administrative Functions* panel displays.
2. Select option D, Distribution Lists, from the *Administrative Functions* panel and press Enter. If there are no distribution lists defined for your Output Manager system, the following pop-up window displays:

```
----- IBM Output Manager - Create a distribution list -----
BJTPDSTI
Command ==>

Enter descriptive name below:

==> _____

Then press ENTER to Add or CANCEL to exit
```

Type a description for the distribution list you are creating and press Enter to add the distribution list. If there are distribution lists defined for your Output Manager system, or if you have just created a distribution list, the *List of Distribution Lists* panel displays:

```
File Help
-----
BJTPDSTE IBM Output Manager - List of Distribution Lists Row 1 of 1
Command ==> SCROLL ==> PAGE
Line Commands: Edit, Insert, Delete, Select
CMD Description
Denver distribution list
***** Bottom of Data *****
```

3. Type S, Select, in the CMD field next to the distribution list you created that is now listed on the *List of Distribution Lists* panel. The following pop-up window displays:

```
----- No Recipients Found -----
BJTPDIDV
Command ==>

No recipients have been found:
Press ENTER to create a new recipient
or CANCEL to exit
```

4. Press Enter to add a recipient to the distribution list. The *Recipient Selection* panel displays:

```

----- IBM Output Manager - Recipient selection -----
Command ==> _____ SCROLL == => PAGE

Line cmds: Select, Add, View, Edit, Delete

CMD Name
____ Sue Lewis
____ Mark Bike
____ Jim Antigua
____ Kevin Smith
***** Bottom of Data *****

```

5. Type S, select, in the CMD field next to the recipient you want to add to the distribution list and press Enter. A / displays in the CMD field.
6. Press PF3. The *List of Distribution Lists* panel displays.
7. Press Enter to save the distribution list.

To assign a distribution list to a report:

1. Select option A, Administrative Functions, from the *IBM Output Manager* main menu and press Enter. The *Administrative Functions* panel displays.
2. Select option C, Custom reports, from the *Administrative Functions* panel and press Enter. The *Reports* panel displays.
3. Type E, Edit, next to the custom report to which you want to assign a distribution list. The *Report* panel displays.
4. Place the cursor on the L of the *Links* drop-down menu at the top of the panel and press Enter. The *Links* menu options display.
5. Select option 2, Choose a Distribution List, and press Enter. The *Distribution List Selection* panel displays:

```

----- IBM Output Manager - Distribution List Selection -----
Command ==> _____ SCROLL ==> PAGE

Line cmds: Select, Insert, Edit, Delete

CMD Description
_____ Denver distribution list
***** Bottom of Data *****

```

6. Type a description for the distribution list you are creating and press Enter to add the distribution list. If there are distribution lists defined for your Output Manager system, or if you have just created a distribution list, the *List of Distribution Lists* panel displays:

```

File Help
-----
BJTPDSTE IBM Output Manager - List of Distribution Lists Row 1 of 1
Command ==> _____ SCROLL ==> PAGE
Line Commands: Edit, Insert, Delete, Select
CMD Description
_____ Denver distribution list
***** Bottom of Data *****

```

7. Type S, Select, in the CMD next to the distribution list you created that is now listed on the *List of Distribution Lists* panel. The following pop-up window displays:

```

----- No Recipients Found -----
BJTPDIDV
Command ==>

No recipients have been found:
Press ENTER to create a new recipient
or CANCEL to exit

```

- Press Enter to add a recipient to the distribution list. The *Recipient Selection* panel displays:

```

----- IBM Output Manager - Recipient selection -----
BJTPDSTY
Command ==> _____ SCROLL == => PAGE

line cmds: Select, Add, View, Edit, Delete

CMD  Name
____ Sue Lewis
____ Mark Bike
____ Jim Antigua
____ Kevin Smith
***** Bottom of Data *****

```

- Type S, select, in the CMD field next to the distribution list you want to link to the custom report and press Enter. A / displays in the CMD field.
- Press PF3. The *Report* panel displays. Verify that the distribution list you selected is displayed in the *Distribution* field.
- Press PF3. An exit confirmation panel displays.
- Press Enter to save your changes.

---

## Step 13: Set up a banner page

In this step, you will set up a banner page.

To set up a banner page:

- Select option A, *Administrative Functions*, from the *IBM Output Manager* main menu and press Enter. The *Administrative Functions* panel displays.
- Select option B, *Banner Pages*, from the *Administrative Functions* panel and press Enter. If there are no banner pages defined for your Output Manager system, the following pop-up window displays:

```

----- No Banners Found -----

Command ==>

No banner pages have been found:
Press ENTER to create a new banner
or CANCEL to exit

```

Press Enter to create a new banner page. If there are banner pages for your Output Manager system, the *Banners* page displays:

```

File Search Preferences Help
-----
BJTPBAN1      IBM Output Manager - Banners                      Row 1 of 2
Command ==>                                     SCROLL ==> PAGE
Line Commands: Edit, Insert, Delete, Member, Load
CMD Status Type Name Member
Enabled Heading Banner page A BANNERA
Enabled Heading Banner page B BANNERB
***** Bottom of Data *****

```

3. To edit an existing banner page, type E in the CMD field next to the appropriate banner page. To insert a new banner page, type I in the CMD field and press Enter. The *Create a Banner Page* panel displays:

```

----- IBM Output Manager - Create a banner page -----
BJTPBAN3
Command ==>

Enter banner page information below:

Name . . . . .
Member name . . . .
Data set name . . .
Status . . . . . Enabled
Type . . . . . Both

Then press ENTER to Add or CANCEL to exit

```

4. Type a name, member name, and a data set name for the new banner page and press Enter. An exit confirmation panel displays.
 

**Note:** The data set name and member name must already exist. The data set contains the text of the banner page. When you specify a member name and data set name on the *Create a Banner Page* panel, you are telling Output Manager where the banner page is located.
5. Press Enter to save your changes. The *Banners* page displays with the new banner page added to the list.
6. For the banner page to print, you also have to load it. To load the banner page:
  - a. On the *Banners* page type L in the CMD field next to the banner page you want to load.
  - b. Press Enter. The banner page is loaded and is now ready for use.

To assign the banner page to a custom report:

1. Select option A, Administrative Functions, from the *IBM Output Manager* main menu and press Enter. The *Administrative Functions* panel displays.
2. Select option C, Custom Reports, from the *Administrative Functions* panel and press Enter. The *Reports* panel displays.
3. Type E, Edit, next to the custom report to which you want to assign a distribution list. The *Report* panel displays.
4. Place the cursor on the L of the *Links* drop-down menu at the top of the panel and press Enter. The *Links* menu options display.
5. Select option 3, Choose a Banner Page, and press Enter. The *Banners* panel displays:

```

----- IBM Output Manager - Banners -----
BJTPBAN2 ==>                                SCROLL ==> PAGE
Line cmds: Select, View, Edit, Insert, Delete
>
CMD  Status  Type  Name  Member
     Enabled  Heading  BANNERA  BANNERA
     Enabled  Heading  BANNERB  BANNERB
***** Bottom of Data *****

```

6. Type S in the CMD field next to the banner page with which you want to associate the custom report and press Enter. A / displays in the CMD field.
7. Press PF3. The *Report* panel displays.
8. Verify that the banner page you selected is displayed in the Banner Page field.
9. Press PF3. An exit confirmation panel displays.
10. Press Enter to save your changes.

---

## Step 14: Run and capture a sample bank report

Your system has now been configured to capture and manage reports. You can now run and capture a sample bank report. SAMPLIB members BJT BANKP and BJT BANKR provide you with a means of generating a sample bank report that can be captured by Output Manager for testing purposes. You can use the JCL in SAMPLIB member BJT BANKP to generate a sample bank report, BJT BANKR.

To generate a sample bank report:

1. Edit the ?BJTHLQ? variable in BJT BANKP to point to the correct BJT highlevel qualifier for your installation of Output Manager.
2. Run BJT BANKP.

---

## Chapter 15. Maintenance tasks

Output Manager maintenance tasks include catalog synchronization and archive log clean up. The following section provides the necessary information for performing these tasks and maintaining the proper functioning of your Output Manager system.

---

### Catalog synchronization

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

**Note:** IBM strongly recommends that archive attributes write to cataloged data sets. Specifying data sets that are not cataloged may produce unexpected results.

### Sample JCL

The catalog synchronization sample JCL is supplied in *highlevel*.SAMPLIB, where *highlevel* is the high-level qualifier of the installed IBM Output Manager product libraries. The member name of the sample JCL is BJTARCH. The following figure shows the sample JCL as provided.

**Note:** The sample JCL illustrates how to set up a catalog synchronization job that will delete duplicate archive rows (if found), delete archive entries that correspond to data sets that are no longer in the catalog, and print the details of all actions taken during the catalog synchronization.

```
//BJTXARCH JOB ,DSNTEP2,CLASS=A,MSGCLASS=X,
// REGION=OM
//JOBLIB DD DSN=W71A.SDSNEXIT,DISP=SHR
// DD DSN=DSN.V710.SDSNLOAD,DISP=SHR
// DD DSN=BJT.PR00110.LOADLIB,DISP=SHR
//*
/* RUN DSNTEP2 TO RUN SQL IN BATCH
/*
//DSNTEP2 EXEC PGM=IKJEFT01,DYNAMNBR=20,COND=(4,LT)
//SYSPRINT DD SYSOUT=*
//SYSIN DD *
DSN SYSTEM(W71A)
RUN PROGRAM(BJTBARCH) PLAN(BJTWARCHE) -
LIB('BJT.PR00110.LOADLIB')
END
//SYSIN DD *
DETAIL = YES
```

The Catalog synchronization job should be scheduled to run on a regular basis to ensure that Output Manager users are presented with an updated picture of current report migration status and availability. The Catalog synchronization job can be scheduled through your existing job scheduling product.

**Note:** You do not need to exit Output Manager to run catalog synchronization.

## Customizing the sample JCL

IBM Output Manager's catalog synchronization feature is a batch process. Sample JCL can be found in SAMPLIB member BJTBARC. You must associate SAMPLIB member BJTBARC with an instance of Output Manager using the QUALIFIER keyword of the BIND.

To customize the sample JCL for your site's catalog synchronization needs:

1. (Required) Enter a valid job card for your site.
2. Specify the control cards appropriate for your site's needs in the SYSIN DD statement. Use the format `KEYWORD = VALUE`. The keyword can be in any column with zero or more spaces on either side of the equal (=) sign. To comment out a line, place an asterisk (\*) or a semicolon (;) in column 1.
  - a. (Optional) If your system uses migrated devices, use the VOLSER keyword to specify the volsers of your system's migrated devices. You can specify up to ten VOLSER keywords. For example, if the volsers MIGRAT and ARCIVE were used in your shop to indicate that a data set has been migrated, you would specify the following VOLSER cards in SYSIN:

```
VOLSER = MIGRAT
VOLSER = ARCIVE
```

**Note:** If you want the Output Manager interface to display a migration status of *yes* for any archive that has been migrated to level 1 storage, specify `VOLSER = MIGRAT`.
  - b. (Optional) If you would like the catalog synchronization job to leave duplicate archive rows, if found, specify the DUPLICATES keyword with a value of NODELETE. If you want the catalog synchronization job to delete duplicate archive rows, if found, specify the DUPLICATES keyword with a value of DELETE.

**Note:** The default value for the DUPLICATES keyword is DELETE.
  - c. (Optional) If you want the catalog synchronization job to delete archive table entries that point to data sets that are no longer in the catalog, specify the NOTCATALOG keyword with a value of DELETE. If you want the catalog synchronization job to leave archive entries that point to data sets that are no longer in the catalog, specify the NOTCATALOG keyword with a value of NODELETE.

**Notes:**

    - 1) The default value for the NOTCATALOG keyword is DELETE. Any archive table entries for data sets no longer in the catalog are deleted.
    - 2) If you have any archive attributes that are writing to data sets that are not cataloged, then you must specify a value of NODELETE or users will be unable to locate and work with the reports associated with these archives after the catalog synchronization job runs.
  - d. (Optional) If you want to print a detailed report of all actions taken during catalog synchronization, specify the DETAILS keyword with a value of YES. If you do not want a printed detailed report, specify the DETAILS keyword with a value of NO.

**Note:** The default value for the DETAILS keyword is NO.
3. For further information about catalog synchronization keywords and values, refer to "Catalog synchronization syntax". When you have finished customizing the JCL, save and run the catalog synchronization job.

## Catalog synchronization syntax

Catalog synchronization keywords are not positional. For readability, include each keyword on a single line. Specify the control cards appropriate for your site's needs in the SYSIN DD statement. Use the format KEYWORD = VALUE. The keyword can be in any column with zero or more spaces on either side of the equal (=) sign. To comment out a line, place an asterisk (\*) or a semicolon (;) in column 1.

### VOLSER

(Optional) Use the VOLSER keyword to specify the volser of the migrated device. You can specify up to ten volser control cards.

**Note:** If you want the Output Manager interface to display a migration status of *yes* for any archive that has been migrated to level 1 storage, specify VOLSER = MIGRAT.

### DUPLICATES

(Required) Use the DUPLICATES keyword to specify what to do if a duplicate archive row is found. Valid values for this keyword are **DELETE** (deletes duplicate archive rows) and **NODELETE** (does not delete duplicate archive rows).

### NOTCATALOG

(Required) Use the NOTCATALOG keyword to specify what to do if the archive table entry points to a data set that is no longer cataloged. Valid values are **DELETE** (deletes the archive table entry) and **NODELETE** (does not delete the archive table entry). If an archive table entry was deleted as a result of the NOTCATALOG keyword, the value **GONE** displays in the Migrated column on the Archived Reports panel (BJTPARCE).

### DETAILS

(Required) Use the DETAILS keyword to specify whether or not to print a detailed report of all actions taken during catalog synchronization. Valid values are **YES** (prints a detailed report of all actions taken during catalog synchronization) and **NO** (does not print a detailed report of all actions taken during catalog synchronization).

---

## Activity log maintenance

You may periodically wish to purge older activity from the activity table. The amount of activity which may be maintained in this table is at the discretion of the product administrator.

**Note:** The amount of activity maintained in this table is contingent upon a variety of factors, one of which is the length of time (duration) of activity maintained.

To reduce the volume of activity maintained in the activity table, you can run the following SQL:

```
DELETE FROM xxxxxxxx.BJTACT WHERE LOGTIME < CURRENT_TIMESTAMP - yy DAYS;
```

where xxxxxxxx is the BJTQUAL variable, and yy is the number of days of activity you wish to KEEP (to maintain in the activity table).

**Note:** The BJTQUAL variable is used during product installation, for more information about this variable refer to "Customization parameters" on page 21.



---

## Chapter 16. Variables

Output Manager supports the use of symbolic and user-defined variables, thus enabling users to assign values and text to variables as needed for their site. Users can then reference Output Manager's variables in banner page members to automatically incorporate customized values or text into banner pages at the time of printing.

---

### Variable descriptions

The following variables are available for use with Output Manager:

**CDATE**

Inserts the date on which the report was created. Values are displayed in the format YYYY/MM/DD.

**CLASS**

Inserts the SYSOUT class of the report.

**COPIES**

Inserts the number of copies being printed of the report.

**CTIME**

Inserts the time the report was created. Values are displayed in the format HH:MM:SS.

**CTIMEP**

Inserts the time a report was created. Values are displayed in the format HH:MM:SS.

**DATE**

Inserts the date the report was printed. Values are displayed in the format YYYY/MM/DD.

**DDNAME**

Inserts the DD name associated with the report.

**DESC**

Inserts a description of the report or bundle.

**DEST**

Inserts the report's SYSOUT destination.

**FORMS**

Inserts the name of any form used for the report.

**INSTnnnn**

Inserts a number, nnnn (where nnnn is 0001 to 0013) that maps to special instructions that appear as drop downs when defining a report."

**JOBID**

Inserts the subsystem job ID for the report.

**JOBNAME**

Inserts the job name that generated the report.

**LINES**

Inserts the number of lines the report contains.

**NAME**

Inserts the name of the template banner page member used to create banner pages.

**PAGES**

Inserts the number of pages in a report.

**PROCNAME**

Inserts the procedure step name that produced the report.

**STEPNAME**

Inserts the step name that produced the report.

**TIME**

Inserts the time the report was printed.

**TIMEP**

Inserts the time the report was printed.

**ACCTn**

Inserts user accounting information for a report.

In addition to the product-specific variables listed above, you can also use standard system variables.

**Note:** When using some system variables for data set name construction, you must place an alphabetic character in front of the variable to ensure the valid construction of data set names, for example:

```
OMREP.NAS2.&JOBNAME..&JOBNUMB..D&YYMMDD
```

---

## Assigning

To use variables in your Output Manager system, you must assign values to variables in the CONFIGURE DD via the VARIABLE SET command. You can then use the variables you defined in the CONFIGURE DD in banner page members.

### Assigning values to user-defined variables

To assign a value to a user-defined variable:

1. Define variables using the VARIABLE SET command in the CONFIGURE DD for your instance of IBM Output Manager. For example, to define a variable, CNAME, for your company's name, you would include the following syntax in your CONFIGURE DD:  

```
VARIABLE SET CNAME='Rocket Software Incorporated'
```
2. Save the CONFIGURE DD.
3. Restarting the Output Manager started task is not necessary for use of the user-defined variables you set.

---

## Using variables in banner pages

To use variables in banner page members:

1. Create a banner page member.
2. Use variables in the banner page member to insert text as needed. For example, to include the subsystem ID for the report, insert the &JOBID variable into the banner page member. To include the user-defined variable CNAME to insert the company name, insert the &CNAME variable into the banner page member.
3. Save and load the banner page member.

---

## Chapter 17. Column names for sorting

This chapter describes the names to use when sorting Output Manager display data based on columns.

---

### Column names and corresponding sort names

The following tables list the names to use when sorting based on a column. For more information about the SORT command, see “SORT command” on page 67.

*Table 19. Captured Reports (BJTPRIX9)*

Column Name	Sort Name
Report Name	RNAME
Capture Time	FORMAT_TIME
Type	RTYPE
Page Count	PAGES
Line Count	LINES

*Table 20. Archived Reports (BJTPARCE)*

Column Name	Sort Name
Job Name	JOBNAME
Job ID	JOBID
Capture Time	ARCHIVE_FORMAT_TIME
Migrated	MIGRATED
Cond	CC
Line count	LINECOUNT
Page count	PAGECOUNT
Byte count	BYTECOUNT
User ID	USERID
Group ID	GROUP
Account 1	ACCT01
Account 2	ACCT02
Account 3	ACCT03
Account 4	ACCT04
Account 5	ACCT05
Account 6	ACCT06
Account 7	ACCT07
Account 8	ACCT08

Table 20. Archived Reports (BJTPARCE)

Column Name	Sort Name
Job Class	JOBCLASS
Msg Class	MSGCLASS
Scheduling Env	SCHENV
Step Name	STEPNAME
Proc Step	PROCSTEPNAME
Proc Name	PROCNAME
Program	PROGRAM
DD Name	DDNAME
DD Seq#	DDSEQ
Sysout Class	SYSOUTCLASS
Data set name	DSNAME
Comments	COMMENTS
System ID	SYSTEMID
Last referenced	LASTREF
Retrieve count	RETRIEVE_COUNT
Layout ID	LAYOUT_ID

Table 21. List of Rules (BJTPDDSE)

Column Name	Sort Name
Status	STATUS
Class	NORM_KEEP_CLASS
Error Disp	ABNO_DISP
Error Class	ABNO_KEEP_CLASS
Error Destination	ABNO_KEEP_DEST
Line Limit	LINE_LIMIT
Limit Disp	LLIM_DISP
Limit Class	LLIM_KEEP_CLASS
Report Name	REPORT_NAME
Layout Name	LAYOUT_NAME
Job Name	JOBNAME
Step Name	STEPNAME
Proc Step Name	PROCSTEPNAME
DD Name	DDNAME
Printer Attribute	PRTATTR_NAME
Disposition	DISP
Exists	EXISTS

Table 21. List of Rules (BJTPDDSE)

Column Name	Sort Name
Archive Attribute	ATTRIBUTE_NAME
Sysout Class	SYSOUTCLASS
Form	FORM1
Destination	DESTINATION
Selector Count	SELECOTR_COUNT
Capture	CAPTURE_ATTR
Combine	COMBINE_SYSOUT
Insert	INSERT_MARKER

Table 22. Archive Attributes (BJTPATTE)

Column Name	Sort Name
Name	NAME
Archive mask	MASK
Retention	RETPD
Primary Space	PRISPACE
Secondary Space	SECSPACE
Space Unit	SPACE

Table 23. Layouts (BJTPLAY9)

Column Name	Sort Name
Name	LNAME
Print Control	CC
Line Count	LINEC
Description	LTEXT

Table 24. Custom Reports (BJTPRPT9)

Column Name	Sort Name
Status	STATUS
Name	RNAME
Type	RRTYP
Contiguous	RCONT
Layout	RDLAY
Banner Page	RDBAN
Distribution	RDNAM

Table 24. Custom Reports (BJTPRPT9)

Column Name	Sort Name
Description	RTEXT

Table 25. Recipient IDs (BJTPDIDE)

Column Name	Sort Name
Name	NAME
Name Out	NAMEOUTPUT
Room	ROOM
Department	DEPARTMENT
Address1	ADDRESS1
Address2	ADDRESS2
Address3	ADDRESS3
Address4	ADDRESS4
Building	BUILDING
Report Title	TITLE
Page Label	DPAGELBL
System Area	SYSAREA

Table 26. Distribution Lists (BJTPDIDE)

Column Name	Sort Name
Description	DESCRIPTION

Table 27. Distribution Lists (BJTPDIDE)

Column Name	Sort Name
Description	DESCRIPTION

Table 28. Distribution Lists (BJTPPRTE)

Column Name	Sort Name
Name	DESCRIPTION
FCB	FCB
Form Name	FORM
UCS	UCS
Control	CONTROL

Table 28. Distribution Lists (BJTPPRTE)

Column Name	Sort Name
Disp	OUTDISP
Cond Disp	OUTCDISP
Priority	PRTY
Line Count	LINECT
Process Mode	PRMODE

Table 29. Banners (BJTPBAN1)

Column Name	Sort Name
Status	BSTAT
Type	BTYPE
Name	BDESC
Member	BNAME
Dataset name	BDSN
Date	DATE
Time	TIME
User	BUSER
LRECL	BLRECL
RECFM	BRECFM

Table 30. Activity List (BJTPACTL)

Column Name	Sort Name
Exceptions	EXCEPTION
Activity	ACTIVITY
Events	EVENTS
Comp code	COMPCODE
Date	DATE
Time	TIME
Userid	USERID
Termid	TERMID



---

## Part 6. Appendixes



---

## Appendix A. Messages

All messages generated by Output Manager are described in this appendix. Variables are shown in *italics*.

---

**BJT09133I**      **BJTBIXC1 Started**

**Explanation:** The BJTBIXC1 program execution has started.

**User Response:** None required.

---

**BJT09136I**      **Delimiter specified in PARM is "c"**

**Explanation:** A delimiter character was specified via the PARM= option of the EXEC PGM= JCL statement. This delimiter will be used to separate columns in the control cards generated by this program. The specification of a delimiter character also causes heading control cards to be generated at the beginning of the TAPE and REPORT control card sections.

**User Response:** None required.

---

**BJT09137I**      **BJTBIXC1 ENDED, RC=*nnnn***

**Explanation:** BJTBIXC1 program execution has ended. The value following RC= is the return code from the program.

**User Response:** If the return code is not zero, check the SYSPRINT, JOBLOG, and JESYSMSG output files for messages that indicate the cause.

---

**BJT09138E**      **No control cards generated, input file is not a valid master index file**

**Explanation:** The file allocated to the INFILE DD statement was not a valid sequential copy of a CA-View master index. The file could not be processed.

**User Response:** Make sure that the INFILE DD statement is allocated to a sequential copy of a CA-View master index. This copy should be created using the SARDBASE utility with IDXOUT option.

---

**BJT09139I**      ***nnnnnnnnnn* tape control cards generated**

**Explanation:** The number of TAPE control cards that were generated is displayed.

**User Response:** None required.

---

**BJT09140I**      ***nnnnnnnnnn* report control cards generated.**

**Explanation:** The number of REPORT control cards that were generated is displayed.

**User Response:** None required.

---

**BJT09141E**      ***ddname* DD is required, but is missing from JCL**

**Explanation:** A required DD statement was missing from the JCL.

**User Response:** Correct the JCL to include the required DD statement.

---

**BJT09142E**      **Open failed for DD(*ddname*), RC=*xxxxxxxx***

**Explanation:** The file allocated to the indicated DD statement could not be opened.

**User Response:** Review the JOBLOG and JESYSMSG output files for additional messages that may indicate why the open operation has failed. Consult the appropriate IBM Messages and Macros manual for the meaning of the return code from OPEN.

---

**BJT10134I**      **BJTBIXC2 started**

**Explanation:** BJTBIXC2 program execution has started.

**User Response:** None required.

---

**BJT10136I**      **Reports inserted=*nnnnnnnnnn*  
skipped=*nnnnnnnnnn*  
duplicate=*nnnnnnnnnn***

**Explanation:** The number of report that were inserted and skipped, as well as the number of duplicate reports is reported.

**User Response:** Review other messages from SYSPRINT to determine whether the skipped or duplicate records are unexpected.

---

**BJT10137I**      **Tapes inserted=***nnnnnnnnnn*  
**skipped=***nnnnnnnnnn*  
**duplicate=***nnnnnnnnnn*

**Explanation:** The number of tapes that were inserted and skipped as well as the number of duplicate reports is reported.

**User Response:** None required.

---

**BJT10138I**      **BJTBIXC2 ended, RC=***nnnn*

**Explanation:** BJTBIXC2 program execution has ended. The value following RC= is the return code from the program.

**User Response:** If the return code is not zero, review the SYSPRINT, JOBLOG, and JESYSMSG output files for messages that indicate the cause.

---

**BJT10139I**      **PARM is "CONVERT", DB2 tables will be updated**

**Explanation:** The CONVERT option has been specified. The DB2 tables will be updated during this execution. Any tapes and reports that are not skipped or duplicates will be registered in the Output Manager DB2 tables.

**User Response:** None required.

---

**BJT10140E**      **Invalid PARM specified, must be "REPORTONLY" or "CONVERT"**

**Explanation:** An invalid value has been specified in the PARM= option of the EXEC PGM= JCL statement.

**User Response:** The only valid values for the PARM= option of the EXEC PGM= JCL statement are CONVERT and REPORTONLY. Change the JCL and resubmit the job.

---

**BJT10141I**      **PARM is "REPORTONLY", DB2 table updates will not be performed**

**Explanation:** The REPORTONLY option has been specified. The DB2 tables will not be updated during this execution. The contents of the Output Manager DB2 tables will **not** be changed by this execution.

**User Response:** None required.

---

**BJT10142I**      **Timestamp for this run=***yyyy-mm-dd-hh.mm.ss.mmmmmmm*

**Explanation:** The DB2 timestamp that was generated for this execution is displayed. Rows inserted into the Output Manager DB2 tables include this timestamp.

**User Response:** None required.

---

**BJT10143E**      **LOAD failed for MODULE=***module*  
**RC=***xxxxxxx*

**Explanation:** A LOAD was unsuccessful for the named module.

**User Response:** Review the JOBLOG and JESYSMSG output files for additional messages that may indicate why the load operation has failed. Consult the appropriate IBM Messages and Macro manuals for the meaning of the return code from LOAD. Make sure that the named module is available to the job via LINKLST, JOBLIB, STEPLIB, etc.

---

**BJT10144I**      **Inserted report ID=***reportid* **control card=***nnnnnnnnnn*

**Explanation:** The named report id has been inserted into the Output Manager DB2 tables. Note that while this message is issued even if the REPORTONLY option has been specified, no DB2 tables are actually updated unless the CONVERT option is in effect.

**User Response:** None required.

---

**BJT10145W**      **Duplicate report ID=***reportid* **control card=***nnnnnnnnnn* **- not inserted**

**Explanation:** The named report id has not been inserted into the Output Manager DB2 tables because the report id has been inserted previously.

**User Response:** Use the control card number to refer to the entire control card in the file allocated to the CTLIN DD statement.

---

**BJT10146I**      **Skipped report id=***reportid* **control card=***nnnnnnnnnn* **- not inserted**

**Explanation:** The named report id has not been inserted into the Output Manager DB2 tables because it has been marked as a comment in the file allocated to the CTLIN DD statement.

**User Response:** Use the control card number to refer to the entire control card in the file allocated to the CTLIN DD statement.

---

**BJT10147I**      **Inserted tape VOLSER=***volser* **control card=***nnnnnnnnnn*

**Explanation:** The named tape has been inserted into the Output Manager DB2 tables. Note that while this message is issued even if the REPORTONLY option has been specified, no DB2 tables are actually updated unless the CONVERT option is in effect.

**User Response:** None required.

---

**BJT10148W Duplicate tape VOLSER=*volser* control card=*nnnnnnnnnn* - not inserted**

**Explanation:** The named tape has not been inserted into the Output Manager DB2 tables because the report id has been inserted previously.

**User Response:** Use the control card number to refer to the entire control card in the file allocated to the CTLIN DD statement.

---

**BJT10149I Skipped tape VOLSER=*volser* control card=*nnnnnnnnnn* - not inserted**

**Explanation:** The named tape has not been inserted into the Output Manager DB2 tables because it has been marked as a comment in the file allocated to the CTLIN DD statement.

**User Response:** Use the control card number to refer to the entire control card in the file allocated to the CTLIN DD statement.

---

**BJT10150E Control card format is invalid**

**Explanation:** The file allocated to the CTLIN DD statement contained an invalid control card.

**User Response:** Make sure that the file allocated to the CTLIN DD statement is a control card file generated by the BJTBOX1 program. Also, make sure that the only modifications to the control cards are either marking a record as a comment by placing an asterisk "\*" in column 1, or deletion of the record in its entirety.

---

**BJT10151E FAILING CONTROL CARD**  
>\*\*\*\*\*  
\*\*\*\*\*  
\*\*\*\*\*...<

**Explanation:** The leftmost portion of the invalid control card is displayed.

**User Response:** This message is issued with one or more other messages. Refer to the user response for the other messages.

---

**BJT10152E CONTROL CARDS ARE OUT OF SEQUENCE**

**Explanation:** A control card was encountered that contained a sequence number that was lower than the previous control card.

**User Response:** Sort the control cards in ascending order using the sequence number column prior to input to this program.

---

**BJT10153E DUPLICATE CONTROL CARD SEQUENCE NUMBER FOUND**

**Explanation:** A control card was encountered that contained a sequence number that was equal to the previous control card.

**User Response:** Make sure that the only modifications to the control cards are either marking a record as a comment by placing an asterisk "\*" in column 1, or deletion of the record in its entirety.

---

**BJT10154I CURRENT CONTROL CARD SEQUENCE NUMBER=*nnnnnnnnnn***

**Explanation:** The sequence number of the control card currently being processed is displayed.

**User Response:** This message is issued when an SQL error is encountered. Refer to the messages that follow for a description of the error. You may use the sequence number in this message to locate the control card which was being processed when the error occurred.

---

**BJT10155S CALL TO DSNTIAR FAILED RC=*xxxxxxxx***

**Explanation:** The DSNTIAR program has returned with a non-zero return code.

**User Response:** Refer to the appropriate DB2 documentation to resolve the problem.

---

**BJT10156E**  
\*\*\*\*\*  
\*\*\*\*\*  
\*\*\*\*\*

**Explanation:** This message contains the text of the DB2 SQL error message that has occurred.

**User Response:** Refer to the appropriate DB2 documentation to resolve the problem.

---

**BJT10157E SQLERROR ENCOUNTERED SQLCODE=*nnnnnnnn***

**Explanation:** An SQL error was encountered.

**User Response:** Refer to BJT10156E messages for a description of the error.

---

**BJT10158E SYSPRINT DD IS REQUIRED, BUT IS MISSING FROM JCL**

**Explanation:** SYSPRINT is a required DD statement, but was missing from the JCL.

**User Response:** Correct the JCL to include the SYSPRINT DD statement.

---

**BJT10159E**      **OPEN FAILED FOR DD(SYSPRINT),  
RC=xxxxxxx**

---

**Explanation:** The file allocated to the SYSPRINT DD statement could not be opened.

**User Response:** Review the JOBLOG and JESYSMSG output files for additional messages that may indicate why the open operation has failed. Consult the appropriate IBM Messages and Macro manuals for the meaning of the return code from OPEN.

---

**BJT10160E**      *ddname* **DD IS REQUIRED, BUT IS  
MISSING FROM JCL**

---

**Explanation:** A required DD statement was missing from the JCL.

**User Response:** Correct the JCL to include the required DD statement.

---

**BJT10161E**      **OPEN FAILED FOR DD(ddname),  
RC=xxxxxxx**

---

**Explanation:** The file allocated to the indicated DD statement could not be opened.

**User Response:** Review the JOBLOG and JESYSMSG output files for additional messages that may indicate why the open operation has failed. Consult the appropriate IBM Messages and Macro manuals for the meaning of the return code from OPEN.

---

**BJT11135I**      **BJTBAPRT STARTED**

---

**Explanation:** BJTBAPRT program execution has started.

**User Response:** None required.

---

**BJT11136I**      **BJTBAPRT ENDED, RC=nnnn**

---

**Explanation:** BJTBAPRT program execution has ended. The value following RC= is the return code from the program.

**User Response:** If the return code is not zero, check the SYSPRINT, JOBLOG, and JESYSMSG output files for messages that indicate the cause.

---

**BJT11137S**      **INTERNAL ERROR - DEVTYPE  
RC=xxxxxxx REASON=xxxxxxx**

---

**Explanation:** An internal error has occurred.

**User Response:** Save the files used for this execution and call IBM Support.

---

**BJT11138E**      **RPTIN DD ALLOCATED ON  
INVALID DEVICE CLASS -**

---

**DEVTYPE RC=xxxxxxx  
REASON=xxxxxxx**

**Explanation:** The RPTIN DD statement is allocated to a device class that is not appropriate for this program.

**User Response:** Make sure that the RPTIN DD statement is allocated to a sequential file on a tape or disk device.

---

**BJT11139W**      **RPTIN DD IS NOT A TAPE DEVICE,  
FILE SEQUENCE NUMBER IN  
PARM IS IGNORED**

---

**Explanation:** A file sequence number was specified in the PARM= option on the EXEC JCL statement, but will be ignored because the RPTIN DD statement is not allocated to a tape device and positioning cannot be performed.

**User Response:** None required.

---

**BJT11140E**      **PARM IS INVALID, MUST BE A 4  
DIGIT NUMBER**

---

**Explanation:** The value specified in the PARM= option on the EXEC JCL statement is not a valid 4-digit number.

**User Response:** Correct the JCL and resubmit the job.

---

**BJT11141E**      **PARM IS INVALID, MUST BE IN  
THE RANGE OF 0001 THROUGH  
9999**

---

**Explanation:** The value specified in the PARM= option on the EXEC JCL statement must be a positive integer in the range of 0001 through 9999.

**User Response:** Correct the JCL and resubmit the job.

---

**BJT11142E**      *ddname* **DD IS REQUIRED, BUT IS  
MISSING FROM JCL**

---

**Explanation:** A required DD statement was missing from the JCL.

**User Response:** Correct the JCL to include the required DD statement.

---

**BJT11143E**      **OPEN FAILED FOR DD(ddname),  
RC=xxxxxxx**

---

**Explanation:** The file allocated to the indicated DD statement could not be opened.

**User Response:** Review the JOBLOG and JESYSMSG output files for additional messages that may indicate why the open operation has failed. Consult the appropriate IBM Messages and Macro manuals for the meaning of the return code from OPEN.

---

**BJT11144E**      **RDJFCB FAILED FOR DD(ddname),  
RC=xxxxxxx**

---

**Explanation:** An error occurred while attempting a RDJFCB operation for the file allocated to the indicated DD statement.

**User Response:** Review the JOBLOG and JESYSMSG output files for additional messages that may indicate why the RDJFCB operation has failed. Consult the appropriate IBM Messages and Macro manuals for the meaning of the return code from RDJFCB.

---

**BJT12139I**      **BJTBAPR1 STARTED**

---

**Explanation:** BJTBAPR1 program execution has started.

**User Response:** None required.

---

**BJT12140I**      **BJTBAPR1 ENDED, RC=nnnn**

---

**Explanation:** BJTBAPR1 program execution has ended. The value following RC= is the return code from the program.

**User Response:** If the return code is not zero, check the SYSPRINT, JOBLOG, and JESYSMSG output files for messages that indicate the cause.

---

**BJT12141E**      **PARAM IS REQUIRED, BUT  
MISSING**

---

**Explanation:** A parameter is required on the JCL EXEC PGM= statement, but none was found.

**User Response:** Specify a 10-digit integer as a parameter on the EXEC PGM= JCL statement. This integer is the value of the ROWID column of the BJTARC table for the archived report to be recalled.

---

**BJT12142E**      **PARAM LENGTH MUST BE 10 BYTES**

---

**Explanation:** The parameter specified on the EXEC PGM= JCL statement was not 10 bytes in length.

**User Response:** Specify a 10-digit integer as a parameter on the EXEC PGM= JCL statement. This integer is the value of the ROWID column of the BJTARC table for the archived report to be recalled.

---

**BJT12143E**      **ARCHIVE ROWID MUST BE A  
VALID 10-DIGIT INTEGER**

---

**Explanation:** The parameter specified on the EXEC PGM= JCL statement was not a valid 10-digit integer.

**User Response:** Specify a 10-digit integer as a parameter on the EXEC PGM= JCL statement. This integer is the value of the ROWID column of the BJTARC table for the archived report to be recalled. This value may contain leading zeros, but may not contain any character other than 0-9.

---

**BJT12144E**      *ddname* **DD IS REQUIRED, BUT IS  
MISSING FROM JCL**

---

**Explanation:** A required DD statement was missing from the JCL.

**User Response:** Correct the JCL to include the required DD statement.

---

**BJT12145E**      **OPEN FAILED FOR DD(ddname),  
RC=xxxxxxx**

---

**Explanation:** The file allocated to the indicated DD statement could not be opened.

**User Response:** Review the JOBLOG and JESYSMSG output files for additional messages that may indicate why the open operation has failed. Consult the appropriate IBM Messages and Macro manuals for the meaning of the return code from OPEN.

---

**BJT13137I**      **BJTBAPR2 STARTED**

---

**Explanation:** BJTBAPR2 program execution has started.

**User Response:** None required.

---

**BJT13139I**      **BJTBAPR2 ENDED, RC=nnnn**

---

**Explanation:** BJTBAPR2 program execution has ended. The value following RC= is the return code from the program.

**User Response:** If the return code is not zero, check the SYSPRINT, JOBLOG, and JESYSMSG output files for messages that indicate the cause.

---

**BJT13140E**      **LOAD FAILED FOR  
MODULE=module RC=xxxxxxx**

---

**Explanation:** A LOAD was unsuccessful for the named module.

**User Response:** Review the JOBLOG and JESYSMSG output files for additional messages that may indicate why the load operation has failed. Consult the appropriate IBM Messages and Macro manuals for the meaning of the return code from LOAD. Make sure that the named module is available to the job via LINKLST, JOBLIB, STEPLIB, etc.

---

**BJT13141E**      **ARCHIVE ROWID IS NOT A VALID  
INTEGER**

---

**Explanation:** The ROWID value specified in the ROWID record in the file allocated to the SYSUT1 DD statement is not a valid integer.

**User Response:** Make sure that the file allocated to the SYSUT1 DD statement contains the proper input for this program. Also insure that the ROWID value is a valid 10-digit integer.

---

**BJT13142E**      **ARCHIVE ROWID RECORD NOT FOUND**

**Explanation:** The ROWID record in the file allocated to the SYSUT1 DD statement was not found.

**User Response:** Make sure that the file allocated to the SYSUT1 DD statement contains the proper input for this program.

---

**BJT13143S**      **CALL TO DSNTIAR FAILED**  
RC=xxxxxxx

**Explanation:** The DSNTIAR program has returned with a non-zero return code.

**User Response:** Refer to the appropriate DB2 documentation to resolve the problem.

---

**BJT13144E**  
\*\*\*\*\*  
\*\*\*\*\*  
\*\*\*\*\*

**Explanation:** This message contains the text of the DB2 SQL error message that has occurred.

**User Response:** Refer to the appropriate DB2 documentation to resolve the problem.

---

**BJT13145E**      **SQLERROR ENCOUNTERED**  
SQLCODE=nnnnnnnn

**Explanation:** An SQL error was encountered.

**User Response:** Refer to BJT10156E messages for a description of the error.

---

**BJT13146E**      **ddname DD IS REQUIRED, BUT IS MISSING FROM JCL**

**Explanation:** A required DD statement was missing from the JCL.

**User Response:** Correct the JCL to include the required DD statement.

---

**BJT13147E**      **OPEN FAILED FOR DD(ddname),**  
RC=xxxxxxx

**Explanation:** The file allocated to the indicated DD statement could not be opened.

**User Response:** Review the JOBLOG and JESYSMSG output files for additional messages that may indicate why the open operation has failed. Consult the appropriate IBM Messages and Macro manuals for the meaning of the return code from OPEN.

---

**BJT13148E**      **SYSPRINT DD IS REQUIRED, BUT IS MISSING FROM JCL**

**Explanation:** A required DD statement was missing from the JCL.

**User Response:** Correct the JCL to include the required DD statement.

---

**BJT13149E**      **OPEN FAILED FOR DD(SYSPRINT),**  
RC=xxxxxxx

**Explanation:** The file allocated to the indicated DD statement could not be opened.

**User Response:** Review the JOBLOG and JESYSMSG output files for additional messages that may indicate why the open operation has failed. Consult the appropriate IBM Messages and Macro manuals for the meaning of the return code from OPEN.

---

**BJT14138I**      **BJTBAPR3 STARTED**

**Explanation:** BJTBAPR3 program execution has started.

**User Response:** None required.

---

**BJT14139I**      **BJTBAPR3 ENDED, RC=nnnn**

**Explanation:** BJTBAPR3 program execution has ended. The value following RC= is the return code from the program.

**User Response:** If the return code is not zero, check the SYSPRINT, JOBLOG, and JESYSMSG output files for messages that indicate the cause.

---

**BJT14140E**      **INVALID PARM SPECIFIED, MUST BE 1 CHARACTER**

**Explanation:** The parameter specified on the EXEC PGM= JCL statement was not 1 byte in length.

**User Response:** Specify a single character as a parameter on the EXEC PGM= JCL statement. This value is used to update the MIGSTATE column of the BJTARC table and must be one of the following values: C, E, F, N, P, OR S.

---

**BJT14141E**      **INVALID PARM VALUE, MUST BE C, E, F, N, P, OR S**

**Explanation:** The parameter specified on the EXEC PGM= JCL statement was not one of the acceptable values.

**User Response:** Specify a single character as a parameter on the EXEC PGM= JCL statement. This value is used to update the MIGSTATE column of the BJTARC table and must be one of the following values: C, E, F, N, P, OR S.

---

**BJT14142E**      **LOAD FAILED FOR  
MODULE=*module* RC=*xxxxxxxx***

**Explanation:** A LOAD was unsuccessful for the named module.

**User Response:** Review the JOBLOG and JESYSMSG output files for additional messages that may indicate why the load operation has failed. Consult the appropriate IBM Messages and Macro manuals for the meaning of the return code from LOAD. Make sure that the named module is available to the job via LINKLST, JOBLIB, STEPLIB, etc.

---

**BJT14143E**      **ARCHIVE ROWID IS NOT A VALID  
INTEGER**

**Explanation:** The ROWID value specified in the ROWID record in the file allocated to the SYSUT1 DD statement is not a valid integer.

**User Response:** Make sure that the file allocated to the SYSUT1 DD statement contains the proper input for this program. Also insure that the ROWID value is a valid 10-digit integer.

---

**BJT14144E**      **ARCHIVE ROWID RECORD NOT  
FOUND**

**Explanation:** The ROWID record in the file allocated to the SYSUT1 DD statement was not found.

**User Response:** Make sure that the file allocated to the SYSUT1 DD statement contains the proper input for this program.

---

**BJT14145S**      **CALL TO DSNTIAR FAILED  
RC=*xxxxxxxx***

**Explanation:** The DSNTIAR program has returned with a non-zero return code.

**User Response:** Refer to the appropriate DB2 documentation to resolve the problem.

---

**BJT14146E**  
\*\*\*\*\*  
\*\*\*\*\*  
\*\*\*\*\*

**Explanation:** This message contains the text of the DB2 SQL error message that has occurred.

**User Response:** Refer to the appropriate DB2 documentation to resolve the problem.

---

**BJT14147E**      **SQLERROR ENCOUNTERED  
SQLCODE=*nnnnnnnn***

**Explanation:** An SQL error was encountered.

**User Response:** Refer to BJT10156E messages for a description of the error.

---

**BJT14148E**      ***ddname* DD IS REQUIRED, BUT IS  
MISSING FROM JCL**

**Explanation:** A required DD statement was missing from the JCL.

**User Response:** Correct the JCL to include the required DD statement.

---

**BJT14149E**      **OPEN FAILED FOR DD(*ddname*),  
RC=*xxxxxxxx***

**Explanation:** The file allocated to the indicated DD statement could not be opened.

**User Response:** Review the JOBLOG and JESYSMSG output files for additional messages that may indicate why the open operation has failed. Consult the appropriate IBM Messages and Macro manuals for the meaning of the return code from OPEN.

---

**BJT14150E**      **SYSPRINT DD IS REQUIRED, BUT  
IS MISSING FROM JCL**

**Explanation:** A required DD statement was missing from the JCL.

**User Response:** Correct the JCL to include the required DD statement.

---

**BJT14151E**      **OPEN FAILED FOR DD(SYSPRINT),  
RC=*xxxxxxxx***

**Explanation:** The file allocated to the indicated DD statement could not be opened.

**User Response:** Review the JOBLOG and JESYSMSG output files for additional messages that may indicate why the open operation has failed. Consult the appropriate IBM Messages and Macro manuals for the meaning of the return code from OPEN.

---

**BJT15140I**      **Output Manager Selector (008DC0D0)  
started.**

**Explanation:**

**User Response:**

---

**BJT15141I**      **Output Manager selector (008DC0D0)  
has terminated normally.**

**Explanation:**

**User Response:**

---

**BJT15142I**

**Explanation:**

**User Response:**

---

**BJTM000A**      *Started task is not active. Reason Code=reason*

**Explanation:** Where reason code =

- 1 - No product instance has ever been active.
- 2 - Internal error, name token footprint is bad.
- 3 - Internal error, no parm pointer.
- 4 - Internal error, bad parm pointer
- 5 - This product instance has never been active.
- 6 - This product instance is not currently active.

In terms of the system action, the requested function is not entered.

**User Response:** Report the problem to your product administrator.

Administrator: For reason codes 1, 5, and 6, request that the product instance, &BJTPROD, be started. For reasons 2, 3, and 4, report the problem to IBM Technical Support.

---

**BJTM000B**      *Truncation error on panel *panel name*, in program *module name**

**Explanation:** There is a problem with this panel. It will not display correctly.

**User Response:** Make a note of the panel name and program name (module name), then contact IBM Technical Support for assistance.

---

**BJTM000C**      *Severe error on panel *panel name*, in program *module name**

**Explanation:** There is a problem with the panel listed in the message.

**User Response:** Make a note of the panel and program name (module name), then contact IBM Technical Support for assistance.

---

**BJTM000D**      *Critical error on panel *panel name*, in program *module name*, rc=return code*

**Explanation:** There is a problem with the panel listed in the message.

**User Response:** Make a note of the panel name, program name (module name), and return code. Contact IBM Technical Support for assistance.

---

**BJTM000E**      *Invalid command. Command is not a valid command*

**Explanation:** The command you entered does not work on this screen.

**User Response:** If you were trying to use a line command, check to see if you typed it in the correct field (Cmd). Otherwise, use a different command

---

**BJTM000F**      *Bad product ptr. Bad product pointer passed to *module name**

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the module name listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM000G**      *Bad parm ptr. Bad parameter pointer passed to *module name**

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the module name listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM000H**      *Invalid option. Internal error, invalid option passed to *module name**

**Explanation:** The option you specified does not work for this part of the program, and an internal error occurred.

**User Response:** Make a note of the module name listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM000I**      *Storage exhausted. Storage exhausted in module *module name*, rc=return code, occ=reason code*

**Explanation:** A problem occurred while attempting to store an archive.

**User Response:** Make a note of the module name, return code, and reason code, then contact IBM Technical Support for assistance.

---

**BJTM000J**      *Invalid Command. Command is invalid. Please select a menu option.*

**Explanation:** The command you typed does not work on this screen.

**User Response:** Choose one of the menu options listed on the screen.

---

**BJTM000K**      *Internal error. Command processing set option from command.*

**Explanation:** An internal error occurred that requires further investigation.

**User Response:** Make a note of the problem and command listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM000L Request canceled by user.**

---

**Explanation:** You cancelled this process.

**User Response:** None required.

---

**BJTM000M Error in program *program name* attempting to display panel *panel name*, rc=*reason code*.**

---

**Explanation:** An error occurred while Output Manager was trying to display a specific panel. This error requires further investigation.

**User Response:** Refer to the program or module name, the panel (screen) name, and the reason code for details on why this error occurred. Contact IBM Technical Support for assistance.

---

**BJTM050A Get control failed rc=*return code*, rs=*reason***

---

**Explanation:** This is an error that requires further investigation.

**User Response:** Make a note of the return and reason codes listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM050B IBM Output Manager is available. Last verified on *date* on system *system name*. Started task was *task name*, product name was *product name*.  
  
This verification occurred at *date* on system, *system name*. Started task is *task name*, product name is *product name*.**

---

**Explanation:** This message displays when you choose the Installation Verification option on the Output Manager main menu and the installation of Output Manager was successful.

**User Response:** None required.

---

**BJTM050C Update control failed, rc=*return code*, rs=*reason*.**

---

**Explanation:** An error occurred while performing an update.

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM060A Invalid condition specified in the Condition column.**

---

**Explanation:** The only valid entries for the Condition field 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). Do not use symbols in this field, such as =, <, or >, but only the two-letter codes listed above.

**User Response:** Type a different entry for the Condition field.

---

**BJTM150A Archive query failure. Return code=*rc*, Reason code=*rs*.**

---

**Explanation:** An attempt to query the archive failed.

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM150B No archives found that match the requested criteria.**

---

**Explanation:** None

**User Response:** Type different criteria.

---

**BJTM150C Archive invalid. Internal error footprint mismatch.**

---

**Explanation:** This problem requires further investigation.

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM150D No results found that match the requested criteria.**

---

**Explanation:** None

**User Response:** Type different criteria.

---

**BJTM150E Storage exhausted for archive linklist rc=*return code*.**

---

**Explanation:** A storage problem occurred, which requires further investigation.

**User Response:** Make a note of the return code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM150F Storage exhausted for archive linklist, rc=*return code*, rs=*reason code***

---

**Explanation:** A storage problem occurred that requires further investigation.

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM150G**      **Storage exhausted for view linklist**  
*rc=return code.*

**Explanation:** A storage problem occurred that requires further investigation.

**User Response:** Make a note of the return code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM150H**      **Invalid view option, only Job, Step, Stats, or All allowed.**

**Explanation:** You can change the view on this screen so that the information you want to display appears on this screen. However, you must type one of the options listed in the message.

**User Response:** Type either Job, Step, Stats, or All.

---

**BJTM150I**      **Invalid line cmd, only B (Browse) or V (View) are allowed.**

**Explanation:** You typed a line command that does not work on this screen.

**User Response:** Type either B for Browse or V for View.

---

**BJTM150J**      **Invalid search option. Only Jobname, migrated, sysout, or generic allowed**

**Explanation:** The search option you typed will not work on this screen.

**User Response:** Type one of the options listed in the message.

---

**BJTM150K**      **Request cancelled**

**Explanation:** None

**User Response:** None required.

---

**BJTM150L**      **Invalid preference opt, only Initial or Save allowed**

**Explanation:** In setting up your preferences, you typed a value that is not accepted on this screen.

**User Response:** Type only Initial or Save for this preference option.

---

**BJTM150M**      **Preference saved in profile dataset**

**Explanation:** Your preferences have been saved.

**User Response:** None required.

---

**BJTM150N**      **Invalid print option only Override or Attr allowed**

**Explanation:** You typed a value that is not accepted for this print option.

**User Response:** Type either Override, which allows you to make a "this time only" change in the distribution list, or Attr to view printer attributes.

---

**BJTM150O**      **Invalid search option, only Jobname, Migrated, Sysout, Generic, or All allowed**

**Explanation:** You cannot perform a search using the option you entered.

**User Response:** Type one of the values listed in the message to perform a search.

---

**BJTM150P**      **Print service failed for data set name, rc= return code, rs = reason.**

**Explanation:** The archive data set did not print.

**User Response:** Make a note of the data set name, return code, and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM150Q**      **Archive queued for printing, dsn=data set name**

**Explanation:** The data set containing the archive is in the print queue.

**User Response:** None required.

---

**BJTM150R**      **Free failed**

**Explanation:** This requires further investigation.

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM150S**      **Attempt to free output descriptors failed, rc=return code, rs=reason code**

**Explanation:** This requires further investigation.

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM150T**      **Unable to complete print request due to output descriptor allocation failure, rc=return code, rs=reason code**

**Explanation:** This requires further investigation.

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM160A**      **No parameter passed to BJTUARCV.**

**Explanation:** A parameter was expected, but not provided.

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM160B**      **Invalid parameter passed to BJTUARCV.**

**Explanation:** None

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM160C**      **Allocation failed.**

**Explanation:** None

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM160D**      **LMMINIT failed.**

**Explanation:** None

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM160E**      **View failed.**

**Explanation:** The view you requested could not be processed.

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM160F**      **FREE failed. Unable to free dataset**  
*rc=return code, rs=reason code.*

**Explanation:** This problem requires further investigation.

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM160G**      **Report viewed. Successfully viewed report.**

**Explanation:** None

**User Response:** None required.

---

**BJTM160H**      **LMFREE failed**

**Explanation:** None

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTMH160I**      **Invalid option passed to BJTUARCV**

**Explanation:** An option was selected and passed that does not relate to this part of the program, resulting in an error.

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM160J**      **Open failed**

**Explanation:** None

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM160K**      **Read failed by product, rc=return code,**  
*rs=reason*

**Explanation:** An attempt to read failed, which requires further investigation.

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM160L**      **Close failed for DDname, rc=return**  
*code, rs=reason*

**Explanation:** A close process failed for the specific DD card listed in the message.

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM160M**      **Attributes failure, rc=return code,**  
*rs=reason*

**Explanation:** There is a problem with the attributes that are assigned, causing a failure.

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM160N**      *Attribute not found. Archive attribute*  
**not on file.**

**Explanation:** The archive attribute listed in the message could not be found.

**User Response:** Try assigning a different archive attribute to the rule.

---

**BJTM160P**      **Temp alloc failed, rc=return code,**  
*rs=reason*

**Explanation:** A failure occurred during allocation.

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM160Q**      **Open failed of temporary file,**  
*rc=return code, rs=reason*

**Explanation:** None

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM160R**      **Archive failure, rc=return code,**  
*rs=reason*

**Explanation:** None

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM160S**      **Archive not found, row row name was**  
**not found.**

**Explanation:** None

**User Response:** Make a note of the row listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM160T**      **Point failed, rc=return code, rs=reason**

**Explanation:** The program attempted to point to a module, but was unsuccessful.

**User Response:** Refer to the return code and reason code listed in the message for more details on why it failed. Contact Technical Support if you need assistance.

---

**BJTM180A**      **Selection failed. rc = return code, rs =**  
*reason*

**Explanation:** A failure occurred during a selection process.

**User Response:** Refer to the return code and reason code in the message for more information. Contact IBM Technical Support for assistance.

---

**BJTM180B**      **Before/After Error. Only one before or**  
**after line command allowed.**

**Explanation:** Cannot use two Before or After line commands.

**User Response:** Specify only one Before or After line command.

---

**BJTM180C**      **Copy error. Program hit unknown**  
**state**

**Explanation:** An error occurred during a Copy process.

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM180D**      **No rules found that match selection**  
**criteria**

**Explanation:** None

**User Response:** Enter different selection criteria.

---

**BJTM180E**      **Selection rules saved.**

**Explanation:** None

**User Response:** None required.

---

**BJTM180F**      **Copy error, only 1 entry can be copied**  
**at a time**

**Explanation:** A copy error occurred because more than one entry was selected.

**User Response:** Choose one entry to copy.

---

**BJTM180G**      **Move error, only 1 entry can be moved**  
**at a time.**

**Explanation:** A move error occurred because more than one entry was selected.

**User Response:** Choose one entry to move.

---

**BJTM180H**      **Update service failed. rc=return code,**  
*rs = reason*

**Explanation:** An attempt to update data failed.

**User Response:** Refer to the return code and reason code for more information. Contact IBM Technical Support for assistance.

---

**BJTM180I**      **COPY PENDING. You must select**  
**both a copy point and a paste point.**

**Explanation:** You have indicated that you want to use the Copy command, but have not selected the data you want to copy.

**User Response:** Select a Copy point and a Paste point so the Copy process can be done.

---

**BJTM180J**      **Paste Error. Cannot use BOTH Before**  
**and After**

**Explanation:** An error occurred while attempting to use the Paste command, because both Before and After were specified.

**User Response:** Specify either Before or After, but not both, and try the paste process again.

---

**BJTM180K**      **Invalid Line Command. That command is not supported.**

**Explanation:** The line command you entered is not valid on this screen.

**User Response:** Try a different line command.

---

**BJTM180L**      **Bad select ID. Internal error footprint mismatch.**

**Explanation:** This error requires further investigation.

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM180M**      **Storage exhausted for select linklist.**

**Explanation:** This error requires further investigation.

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM180N**      **Free failed for archive result set, rc=return code, rs=reason**

**Explanation:** An attempt was made to free an archive result set, but the attempt failed.

**User Response:** Refer to the return code and reason code for more information. Contact IBM Technical Support for assistance.

---

**BJTM180O**      **Storage exhausted for view linklist, rc=return code**

**Explanation:** This error requires further investigation.

**User Response:** Make a note of the return code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM180P**      **View requires an operand, Jobs, Sysout, All**

**Explanation:** You must indicate whether you want to view the data by job name, sysout, or all data.

**User Response:** Choose either Job, Sysout, or All for your view.

---

**BJTM180Q**      **Invalid LINK command**

**Explanation:** The Link command does not work on this screen.

**User Response:** Use a different command.

---

**BJTM180R**      **Invalid PREFER command**

**Explanation:** The PREFER command does not work on this screen.

**User Response:** Use a different command.

---

**BJTM180S**      **Preferences saved in your profile dataset.**

**Explanation:** The entries you made for preferences were saved in your profile dataset.

**User Response:** None required.

---

**BJTM180T**      **Request cancelled.**

**Explanation:** None.

**User Response:** None required.

---

**BJTM180U**      **Rules refreshed from database.**

**Explanation:** None

**User Response:** None required.

---

**BJTM180V**      **No changes made to rules, update not attempted.**

**Explanation:** None

**User Response:** None required.

---

**BJTM180W**      **Internal error, module name called with invalid option option name.**

**Explanation:** This internal error requires further investigation.

**User Response:** Make a note of the module name and option name listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM180X**      **No reports have been defined by the administrator.**

**Explanation:** There are no custom reports for you to view.

**User Response:** None required.

---

**BJTM180Y**      **Invalid LINK command**

**Explanation:** You cannot use the Link command on this screen.

**User Response:** Use a different command.

---

**BJTM180Z      Rule deleted**

**Explanation:** You used a line command to delete an interceptor, selector, or report rule, and this message confirms that the rule was deleted.

**User Response:** None required.

---

**BJTM190A      Invalid Status. Only Enabled or Disabled allowed.**

**Explanation:** You typed something other than Enabled or Disabled in the Status field for this rule.

**User Response:** Enter either Enabled (activate) or Disabled (inactivate) in the Status field for this rule.

---

**BJTM190B      Invalid Disposition. Only Keep or Delete allowed.**

**Explanation:** You typed something other than Keep or Delete in the Disposition field for this sysout.

For interceptor rules, Keep sends the data to the spool, but makes a copy of it for the archive at the same time. For selector rules, Keep means keep the data on the spool and make a copy of it for the archive.

For interceptor rules, Delete prevents the data from going to the spool, but makes a copy of the data for the archive. For selector rules, Delete removes the data from the spool after making a copy of the data for the archive.

**User Response:** Enter either Keep or Delete in the Disposition field.

---

**BJTM190C      Invalid (entry for) Exists. Only Leave, Replace or Extend allowed.**

**Explanation:** You must tell Output Manager what to do if an archive already exists. Type one of the following in the Exists field:

- Replace - Replace the data in the archive with the new data.
- Leave - Leave the old data in the archive and do not update it. Keep the data on the spool.
- Extend - Write the new data at the end of the old archive data set.

**User Response:** Type Leave, Replace, or Extend in the Exists field.

---

**BJTM190D      Invalid Job type. Only All, Batch, Tso, Stc, or APPC allowed.**

**Explanation:** You must indicate the type of job that this rule applies to. Valid entries for the Job Type field are:

- All - all jobs
- Batch - only jobs processed in batch mode

- Appc - only jobs associated with a specific application
- Tso - only jobs processed on TSO systems.
- Stc - only jobs related to the started task

**User Response:** Type either All, Batch, Tso, Stc, or APPC in the Job Type field.

---

**BJTM190E      Invalid jesqueue. Only All, Hold, External Writer, Write, or Hold allowed.**

**Explanation:** You must indicate what to do with the jobs in the JES queue that will be archived. Valid entries are:

- All - Select all jobs in the JES queue.
- External - Only select jobs assigned to a special, external writer. This may or may not be a printer.
- Write - Select jobs that are ready to be written to a printer.
- Hold - Select jobs that are on hold in the JES queue, and are not ready to be written.

**User Response:** Specify either All, Hold, External Writer, Write, or Hold for the JES queue field.

---

**BJTM190F      Invalid Capture. Only Yes or No allowed.**

**Explanation:** You must indicate if you want the information associated with the SYSOUT, such as printer attributes, to be saved in the archive with the data.

**User Response:** Type Yes or No in the Capture Attr field.

---

**BJTM190G      Jobname is required.**

**Explanation:** You must type the name of a job to associate with this rule.

**User Response:** Type a job name.

---

**BJTM190H      At least one of proc name, step name, procstep, or step number.**

**Explanation:** You need to enter more job information.

**User Response:** Specify either a Proc Name, Step Name, Proc Step, or Step Number.

---

**BJTM190I      DD name is required.**

**Explanation:** You left the DD name field blank. This is a required field.

**User Response:** Type up to eight (8) characters for the name of the DD statement that is associated with this custom report.

---

**BJTM190J**      **Invalid dialog exit. Only Save, Prompt, or Nosave allowed.**

**Explanation:** Indicate what you want Output Manager to do when you exit a dialog: Save your entries, give you a Prompt (a pop-up window) so you can choose whether to save your entries, or do not save your entries (Nosave).

**User Response:** Type Save, Prompt, or Nosave to indicate what Output Manager should do when you exit a dialog.

---

**BJTM190K**      **Invalid level exit. Only Save, Prompt, or Nosave allowed.**

**Explanation:** Indicate what you want Output Manager to do when you exit a level: Save your entries, give you a Prompt (a pop-up window) so you can choose whether to save your entries, or do not save your entries (Nosave).

**User Response:** Type Save, Prompt, or Nosave to indicate what Output Manager should do when you exit a level.

---

**BJTM190L**      **Invalid delete option. Only Prompt or Noprompt allowed.**

**Explanation:** Indicate what you want Output Manager to do when you use a Delete line command: Display a window (Prompt) asking you to confirm the deletion or automatically perform the deletion (Noprompt).

**User Response:** Type either Prompt or Noprompt to indicate how to handle any Delete requests.

---

**BJTM190M**      **Preferences saved in your profile dataset.**

**Explanation:** This is an informative message.

**User Response:** None required.

---

**BJTM190N**      **Invalid view option, only Job, Sysout, Report, or All allowed.**

**Explanation:** You can change how information is displayed by choosing the column that is most important to you.

**User Response:** Specify the view you want to have displayed by choosing Job, Sysout, Report, or All.

---

**BJTM200A**      **Invalid color, only Red, Pink, Green, Yellow, Blue, Turquoise or White allowed.**

**Explanation:** There are many colors to choose from, but not the one you entered.

**User Response:** Type R (red), P (pink), G (green), Y (yellow), B (blue), T (turquoise) or W (white) to select a color for this field.

---

**BJTM200B**      **Invalid hilite, only None, Blink, Reverse, Uscore allowed**

**Explanation:** Indicate how you want to highlight information.

**User Response:** Type either Blink (flashing), Reverse (background and foreground colors are reversed), Uscore (underscore the text), or None.

---

**BJTM200C**      **Invalid intensity, only Low or High allowed.**

**Explanation:** Indicate the level of intensity (brightness) that you want to use for this type of information.

**User Response:** Type either Low or High for the level of intensity.

---

**BJTM200D**      **Preferences saved in your profile dataset.**

**Explanation:** This is for your information only.

**User Response:** None required.

---

**BJTM200E**      **Invalid parm, internal error  
parm=*parm name***

**Explanation:** The parameter name listed in the message is invalid.

**User Response:** Try using a different parameter or contact IBM Technical Support for assistance.

---

**BJTM200Z**      **Licensed Materials - Property of IBM  
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Copyright (C) 2002 Rocket Software,  
Inc.  
All rights reserved.  
IBM is a registered trademark of  
International Business Machines Co.  
Rocket is a registered trademark of  
Rocket Software, Inc.**

**Explanation:** This is for your information only.

**User Response:** None required.

---

**BJTM250A**      **Invalid Command, *command* is not a valid command.**

**Explanation:** The command you entered does not work on this screen.

**User Response:** Try a different command.

---

**BJTM250B**      **Select Error. Internal select error  
*command*.**

**Explanation:** A selection error occurred.

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM300A**      **Query failed for distribution list, rc = return code, rs = reason code**

**Explanation:** The distribution list you wanted could not be displayed.

**User Response:** Look at the return code and reason code for more details on why the query failed. Check to ensure that the subsystem containing this distribution list is active. Otherwise, try selecting a different distribution list.

---

**BJTM300B**      **No recipient found that match the requested criteria.**

**Explanation:** None

**User Response:** Try entering different criteria.

---

**BJTM300C**      **Bad distribution list. Internal error footprint mismatch.**

**Explanation:** This message requires further investigation.

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM300D**      **No results found that matched the requested criteria.**

**Explanation:** None

**User Response:** Try entering different criteria.

---

**BJTM300E**      **Storage exhausted for recipient linklist, rc = return code.**

**Explanation:** This message requires further investigation.

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM300F**      **Free failed for recipient result set, rc = return code, rs = reason code**

**Explanation:** This message requires further investigation.

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM300G**      **Storage exhausted for view linklist, rc = return code**

**Explanation:** This message requires further investigation.

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM300H**      **Insert failed for distribution list, rc = return code, rs = reason code**

**Explanation:** An attempt was made to either insert a new distribution list or insert a new recipient in an existing distribution list, but the insertion process failed.

**User Response:** Refer to the return code and reason code for more details on why the Insert process failed. Contact Technical Support for assistance.

---

**BJTM300I**      **Entry added.**

**Explanation:** None

**User Response:** None required.

---

**BJTM300J**      **Request cancelled per user request.**

**Explanation:** None

**User Response:** None required.

---

**BJTM300K**      **Update failed for distribution list, rc=return code, rs=reason.**

**Explanation:** You attempted to use the Edit line command to update a distribution list, but it did not work.

**User Response:** Refer to the return code and reason code for more details on why the update process failed. Contact IBM Technical Support for assistance.

---

**BJTM300L**      **Update complete for distribution list.**

**Explanation:** None

**User Response:** None required.

---

**BJTM300M**      **Delete failed for distribution list, rc=return code, rs=reason.**

**Explanation:** You attempted to delete a distribution list, but this did not work.

**User Response:** Refer to the return code and reason code for more details. Contact IBM Technical Support for assistance.

---

**BJTM300N**      **Delete complete for distribution list.**

**Explanation:** None.

**User Response:** None required.

---

**BJTM300O**      **Description required for distribution list.**

**Explanation:** You must type a name for your distribution list.

**User Response:** Type up to 60 characters for the description or name for this distribution list.

---

**BJTM300P**      **No recipients exist for this list, add them if you wish.**

**Explanation:** There are no individual recipients (IDs) assigned to this distribution list.

**User Response:** Use the Add line command to add one or more recipient IDs to a distribution list.

---

**BJTM310A**      **Query failed for distribution list, rc = return code, rs = reason code**

**Explanation:** An attempt was made to query a distribution list, but it did not work.

**User Response:** Refer to the return code and reason code for more details. Contact IBM Technical Support

---

**BJTM310B**      **No recipient (or list) found that match the requested criteria**

**Explanation:** None

**User Response:** Try different criteria.

---

**BJTM310C**      **Bad distribution list. Internal error footprint mismatch**

**Explanation:** This error requires further investigation.

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM310D**      **No results found that match the requested criteria.**

**Explanation:** None

**User Response:** None required.

---

**BJTM310E**      **Storage exhausted for recipient linklist, rc=return code**

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the return code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM310F**      **Free failed for recipient result set, rc=return code, rs=reason**

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM310G**      **Storage exhausted for view linklist, rc=return code**

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the return code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM310H**      **Insert failed for distribution list, rc=return code, rs=reason code**

**Explanation:** You attempted to use the Insert line command to add a distribution list, but it did not work.

**User Response:** Refer to the return code and reason code for more details. Contact IBM Technical Support for assistance.

---

**BJTM310I**      **Distribution list, list name, has been saved.**

**Explanation:** The distribution list that is named in the message was saved.

**User Response:** None required.

---

**BJTM310J**      **Request cancelled per user request.**

**Explanation:** None.

**User Response:** None required.

---

**BJTM310K**      **Internal error, size mismatch ui size=return code, db size=size**

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the return code and size listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM310L**      **Storage exhausted for new recipient node, rc=return code**

**Explanation:** A distribution list can hold a maximum of 127 recipients.

**User Response:** Make a note of the return code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM310M**      **Invalid value, only List or Id are allowed.**

**Explanation:** Indicate whether the recipients you want to locate are in a distribution list (List) or are individual recipients (ID).

**User Response:** Type either List or ID and press Enter to continue.

---

**BJTM310N**      **Refreshed, data was refreshed from database.**

**Explanation:** None

**User Response:** None required.

---

**BJTM310P**      **Recipients added to distribution list.**

**Explanation:** None

**User Response:** None required.

---

**BJTM310Q**      **No recipients added. Selected entries already on list.**

**Explanation:** The recipients that you selected to add to a list are already a part of that list.

**User Response:** Choose different recipients for this list.

---

**BJTM310R**      **Distribution list override failed, rc=return code, rs=reason code**

**Explanation:** An attempt to override the distribution list assigned to a specific custom report did not work.

**User Response:** Refer to the return code and reason code listed in the message. Contact IBM Technical Support for assistance.

---

**BJTM350A**      **Query failed for recipient ID, rc=return code, rs=reason code**

**Explanation:** The program could not locate the recipient ID you selected.

**User Response:** Refer to the return code and reason code for more details. Contact IBM Technical Support for assistance.

---

**BJTM350B**      **No recipient found that match the requested criteria**

**Explanation:** None

**User Response:** Try entering different criteria or no criteria to see a complete list.

---

**BJTM350C**      **Bad recipient ID. Internal error footprint mismatch.**

**Explanation:** This error requires further investigation.

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM350D**      **No results found that match the requested criteria.**

**Explanation:** None

**User Response:** Try entering different criteria or no criteria.

---

**BJTM350E**      **Storage exhausted for recipient linklist, rc=return code**

**Explanation:** This message requires further investigation.

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM350F**      **Free failed for recipient result set, rc = return code, rs = reason code**

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM350G**      **Storage exhausted for view linklist, rc = return code**

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the return code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM350H**      **Recipient has not been deleted.**

**Explanation:** You used the Delete line command, but then cancelled the deletion.

**User Response:** None required.

---

**BJTM350I**      **Delete service failed, rc=return code, rs=reason**

**Explanation:** The delete process failed.

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM350J**      **Recipient has been deleted.**

**Explanation:** None

**User Response:** None required.

---

**BJTM350K**      **Invalid view option, only Name, Print, or All allowed.**

**Explanation:** You are attempting to change the display of information on a screen, based on a specific column.

**User Response:** The view can be adjusted to display by Name, Print, or All columns.

---

**BJTM350L**      **Internal error, size mismatch ui size =size or return code, db size=size or reason code**

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the sizes or return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM400A**      **Query failed for printer attributes, rc = return code, rs = reason code**

**Explanation:** An attempt to access the printer attributes failed.

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM400B**      **No printer attributes that match the requested criteria.**

**Explanation:** None

**User Response:** Try entering different criteria or no criteria.

---

**BJTM400C**      **Bad attribute ID. Internal error footprint mismatch.**

**Explanation:** This message requires further investigation.

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM400D**      **No results found that matched the request criteria.**

**Explanation:** None

**User Response:** Try entering different criteria or no criteria.

---

**BJTM400E**      **Storage exhausted for recipient linklist, rc = return code**

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the return code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM400F**      **Free failed for recipient result set, rc=return code, rs=reason**

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM400G**      **Storage exhausted for view linklist, rc = return code**

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the return code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM400H**      **Printer attribute entry has not been deleted.**

**Explanation:** None

**User Response:** None required.

---

**BJTM400I**      **Delete failed, rc=return code, rs=reason**

**Explanation:** None

**User Response:** Refer to the return code and reason code for more information on why the delete process failed.

---

**BJTM400J**      **Entry has been deleted.**

**Explanation:** None

**User Response:** None required.

---

**BJTM400K**      **View requires an operand, PRINT, PSF, LASER, MISC, or ALL.**

**Explanation:** You are attempting to change the display of information on the Printer Attributes screen, but have not selected a valid view.

**User Response:** Type or select PRINT to display print fields, PSF for psf fields, LASER for 3800 fields, MISC for miscellaneous fields, or ALL for all fields.

---

**BJTM410A**      **Insert failed for recipient ID, rc =**  
*return code, rs = reason code*

**Explanation:** You attempted to insert a recipient ID, but it did not work.

**User Response:** Refer to the return code and reason code for more details on why this Insert process failed. Contact IBM Technical Support for assistance.

---

**BJTM410B**      **Replace failed for recipient ID rc =**  
*return code, rs = reason code*

**Explanation:** You attempted to replace a recipient ID with another ID, but it did not work.

**User Response:** Refer to the return code and reason code for more details. Contact IBM Technical Support for assistance.

---

**BJTM410C**      **Storage exhausted for new linklist**  
**row, record added successfully.**

**Explanation:**

**User Response:**

---

**BJTM410D**      **Read by rowid failed, rowid=rowid,**  
*rc=return code, rs=reason*

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the row ID, return code, and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM410E**      **Invalid link option, only CHOPRT**  
**and EDIPRT allowed.**

**Explanation:** None

**User Response:** None required.

---

**BJTM410F**      **SAVE command disabled for**  
**Print/Reprint Override processing**

**Explanation:** None

**User Response:** None required.

---

**BJTM420A**      **Invalid input. Name out can only be**  
**Yes or No**

**Explanation:** The Name out field appears when you Insert or Edit a recipient ID. The only valid entries for this field are Yes and No.

**User Response:** Type Yes or No in the Name out field to indicate whether this recipient's name should be generated as part of the output card.

---

**BJTM420B**      **Invalid input. Hard copy can only be**  
**Yes or No**

**Explanation:** The Hard Copy field only accepts Yes or No to indicate whether this person should always get a hard copy (print out) of any report referencing that distribution list.

**User Response:** Type Yes or No for the Hardcopy field.

---

**BJTM420C**      **Invalid input. Duplex can only be No,**  
**Normal, or Tumble**

**Explanation:** The entry you made for the Duplex field when inserting or editing a Recipient ID is not valid.

**User Response:** Type either No, Normal, or Tumble for the Duplex field.

---

**BJTM420D**      **Invalid input. Burst can only be Yes or**  
**No**

**Explanation:** The entry you made for the Burst field when inserting or editing a Recipient ID is not valid. To "burst" a report means to separate the report into smaller reports based on specific criteria, such as branch ID.

**User Response:** Type either Yes or No in the Burst field.

---

**BJTM420E**      **Invalid input. Label can only be Yes**  
**or No**

**Explanation:** You typed an invalid entry in the Label field when inserting or editing a Recipient ID. The Label field determines whether a security label is printed with the report.

**User Response:** Type Yes or No in the Label field, or leave it blank.

---

**BJTM420F**      **Sysarea can only be Yes or No**

**Explanation:** You typed an invalid entry in the Sysarea field when inserting or editing a Recipient ID. The Sysarea field determines whether a System area label is printed with the report.

**User Response:** Type Yes or No in the Sysarea field, or leave it blank.

---

**BJTM440A**      **Invalid input. Control can only be**  
**Program, Single, Double or Triple.**

**Explanation:** You typed an invalid entry in the Control field on the Printer Attributes Detail screen.

**User Response:** Type up to eight (8) characters for the printer control to indicate the spacing for the output. Valid values are:

- Program - Each logical record starts with a carriage control character.
- Single - Print the output with single spacing.

- Double - Print the output with double spacing.
- Triple - Print the output with triple spacing.

---

**BJTM440B**      **Invalid input. Normal disposition can only be Write, Hold, Keep, Leave or Purge.**

**Explanation:** The value you typed in the Normal Disposition field is not valid.

**User Response:** Type either Write, Hold, Keep, Leave, or Purge in the Normal Disposition field.

---

**BJTM440C**      **Invalid input. Abnormal disposition can only be Write, Hold, Keep, Leave, or Purge.**

**Explanation:** The value you typed for the Conditional Disposition field is not valid.

**User Response:** Type either Write, Hold, Keep, Leave, or Purge in the Conditional Disposition field.

---

**BJTM440D**      **Invalid input. Form length metric can only be Inches or CM.**

**Explanation:** The Form Length field consists of two entries. The first is for a number, the second accepts only Inches or CM.

**User Response:** Type a number in the first Form Length field, and either Inches (uppercase "I") or CM in the second Form Length field.

---

**BJTM440E**      **Invalid input. Error blocking can only be Block, Unblock, Char blk or Pos blk**

**Explanation:** The entry you made in the Err Blocking field is not valid. There are two type of errors that can either be reported normally or blocked:

- *Print-positioning errors.* These 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.
- *Invalid-character errors.* These errors occur when a text character is not part of a font set.

Type one of the following to indicate how to handle "positional" and "invalid character" errors:

- **Block** - Print-positioning errors and invalid-character errors are not reported to PSF.
- **Unblock** - Print-positioning errors and invalid-character errors are reported to PSF.
- **Char Blk** - Invalid-character errors are blocked, but print-positioning errors are reported.
- **Pos blk** - Print-positioning errors are blocked, but invalid-character errors are reported.

**User Response:** Type either Block, Unblock, Char blk, or Pos blk in the Err Blocking field.

---

**BJTM440F**      **Invalid input. Print errors can only be Yes or No.**

**Explanation:** The entry you made in the Print Errors field is not valid. In the first field, type "Yes" or "No" to indicate whether all error messages should be printed at the end of the output data set. If you type "No", the only messages that are printed are those that force an early termination of the print job.

In the second field, type a number from 0 - 999 to indicate the maximum number of error messages to allow before cancelling the printing of the current data set. A value of zero (0) is treated as infinite. This message count includes all error messages that are generated by PSF, even if you specified "No" in the first field to prevent the printing of error messages.

**User Response:** Type Yes or No in the first field and a number between 0 - 999 in the second field.

---

**BJTM440G**      **Invalid input. Print error disposition can only be Quit or Hold**

**Explanation:** The entry you made in the Error Disposition field is not valid. Type one of the following values to indicate what to do if an error occurs during printing that forces the termination of the print job:

- **Quit** - Release the data set back to JES as complete, even if an early termination error occurs during printing.
- **Hold** - Keep the data set on the spool until a system operator releases it.

**User Response:** Type either Quit or Hold in the Error Disposition field.

---

**BJTM440H**      **Invalid input. Overflow can only be Yes or No**

**Explanation:** The entry you made in the Overflow field is not valid. Indicate whether to perform a JES3 overflow check by entering one of the following values:

- **Yes** - The printer should eject whenever an end-of-forms indicator is encountered.
- **No** - Do not check for forms overflow.

**User Response:** Type either Yes or No in the Overflow field.

---

**BJTM440I**      **Invalid input. Table reference character can only be Yes or No**

**Explanation:** The entry you made for the table reference character field (Table ref chr) is not valid. Type Yes or No to indicate whether the data contains table reference characters (TRC) codes. The TRC code indicates which font in the "Char arg tbl" field should be used to print the record.

**User Response:** Type Yes or No in the Table ref chr field.

---

**BJTM440J**      **Invalid input. Resolution format can only be P240 or P300.**

**Explanation:** The entry you made in the Resolution field is not valid. Type one of the following to indicate the type of resolution used to format the print data set:

- **P240** - Formatted with 240 pels per inch.
- **P300** - Formatted with 300 pels per inch.

**User Response:** Type either P240 or P300 in the Resolution field.

---

**BJTM450A**      **Status set to disabled, due to no archive link established**

**Explanation:** To change the status to "enabled," meaning active, you must associate an archive with this rule.

**User Response:**

---

**BJTM450B**      **Status set to disabled, selector must have at least one field set.**

**Explanation:** This selector rule is "disabled," meaning "inactive."

**User Response:**

---

**BJTM450C**      **Status set to disabled, interceptor must have at least one field set.**

**Explanation:** This interceptor rule is "disabled," meaning "inactive."

**User Response:**

---

**BJTM450D**      **Status set to disabled, reports must have a name.**

**Explanation:** This rule is now "disabled," meaning "inactive."

**User Response:**

---

**BJTM450E**      **Status set to disabled, JOBNAME is required for reports.**

**Explanation:** This rule is "disabled," meaning "inactive," because there is no job name associated with this rule.

**User Response:** Type up to eight (8) characters for a job name to associate with this rule.

---

**BJTM450F**      **Status set to disabled, STEPNAME is required for reports.**

**Explanation:** This rule is "disabled," meaning "inactive," because there is no step name associated with this rule.

**User Response:** Type up to eight (8) characters for a step name to associate with this rule.

---

**BJTM450G**      **Status set to disabled, DDNAME is required for reports.**

**Explanation:** This rule is "disabled," meaning "inactive," because there is no DD name associated with this rule.

**User Response:** Type up to eight (8) characters for a DD name to associate with this rule.

---

**BJTM500A**      **Query failed for archive attributes, rc=return code, rs=reason**

**Explanation:** An attempt to query Archive Attributes failed.

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM500B**      **No archive attributes that match the requested criteria.**

**Explanation:** None

**User Response:** Try entering different criteria or no criteria.

---

**BJTM500C**      **Bad attribute ID. Internal error footprint mismatch.**

**Explanation:** This message requires further investigation.

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM500D**      **No results found that match the requested criteria.**

**Explanation:** None

**User Response:** Try entering different criteria or no criteria.

---

**BJTM500E**      **Storage exhausted for archive attribute linklist, rc=return code.**

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the return code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM500F**      **Free failed for archive attribute result set, rc=return code, rs=reason.**

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM500G**      **Storage exhausted for view linklist,**  
*rc=return code.*

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the return code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM500H**      **Archive attribute entry has not been**  
**deleted.**

**Explanation:** You may have selected an archive attribute name to delete, then cancelled the deletion.

**User Response:** None required.

---

**BJTM500I**      **Delete failed, rc=return code, rs=reason**

**Explanation:** None

**User Response:** Refer to the return code and reason code for more details. Contact IBM Technical Support for assistance.

---

**BJTM500J**      **Entry has been deleted.**

**Explanation:** You selected an item for deletion and it was deleted.

**User Response:** None required.

---

**BJTM500K**      **View requires an operand, NAME or**  
**ALL.**

**Explanation:** The command you typed is not valid. You can either view all of the details of the archive attributes on the screen (VIEW ALL), or you can view a smaller subset of information (VIEW NAME). You may need to Page Right to see all of the columns.

**User Response:** Type either VIEW NAME or VIEW ALL to indicate which set of archive attribute information you want to display.

---

**BJTM510A**      **Insert failed for attribute ID, rc=return**  
*code, rs=reason code*

**Explanation:** You attempted to insert a new archive attribute, but it did not work.

**User Response:** Refer to the return code and reason code for more details. Contact IBM Technical Support for assistance.

---

**BJTM510B**      **Replace failed for attribute ID,**  
*rc=return code, rs=reason code*

**Explanation:** An attempt to update an attribute failed.

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM510C**      **Storage exhausted for new linklist**  
**row, record added successfully**

**Explanation:** This message requires further investigation.

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM510D**      **Read by rowid failed, rowid=row ID,**  
*rc=return code, rs=reason code*

**Explanation:** A read process failed at the row listed in the message.

**User Response:** Refer to the row ID, return code, and reason code for more details. Contact IBM Technical Support for assistance.

---

**BJTM510E**      **Invalid link option, only CHOPRT**  
**and EDIPRT allowed.**

**Explanation:** None

**User Response:** Use one of the values listed in the message.

---

**BJTM520A**      **Only Tracks, Cylinders, Blocks,**  
**Kilobytes, Megabytes, Bytes, or**  
**Records.**

**Explanation:** The entry you made in the Space Units field is not valid. Type one of the following to indicate the type of space units associated with this archive:

- Blocks
- Tracks
- Cylinders
- Kilobytes
- Megabytes
- Bytes
- Records

**User Response:** Type a valid entry, listed above.

---

**BJTM520B**      **Byte modifier can only be Bytes,**  
**Mega, or Kilo**

**Explanation:** The entry you made in the Average Record Unit field is not valid. Valid entries are B (bytes), M (megabytes), or K (kilobytes).

**User Response:** Type either B, M, or K to indicate the average record units.

---

**BJTM520C      Only Catalog or Keep allowed.**

**Explanation:** The entry you made in the Normal Disposition field is not valid. Indicate the standard disposition of this archive by entering one of the following:

- **Catalog** - The archive is accessible through a catalog.
- **Keep** - Save this archive.

**User Response:** Type either Catalog (C) or Keep (K) in the Normal Disposition field.

---

**BJTM520D      Only Catalog, Delete or Keep allowed.**

**Explanation:** The entry you made in the Abnormal Disposition field is not valid. Indicate what to do with this archive if the "save to archive" fails. Valid entries are:

- **Catalog** - The archive is accessible through a catalog.
- **Keep** - Save this archive.
- **Delete** - Delete this archive.

**User Response:** Type either Catalog (C), Keep (K), or Delete (D) in the Abnormal Disposition field.

---

**BJTM520E      Invalid space release. Only Yes or No allowed.**

**Explanation:** The entry you made in the Release Unused Space field is invalid. Type either Yes or No to indicate whether you want to release unused space.

**User Response:** Type Yes or No in the Release Unused Space field on the Archive Attributes screen.

---

**BJTM520F      Not numeric. Retention period must be a number.**

**Explanation:** You can only enter a number in the Retention Period field.

**User Response:** Type a number between 1 and 9999 to indicate the number of days you want to keep this archive.

---

**BJTM600A      Query failed for product status, rc=return code, rs=reason code**

**Explanation:** An attempt to check the status of Output Manager failed

**User Response:** Make a note of the return code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM600B      No archive attributes that match the requested criteria.**

**Explanation:** None

**User Response:** Try using different criteria or no criteria.

---

**BJTM600C      Bad attribute ID. Internal error footprint mismatch**

**Explanation:** This error requires further investigation.

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM600D      No results found that match the requested criteria.**

**Explanation:** None

**User Response:** Try entering different criteria or no criteria.

---

**BJTM600E      Storage Exhausted for archive attribute linklist, rc=return code**

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the return code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM600F      Free failed for archive attribute result set, rc=return code, rs=reason code**

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM600G      Storage exhausted for view linklist, rc=return code**

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the return code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM600H      Archive attribute entry has not been deleted.**

**Explanation:** You may have used the Delete line command to choose an entry for deletion, but then cancelled the deletion.

**User Response:** None required.

---

**BJTM600I**      **Delete failed, rc=return code, rs=reason code**

**Explanation:** A delete process failed.

**User Response:** Refer to the return code in the message and contact IBM Technical Support.

---

**BJTM600J**      **Entry has been deleted.**

**Explanation:** None

**User Response:** None required.

---

**BJTM600K**      **View requires an operand, NAME or ALL**

**Explanation:** You are attempting to change the view of the data that is displayed on the screen, but need to use VIEW NAME or VIEW ALL.

**User Response:** Type VIEW NAME to display the data by name or VIEW ALL to display all of the data.

---

**BJTM650A**      **Query failed for activity records, rc=return code, rs=reason**

**Explanation:** None

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM650B**      **No activities found that match selection criteria.**

**Explanation:** None

**User Response:** Try entering different criteria or no criteria.

---

**BJTM650C**      **Bad activity ID. Internal error footprint mismatch.**

**Explanation:** This message requires further investigation.

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM650D**      **No results found that match the requested criteria.**

**Explanation:** None

**User Response:** Try entering different criteria or no criteria.

---

**BJTM650E**      **Storage exhausted for activity linklist, rc=return code.**

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the return code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM650F**      **Free failed for activities result set, rc=return code, rs=reason**

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM650G**      **Storage exhausted for view linklist, rc=return code.**

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the return code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM650H**      **Invalid option, option, has been passed to module name.**

**Explanation:** An invalid option was passed to a specific module.

**User Response:** You may want to try a different option, or contact IBM Technical Support for assistance.

---

**BJTM650I**      **Internal size error, ui size=return code, service size=size.**

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the return code and size listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM650J**      **Internal logic error, view is invalid.**

**Explanation:** A problem occurred when attempting to change the view of the data.

**User Response:** Try a different view or contact IBM Technical Support for assistance.

---

**BJTM650K**      **Invalid line command, try "S"**

**Explanation:** Use the S line command.

**User Response:** An S line command usually means "Select", but is also used for "Set Hardcopy."

---

**BJTM650L**      **Activities refreshed**

**Explanation:** None

**User Response:** None required.

---

**BJTM650M**      **Invalid view option, Log or Active are valid.**

**Explanation:** The only entries you can make to change the view are Log or Active.

**User Response:** Type Log or Active.

---

**BJTM650N**      **Request cancelled**

**Explanation:** None

**User Response:** None required.

---

**BJTM650O**      **Class table update failed, rc=return code, rs=reason code.**

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM650P**      **Query failed for class table, rc=return code, rs=reason code.**

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM650Q**      **Class table does not exist.**

**Explanation:** None

**User Response:** None required.

---

**BJTM650R**      **Class table has been updated.**

**Explanation:** None

**User Response:** None required.

---

**BJTM670A**      **Query failed for event records, rc=return code, rs=reason**

**Explanation:** An attempt to display event records for the Activity Monitor failed.

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM670B**      **No events found that match selection criteria**

**Explanation:** None

**User Response:** Try entering different criteria or no criteria.

---

**BJTM670C**      **Bad event ID. Internal error footprint mismatch.**

**Explanation:** This message requires further investigation.

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM670D**      **No results found that match the requested criteria.**

**Explanation:** None

**User Response:** Try entering different criteria or no criteria.

---

**BJTM670E**      **Storage exhausted for event linklist, rc=return code.**

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the return code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM670F**      **Free failed for events result set, rc=return code, rs=reason.**

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM670G**      **Storage exhausted for view linklist, rc=return code.**

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the return code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM670H**      **Invalid option. Option name has been passed to module name.**

**Explanation:** None

**User Response:** Try using a different option or contact IBM Technical Support for assistance.

---

**BJTM670I**      **Internal size error, ui size=return code, service size=reason**

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM670J**      **Internal logic error, view is invalid.**

**Explanation:** The view you specified does not work on this screen.

**User Response:** Try a different view.

---

**BJTM670K**      **Invalid line command, try "S"**

**Explanation:** The only line command that is valid on this Activity screen is S (Select).

**User Response:** Type S to select an activity to review.

---

**BJTM670L**      **Events refreshed.**

**Explanation:** None

**User Response:** None required.

---

**BJTM670M**      **Invalid view option, Log or Active are valid.**

**Explanation:** The word you typed after "VIEW" is not valid.

**User Response:** Type VIEW LOG or VIEW ACTIVE.

---

**BJTM700A**      **Query failed for report layouts, rc=return code, rs=reason**

**Explanation:** An attempt to query the table containing the list of report layouts failed.

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM700B**      **No layouts found that match the requested criteria**

**Explanation:** None

**User Response:** Try entering different criteria or no criteria.

---

**BJTM700C**      **Bad layout id. Internal error footprint mismatch.**

**Explanation:** This message requires further investigation.

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM700D**      **No results found that match the requested criteria.**

**Explanation:** None

**User Response:** Try entering different criteria or no criteria.

---

**BJTM700E**      **Storage exhausted for layouts linklist, rc=return code.**

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the return code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM700F**      **Free failed for layout result set, rc=return code, rs=reason**

**Explanation:** This message requires further investigation.

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM700G**      **Storage exhausted for view linklist, rc=return code.**

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the return code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM700H**      **Layout has not been deleted.**

**Explanation:** You may have typed the Delete line command next to a report layout, then decided to cancel the deletion.

**User Response:** None required.

---

**BJTM700I**      **Delete service failed, rc=return code, rs=reason**

**Explanation:** A deletion attempt failed.

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM700J**      **Layout has been deleted.**

**Explanation:** None

**User Response:** None required.

---

**BJTM700K**      **Only Select, Add, View, Edit or Delete allowed.**

**Explanation:** You made an entry that is not valid for this field.

**User Response:** Type either S (Select), A (Add), V (View), E (Edit), or D (Delete) next to a layout.

---

**BJTM710A**      **Bad parm passed to module *module name*, parm=*parm name***

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the module name and parameter name listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM710B**      **No parm passed to module *module name***

**Explanation:** This module expected to receive a parameter, but did not.

**User Response:** Make a note of the module name and contact IBM Technical Support for assistance.

---

**BJTM710C**      **Query failed for report layouts, rc=*return code*, rs=*reason***

**Explanation:** An attempt to query the report layouts table failed.

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM710D**      **Bad layout id. Footprint mismatch on layout result set**

**Explanation:** This message requires further investigation.

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM710E**      **No layouts found that match selection criteria.**

**Explanation:** None

**User Response:** Try entering different criteria or no criteria.

---

**BJTM710F**      **Storage exhausted for layout linklist.**

**Explanation:** This is an informative message.

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM710G**      **Free failed for layout result set rc=*return code*, rs=*reason***

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM710H**      **Storage exhausted for layout view linklist**

**Explanation:** None

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM710I**      **View stack full. Internal error, too many levels nested.**

**Explanation:** This message requires further investigation.

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM710J**      **Preferences saved in your profile data set.**

**Explanation:** None

**User Response:** None required.

---

**BJTM710K**      **Save failed. Service failed, rc=*return code*, rs=*reason***

**Explanation:** A save process failed.

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM710L**      **Layout saved in DB2 table**

**Explanation:** None

**User Response:** None required.

---

**BJTM710M Invalid exit pref. Exit name is not valid**

---

**Explanation:** The entry you made telling the Preferences how to handle exiting was not valid.

**User Response:** Type a valid entry for Exit processing on the Preferences screen.

---

**BJTM710N Invalid PREFER command**

---

**Explanation:** This command does not work on this screen.

**User Response:** Try a different command.

---

**BJTM710O request cancelled**

---

**Explanation:** None

**User Response:** None required.

---

**BJTM710P Layout has not been saved**

---

**Explanation:** You may have indicated that you wanted to save the layout, then cancelled the save process.

**User Response:** None required.

---

**BJTM710Q Storage exhausted for new layout nodes**

---

**Explanation:** None

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM710R Invalid line command. Try E - Edit, I - Insert, D - Delete, R - Repeat**

---

**Explanation:** You entered a line command that does not work on this screen.

**User Response:** Type either E (Edit), I (Insert), D (Delete), or R (Repeat).

---

**BJTM710S Entry(s) deleted. All requested entries have been deleted.**

---

**Explanation:** None

**User Response:** None required.

---

**BJTM710T Layouts refreshed from data base**

---

**Explanation:** None

**User Response:** None required.

---

**BJTM720A Only DCB, ASA or Machine allowed**

---

**Explanation:** You typed an entry that is not valid for this field. Indicate the type of printer control that will be used with this report layout:

- **DCB** - Use the spacing assigned to the report by the application. If you do not know which value to type, use DCB. It is the default.
- **ASA** - Use ANSI-standard spacing.
- **Machine** - Use machine carriage control.

**User Response:** Type DCB, ASA, or Machine in the Print Control field.

---

**BJTM720B A layout name is required.**

---

**Explanation:** You are attempting to create a new layout, but have not provided a name for it in the Layout Name field.

**User Response:** Type up to 24 characters for a name for the report layout.

---

**BJTM720C Invalid relationship. Only Diagonal, Below or Adjacent allowed**

---

**Explanation:** You made an invalid entry in the Relationship field or you made an entry in the Relationship field without specifying a name in the Relative Area Name field.

**User Response:** Type either Diagonal, Below, or Adjacent for the relationship, or leave this field blank. Also, be sure you've specified an area name in the Relative Area Name field.

---

**BJTM720D Invalid dialog exit. Only Save, Prompt, or Nosave allowed.**

---

**Explanation:**

**User Response:** Type either Save, Prompt, or Nosave to indicate what you want Output Manager to do when you exit a dialog.

---

**BJTM720E Invalid level exit. Only Save, Prompt, or Nosave allowed.**

---

**Explanation:** The entry you made in the Level Exit field on the Preferences screen is not valid. Indicate what you want Output Manager to do when you exit a level: Save your entries, give you a Prompt (a pop-up window) so you can choose whether to save your entries, or do not save your entries (Nosave).

**User Response:** Type Save, Prompt, or Nosave in the Level Exit field.

---

**BJTM720F An area name is required.**

---

**Explanation:** None

**User Response:** Type a name for the area you are defining.

---

**BJTM720G**      **A field name is required.**

**Explanation:** None

**User Response:** Type a name for the field you are defining.

---

**BJTM720H**      **Not a valid number. Only numerics allowed.**

**Explanation:** None

**User Response:** Type a number in this field.

---

**BJTM720I**      **Invalid constant. Only No or Yes allowed.**

**Explanation:** None

**User Response:** Type either Yes or No in this field.

---

**BJTM720J**      **Invalid delete option. Only No or Yes allowed.**

**Explanation:** The Delete line command is not valid at this point.

**User Response:** Type either Yes or No.

---

**BJTM750A**      **Query failed for custom reports, rc=return code, rs=reason**

**Explanation:** An attempt to query the custom reports failed.

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM750B**      **No reports found that match the requested criteria**

**Explanation:** None

**User Response:** Try different selection criteria or no criteria.

---

**BJTM750C**      **Bad report id. Internal error footprint mismatch.**

**Explanation:** This message requires further investigation.

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM750D**      **No results found that match the requested criteria.**

**Explanation:** None

**User Response:** Try entering different criteria or no criteria.

---

**BJTM750E**      **Storage exhausted for reports linklist, rc=return code.**

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the return code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM750F**      **Free failed for report result set, rc=return code, rs=reason**

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM750G**      **Storage exhausted for view linklist, rc=return code**

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the return code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM750H**      **Report has not been deleted.**

**Explanation:** You may have typed the D (Delete) line command next to a report, then decided to cancel the deletion.

**User Response:** None required.

---

**BJTM750I**      **Delete service failed, rc=return code, rs=reason**

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM750J**      **Report has been deleted.**

**Explanation:** None

**User Response:** None required.

---

**BJTM750K**      **Invalid prefer option. Only set is allowed.**

**Explanation:** The only "preference" option you can choose is Set.

**User Response:** Choose the Set Preferences option.

---

**BJTM750L**      **Preferences saved in your profile dataset.**

**Explanation:** None

**User Response:** None required.

---

**BJTM750M**      **No custom reports defined by the report administrator.**

**Explanation:** No custom reports have been created.

**User Response:** If a Basic report is displayed, instead of a custom report, the administrator needs to assign a report layout to this basic report to convert it to a custom report.

---

**BJTM750N**      **Invalid line command. Try "S" or a valid line command.**

**Explanation:** The S line command selects an entry or assigns a setting for the Hard Copy field.

**User Response:** Try the S line command or another line command that displays on this screen.

---

**BJTM760A**      **Bad parm passed to module *module name*, parm = *parm name*.**

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the module name and parameter listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM760B**      **No parm passed to module *module name*.**

**Explanation:** This module was expecting to receive a parameter, but didn't.

**User Response:** Either provide a parameter, or contact IBM Technical Support for assistance.

---

**BJTM760C**      **Query failed for custom report, rc=*return code*, rs=*reason***

**Explanation:** An attempt to query a custom report failed.

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM760D**      **Bad report id. Footprint mismatch on custom report result set.**

**Explanation:** This message requires further investigation.

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM760E**      **No reports found that match selection criteria**

**Explanation:** None

**User Response:** Try using different criteria or no criteria.

---

**BJTM760F**      **Storage exhausted for custom report linklist.**

**Explanation:** This message requires further investigation.

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM760G**      **Free failed for report result set rc=*return code*, rs=*reason***

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM760H**      **Storage exhausted for report view linklist**

**Explanation:** This message requires further investigation.

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM760I**      **View stack full. Internal error, too many levels nested.**

**Explanation:** This message requires further investigation.

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM760J**      **Preferences saved in your profile dataset**

**Explanation:** None

**User Response:** None required.

---

**BJTM760K**      **Save failed. Service failed, rc=return code, rs=reason**

---

**Explanation:** None

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM760L**      **Report saved in DB2 table.**

---

**Explanation:** None

**User Response:** None required.

---

**BJTM760M**      **Invalid exit pref. Exit name is not a valid dialog exit option.**

---

**Explanation:** You must make a valid entry in the Dialog Exit field on the preferences screen.

**User Response:** Type a valid entry in the Dialog Exit field.

---

**BJTM760N**      **Invalid PREFER command.**

---

**Explanation:** None

**User Response:** Use a different command after PREFER or choose a preference option from a pull-down menu.

---

**BJTM760O**      **Request cancelled.**

---

**Explanation:** None

**User Response:** None required.

---

**BJTM760P**      **Report has not been saved.**

---

**Explanation:** You may have indicated that you wanted to save a report, then decided to cancel the save.

**User Response:** None required.

---

**BJTM760Q**      **Storage exhausted for new report nodes.**

---

**Explanation:** None

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM760R**      **Invalid line command. Try E - Edit, I - Insert, D - Delete, R -Repeat.**

---

**Explanation:** You used a line command that does not work on this screen.

**User Response:** Type either E (Edit), I (Insert), D (Delete), or R (Repeat).

---

**BJTM760S**      **Entry(s) deleted. All requested entries have been deleted.**

---

**Explanation:** You used the D (Delete) line command next to one or more entries, and they have been deleted.

**User Response:** None required.

---

**BJTM760T**      **Reports refreshed from data base.**

---

**Explanation:** You chose the Refresh option.

**User Response:** None required.

---

**BJTM760U**      **Entry saved in local storage**

---

**Explanation:** None

**User Response:** None required.

---

**BJTM760V**      **Invalid exit pref. Exit name is not a valid level exit option.**

---

**Explanation:** You made an invalid entry in the Level Exit field on the Preferences screen.

**User Response:** Make a valid entry in the Level Exit field.

---

**BJTM760W**      **Invalid LINK command**

---

**Explanation:** The LINK command does not work on this screen.

**User Response:** Use a different command.

---

**BJTM770A**      **Invalid delete option. Only Prompt or Noprompt allowed.**

---

**Explanation:** You made an entry in the Delete field on the Preferences screen that is not valid.

**User Response:** Type Prompt if you want Output Manager to display a pop-up window to confirm the deletion (Prompt) or whether you want Output Manager to automatically perform the deletion (No prompt).

---

**BJTM770B**      **Preferences saved in your profile dataset.**

---

**Explanation:** None

**User Response:** None required.

---

**BJTM770C**      **Invalid condition specified in the Condition column.**

---

**Explanation:** You entered a symbol or some other character that is not valid in the Condition column.

**User Response:** Type either EQ (equal), GT (greater than), GE (greater than or equal to), LT (less than), LE

(less than or equal to) or NE (not equal to) in the Condition field.

---

**BJTM770D**      **Only Yes or No allowed in contiguous report field.**

**Explanation:** The Contiguous field only accepts Yes or No.

**User Response:** Type Yes or No to indicate if the pages in the report are contiguous (one right after another).

---

**BJTM800A**      **Query failed for custom reports, rc=return code, rs=reason**

**Explanation:** An attempt to query the custom reports table failed.

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM800B**      **No reports found that match the requested criteria.**

**Explanation:** None

**User Response:** Try entering different criteria or no criteria.

---

**BJTM800C**      **Bad report id. Internal error footprint mismatch.**

**Explanation:** This message requires further investigation.

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM800D**      **No results found that match the requested criteria.**

**Explanation:** None

**User Response:** Try entering different criteria or no criteria.

---

**BJTM800E**      **Storage exhausted for reports linklist, rc=return code**

**Explanation:** None

**User Response:** Make a note of the return code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM800F**      **Free failed for report result set, rc=return code, rs=reason**

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM800G**      **Storage exhausted for view linklist, rc=return code**

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the return code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM800H**      **Report has not been deleted.**

**Explanation:** You may have used the D (Delete) line command to select a report for deletion, then cancelled the deletion.

**User Response:** None required.

---

**BJTM800I**      **Delete service failed, rc=return code, rs=reason**

**Explanation:** None

**User Response:** Make a note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM800J**      **Report has been deleted.**

**Explanation:** None

**User Response:** None required.

---

**BJTM800K**      **Invalid prefer option. Only set is allowed.**

**Explanation:** Only the Set Preferences option is valid.

**User Response:** Choose the Set Preferences option.

---

**BJTM800L**      **Preferences saved in your profile dataset.**

**Explanation:** None

**User Response:** None required.

---

**BJTM800M**      **No distribution list available to complete print request.**

**Explanation:** In some cases, the completion of a print or reprint request requires a distribution list.

**User Response:** If you receive this message while attempting to print a custom report, have your report administrator assign a distribution list to the custom report definition, then retry the print or reprint request.

---

**BJTM800N**      **Invalid line command. Try "S" or a valid line command.**

**Explanation:** The line command you entered is not valid on this screen.

**User Response:** Use the S (Select) line command, or any other line command listed on this screen.

---

**BJTM800O**      **Invalid search option - only RPTNAME, RPTTYPE, or AFTERDA (for "on or after date") allowed.**

**Explanation:** You need to use different search criteria to search for the reports.

**User Response:** Enter a report name, a report type, or an "After" date for the search criteria.

---

**BJTM800P**      **Request to print report name report in dataset name failed, rc=return code, rs=reason code.**

**Explanation:** The report listed in the message could not be printed.

**User Response:** Make note of the return code and reason code listed in the message, then contact IBM Technical Support for assistance.

---

**BJTM800Q**      *Report name report in archive dataset name* **queued for printing in product address space.**

**Explanation:** This message informs that the report listed in the message, which is in the archive listed in the message, has been queued for printing in a specific address space.

**User Response:** None required.

---

**BJTM800R**      **View and Print line commands are invalid for report index lines that contain the text <No Report> in the Type column.**

**Explanation:** The <No Report> type indicates that this is an empty report. There were no SYSOUT pages that matched the criteria for this custom report.

**User Response:** You may want to check the custom report and the application to see if there is a problem with either the report layout or the conditions listed for this custom report.

---

**BJTM800S**      **Internal error - failure copying distribution list data to local storage.**

**Explanation:** For some reason, the distribution list could not be saved.

**User Response:** Contact IBM Technical Support for assistance.

---

**BJTM800T**      **Invalid report type - specify Basic, Custom Undefined, No reports, or All.**

**Explanation:** You need to specify the type of report you want to search for or display. Valid types are:

- **Basic** - This archive contains every page of the SYSOUT, the full report.
- **Custom** -- This archive contains data that met the specific criteria for this custom report, which is usually a subset of the full (basic) report.
- **Undefined** - This archive contains all of the SYSOUT pages that did not match any of the criteria in *any* of the custom reports.
- **No report** - This is an "empty" report that informs you there were no SYSOUT pages that matched the criteria for this specific custom report.
- **All** - Display all types of reports.

**User Response:** Type Basic, Custom, Undefined, No report, or All to indicate which type of report you want to search for or display on the screen.

---

**BJTM800U**      **Valid report type specifications are Basic, Custom Undefined, No reports, and All.**

**Explanation:** You need to specify the type of report you want to search for or display. Valid types are:

- **Basic** - This archive contains every page of the SYSOUT, the full report.
- **Custom** -- This archive contains data that met the specific criteria for this custom report, which is usually a subset of the full (basic) report.
- **Undefined** - This archive contains all of the SYSOUT pages that did not match any of the criteria in *any* of the custom reports.
- **No report** - This is an "empty" report that informs you there were no SYSOUT pages that matched the criteria for this specific custom report.
- **All** - Display all types of reports.

**User Response:** Type Basic, Custom, Undefined, No report, or All to indicate which type of report you want to search for or display on the screen.

---

**BJTM800V**      **Initial preferences saved in your profile dataset.**

**Explanation:** This informs you that your "preference" entries have been saved in your profile.

**User Response:** None required.

---

**BJTM800W**      **Request cancelled.**

**Explanation:** None

**User Response:** None required.

---

**BJTM800X** Report index list refreshed.

**Explanation:** You chose the "Refresh" option and this message informs you that the refresh process was performed.

**User Response:** None required.

---

**BJTM800Y** Search results displayed.

**Explanation:** None.

**User Response:** None required.

---

**BJTM800Z** Incorrect date format specified in the "On or after date" field. Valid input for this field is either a date formatted as YYYY/MM/DD, or Today, for reports generated since midnight today.

**Explanation:** The date format you used in this field is not valid.

**User Response:** Type a date in the "On or After Date" field, using one of the formats listed in the message.

---

**BJTM801A** Incorrect interval specified in the "On or after date" field. When using the "T-nnnn" interval specification, *nnnn* must be a numeric value between 0 and 9999.

**Explanation:** The number you used after the minus sign was larger than 9999.

**User Response:** Type the letter "T" followed by a minus sign (-) and a number between 0 and 9999 to indicate how many days before today you want to search. For example, "T-14" means "today and the previous 14 days."

---

**BJTM801B** Unable to complete print request due to output descriptor allocation failure, *rc=return code, rs= reason code.*

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the return code and reason code listed in the message and contact IBM Technical Support for assistance.

---

**BJTM801C** Attempt to free output descriptors failed, *rc=return code, rs=reason code.*

**Explanation:** This message requires further investigation.

**User Response:** Make a note of the return code and reason code listed in the message and contact IBM Technical Support for assistance.

---

**BJTM801D** Command disabled for this function.

**Explanation:** The line command you entered is not valid on this screen.

**User Response:** Use another line command listed on this screen.

---

**BJTM900A** Migration status of Yes or No only

**Explanation:** None

**User Response:** Type either Yes or No.

---

**BJTM900B** Initial view can only be Job, Step, Stats, or All

**Explanation:** The view you tried to use is not valid on this screen.

**User Response:** Use the VIEW command in combination with either Job, Step, Stats, or All.

---

**BJTM900C** Initial search can only be Job Name, Migrated, Sysout Class, Generic or All

**Explanation:** Use one of the search options listed in the message.

**User Response:** Type either Job Name, Migrated, Sysout Class, Generic, or All.

---

**BJTM900D** Initial preferences saved. Initial in your profile dataset.

**Explanation:** None

**User Response:** None required.

---

## CTC messages

The following message list contains explanations and user responses to the various CTC messages you might encounter when using Output ManagerCTC.

---

**CTC801E** AN INVALID SQLCODE OF *code* WAS ENCOUNTERED. *messages.*

**Explanation:** An invalid SQLCODE was encountered.

**User Response:** If you cannot resolve this issue using the messages displayed, contact IBM Customer Support.

---

**CTC802E**      **AN INVALID RETURN CODE OF *code* WAS ENCOUNTERED ON *function* FUNCTION. THE ERROR MESSAGE TEXT FOLLOWS: *messages***

**Explanation:** An invalid return code was encountered.

**User Response:** If you cannot resolve this issue using the messages displayed, contact IBM Customer Support.

---

**CTC803E**      **THE FIRST CHARACTER OF THE COMMAND IS NOT A DASH. CORRECT THE SYNTAX OF THE DB2 COMMAND AND RESUBMIT.**

**Explanation:** You entered a command with using a dash as the first character.

**User Response:** Correct the syntax of the DB2 command and resubmit.

---

**CTC901E**      **Dataset not found**

**Explanation:** The Rocket Software default load library could not be located.

**User Response:** Contact IBM Customer Support.

---

**CTC902E**      **No DB2 system name**

**Explanation:** A DB2 subsystem ID has to be entered for processing.

**User Response:** Enter a valid DB2 subsystem name.

---

**CTC903E**      **Dataset not found**

**Explanation:** The default GDG base dataset name could not be located.

**User Response:** Ensure that GDG base dataset name is correct and that it exists.

---

**CTC904E**      **VSAM open error**

**Explanation:** The specified dataset could not be opened for I/O.

**User Response:** Contact IBM Customer Support.

---

**CTC905E**      **VSAM read error**

**Explanation:** An unexpected return code from VSAM was encountered while doing a read of the control file. *RC=code*.

**User Response:** Contact IBM Customer Support.

---

**CTC906I**      **Record updated**

**Explanation:** The control file record for DB2 subsystem *ssid* has been successfully updated.

**User Response:** None required.

---

**CTC907E**      **Error in VSAM update**

**Explanation:** An unexpected return code from VSAM was encountered while doing an update operation of the control file. *RC1=code RC2=code*

**User Response:** Contact IBM Customer Support.

---

**CTC908I**      **Record added**

**Explanation:** The control file record for DB2 subsystem *ssid* has been successfully added.

**User Response:** None required.

---

**CTC909E**      **Invalid value**

**Explanation:** The range of valid values is 1 to 3 and 5.

**User Response:** Enter a valid value.

---

**CTC910E**      **Error in VSAM add**

**Explanation:** An unexpected return code from VSAM was encountered while doing an add operation to the control file. *RC1=code RC2=code*

**User Response:** Contact IBM Customer Support.

---

**CTC911E**      **No Find string specified**

**Explanation:** The (F)IND command was entered but no parameters were specified.

**User Response:** Enter a FIND parameter.

---

**CTC912I**      **Find string not found**

**Explanation:** The requested find string was not found.

**User Response:** None required.

---

**CTC913E**      **Invalid Primary Command Entered**

**Explanation:** An unknown primary command has been entered.

**User Response:** Enter a valid primary command.

---

**CTC914E**      **Unknown Column Entered**

**Explanation:** An unknown column was specified using the SORT command.

**User Response:** Verify that you correctly typed the name of the column or select another column.

---

**CTC915E      Column Unsortable**

**Explanation:** SORT is not supported for the specified column.

**User Response:** You must select a different column.

---

**CTC916E      Column Not Specified**

**Explanation:** Sort column not entered. Column name or number must be specified.

**User Response:** Contact IBM Customer Support.

---

**CTC920E      File tailor error**

**Explanation:** File tailoring open returned a file tailoring already in progress condition.

**User Response:** Contact IBM Customer Support.

---

**CTC921E      File tailor error**

**Explanation:** File tailoring open returned the output file already in use condition -- ENQ failed.

**User Response:** Contact IBM Customer Support.

---

**CTC922E      File tailor error**

**Explanation:** File tailoring open returned the skeletal file or output file not allocated condition.

**User Response:** Contact IBM Customer Support.

---

**CTC923E      File tailor error**

**Explanation:** File tailoring open returned a severe error condition.

**User Response:** Contact IBM Customer Support.

---

**CTC924E      File tailor error**

**Explanation:** File tailoring open returned an unknown code -- severe error.

**User Response:** Contact IBM Customer Support.

---

**CTC925E      File tailor error**

**Explanation:** File tailoring close returned a file not open condition -- severe error.

**User Response:** Contact IBM Customer Support.

---

**CTC926E      File tailor error**

**Explanation:** File tailoring close returned an output file in use condition.

**User Response:** Contact IBM Customer Support.

---

**CTC927E      File tailor error**

**Explanation:** File tailoring close returned a skeletal file or output file not allocated condition.

**User Response:** Contact IBM Customer Support.

---

**CTC928E      File tailor error**

**Explanation:** File tailoring close returned a severe error.

**User Response:** Contact IBM Customer Support.

---

**CTC929E      File tailor error**

**Explanation:** File tailoring close returned an unknown code -- severe error.

**User Response:** Contact IBM Customer Support.

---

**CTC930E      File tailor error**

**Explanation:** File tailoring close returned a output member exists in the output library and NOREPL was specified.

**User Response:** Contact IBM Customer Support.

---

**CTC931E      File tailor error**

**Explanation:** File tailoring include returned a skeleton does not exist condition.

**User Response:** Contact IBM Customer Support.

---

**CTC932E      File tailor error**

**Explanation:** File tailoring include returned a skeleton in use -- ENQ failed condition.

**User Response:** Contact IBM Customer Support.

---

**CTC933E      File tailor error**

**Explanation:** File tailoring include returned a data truncation or skeleton library or output file not allocated condition.

**User Response:** Contact IBM Customer Support.

---

**CTC934E      File tailor error**

**Explanation:** File tailoring include returned a severe error condition.

**User Response:** Contact IBM Customer Support.

---

**CTC935E      File tailor error**

**Explanation:** File tailoring include returned an unknown condition -- severe error.

**User Response:** Contact IBM Customer Support.

---

**CTC936E      Allocation Error**

**Explanation:** Allocation Error - The ISPFDD DD is already allocated and can not be deallocated - Process not completed.

**User Response:** Contact IBM Customer Support.

---

**CTC937E      Allocation Error**

**Explanation:** Allocation Error - An error was encountered allocating the ISPWRK1 or ISPWRK2 DD - Process not completed.

**User Response:** Contact IBM Customer Support.

---

**CTC938E      Field Required**

**Explanation:** The dataset entered is a partitioned dataset and the member name is required.

**User Response:** Enter a member name and retry.

---

**CTC939E      Invalid value**

**Explanation:** The only valid values are "T" for tracks and "C" for cylinders

**User Response:** Enter a valid value.

---

**CTC940E      Dataset not found**

**Explanation:** The specified dataset could not be found in the MVS catalog.

**User Response:** Ensure that the dataset name is correct.

---

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**Contrast with.** This refers to a term that has an opposed or substantively different meaning.

**Synonym for.** This indicates that the term has the same meaning as a preferred term, which is defined in its proper place in the dictionary.

**Synonym with.** This is a backward reference from a defined term to all other terms that have the same meaning.

**See.** This refers the reader to multiple-word terms that have the same last word.

**See also.** This refers the reader to terms that have a related, but not synonymous, meaning.

## A

**access authority.** (1) The privileges granted to a particular user or group when accessing a protected resource (such as the ability to read or update a data set). For resources protected by RACF profiles, the access authorities are NONE, EXECUTE, READ, UPDATE, CONTROL, and ALTER. These authorities are hierarchical, with READ also granting EXECUTE, UPDATE granting READ, and so forth. (2) RACF also has access authorities of READ, WRITE, and EXECUTE (or SEARCH) when dealing with files and directories in the HFS. Note that these authorities are not hierarchical, and HFS files are not protected by RACF profiles, although they do have access authorities.

**access intent.** When a user performs a function within Output Manager, they are attempting to access a resource with some intent. This intent is the same as the authority. If the user has sufficient authority for the given request, they are then granted access. Output Manager only implements NONE, READ, UPDATE, and CONTROL authorities. This is a hierarchy (except for NONE). If you have CONTROL authority, you then also have UPDATE and READ authority.

**access list.** A list of RACF user IDs and group names authorized to access a resource. This list also includes the level of access granted to each user ID and group.

**alphabetic character.** A letter or other symbol, excluding digits, used in a language. Usually the uppercase and lowercase letters A through Z plus other special symbols (such as \$ and \_) allowed by a particular language. See also Alphanumeric Character.

**alphanumeric character.** Consisting of letters, numbers, and often other symbols such as punctuation marks and mathematical symbols. See also Alphanumeric Character.

**archive attribute.** A set of attributes that IBM Output Manager uses when allocating a sequential file to hold captured SYSOUT. A report administrator creates a set of archive attributes and links them to interceptor and selector rules. When SYSOUT is intercepted or selected, archive attributes define how to name the archive data set that is to be created, where to allocate it, and how much space to reserve for the archive. See also Archive Mask and SMS Allocation Parameters.

**archive mask.** A template that is used to create the data set name for an archive.

**archive storage.** The storage in which the long-term or backup copy of a report is maintained. Includes the devices and volumes on which the files are stored and the management policies that determine how long data is maintained in archive storage.

**archived report.** Captured reports that have been stored as sequential files (archived).

**area.** A sub-component of a report layout. An area is contained within a page and contains fields. See also Page, Field, and Report Layout.

**ASCII (American Standard Code for Information Interchange).** The standard code, using a coded character set consisting of 7-bit coded characters (8-bits including parity check), that is used for information interchange among data processing systems, data communication systems, and associated equipment. The ASCII set consists of control characters and graphic characters. (A)

**attribute character.** A special character used in the body section of a master banner page member that indicates the start and end of symbolic variables and text display information (such as text location and size).

## B

**banner page.** A banner page is component that can be output with the printing of a report. Information contained in a partitioned data set (such as a description of a report, routing procedures, or delivery instructions) is loaded into a DB2 table in the appropriate location so as to make it available for print processing.

**basic report.** A report that contains an entire SYSOUT data set and is distributed as a unit. A basic report represents the entire SYSOUT produced by an application.

## C

**cache storage.** The storage in which the primary or short-term copy of a report is stored. Usually disk storage. Most customers configure the system to maintain the most recent and frequently used versions of reports in cache storage.

**captured report.** SYSOUT that has been selected or intercepted by Output Manager.

**carriage control character.** The first character of an output record (line) that is to be printed; it determines how many lines should be skipped before the next line is printed.

**CICS.** Customer Information Control System. An online transaction management and connectivity system.

**class.** A collection of RACF-defined entities (users, groups, and resources) with similar characteristics. Classes are defined in the class descriptor table (CDT) except for the USER, GROUP and DATASET classes.

**concatenate.** (1) To link together. (2) To join two character strings.

**configuration.** The process of describing to a system the devices, optional features, and program products that have been installed so that these features can be used. Contrast with Customization.

**configure.** To describe to a system the devices, optional features, and licensed programs installed on a system. Contrast with Customize.

**customization.** The process of describing optional changes to defaults of a software program that is already installed on the system and configured so that it can be used. Contrast with Configuration.

**custom report.** A subset of a captured report. A custom report is generated when the conditions set forth in the corresponding custom report definition are met. Such conditions are based on the value specified in one or more fields that are part of a report layout. See also Report Layout, Custom Report Definition and Captured Report.

**custom report definition.** A custom report definition specifies conditions that must be met to create a custom report. When defining a custom report, you specify sets of conditions using the field names defined in the report layout. For a custom report to be created (1) the report layout assigned to the custom report definition must match the one assigned to the report selection rule and (2) the fields listed in the custom report definition must match those listed in the report layout. (3) Optionally, a distribution list can be assigned to a custom report definition so the report is sent to the recipients in the distribution list.

**customize.** To describe the system, the devices, programs, users, and user defaults for a particular data processing system or network. Contrast with Configure.

## D

**DASD.** Direct Access Storage Device. A storage device for which data access time is independent of the physical location of that data on the storage device.

**data set.** (1) A named set of records that are stored or processed as a unit. (2) The major unit of data storage and retrieval. A data set consists of a collection of data in one of several prescribed arrangements and described by control information to which the operating system has access.

**distribution list.** A group of recipients that are linked to a custom report definition and control the real time, reprint, or reprint with distribution functions. See also Recipient.

## E

**EBCDIC.** Extended Binary-Coded Decimal Interchange Code. This is the default type of data encoding in an MVS environment. Contrast with ASCII.

## F

**field.** A sub-component of a report layout. A field is contained within an area which, in turn, is contained within a page. See also Page, Area, and Report Layout.

**file.** Synonym for Data Set.

## H

**HSM.** Hierarchical Storage Management. HSM is a form of file management (backup and archiving) that enables efficient use of storage devices.

## I

**index.** A process of segmenting a print file into uniquely identifiable groups of pages (a named collection of sequential pages) for later retrieval.

**input file.** A file opened in order to allow records to be read.

**install.** (1) To add a program, program option, or software program to the system in a manner such that it may be executed and will interact properly with all affected programs in the system. (2) To connect a piece of hardware to the processor.

**interceptor rule.** A rule that (1) specifies the criteria by which SYSOUT is captured prior to its reaching the spool and (2) defines what to do with captured SYSOUT, such as what to do with the SYSOUT when it is archived.

## J

**JCL.** Job Control Language. A control language that specifies a job and its requirements to the operating system.

**JES.** Job Entry Subsystem. JES is a facility of the OS/390 and MVS operating systems that manages jobs (units of work) that the system executes. There are two versions of JES, JES2 and JES3.

## L

**layout.** Synonym for Report Layout.

**local printing.** A printing option that enables a user to print a custom report for their own use.

## P

**page .** (1) A collection of data that can be printed on one side of a sheet of paper or a form. (2) The boundary for determining the limits of printing. (3) Part of an AFP document bracketed by a pair of Begin Page and End Page structured fields. (4) A sub-component of a report layout. A report administrator defines a page for each unique style of page in a SYSOUT. Pages contain areas. See also Report Layout and Area.

**page definition.** A resource that defines the rules of transforming line data into composed pages and text controls.

**parameter.** Information that the user supplies to a panel, command, or function.

**partitioned data set.** A data set in direct access storage that is divided into partitions, called members, each of which can contain a program, a part of a program, or data.

**print file.** (1) The output of a user-defined program that is to be indexed and loaded into the system. (2) A file that a user wants to print.

**print job.** A series of print files scheduled for printing. At print submission time, the user can request one or more files to be printed; therefore, a print job consists of one or more print files.

**print override.** The printing option that enables a user to temporarily override printer information and direct printout to a different printer.

**print queue.** A file containing a list of the names of files waiting to be printed.

**Print Services Facility (PSF).** An IBM print subsystem that drives IPDS page printers. When printing line data, PSF supports external formatting using page definitions and form definitions. This external formatting extends page printer functions such as electronic forms and use of typographic fonts without any change to applications that generate the data.

**print spooler.** The print spooler directs the printing of data from different applications. It temporarily stores information in separate files until they are printed.

**printer attributes.** A set of attributes including information about general printing attributes, PSF-related attributes, and attributes associated with printing on a 3800 series printer.

**Printer Control Language (PCL).** The data stream used by Hewlett-Packard LaserJet II and III and other compatible printers.

**profiles.** RACF-defined entities that are used as the primary protection mechanism. Each Output Manager installation defines its own set of profiles to give the level of protection desired. Profiles can contain wildcards, thus

enabling the coverage of more than one resource type, ID, subsystem, etc.

## Q

**QSAM.** Queued Sequential Access Method.

**queue.** (1) A line or list formed by items waiting to be processed. (2) To form or arrange in a queue.

## R

**RACF (Resource Access Control Facility).** A program providing security facilities to protect archive data and forms where specified.

**real-time printing.** A category of printing for which a hard copy is produced for each recipient in the distribution list associated with a custom report. Real-time printing occurs at the time the SYSOUT is processed by IBM Output Manager to create the virtual custom reports.

**recipient.** Information about an individual or generic location such as name, address, building, printer destination, SYSOUT class, or USERID. See also Distribution List.

**report.** A print data stream produced by a user-defined program or other software program that can contain hundreds or thousands of pages of related information. Most reports can be logically divided and indexed into single and multiple page objects called documents.

**report layout.** In IBM Output Manager, a report layout is the way of describing how an original report looks as produced by an application. A report layout has three sub-components: pages, areas, and fields, where pages contain areas, areas contain fields, and fields are specific data on a report. See also Page, Area, and Field.

**report name.** A tag or label selected by users to identify their reports to other users.

**report owner.** The person responsible for controlling access to usage and validating data in a report.

**report selection rule.** A rule that (1) specifies the criteria (such as the job, proc, program, DD name and step) against which captured reports are matched to determine if they should be processed into basic reports and (2) identifies the report layout, that if used by a custom report definition, initiates the creation of a custom report from a basic report. See also Basic Report.

**report user.** A person who has a need to access report data.

**reprint distribution.** A printing option available to report administrators that enables them to print a custom report again while also temporarily altering the distribution list.

**reprinting.** A printing option available to report administrators that enables them to print a custom report again.

**resource.** An entity protected by the security system, for example, data sets, programs, and application-specific objects are resources.

**resource names.** The structured name associated with each Output Manager resource. The resource name facilitates the use of wildcards at various levels. The general structure of a resource name consists of levels, like dataset names, which are separated by periods. The structure of a resource name is `bjt.ssss.restyp.resid` where `bjt` is the three-character SSAF ID, `ssss` is the product instance name, `restyp` is the object type (menu, rules, arcattr, etc.) and `resid` is the instance of the particular object. Resource names that contain blanks are represented in RACF profile names with the "\_" character. All resource names will be folded to uppercase.

**routing.** The assignment of the path by which a message will reach its destination.

## S

**SAF.** System Authorization Facility. Part of the OS/390 operating system that directs control to RACF, if RACF is present, or to a user-supplied processing routine or both when receiving a request from a resource manager.

**SAF ID.** The variable that identifies the highest level of the structured resource name. This variable is used to differentiate a structured resource from other general resources (such as operator commands).

**SAF router.** A system service that provides a common focal point for all products providing resource control. The SAF router encourages the use of common control functions shared across products and across systems.

**selector definition.** A rule that (1) specifies the criteria by which specific output types are selected directly off the spool and (2) defines what to do with captured output, such as what to do with the output when it is archived.

**SYSOUT.** A system output stream used as an indicator in data definition statements to specify that a data set is to be written to a system output unit.

**System Managed Storage (SMS).** An environment that allows data center applications that use DASD devices to work independently of the physical characteristics of the devices.

## U

**universal access authority.** The default access authority that applies to a resource if the user or group is not specifically permitted access to the resource. The universal access authority can be any of the access authorities.

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# Index

## A

- adjacent relationship 143
- archive report 58
- archive reports 61
- area
  - creating 142
  - defining 135
  - relationship to others 143
- AUTHID 70

## B

- basic reports 134
- below relationship 143
- BJT#IN03 29
- BJT#IN04 29

## C

- capturing reports 148
- Condition field 150
- conditions 149
- conditions, custom reports 150
- Connector field 150
- control card file 59
- conversion
  - of archive report 58
  - of master index 57
- custom report
  - definition 148
- custom reports 134
  - conditions 150
  - defining 136, 149
  - fields 150
  - rules and layouts 152
  - tie to distribution list 154
  - values 150
- customization
  - parameters 47
- customization members
  - BJT 29
  - BJT#IN03 29
  - BJT#IN04 29

## D

- defining a custom reports 148
- Delete confirmation window 146
- Delete Entry 139
- deleting layout 146
- diagonal relationship 143
- Dialog Exit 139
- distribution list 136
  - tie to custom report 154
- Distribution List Selection screen 156

## F

- field
  - creating in layout 143
  - defining for layout 136
- fields, custom reports 150

## I

- installation verification
  - messages 31

## L

- Layout Area screen 142
- Layout Field screen 144
- Layout Page screen 141
- Layout screen 139
- layouts
  - creating 135
  - creating a field 143
  - deleting 146
  - inserting 139
  - printer control 140
  - relationship of areas 143
  - relative field name 144
  - relative field relationship 144
  - tie to rule 160
  - tie to rules 152
  - view existing 145
- List of Report Rules screen 158

## M

- master index 57, 58

## P

- page
  - creating 141
  - defining 135
- preferences
  - delete entry 139
  - dialog exit 139
  - report layouts 138

## R

- recipient IDs 136
- Relationship field, layout 143
- Relative Field Name 144
- Relative Field Relationship 144
- Report Condition Entry window 150
- report layout
  - creating 135
- Report layout Preferences screen 138
- report layouts
  - creating a field 143
  - deleting 146
  - designing 137
  - inserting 139
  - preferences 138
  - printer control 140
  - relationship of areas 143
  - relative field name 144
  - relative field relationship 144
  - tie to rule 160
  - view existing 145
- Report Rules screen 157
- report selection rules 137, 156
- reports
  - basic 134
  - capturing 148

- conditions 149
- creating layout 135
- custom 134
- defining custom 148
- tie to distribution list 154
- tie to layouts 152

rules

- report selection 156
- tie to layout 160

## **S**

screens

- Delete confirmation window 146
- Distribution List Selection 156
- Layout 139
- Layout Area 142
- Layout Field 144
- Layout Page 141
- List of Report Rules 158
- Report Condition Entry 150
- Report layout Preferences 138
- Report Rules 157

service updates xiv

support information xiv

## **V**

- Value field 150
- values, custom reports 150

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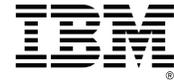
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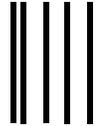
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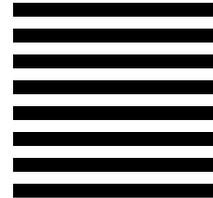
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