

3.1

*IBM Tivoli Output Manager for z/OS  
Installation and Customization Guide*



**Note:**

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

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## About this information

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This book provides instructions for customizing and using IBM® Tivoli® Output Manager. The book is designed to help report administrators, report users, system administrators, security administrators, database administrators, and print room managers and operators perform the following tasks:

These topics are designed to help database administrators, system programmers, application programmers, and system operators perform these tasks:

- Plan for the installation of Output Manager
- Install and operate Output Manager
- Customize your Output Manager environment
- Migrate from an older version of Output Manager to the current version

For installation instructions, refer to the Output Manager Program Directory, which is included in the product package.

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

- The z/OS® operating system
- RACF®
- ISPF
- Db2®
- Web-browser based applications





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# Chapter 1. Introduction to Output Manager

Review these introductory topics to become familiar with Output Manager:

- [“What Output Manager does” on page 1](#)
- [“Output Manager components” on page 2](#)
- [“Report processing” on page 2](#)
- [“Exception processing” on page 5](#)
- [“General product administration” on page 5](#)

This book provides instructions for the installation and customization of Output Manager. The book is designed to help report administrators, system administrators, security administrators, database administrators, and print room managers and operators perform the following tasks:

- Plan for the installation of the product
- Customize the product following installation
- Migrate from an older product version to the current version

For information on the administration of Output Manager, report administrators, system administrators, security administrators, and database administrators should refer to the *IBM Tivoli Output Manager for z/OS Administrator's Guide*.

For information on the administration of Output Manager, report administrators, system administrators, security administrators, and database administrators should refer to the *IBM Tivoli Output Manager for z/OS Administrator's Guide*.

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## What Output Manager does

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

Key product features and benefits:

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

- Converts reports in third-party archives. CA-View™ and IBM RMD5 archives are supported. For more information on additional supported third-party ISV archives, contact your IBM representative or Technical Support.

**Note:**

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

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

**Related concepts**

[Output Manager components](#)

[Report processing](#)

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

[Exception processing](#)

[General product administration](#)

## Output Manager components

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An Output Manager system is composed of the following components:

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

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

**Related concepts**

[What Output Manager does](#)

[Report processing](#)

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

[Exception processing](#)

[General product administration](#)

## Report processing

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

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

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

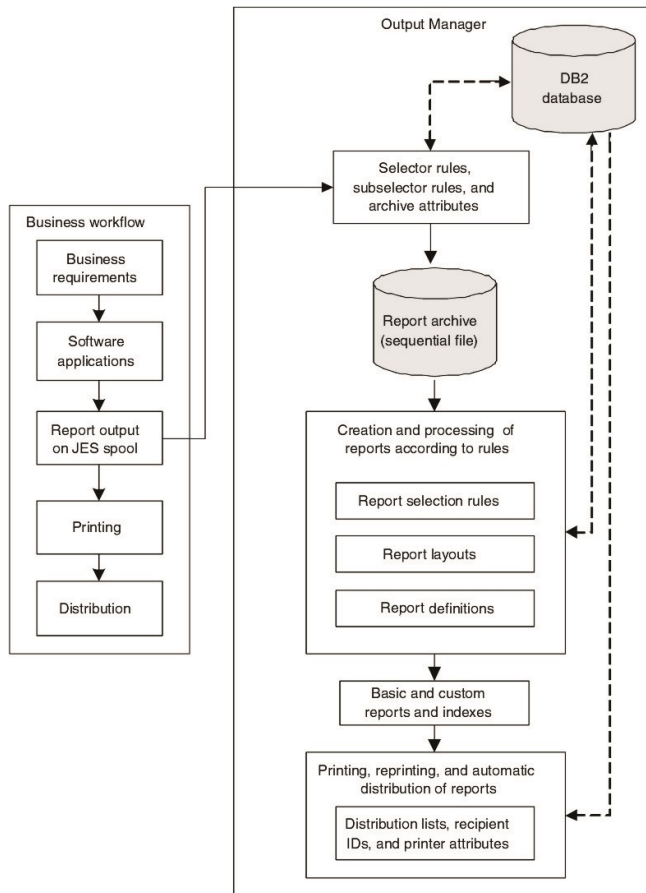


Figure 1. Output Manager in the business flow

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

### Related concepts

[What Output Manager does](#)

[Output Manager components](#)

[Exception processing](#)

[General product administration](#)

## Process flow

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

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

1. A business application running on a z/OS system produces a report as SYSOUT on the JES spool.
2. JES notifies Output Manager when SYSOUT that matches a selector is discovered on the spool. Once a matching selector rule is found, Output Manager processes the SYSOUT.
3. If any subselector rules are associated with the selector rule, Output Manager scans the subselector rules in the order in which they are listed to determine if any match the SYSOUT. If a matching

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

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

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

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

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

## Example of report processing

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

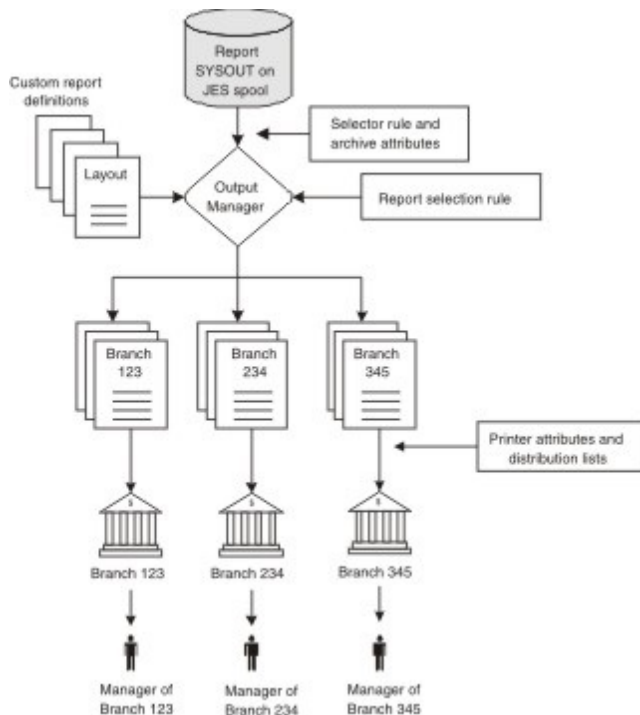


Figure 2. Example of report processing for a bank

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

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

## Exception processing

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

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

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

**IEF452I** - JCL error.

**IEF453I** - JCL error.

**IEFC452I** - JCL error.

**IEF450I** - Abend.

**IEF142I** - Step completion code.

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

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

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

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

### Related concepts

[What Output Manager does](#)

[Output Manager components](#)

[Report processing](#)

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

[General product administration](#)

## General product administration

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From the ISPF interface, product administrators can manage the Output Manager system policies using the Policy Administration panel (ISPF A.PA). They can also define messages to product users. Other

administration tasks, such as synchronizing Output Manager tables and archive data sets with the z/OS system catalog, must be performed from outside of the ISPF interface.

### **Related concepts**

[What Output Manager does](#)

[Output Manager components](#)

[Report processing](#)

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

[Exception processing](#)

## **Catalog synchronization**

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

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

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

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

## **Conversion of third-party archived reports**

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

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

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

For more information, see [Chapter 5, “Third-party archive conversion,” on page 89](#).

## **Supported third-party ISV products**

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

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

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## Chapter 2. Planning for Output Manager

Review these topics to prepare for implementing Output Manager:

- [“Archives for captured SYSOUT ” on page 8](#)
- [“Deployment considerations” on page 8](#)

### Prerequisites

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Output Manager has both hardware requirements and software requirements. Make sure that you have the following minimum hardware and software requirements in place before you install Output Manager.

#### Hardware requirements

Output Manager for z/OS (5698-AA5) runs on any hardware that is capable of running the z/OS® operating system.

You must have a computer that is capable of running the required software listed below in the Software requirements section. Your specific hardware requirements will depend on the volume of data that you plan to maintain, the backup and recovery practices at your site, and the performance levels that your system is expected to maintain.

#### Software requirements

The following:

- z/OS V2.3 (5650-ZOS) or later
- Db2 12 for z/OS (5650-DB2), or later
- Db2 Utilities Suite for z/OS, V12.1 (5770-AF4) or later

The following z/OS base elements:

- ISPF
- TSO/E
- JES2 or JES3
- RACF or comparable third-party SAF-based security manager
- IBM HTTP Server powered by Apache V9 required if using Tivoli Output Manager web component
- Integrated Cryptographic Service Facility required if using Text Processing Language feature

One of the following web browsers required if using Tivoli Output Manager web component:

- Mozilla Firefox
- Microsoft Edge

**Note:** It is recommended to define a user catalogue on an EAV volume.

#### Planning a migration from a previous version of Output Manager

Sites running earlier versions of Output Manager must follow the instructions in [Chapter 7, “Migrating from a previous version of Output Manager,” on page 117](#). The migration process does not make any changes to your existing database or configuration. The migration makes a copy of your current database and then converts the copy to the Output Manager V3R1 format.

Migration from earlier versions of Output Manager to V3R1 involves the following tasks:

- Install Output Manager V3R1 in a separate SMP/E zone.

- It is recommended to apply all available maintenance so that you start the migration process using the most up-to-date version of the Output Manager V3R1 software. When applying maintenance, you can skip the hold actions that apply updates to the V3R1 database. The database migration jobs will rebuild the new V3R1 database using DDL (Data Definition Language) members that include all hold actions.
- Build a new database using a copy of the existing Output Manager database.
- Perform several customization steps.

## Archives for captured SYSOUT

---

Archive data set names must be unique. Work with your system administrator and security administrator to ensure that the archive data set names are unique and adhere to your site's requirements and conventions.

Consult with your system administrator and storage administrator about other archive attributes, such as storage class, management class, data class, and space release, to ensure that these attributes are compatible with your site's conventions, capacity, and resources. If your site uses SMS ACS routines, these routines might override some archive attributes. SMS ACS routines can automatically assign a storage class, management class, and data class based on a data set name. Your system administrator might be able to determine the appropriate archive attributes to use based on the archive data set naming convention.

Output Manager also generates a logical name for each archive. This name is stored in the BJTARC table and displayed as "Archive Name" for archived reports.

**Note:** It is highly recommend that Output Manager archive data sets be SMS-managed.

## Deployment considerations

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The Output Manager administrator in conjunction with the other appropriate personnel should carefully consider the following deployment issues prior to implementing Output Manager:

- Capture of JES data sets as well as report SYSOUT
- Archives for captured SYSOUT
- Storage and space requirements
- Methods of accessing load modules
- Db2 considerations
- Dispatching priorities
- Scheduling of catalog synchronization
- Implementation in a sysplex
- Security considerations

## Capture of JES data sets and report SYSOUT

Output Manager can capture and archive JES data sets as well as report SYSOUT.

Many sites want to separate report output from the JES data sets that jobs produce. To do so, they can direct production reports to SYSOUT classes that are different from those for JES listings. For instance, they might specify `//PRODREPT DD SYSOUT=P` for production reports and specify `MSGCLASS=A` on the job card for JES message output. Also, sites might have different storage and retention requirements for production reports than for JES listings.

In Output Manager, you can configure selector rules and archive attributes to capture and archive JES data sets separately. For example, you could use the archive mask `SYSOUT.&JOBNAME.&JOBNUMB.&N` to allocate an archive data set for JES output.



## Archives for captured SYSOUT

Archive data set names must be unique. Work with your system administrator and security administrator to ensure that the archive data set names are unique and adhere to your site's requirements and conventions.

Consult with your system administrator and storage administrator about other archive attributes, such as storage class, management class, data class, and space release, to ensure that these attributes are compatible with your site's conventions, capacity, and resources. If your site uses SMS ACS routines, these routines might override some archive attributes. SMS ACS routines can automatically assign a storage class, management class, and data class based on a data set name. Your system administrator might be able to determine the appropriate archive attributes to use based on the archive data set naming convention.

Output Manager also generates a logical name for each archive. This name is stored in the BJTARC table and displayed as "Archive Name" for archived reports.

**Note:** It is highly recommend that Output Manager archive data sets be SMS-managed.

## Considerations for using Output Manager and other SAPI-based applications

If more than one SAPI-based application is attempting to operate on the same JES spool job at the same time, results may be unpredictable. For example, if you have an existing ISV product that is capturing SYSOUT class "Q" output, do not configure Output Manager to process class "Q" output as well. If both ISV products are configured to capture the same SYSOUT class output, the output may appear in Output Manager or the other product's database.

To perform parallel testing with Output Manager and another ISV product, allow Output Manager to capture the output and leave a copy on the spool for the other ISV product.

To configure Output Manager to capture the output and leave a copy on the spool, change the JCL of the test job to use a SYSOUT class managed by Output Manager. When defining the Output Manager selector rule, specify the KEEP in a different class.

## Considerations for setting up Output Manager in a multi-LPAR environment

IBM Tivoli Output Manager for z/OS can be configured to run in an environment that has more than one LPAR. However, you must follow different configuration steps than when installing a standard Output Manager setup.

**Note:** Consult with your Db2 systems programmer for their advice and assistance before configuring your Output Manager installation in a multi-LPAR environment. They will need to configure Db2 to operate between the different LPARs. Pay particular attention to the BIND examples and make certain that these are replaced with the BINDs associated with your current version and PTF level of Output Manager.

One LPAR runs the started task to capture SYSOUTs. Users on other LPARs can view the archives and reports.

## Configuring Output Manager to allow access from multiple LPARs

Prerequisites:

- These configurations assume that each LPAR is in the same SYSPLEX, is using shared DASD, and is able to share the same security definitions.
- Output Manager load modules must be APF authorized. For more information on how to accomplish this, refer to [“APF-authorize the load library and LPA library” on page 27](#) and [“Make Output Manager modules available ” on page 29](#).
- The BJTISMF Output Manager program must be added to IKJTSoxx AUTHCMD, AUTHPGM, and AUTHTSF sections. For more information on how to accomplish this, refer to [“Update your TSO configuration” on page 30](#)

- The ARA\_HOST Output Manager configuration parameter must be set to the name of the system on which the Output Manager started task is running.

## Security requirements

In order to access Output Manager, the remote LPAR/Db2 subsystem requires the same security privileges that it requires to access the collector environment. Any time you add, delete, or change the security definitions related to Output Manager, you must refresh the RACF class on both LPARs. To do so, issue the following command on each LPAR that Output Manager viewing (of reports and archive) and administration occurs:

```
SETROPTS RACLIST(XFACILIT|FACILITY) REFRESH
```

Provide Output Manager with READ access to the EZBDOMAIN resource:

1. In the SERVAUTH class, locate the EZBDOMAIN resource profile. If the EZBDOMAIN resource profile does not exist, create it. The following is an example of defining the EZBDOMAIN resource in RACF:

```
SETROPTS CLASSACT(SERVAUTH)
SETROPTS RACLIST (SERVAUTH)
```

**Note:** The SERVAUTH class must be active and RACLISTed.

2. Define the EZBDOMAIN profile and customize the APPLDATA field to contain the security domain name for the SYSplex:

```
RDEFINE SERVAUTH EZBDOMAIN APPLDATA('security_domain_name')
```

3. Provide the user ID or Group of the Output Manager started task READ access to the EZBDOMAIN profile:

```
PERMIT EZBDOMAIN CLASS(SERVAUTH) ID(BJTSTCU) ACCESS(READ)
```

4. Refresh the SERVAUTH class to activate the changes:

```
SETROPTS RACLIST(SERVAUTH) REFRESH
```

### Option 1: Configuring Output Manager to allow viewing archives and reports from a remote Db2 using Db2 data sharing:

1. Set up the Output Manager Collector environment. It is recommended to follow the instructions found in [Chapter 3, “Customizing Output Manager,” on page 19](#).

**Note:** Specify the Db2 data sharing Group Attachment Name as the Db2 subsystem ID during the setup.

2. Copy the customized SBJTEXEC member BJTUI used for the Output Manager Collector environment and make it available for TSO users on the LPAR running a Db2 Subsystem that is part of the same data sharing group.

### Option 2: Configuring Output Manager to allow viewing archives and reports from a remote Db2 using DRDA

With DRDA, Output Manager connects to a server at another location and executes packages that have been previously bound at that server. Output Manager uses a CONNECT statement and an alias defined to substitute the three-part name used to access Db2 tables and views at a remote location.

1. Set up the Output Manager Collector environment using the instructions found in [Chapter 3, “Customizing Output Manager,” on page 19](#). This configuration will use the Db2 running on the same LPAR (through the local Db2 connection).
2. Create a new SBJTSAMP library for remote Db2 access on each LPAR that will be used to run TSO viewers.

**Overview:** BJT@CPYA is used to copy specific members from the SBJTSAMP and SBJTEXEC that was provided with the installation into a new HLQ used for customization. You then modify members BJT@PREA and BJT@JCEA to specify configuration values that will aid in creating aliases, and then submit member BJT@JCEA.

- a. Copy BJT@CPYA from your SMP/E install library to a separate JCL library.
- b. Modify the copy of BJT@CPYA to specify a new location for a copy of the specific members of the SBJTSAMP library:
  - **?BJTHLQ?**: Specify the high-level qualifier for the Output Manager product libraries. This high-level qualifier was specified during the installation process, as documented in the *Program Directory for Tivoli Output Manager for z/OS*.
  - **?SAMPHLQ?**: Specify a high-level qualifier for the SBJTSAMP containing the members used to set up the view-only configuration. In the following examples, the value *HLQ.CPYA* is used.
- c. Submit the modified version of BJT@CPYA. BJT@CPYA creates a copy of the members of SBJTSAMP required to configure the viewer sessions.
- d. Modify *HLQ.CPYA.SBJTSAMP (BJT@JCEA)* to replace the ?SAMPHLQ? variable with the high level qualifier for this newly copied SBJTSAMP library, and replace the ?BJTHLQ? variable with the high level qualifier for your Output Manager V3R1 product libraries.

**Important:** Never run BJT@JCEA against your SMPE applied library.

- e. Modify <JOB PARAMETERS> on the job card.
  - f. Modify *HLQ.CPYA.SBJTSAMP (BJT@PREA)*. Follow instructions within the member and specify the following configuration parameters:
    - **?SAMPHLQ?**: Specify the high-level-qualifier of this newly copied version of SBJTSAMP (the DSNNAME of the library for this member). For example, *HLQ.CPYA*.
    - **?BJTHLQ?**: The high-level qualifier of the *new* Output Manager V3R1 product libraries.
    - The following variables are optional for setting up JOB cards: **?ACCT?**, **?PROGRAMMER NAME?**, **?JOBCLASS?**, **?MSGCLASS?**.
    - **?SDSNEXIT?**, **?SDSNLOAD?**, **?RUNLIB?**, and **?TEPPLAN?**: Specify values for the Db2 subsystem where you are creating the aliases. ?SDSNEXIT? is the EXIT library for your Db2 subsystem. ?SDSNLOAD? is the Db2 LOAD library for your Db2 subsystem. ?RUNLIB? is the Db2 RUN library. ?TEPPLAN? is the plan name for the DSNTEP2 program.
    - **?DB2SSID?**, **?BJTBASE?**, and **?BJTQUAL?**: Specify values used to create the aliases. ?DB2SSID? is the subsystem ID of the viewer. ?BJTQUAL? must be the same qualifier used on the collector system. ?DB2LOCTN? is the location name of the collector system. This is used to construct the aliases.
    - **?OWNER?**: The authorization ID of the owner of the new Output Manager database. If your site has no specific security requirements for the database, set this to the user ID that submits the job to create the database.
    - **?PLANOWNER?**: The authorization ID of the owner for the plans and packages. If your site has no specific security requirements for the Output Manager database, set this to the user ID that submits the jobs to BIND the packages and plans.
    - **?BJTPLAN?**: The ?BJTPLAN? value in *HLQ.CPYA* must be the same value used on the collector system for the plan name prefix.
    - **?BJTCOL?**: The ?BJTCOL? value in *HLQ.CPYA* must be the same value used on the collector system for the collection name.
    - **?BJTHLQ?**: (This variable must be specified in two locations in BJT@PREA.) Specify the high-level qualifier of the *new* Output Manager V3R1 product libraries.
  - g. Submit *HLQ.CPYA.SBJTSAMP (BJT@JCEA)*. BJT@JCEA automatically modifies all of the members of the specified SBJTSAMP library according to the values specified in BJT@PREA.
3. Create Db2 ALIAS definitions. In the new SBJTSAMP library, run the SQL statements in BJT@ALCR using SPUFI or BJT@JCUT.

4. DROP ALIAS definitions. In the new SBJTSAMP library, run the SQL statements in BJT@ALDR using SPUFI or BJT@JCUT if you wish to remove the remote access capabilities.
5. Bind Db2 plans and packages: from the new SBJTSAMP library, submit BJT@JCBX. Expected completion code of this job is 0000.
6. ?BJTPLAN?: The ?BJTPLAN? value in HLQ.CPYA must be the same value that is used on the collector system for the plan name prefix.

The package(s) must be bound on the collector system (Db2 subsystem that contains the tables.). If the collection name on the viewer system is different than the one on the collector system, the packages defined in BJT@PRBX need to be bound on both systems.

**Note:** Do not use the same name for collections and plans to refer to the different database objects.

7. Customize the Output Manager user interface to use the Db2 subsystem definitions allowing remote access:
  - a. BJT@CPYA copies the SBJTEXEC BJTUI member into a library that can be accessed on the LPAR where the Output Manager ISPF interface will use remote Db2 access.
  - b. When you run BJT@JCEA the following changes are made to BJTUI:
    - sdsnext = Modified to contain the Db2 exit library for the Remote Db2 subsystem used for Output Manager viewing
    - sdsnload = Modified to contain the Db2 load library for the Remote Db2 subsystem used for Output Manager viewing
    - db2ssid = Modified the SSID to the remote Db2 subsystem id where the Db2 ALIAS definitions are stored.

## **Considerations for applying Output Manager PTFs when Output Manager is sharing Db2 objects (database, plans, or packages) or using Db2 Views in a multi-LPAR environment**

When Output Manager is sharing the same database, plans, or packages in a multi-LPAR environment (with Db2 data sharing, with a distributed connection using DRDA protocol and ALIASes pointing to a remote Db2, or using Db2 Views), the following considerations must be made when applying Output Manager PTFs:

- If an Output Manager PTF includes additions, deletions, or updates to SBJTSAMP BIND statements found in BJT@PRBI, BJT@PRBU, or BJT@PRBX, you must update your customized version of the SBJTSAMP BIND members on the Collector Db2 subsystem where Output Manager definitions are stored. Then, run the updates using bind JCL (BJT@JCBI, BJT@JCBU, or BJT@JCBX). On each Db2 Subsystem/LPAR for viewing, update BJT@PRBX and run BJT@JCBX to bind the plan used by the TSO session.
- If an Output Manager PTF creates a new table (denoted by a new SBJTSAMP member BJTALTxx containing a CREATE TABLE definition along with an update to SBJTSAMP member BJT@TBCR with the same CREATE TABLE definition added), and you use DRDA to connect to the Output Manager collector started task, you must create a new alias definition (CREATE ALIAS) for the Output Manager viewer started task. If your environment uses Db2 views, you must also add a new Db2 VIEW for the new table, unless otherwise specified.
- If an Output Manager PTF requires an existing table or tablespace to be dropped and rebuilt (denoted by a new SBJTSAMP BJTALTxx member containing a drop table or tablespace followed by a CREATE of this same table or tablespace) and your Output Manager environment uses Db2 views, those views will be dropped as a result of the table or tablespace being dropped, so the views must be rebuilt.

## Applying Output Manager PTFs when Output Manager is sharing tables/plans in a multi-LPAR environment

When Output Manager is sharing tables/plans in a multi-LPAR environment, either with Db2 data sharing or with a distributed connection using DRDA protocol with ALIASes/VIEWS pointing to a remote Db2, the following considerations must be made when applying Output Manager PTFs.

- If the HOLD ACTION of an Output Manager PTF states that the started task must be shut down, you must shut down each instance of the Output Manager started task (both local and remote).
- If an Output Manager PTF includes updated sample BIND jobs, you must update your customized version of the sample BIND jobs for each Output Manager instance. If you are using data sharing in your multi-LPAR environment, run the updated bind once on one of the Db2 subsystems in the group. If you are not using data sharing, run the updated bind job on each Output Manager Db2 subsystem.
- If an Output Manager PTF includes a new Db2 table, BJT@TBCR is updated to create the table. If you use DRDA to connect to the Output Manager collector started task, you must create a new alias definition (CREATE ALIAS) for the Output Manager viewer started task. If your environment uses Db2 views, you must also add a new Db2 VIEW (CREATE VIEW) for the new table added by BJT@TBCR, unless otherwise specified.
- If your environment uses Db2 views for the Output Manager started task, and an Output Manager PTF includes a new BJTALTxxx member that drops and recreates an existing table or table space, those views will be dropped with the table or table space, so you must rebuild those views.

## Configuring IBM Tivoli Output Manager for High Availability

IBM Tivoli Output Manager for z/OS can be configured to have a standby started task for High Availability, if we have a multi-LPAR environment with a JES multi-access spool, shared DASD and Db2 Data sharing.

In this configuration, one IBM Tivoli Output Manager started task can be configured as Active task in one LPAR, which is used to collect output from the spool, provide product administration services and service online viewing requests and the other started task can be configured as Standby Task in another LPAR.

### Prerequisites

Here are the prerequisites for configuring IBM Tivoli Output Manager high availability.

1. These configurations assume that each LPAR is in the same SYSPLEX, is using shared DASD, and can share the same security definitions.
2. High availability only works in the scope of a JES2 MAS. All participating systems must be members of the same JES2 MAS.
3. The underlying DB2 database that is created for IBM Tivoli Output Manager must be within a DB2 data sharing group which is directly accessible from all systems. Please consult with your DB2 systems programmer for his or her advice and assistance for using the Db2 Data Sharing.
4. All archive and support data sets must be available to all systems via the coupling facility, i.e., the systems must be members of a SYSPLEX.

### Deploying Output Manager in a multi-LPAR environment for High Availability

To deploy Output Manager for high availability, you need to set up the Output Manager started tasks on separate LPARs.

1. One **Active Started task** for capturing and archiving output from the JES spool.
2. One **Standby Started task** for capturing the output in case the main started task abnormally ends.

### Configuring Active Output Manager Started task using DB2 data sharing

To set up the Output Manager Collector environment, see [Chapter 3, “Customizing Output Manager,” on page 19.](#)

## Configuring Standby Output Manager Started task using DB2 data sharing

1. Create a new SBJTSAMP library for Standby IBM Tivoli Output Manager task and copy the BJT#IN04 SBJTSAMP member into it.
2. Modify the startup procedure BJT#IN04 similar to the one created for active task (same PROC can also be used) and place it into the PROCLIB (choose a member name for the startup PROC other than the one used for Active Started task).
3. Same BJT#IN03 SBJTSAMP member can be used for both Active and Standby task.
4. Same BJTUI member can be used for both Active Started task and Standby Started task.
5. Ensure that the bjtname provided in the PARM NAME=?BJTNAME? is same as that of the Active Started task.

### Start Procedure

1. Add the parameter **ITOMHA=Y** in both the PROC of active and backup started task after the IBM Tivoli Output Manager instance NAME parameter.

```
000001 //BJTP      PROC NAME='BJTRS22C,ITOMHA=Y'
000002 //*****
000003 // 5698-AA5
000004 // © Rocket Software, Inc. or its affiliates 2011-2023
000005 // All Rights Reserved.
```

2. Start the Active started task in the designated LPAR.
3. Start the Standby started task in the selected LPAR.
4. If the Active started task abnormally ends, the standby task becomes active and will start to archive the SYSOUTs.

#### Note:

IBM Tivoli Output Manager High Availability will be enabled only when the parameter **ITOMHA=Y** is provided in the PROC.

IBM Tivoli Output Manager standby started task cannot be stopped using the **STOP** command as the standby started task is not completely initialized and active.

If multiple LPAR view is configured for the instances running in LPARs which are part of High availability, ARA\_HOST must be updated manually when the auto roll-over occurs from active to standby. The update can be done through the Policy Administration panels (ISPF A.PA).

## Storage and space considerations

The data sets that Output Manager allocates consume storage space.

You must assess how much storage space is necessary to accommodate the expected volume of archive data sets, the retention periods for the archive data sets, and the enforcement of retention policies.

When estimating the amount of DASD that will be required, consider the following factors:

- The volume of output that Output Manager is expected to process
- The size of the reports that will be produced and managed (in pages and bytes)
- The number of reports that will be produced and managed, and the versions of these reports
- Your site's retention policies

Retention periods for data sets can be defined in the JCL. Your site probably has additional retention policies to ensure that data sets are kept as long as necessary. Your site also probably has mechanisms for ensuring that old data sets that must be retained are copied to tape or other media for long-term storage.

**Note:** Allocate banner libraries as Fixed record format (RECFM=FB or RECFM=FBA). Allocating these libraries as RECFM=VB or VBA may have unpredictable results.

## Methods of accessing load modules

You can define the SBJTLOAD library in the link list, but you are not required to do so.

The sample PROC in SBJTSAMP member BJT#IN04 includes a STEPLIB DD statement that refers to the Output Manager SBJTLOAD data set. Also, the BJTUI REXX Exec in the SBJTEXEC library uses the ISPF LIBDEF service to make the SBJTLOAD data set available in the ISPF environment.

**Note:** If the SBJTLOAD and SBJTLPA modules are not loaded into the dynamic LPA, they must be link-listed or STEPLIBed until the next IPL, and refresh the dynamic LPA every time you IPL. If using dynamic LPA, they must be loaded into dynamic LPA after every IPL.

## Db2 considerations

The base Output Manager product requires the following Db2 objects: a database, several table spaces, several tables, and several indexes.

**Note:** Output Manager requires that any Output Manager Db2 V9 subsystem operate in New Function Mode. Output Manager does not support Db2 V9 in Compatibility Mode.

It is recommended to install Output Manager on a separate Db2 subsystem. Although Output Manager can be run on an existing Db2 subsystem, having a separate subsystem allows you to carefully monitor resource usage and plan maintenance windows. Work with your database administrator to decide what's right for you.

Optional Output Manager components such as ISV recall require additional table spaces, tables, and indexes.

You must work with your database administrator to obtain the Output Manager names and SQL IDs for these Db2 objects and to ensure that enough space is available for each of the tables.

**Note:** CCSID EBCDIC is specified in the SBJTSAMP for creating the Output Manager Db2 database (tablespaces and tables), even if this is not your subsystem default. Additionally, ENCODING(EBCDIC) is required for the ITOM BIND jobs.

You should perform regularly scheduled maintenance on the Output Manager Db2 objects to ensure that data integrity is maintained and that access performance is optimal. Maintenance tasks include:

- Performing regularly scheduled image COPY, REORG, and RUNSTATS operations
- Purging old records from the Output Manager bundle history table (BJTBHI) if you use the report-bundling feature

If you run a Db2 utility (for example, the COPY or REORG utility) that puts Db2 objects in a read-only or stopped state, ensure that you stop the Output Manager started task prior to starting the utility. Also, ensure that the utility is successfully completed and that the database is in read-write mode before starting the Output Manager started task again. If the utility does not complete successfully, the Output Manager Db2 objects might remain in a stopped or read only state; in this case, Output Manager cannot update its Db2 tables and SQL errors occur.

If you upgrade to a later Db2 version after deploying Output Manager, you must perform the following steps:

1. Set the ?SDSNLOAD? variable value to the name of the new Db2 load library in the SBJTSAMP members. (Tip: You can re-use BJT@PRED and BJT@JCED to specify new values.)
2. If a new SDSNEXIT data set is defined for the new version, change all JCL that refers to it accordingly.
3. Change the ?RUNLIB? variable value to the name of the new Db2 RUNLIB data set in SBJTSAMP members. (Tip: You can re-use BJT@PRED and BJT@JCED to specify new values.)
4. Rebind the Output Manager plan. For more information, see [Chapter 3, “Customizing Output Manager,” on page 19](#).
5. If you use ISV recall, rebind the ISV recall plan. For more information, see [Chapter 3, “Customizing Output Manager,” on page 19](#).
6. Edit the logon PROCs for Output Manager users to allocate the correct Db2 libraries to their user IDs.

7. Modify the ?SDSNEXIT? and ?SDSNLOAD? variables in BJTEXEC member BJTUI.

## Dispatching priorities

Output Manager requires both JES and Db2 to do its work. Therefore, the system administrator must set the dispatching priority for the Output Manager started task to a value that is lower than the value for JES and lower than the value for the Db2 instance that Output Manager is using. However, to ensure good throughput and responsiveness, it is recommended that the Output Manager started task is assigned to a medium priority STC class such as STCMD and adjusting JES and Db2 priorities accordingly. Further, you can tune the system to meet your response time and throughput goals

## Considerations for setting up Output Manager to use generation data groups (GDGs) as archive data sets

Output Manager supports the use of generation data groups as archive data sets. This legacy compatibility feature is useful for customers who have used copies-based versioning in their previous ISV products, it is not recommended for customers standard configurations.

Once your environment is properly configured, Output Manager can retain reports based on "Number of copies". No fewer than "Number of copies" will be retained as cataloged archive data sets provided at least "Number of copies" have been captured.

### GDG environment configuration

When using GDGs with Output Manager, all GDGs must be created with the attributes NOEMPTY and NOSCRATCH, to retain all rolled-off generations. When NOSCRATCH is specified, rolled-off generation data sets (GDSs) are not immediately deleted. When NOEMPTY is specified, an active GDS is not scratched when a generation is rolled off.

A suitable Management Class must be defined to ensure that active generations are never scratched. Optionally, you may elect to retain more generations than absolutely necessary to allow for Job reruns. Archives will be managed with normal GDG and DFSMSHsm semantics.

Additionally:

- The Primary Management Class must specify the following values:
  - NOLIMIT for EXPIRE DAYS NON-USAGE
  - NOLIMIT for EXPIRE DATE/DAYS
  - EXPIRE for ROLLED-OFF GDS ACTION.

These values will not be checked by Output Manager, and it is the responsibility of the Report Administrator and Storage Administrator to set them correctly.

- The retention period must be specified as "0" in the Archive Attribute to prevent Output Manager from computing or setting an Expiration Date.

### Configuring Output Manager to work with GDGs

Specify the configuration parameter DEFAULT\_GENERATIONS in the Policy Administration panels (ISPF A.PA), to define the number of default generations to retain. For more information see [“Reference: BJTCFG configuration parameters” on page 66](#).

Specify &GDG or &GDGnnn in an archive mask for an archive attribute. For more information, see the *IBM Tivoli Output Manager Administrator's Guide*.



## Catalog synchronization scheduling

Over time, Output Manager archive data sets will probably be deleted or migrated based on the associated archive attributes and on your storage management policies. As these data sets are deleted and migrated, the Output Manager Db2 tables can become out of sync with the z/OS system catalog.

To keep the Db2 tables synchronized with the catalog, you need to periodically run the catalog synchronization job. The sample JCL for this job is in the SBJTSAMP library member BJTCTSNC. You can schedule this job to run as often as necessary to ensure that Output Manager displays current data set information. When scheduling the job, consider how the archive attributes and your storage management policies affect data set retention, deletion, and migration.

## Sysplex considerations

Output Manager, when implemented in a sysplex environment, can be configured to enable users to view captured output across multiple z/OS images.

The web server requires access to the ITOM database and archive data sets. If datasharing or DRDA is configured, the web server can be on any LPAR that has access to the data sharing group or aliases.

Sysplex NEPLEX01; JES MAS "YANKEE"

LPAR System Name	SZ21	SZ22	SZ23	SZ24
DB2 Subsystem	DA1A	XA1B	XA1A	<none>
DB2 Data Sharing Group	<none>	DSG1	DSG1	<none>
ITOM Started Task	ITOMD	ITOMP	<none>	<none>

### Note:

- SZ21 - A stand-alone ITOM system for developers. Separate ITOM database. Configured to pull only test jobs from the JES MAS. Online viewing, printing.
- SZ22 - The ITOM production system. Production output is pulled from JES MAS regardless of which system the job ran on. Collects sysout and provides online viewing, printing.
- SZ23 - Users can view and print from this system because it is configured for data sharing group with SZ22. No ITOM STC is required when using DB2 data sharing.
- SZ24 - No ITOM access at all because there is no DB2 subsystem installed here.



## Chapter 3. Customizing Output Manager

After you complete the installation instructions in the *Program Directory for IBM-Tivoli Output Manager for z/OS*, you should apply all maintenance that is available for the product from the IBM website at <http://www.ibm.com/support/mysupport>. Then you must customize the core product. You can also install and customize the optional ISV recall, ITOMweb, and SMF logging components.

**Note:** At the end of the customization process, follow the procedures in the [Chapter 4, “Security,”](#) on page 77 chapter.

**Note:** It is recommended that the user ID of the user performing the installation and customization is added to the RACF group that identifies Output Manager administrators. The user ID must be an administrator in order to add configuration parameters in the Output Manager ISPF interface.

### Customization overview

Complete the customization steps to tailor Output Manager for your environment.

The following table provides a summary of the steps involved with customization:

Step	Description
1	<a href="#">“Copy the Output Manager SAMPLIB, SBJTSAMP, using BJT@CPYU”</a> on page 25
2	<a href="#">“Modify and submit JCL in BJT@PRED and BJT@JCED to configure customization variables”</a> on page 25
3	<a href="#">“Run the job to create the Output Manager database”</a> on page 26
4	<a href="#">“Bind the Output Manager packages and plans”</a> on page 26
5	<a href="#">“APF-authorize the load library and LPA library”</a> on page 27
6	<a href="#">“Enable DFSMSshm and ISV recall processing ”</a> on page 27
7	<a href="#">“Modify the started task JCL”</a> on page 27
8	<a href="#">“Authorize the started task”</a> on page 28
9	<a href="#">“Define RACF classes and profiles with BJT#RDEF and BJT#RPER”</a> on page 28
10	<a href="#">“Create access to the Output Manager interface ”</a> on page 29
11	<a href="#">“Make Output Manager modules available ”</a> on page 29
12	<a href="#">“Update your TSO configuration”</a> on page 30
13	<a href="#">“Start the started task and verify the ISPF installation ”</a> on page 30
14	<a href="#">“Specify configuration parameters from the Output Manager ISPF interface”</a> on page 31

If you plan to use the optional ISV recall and ITOMweb components, refer to following topics:

- [“ISV recall installation and customization”](#) on page 44.
- [“ITOMweb installation and customization”](#) on page 32

## Reference: Output Manager customization variables worksheets

This topic is provided for reference only. SBJTSAMP members BJT@JCED and BJT@PRED simplify the initial configuration process by editing most configuration variables throughout your local copy of the Output Manager SBJTSAMP library used for customization. If you modified and submitted BJT@JCED and BJT@PRED in “Modify and submit JCL in BJT@PRED and BJT@JCED to configure customization variables” on page 25, these customization variables were modified automatically. For more information, refer to SBJTSAMP member BJT@PRED.

### Required Output Manager customization variables worksheet

The following table lists the Output Manager required customization variable parameters, the description of each parameter, and a blank field to allow you to record the value you used for future reference.

Parameter	Description	Your value
?SAMPHLQ?	The high level qualifier of the copy of SBJTSAMP used for customization.	
?BJTHLQ?	The high level qualifier of the Output Manager product libraries.	
?SDSNEXIT?	The EXIT library for your Db2 subsystem.	
?SDSNLOAD?	The Db2 LOAD library for your Db2 subsystem, for example DSN.V910.SDSNLOAD.	
?DB2SSID?	<p>The Db2 subsystem ID of the subsystem that contains the Output Manager database tables. This value can be 1-4 characters.</p> <p>If the subsystem is a member of a data sharing group and you want Db2 to select which subsystem to use, specify the Group Attachment Name. If you want to specify the specific member of a data sharing group, or if the Db2 subsystem is not a member of a data sharing group, specify the Db2 Subsystem Name.</p> <p><b>Note:</b> Multiple Output Manager instances can use the same Db2 subsystem, or they can use different subsystems. If you plan to use multiple product instances on different subsystems, you will need to define the subsystem ID for each subsystem in a separate member. You can use BJT@PRSS as a template.</p>	
?RUNLIB?	The Db2 RUN library.	
?TEPPLAN?	The plan name for the DSNTEP2 program (or similar) program, for example, DSNTEP2.	
?BJTBASE?	<p>This variable is used to name the Output Manager database and table spaces. The recommended value is BJTBASE.</p> <p><b>Note:</b> This value must be unique on the Db2 subsystem for which you configure Output Manager. Check with your Db2 systems administrator to ensure the value that you specify is valid and adheres to your site's naming convention.</p>	
?BJTQUAL?	The schema name (qualifier) of the Output Manager database objects.	

Table 2. Required Output Manager customization variables worksheet (continued)

Parameter	Description	Your value
?BJTPLAN?	The prefix of the Output Manager plan names. The recommended value is BJTPLAN. The naming conventions for the various plans use ?BJTPLAN? plus an additional letter. It is recommended to use the value BJTPLAN, and to preserve the additional letter for consistency in the other members that refer to the plan name.	
?OWNER?	The authorization ID of the owner of the new Output Manager database. If your site has no specific security requirements for the database, set this to the user ID that submits the job to create the database.	
?PLANOWNER?	The authorization ID of the owner for the plans and packages. If your site has no specific security requirements for the Output Manager database, set this to the user ID that submits the jobs to BIND the packages and plans.	
?BJTCOL?	The Output Manager collection name prefix. The recommended value is BJTCOL.	
?COPYDACL?	The dataclass for Db2 COPY data sets. This variable is optional.	
?COPYHLQ?	The high level qualifier for Db2 COPY data sets	
?REORGLQ?	The high level qualifier for REORG data sets	
?BJTNAME?	The one- to eight- character name that is assigned to the Output Manager instance to be configured (the product instance name).	
?CCSID?	Used to set the code pages while customizing the product. For the US code page, the value is 00037.	

### Optional customization variable parameter worksheet

The following table lists the Output Manager optional customization variable parameters, the description of each parameter, the member names of the location of each parameter, and a blank field to allow you to record the value you used for future reference. These variables need to be specified only when optional Output Manager features (such as AFP conversion, third party index loads, and SMF logging) are used.

Table 3. Optional Output Manager customization variables worksheet

Parameter	Description	Your value
?UNLDDACL?	The dataclass for your unload data sets when using ITOM unload/load BJTJCVn (refer to BJT@JCUL and BJT@JCLD).	
?UNLDHLQ?	The high level qualifier for unload data sets ITOM unload/load BJTJCVn (refer to BJT@JCUL and BJT@JCLD).	
?NEWBASE?	the database you will be loading into for ITOM unload (BJT@JCUL)	
?NEWQUAL?	the qualifier for the tables in the new database for ITOM unload (BJT@JCUL)	
?FIXCLASS?	The fixclass for BJTJCV1	

Table 3. Optional Output Manager customization variables worksheet (continued)

Parameter	Description	Your value
?FIXRCLASS?	The report sysout fixclass for BJTJCV1	
?IDXOUT?	the IDXOUT data set	
?IDXOUTC?	the number of IDXOUT data sets being loaded, must be two digits	
?IDXOUTN?	the number of IDXOUT data sets, must be two digits	
?PRIGCR?	the primary space for GCR data set, in cylinders. The recommended value is 250.	
?SECGCR?	the secondary space for GCR data, in cylinders. The recommended value is 250.	
?UNIT?	(For third party recall)	
?FAILC?	(For third party recall) SYSOUT class for recall failures	
?FAILD?	(For third party recall) SYSOUT destination for recall failures	
?SELC?	(For third party recall) SYSOUT class for recall success	
?SELD?	(For third party recall) SYSOUT destination for recall success	
?BJTUNLD?	(For third party index load) the unload data set	
?BJTCTLF?	(For third party index load) the control card output data set	
?OUTFILE?	(For the Universal Batch Utility) the path for your UBU flat file to receive the extracts or provide updates to the Db2 tables	
?ALTHLQ?	(For AFP conversion, BJTAFPI1) the HLQ for your site's AFP conversion resources	
?NNN?	Three digit SMF record type for SMF logging. Specify 0 for no logging.	
?ACCT?	Simple job accounting information	
?JOBCLASS?	Job class	
?MSGCLASS?	Job MSGCLASS	
?PROGRAMMER NAME?	Job programmer name	
?SAMP23HLQ?	When migrating to a new version of Output Manager, the high-level-qualifier of the source/old version of SBJTSAMP library.	
?EXECHLQ?	The high level qualifier for the copy of SBJTEXEC.	
?ARA_PORT?	TCPIP port for ARA.	
?ARA_HOST?	The TCPIP host name of the LPAR on which Output Manager is running. The host name of the system running the started task.	
?PRSET_DSN?	The DSN of the library containing the PRSET members used for printing.	

Table 3. Optional Output Manager customization variables worksheet (continued)

Parameter	Description	Your value
?SAF_CLASS?	The SAF class used by RACF.	
?BJTOWNER?	The owner of the RACF general resource profile(s) for Output Manager definitions. These profiles are defined in BJT#RDEF.	
?BJTADMIN?	The RACF user ID or group that identifies the Output Manager administrator(s).	
?BJTADMINREPORTS?	The RACF user ID or group that is allowed to run the Output Manager Administrative Reports in ITOMweb or via batch using BJT@ARPT.	
?BJTSTCU?	The RACF userid or group assigned to the Output Manager started task.	
?BJTUSER?	The RACR userid or group of non-administrative users of Output Manager Archives and Reports.	
?WEBROOT?	The root USS directory for ITOMweb.	
?OMWEBCONF?	The USS pathname of the ITOMweb omweb.conf file being imported from an earlier release.	
?RECALL_JOBNAME?	The name of the recall job that will be submitted by Output Manager to recall third party and DFSMSHsm (or equivalent) migrated archive data sets.	
?RECALL_JOB_PARAMETERS?	Specifies the JOB card parameters for the recall job that invokes the recall procedure.	
?RECALL_JOBNAME_PATTERN?	The job name pattern/prefix allows multiple recall jobs to process concurrently if you use BJT@PRVV as your RECALL_MEMBER.	
?HLQ?	High level qualifier for Output Manager work files.	
?SLQ?	Second level qualifier for Output Manager work files.	
?JOBID?	The JES jobid used in sample job BJTBRJAB to query and/or delete a particular job and jobid associated with an active Report Bundle.	
?JOBNAME?	The jobname of the job to be removed from active bundles using BJTBRJAB.	
?DB2LOCTN?	The Db2 location name of the Output Manager database used to create aliases in BJT@ALCR. This variable is used to define Db2 three part alias names used to access Output Manager in a multiple LPAR environment using DRDA protocol.	
?OLDJOBS?	When migrating to a new version of Output Manager, specifies the name of the data set containing the bundle print job.	
?NEWJOBS?	When migrating to a new version of Output Manager, specifies the name of the data set used to store the modified bundle print job.	

## Additional customization variables when migrating from RMDS

The following table lists the Output Manager customization variable parameters when migrating from RMDS. The description of each parameter, the member names of the location of each parameter, and a blank field to allow you to record the value you used for future reference.

Parameter	Description	Your value
?RMDSHLQ?	The high-level-qualifier of the unloaded RMDS tables.	
?BJTFILE?	The high-level-qualifier of the input data sets used to run the RMDS conversion.	
?ARCHIVEHLKQ?	The high-level-qualifier for the Archive Attributes data sets.	
?GDGHLQ?	The high-level-qualifier used for the GDG definitions created during conversion	
?UBUSYSOUT?	Specify a SYSOUT class for the RMDS selector to use.	
?UBUNORM?	Specify the SYSOUT class to use for the RMDS selector that processes RMDS SYSOUT with NORMAL disposition. Disposition (Keep, Hold, Syshold, or Release) is specified in the Processing Options panel of the selector rule.	
?UBUERROR?	Specify the SYSOUT class to use for the RMDS selector that processes RMDS SYSOUT with ERROR disposition. Disposition (Keep, Hold, Syshold, or Release) is specified in the Processing Options panel of the selector rule.	
?UBUERRORFORM?	Specify FORM to use for the RMDS selector that processes RMDS SYSOUT with ERROR disposition. Disposition (Keep, Hold, Syshold, or Release) is specified in the Processing Options panel of the selector rule.	
?COMMITINTERVAL?	The number of index load inserts before doing a commit.	

## Required Db2 objects

Output Manager requires the following Db2 objects. You will create most of these objects during customization.

### Db2 database

Output Manager uses one Db2 database. This database is a logical construction that exists only in the Db2 catalog. It groups the product's tables and table spaces together.

### Table spaces

Output Manager requires a unique table space for each of its tables. This configuration facilitates Db2 operations such as backup and recovery. If partitioning is implemented, you can back a table space by one or more physical data sets.

### Tables

Output Manager uses Db2 tables to store administrative definitions, archive data set indexes, and report indexes.



## Indexes

Output Manager uses indexes on the Db2 tables to enhance the performance of data queries.

Output Manager also requires the following Db2 objects. Talk to your Db2 administrator about these objects during customization.

## Storage groups

A storage group is a set of physical volumes on which Db2 can create table spaces. Output Manager table spaces are created in STOGROUPS. The DDL for creating these table spaces uses SYSDEFLT STOGROUP.

## 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 a Db2 system administrator for performance reasons. **The Output Manager Text Processing Rule table (BJTTPL) must be staged into a 32 K buffer pool because of its size.**

## Customization steps

---

After you install Output Manager, you must complete several steps to customize the product for your environment.

These customization steps must be completed before you run Output Manager for the first time.

### **BJT@JCED and BJT@PRED: SBJTSAMP members used for customization**

SBJTSAMP members BJT@JCED and BJT@PRED simplify the initial configuration process by editing most configuration variables throughout your local copy of the Output Manager SBJTSAMP library used for customization. [“Reference: Output Manager customization variables worksheets”](#) on page 20 is provided as a reference to keep track of the variables you use for your installation.

You specify customization variables in BJT@PRED. Then, you submit SBJTSAMP member BJT@JCED. BJT@JCED modifies the variables throughout the Output Manager customization members using the values specified in BJTPRED.

### **Copy the Output Manager SAMPLIB, SBJTSAMP, using BJT@CPYU**

Before you begin, copy the SBJTSAMP members. You can then customize the copies to preserve the original members for reuse, if necessary. SBJTSAMP member BJT@CPYU is provided to copy the installation libraries, SBJTSAMP and SBJTEXEC, to a new HLQ.

1. Copy BJT@CPYU from your SMP/E install library to a separate JCL library.
2. Modify the copy of BJT@CPYU to specify a new location for a copy of the SBJTSAMP and SBJTEXEC libraries:
  - **?BJTHLQ?**: Specify a high-level qualifier for the copy of SBJTSAMP and SBJTEXEC.
  - **?SAMPLQ?**: Specify a data set name for the copy of SBJTSAMP.
  - **?EXECHLQ?**: Specify a data set name for the copy of SBJTEXEC.
3. Submit the copy of BJT@CPYU.  
BJT@CPYU creates copies of SBJTSAMP and SBJTEXEC in the specified library.

### **Modify and submit JCL in BJT@PRED and BJT@JCED to configure customization variables**

You can specify most Output Manager customization variables in SBJTSAMP member BJT@PRED. Then, submit SBJTSAMP member BJT@JCED to modify the variables throughout the Output Manager customization members.

In this step, modify the copy of SBJTSAMP that you created using **BJT@CPYU**. This way, the original version of SBJTSAMP is preserved.

“Reference: Output Manager customization variables worksheets” on page 20 is provided as a worksheet to record your customization variables for future reference.

1. Modify BJT@PRED to specify your custom configuration parameters. The configuration parameter definitions and recommended values are described in comments within BJT@PRED.
2. Modify BJT@JCED:
  - Replace the ?SAMPHLQ? variable with the high level qualifier for your SBJTSAMP library.
  - Replace the ?BJTHLQ? variable with the high level qualifier for your Output Manager product libraries.
  - Update <JOB PARAMETERS> with job parameters used by your installation.

**Important:** Never run BJT@JCED against your SMPE applied library.

3. Submit BJT@JCED. BJT@JCED automatically modifies all of the members of the specified SBJTSAMP library according to the values specified in BJT@PRED.

## Run the job to create the Output Manager database

Your Db2 installation might have multiple instances of Db2 running. Before attempting to execute the Output Manager DDL, check with your Db2 system administrator to verify that you have the proper authority to do so. Additionally, ask your Db2 system administrator which subsystem you should use. Each Db2 installation is likely to have unique conventions regarding DDL execution, tracking, and management.

If your Db2 security policies require GRANTS for specific table privileges, edit SBJTSAMP member BJT@TBCR to implement security settings on the database and the tables. Uncomment the DD statement in BJT@JCDB to issue the GRANTS in BJT@TBGR.

You can use either of the following approaches to execute the DDL:

- Submit job BJT@JCDB to execute the SQL statements to create the database, table spaces, tables and indexes. Uncomment the DD statement for BJT@TBGR if your site security policies require privileges to be defined for each user.
- Submit each DDL member individually with SPUFI. Run in the following order: BJT@DBCR, BJT@TSC1, BJT@TBCR, BJT@INCR, and then BJT@TBVO. Run BJT@TBGR if your site security policies require privileges to be defined for each user.

**Note:** Do not change the index definitions in BJT@INCR except to change parameters such as STOGROUP, PRIQTY, and SECQTY. The columns, column order, and whether ASC or DESC have been tuned in conjunction with the queries issued by the ITOM programs to ensure queries are index-only and avoid table scans, creation of work files, and external sorts wherever possible.

## Bind the Output Manager packages and plans

The SBJTSAMP member BJT@PRBI contains Output Manager bind control statements. The member BJT@JCBI contains the JCL that is used to execute the BJT@PROC and bind the started task plans. This JCL points to BJT@PRBI, which provides the BIND parameters, and to BJT@PRSS, which defines the Db2 SSID. BJT@JCBU binds the utility plans, and BJT@JCBX binds the ISPF/ITOMweb plan.

This task is part of the greater task of customizing Output Manager. You must have completed the steps in “Modify and submit JCL in BJT@PRED and BJT@JCED to configure customization variables” on page 25 to specify customization variables before starting this task.

The plan and package names are specified with a customized base component. If you accept the recommended collection and plan names, you only need to edit the base component variable. If you use unique collection and plan name values, record the values for future reference. The recommended values are BJTCOL for the collection and BJTPLAN for the plan names.

1. Review the following SBJTSAMP members and edit the job card information if necessary:
  - BJT@PRBI
  - BJT@PRBU

- BJT@PRBX
  - BJT@PRGR
  - BJT@PRTI
  - BJT@PRSS
  - BJT@PROC
  - BJT@JCBI
  - BJT@JCBU
  - BJT@JCBX
2. If your Db2 security policies require users to be granted CREATE permission on collections, edit and run the JCL in SBJTSAMP member BJT@JCGR.
  3. Submit BJT@JCBI, BJT@JCBU, and BJT@JCBX.

## APF-authorize the load library and LPA library

Output Manager requires that the target load library *HLQ.SBJTLOAD*, and LPA library *HLQ.SBJTLPA* (where *HLQ* is the high-level qualifier for the product libraries) be APF-authorized.

Include the *HLQ.SBJTLOAD* and *HLQ.SBJTLPA* libraries in your system APF-authorized list. Contact your system administrator if you need assistance.

## Enable DFSMSshm and ISV recall processing

The processing of DFSMSshm recall and ISV recall is performed by batch jobs. A sample recall proc, BJT@PRV, which handles both ISV and HSM recalls, is included in SBJTSAMP. An additional member, BJT@PRVV, also handles HSM recalls. Specify the name and location of the recall in the Policy Administration panel using the RECALL\_MEMBER and RECALL\_PDS attributes in the \*,\* subsystem/type policy.

### Note:

All conversions and migrations of third-party report archives (history entries) require services. Contact your IBM sales contact for details.

For information on multi-threaded recalls, see SBJTSAMP member BJT@PRVV.

This task is part of the greater task of customizing Output Manager. You must have completed the steps in [“Modify and submit JCL in BJT@PRED and BJT@JCED to configure customization variables”](#) on page 25 to specify customization variables before starting this task.

1. Review SBJTSAMP member BJT@PRV to ensure that the customization variables are correct.
2. If you also have HSM recalls, review SBJTSAMP member BJT@PRVV to ensure that the customization variables are correct.

## Modify the started task JCL

You must modify the started task JCL in the SBJTSAMP member BJT#IN04 according to your site's standards. After doing so, place the JCL in your system PROCLIB.

This task is part of the greater task of customizing Output Manager. You must have completed the steps in [“Modify and submit JCL in BJT@PRED and BJT@JCED to configure customization variables”](#) on page 25 to specify customization variables before starting this task.

1. In the BJTOUT OUTPUT statement of BJT#IN04, edit the CLASS parameter to specify the default class that will be used for reprinting reports when the following settings are specified for a recipient ID: the value **No** in the **Name Out** field; a value other than **Local** in the **Dest** field; the value **0** in the **Copies** field; and a blank in the "Report behaviors" fields **Class**, **Groupid**, **Duplex**, **Burst**, **Label**, **Sys Area**, and **Rept Title**. Do *not* change the DEFAULT parameter value of Y. If necessary, you can use this statement to specify other default parameters for printing reports. For information about valid OUTPUT parameters, refer to the IBM *z/OS MVS JCL Reference*.

2. Place the customized BJT#IN04 member in your system PROCLIB.

## Authorize the started task

If you use RACF to control access to the SYSOUT data sets on the JES spool, ensure that the user ID that is assigned to the Output Manager started task is granted UPDATE or CONTROL access authority for applicable resource profiles in the JESSPOOL class, and ALTER on the BJT.<DB\_QUALIFIER>.VIEW.RPRT resource profile. Otherwise, the started task might fail to issue PUT and GET calls to the SYSOUT application program interface (SAPI). In this event, the following console message will be issued:

```
$HASP186 text NOT SELECTED BY started_task_name/userid DUE TO SECURITY POLICY
```

The RACF Profile Name Format for the JESSPOOL class is:

```
localnodeid.userid.jobname.jobid.dsnumber.name
```

For example you might have a generic resource profile `***` for JESSPOOL: to give ITOM access to this profile, you would issue the following RACF command:

```
PERMIT ** CLASS(JESSPOOL) ID(ITOMSTC) ACCESS(UPDATE)
```

Where ITOMSTC is the USERID assigned to the Output Manager started task.

Another example is a generic profile for a specific Node. The following command gives Output Manager access to all to all output on node N1:

```
PERMIT N1.** CLASS(JESSPOOL) ID(ITOMSTC) ACCESS(UPDATE)
```

For more information, see the section titled "Controlling access to data that resides on SPOOL" in the "Initialization and Tuning Guide" for JES2 or JES3. Also refer to the z/OS Security Server RACF Security Administrator's Guide.

If you use RACF resource profiles in the OPERCMDS class to control which users may issue JES commands, ensure that the user ID that is assigned to the Output Manager started task is granted UPDATE or CONTROL access authority for `jesname.CANCEL.JSTOUT` and `jesname.MODIFY.JSTOUT` (JES2), or for `jesname.MODIFY.F` (JES3)

For more information, see the section titled "Recovery from problems capturing an archive" in the Output Manager "Administrator's Guide". Also refer to the section titled "Authorizing the use of operator commands" in the "JES2 Initialization and Tuning Guide" or the section titled "Using RACF to Authorize the Use of Operator Commands" in the "JES3 Initialization and Tuning Guide". Also refer to the z/OS Security Server RACF Security Administrator's Guide.

## Specify initial configuration parameters in BJTCNVPM

1. Modify SBJTSAMP member BJTCNVPM to specify configuration parameters. BJTCNVPM contains modification instructions in the comments.
2. Submit SBJTSAMP member BJTCNVPM.

## Define RACF classes and profiles with BJT#RDEF and BJT#RPER

1. Review and modify the two sample jobs, BJT#RDEF and BJT#RPER, in SBJTSAMP to define RACF classes and profiles. BJT#RDEF has RDEFINE statements to define each Output Manager profile. BJT#RPER has PERMIT statements for each profile defined in BJT#RDEF. Follow the modification instructions in the comments these members. Configure Output Manager security configuration parameters. See [Chapter 4, "Security," on page 77](#) for more information.
2. Submit the modified versions of BJT#RDEF and BJT#RPER.

## Define the SBJTLOAD library for bundle administration

If you plan to activate, deactivate, or reactivate bundles from the Bundle Administration, you must define the SBJTLOAD library.

You have three options for defining the SBJTLOAD library. You can add SBJTLOAD to the LINKLIST; you can add SBJTLOAD to the STEPLIB for the LOGON PROC; or you can add SBJTLOAD with TSOLIB before ISPF is started.

**Note:** If you do not plan to activate, deactivate, or reactivate bundles from Bundle Administration, you can skip this step.

## Create access to the Output Manager interface

1. Edit SBJTEXEC member BJTUI. Ensure that the variables updated by BJT@PRED are correct.
2. Save any changes.
3. Make the EXEC members available to your TSO users. Contact your system administrator for assistance if necessary.

## Make Output Manager modules available

In order to make the Output Manager modules available, you must decide whether or not you will add them to the LPA.

Adding Output Manager modules to the LPA improves performance and reduces memory consumption. If the SBJTLPA modules are added to the LPA, ECSA will increase by approximately 34 megabytes. If these modules are not added to LPA, the TSO address space will need to be 80 megabytes.

- [“Option 1: Make LPA-eligible Output Manager modules available without using the LPA” on page 29.](#) This method is for sites that are not concerned with region size.
- [“Option 2: Make LPA-eligible Output Manager modules available using the LPA \(recommended\)” on page 30.](#) This method provides increased performance.

### Option 1: Make LPA-eligible Output Manager modules available without using the LPA

If you decide not to load the Output Manager modules into the LPA, you must modify several SBJTSAMP and SBJTEXEC members to make them available to the STEPLIB.

1. Modify the following SBJTSAMP members to remove the comment character from the SBJTLPA reference lines to make those libraries available to the STEPLIB:
  - BJT#IN04
  - BJT@AFP
  - BJT@ARPT
  - BJT@BTCH
  - BJT@BUNP
  - BJT@PBN1
  - BJT@PBN2
  - BJT@PRAP
2. Modify SBJTEXEC member BJTUI to remove the comment character from the SBJTLPA reference lines to make those libraries available to the STEPLIB.
3. Modify your TSO address space to be 80 megabytes.

If you plan to use SMF logging, you must also perform the steps in [“Options for authorizing the ISPF modules in preparation for SMF logging in ISPF” on page 49.](#)

## Option 2: Make LPA-eligible Output Manager modules available using the LPA (recommended)

Making the Output Manager modules available using the LPA provides a performance advantage.

In order for your ISPF session to load new commands, you must customize your ISPTCM (ISPF TSO Command Table) from ISP.SISPSAMP(ISPTCMA). For more information, see [Customizing the ISPF TSO command table \(ISPTCM\)](#) in the *z/OS ISPF Planning and Customizing Information Center*. ISPF will only load commands from the LPA if they are defined in this table.

1. Add the following lines to your ISPF TSO command table, ISPTCM:

```
ISPMTCM FLAG=62,ENTNAME=BJTISMF  BJT SMF processor
ISPMTCM FLAG=42,ENTNAME=BJTISPF  BJT ISPF main program
ISPMTCM FLAG=42,ENTNAME=BJTIRUN  BJT UI initiator
```

**Note:** This table must remain in alphabetical order.

2. Rebuild the ISPTCM load module.
3. Once the modified ISPF TSO Command Table is in place, load the following C/C++ modules into the dynamic LPA:
  - C128
  - BJTDLL
  - BJTISMF
  - BJTISPF
  - BJTIRUN

**Note:** Because these are C/C++ modules, they cannot be loaded into the fixed LPA at IPL time.

The following sample console commands can be used for loading the modules into the dynamic LPA:

```
COMMAND 'SETPROG LPA,ADD,MOD=C128,DSNAME=CEE.SCEERUN2,PAGEABLE'
COMMAND 'SETPROG LPA,ADD,MOD=BJTDLL,DSNAME=BJT.BJT310.SBJTLPA,PAGEABLE'
COMMAND 'SETPROG LPA,ADD,MOD=BJTISMF,DSNAME=BJT.BJT310.SBJTLPA,PAGEABLE'
COMMAND 'SETPROG LPA,ADD,MOD=BJTISPF,DSNAME=BJT.BJT310.SBJTLPA,PAGEABLE'
COMMAND 'SETPROG LPA,ADD,MOD=BJTIRUN,DSNAME=BJT.BJT310.SBJTLPA,PAGEABLE'
```

4. Add the DSNAME used in the SETPROG command to your LNKLSTxx member:

```
COMMAND 'SETPROG LPA,ADD,MOD=C128,DSNAME=CEE.SCEERUN2,PAGEABLE'
```

## Update your TSO configuration

1. Add BJTISMF to the AUTHCMD, AUTHPGM, and AUTHTSF sections of your IKJTSOxx parmlib member.

**Note:** This table must remain in alphabetical order.

2. Make the IKJTSOxx member and the updated ISPTCM member (for LPA-loaded configurations) active:
  - a. Copy the modified ISPTCM into any library that the LPA is loaded from.
  - b. Activate your changes by entering the following two commands in the z/OS console:

```
SET IKJTSO=<xx>
SETPROG LPA,ADD,MOD=ISPTCM,DSNAME=<DSN>,PAGEABLE
```

Where *DSN* is the DSN of the library containing modified ISPTCM.

## Start the started task and verify the ISPF installation

Before starting the Output Manager started task, ensure that the SBJTLOAD and SBJTLPA libraries are APF-authorized, and ensure that Db2 and JES are active.

To start the started task, specify the z/OS Start operator command using the following syntax:

```
start started_task_name
```

**Note:** At Output Manager start up, JES might post the following message:

```
*$HASP473 ERRORS OCCURRED CREATING JES2 CELL POOL. RC=00, TYPE=B32K
```

As long as the return code is zero (RC=00), this message is informational only and does not signify a problem. Output Manager is a SAPI-based product that uses multiple SAPI threads.

After issuing the Start command, verify that Output Manager is running and available, as follows:

1. Check for messages that indicate the status of the started task.

If you receive the following message, the started task is running. You can continue to the next step.

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

If this message is not displayed, the started task is not running. In this case, review the other messages to identify potential problems. Also, check your customization steps. If you need assistance, contact your system administrator.

2. In ISPF, start the Output Manager interface by running the BJTUI EXEC that you modified in [“Create access to the Output Manager interface”](#) on page 29.

The Output Manager main menu is displayed.

Now that the Output Manager ISPF interface is installed, Output Manager administrators can tour the panels and begin defining Output Manager objects.

## Specify configuration parameters from the Output Manager ISPF interface

**Important:** You can specify configuration parameters from the ISPF interface only if your used ID has been added to the RACF group that identifies Output Manager administrators.

1. From the Output Manager main menu, type A and press Enter

The **Administrative Functions** panel is displayed.

2. Type PA on the command line and press Enter to access the **Policy Administration** panel.
3. Type an asterisk (\*) in the **Subsystem Name** field.
4. Type an asterisk (\*) in the **Subsystem Type** field.
5. Type E on the command line and press Enter.

The **Policies** panel is displayed. Changes made on this panel will affect the subsystem/type displayed in the **Subsystem name** and **Subsystem Type** fields at the top of the panel. An asterisk (\*) signifies that these changes are made to the default subsystem for the global type used for all Output Manager services.

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

A list of common configuration attributes that are valid for this subsystem type but are not yet included in the current subsystem are displayed.

7. Type S (Select) next to an attribute to select it and add it to the list.

### **PRINT\_PDS ?BJTHLQ?.SBJTSAMP**

This required parameter specifies the data set name of the library containing your customized SBJTSAMP members. SBJTSAMP(BJT@PRAP) is used for printing report bundles, batch printing archives from the **Archived Reports** panel (PJ command from V.A in the ISPF interface), and print/reprint operations. SBJTSAMP members BJT@PBN1 and BJT@PBN2 (and tailored versions of these jobs) are used for automatically printing report bundles when the bundles are deactivated. ?BJTHLQ?.SBJTSAMP is the PDS name that contains these jobs.

**Important:**

Output Manager uses this parameter to locate BJT@PRAP, BJT@PBN1, and BJT@PBN2. Failure to set this parameter this will result in archive batch print job submission failing.

**SAF\_CLASS [FACILITY | XFACILIT]**

Specify the SAF class used by RACF. Valid values include FACILITY or XFACILIT.

**Note:** These are the configuration parameter required in this step. Additional configuration parameters, including optional parameters, and the parameter descriptions, can be viewed. For more information, see [“Reference: BJTCFG configuration parameters” on page 66.](#)

8. Review and add any additional parameters, including optional parameters. Press the F1 key on the **Policy** panel to display the extended Policies help panel and view the full list of parameters, and the parameter descriptions.
9. Type SAVE on the command line to save your changes.
10. Press F3 to return to the **Policy Administration** panel.

## ITOMweb installation and customization

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ITOMweb requires an additional started task for the web server.

**Note:** It is strongly recommended that you run ITOMweb in its own HTTP Server STC.

### Accessing the ITOMweb services

The URL for the ITOMweb start page is: `http://hostName:Port/OM`

- *hostName* is the system name where you are running the server.

If you are running the V9R0 server, the Port is the port number specified for the virtual host. This is described in more detail in [“Configuring the IBM HTTP Server \(powered by Apache\) V9R0 for use with Output Manager” on page 34.](#)

/OM is the service the builds the start page.

#### Related concepts

[ITOMweb dependencies with other subsystems](#)

[Installing an instance of the IBM HTTP Server and configuring it for use with Output Manager](#)

You can use IBM HTTP Server (powered by Apache) and configure it for use with Output Manager.

[Adding Advanced Function Printing \(AFP\) support to ITOMweb](#)

[Foreign code page support](#)

To configure ITOMweb for foreign code pages, you must configure the server to support foreign code page conversions to UTF-8. USA English sites do not need this option, the default code set is sufficient. Determine the correct name for the code page your site uses to encode sysouts captured by Output Manager. For example, if your site uses code page IBM-424, make the following changes.

[SSL or TLS support for ITOMweb](#)

Configure SSL or TLS for communication between web browsers and the ITOMweb virtual host.

### ITOMweb software requirements

Before you install ITOMweb, ensure that you have the following software.

A configured and operational IBM HTTP server. The following HTTP server is supported:

- IBM HTTP Server (powered by Apache) V9R0

Output Manager for z/OS web supports the following web browsers:

- Mozilla Firefox 20.0 or later
- Microsoft™ Edge



If the option to block pop-up windows is enabled in your Internet browser, you will need to specify the ITOMweb site as an exception. Otherwise, your users will not be able to recall DFSMSshm-migrated reports for viewing from ITOMweb.

Also, ensure that your USS file system has sufficient storage for the ITOMweb installation. ITOMweb requires at least 10 megabytes in the USS file system, in addition to any log files written by the server.

## ITOMweb dependencies with other subsystems

The Output Manager web services use Db2 and TCP/IP. Your site security policies might require you to add the web server user ID to the access list on existing RACF profiles or create new profiles.

Your webserver requires UPDATE access to the BPX.SERVER FACILITY class profile. For example:

```
PERMIT BPX.SERVER CLASS(FACILITY) ID(WEBSRVR) ACCESS(UPDATE)
SETROPTS RACLIST(FACILITY) REFRESH
```

**Note:** Replace WEBSRVR with the user ID your web server runs as.

Your webserver requires the UPDATE access to the BPX.DAEMON FACILITY class profile. For example:

```
PERMIT BPX.DAEMON CLASS(FACILITY) ID(WEBSRVR) ACCESS(UPDATE)
SETROPTS RACLIST(FACILITY) REFRESH
```

**Note:** Replace WEBSRVR with the user ID your web server runs as.

The web server's connections to Db2 require READ access to the RRSFAC profile in the DSNR class. Check with your Db2 security administrator to see which profiles have been created. The site might have a generic profile for multiple subsystem names, or discrete profiles for each subsystem. In the following example, WEBSRVR is granted permission to use RRSFAC in the DB1A subsystem:

```
PERMIT DB1A.RRSFAC CLASS(DSNR) ID(WEBSRVR) ACCESS(READ)
SETROPTS RACLIST(FACILITY) REFRESH
```

The web server requires program control for the Db2 code. You can set this using RDEFINE, if no profiles exist, or RALTER, if you already have some generic profiles created. Check with your RACF administrator to see which PROGRAM control profiles exist. The V9 server requires program control on the following libraries:

- hlq.LINKLIB
- hlq.SCEERUN
- hlq.SCEERUN2
- hlq.SCLBDLL

If the Db2 code libraries are not included, you can add them with RALTER where ?SDSNEXIT? and ?SDSNLOAD? are the Db2 SDSNEXIT and SDSNLOAD libraries for the Db2 subsystem for your Output Manager database. For example:

```
RALTER PROGRAM * ADDMEM('?SDSNEXIT?') UACC(READ)
RALTER PROGRAM * ADDMEM('?SDSNLOAD?') UACC(READ)
SETROPTS WHEN(PROGRAM) REFRESH
```

### Related concepts

[Accessing the ITOMweb services](#)

[Installing an instance of the IBM HTTP Server and configuring it for use with Output Manager](#)

You can use IBM HTTP Server (powered by Apache) and configure it for use with Output Manager.

[Adding Advanced Function Printing \(AFP\) support to ITOMweb](#)

[Foreign code page support](#)

To configure ITOMweb for foreign code pages, you must configure the server to support foreign code page conversions to UTF-8. USA English sites do not need this option, the default code set is sufficient.

Determine the correct name for the code page your site uses to encode sysouts captured by Output Manager. For example, if your site uses code page IBM-424, make the following changes.

[SSL or TLS support for ITOMweb](#)

Configure SSL or TLS for communication between web browsers and the ITOMweb virtual host.

## Installing an instance of the IBM HTTP Server and configuring it for use with Output Manager

You can use IBM HTTP Server (powered by Apache) and configure it for use with Output Manager.

When using V9R0, you install an instance of the HTTP server, and then specify Output Manager configuration options on the Policy Administration panel of the Output Manager ISPF user interface. For more information, see [“Configuring the IBM HTTP Server \(powered by Apache\) V9R0 for use with Output Manager”](#) on page 34.

**Note:** You must install ITOMweb (by submitting a suitably customized BJT@JCPF job from SBJTSAMP) before installing the IBM HTTP Server (powered by Apache).

### When migrating from a previous version of Output Manager

If your earlier version of Output Manager was configured to use the V5R3 HTTP server, and you are migrating to an updated version of Output Manager to use the IBM HTTP Server (powered by Apache), note the following differences between the two servers:

- In addition to your current port for the ITOMWeb server <ITOMWeb\_PORT>, you will need to have another port assigned for the Apache server <APACHE\_PORT>.
- The httpd.conf and httpd.envvars files in the ITOMWeb install directory are obsolete and are no longer used. The Apache server installs a new httpd.conf in the Apache install directory.

#### Related concepts

[Accessing the ITOMweb services](#)

[ITOMweb dependencies with other subsystems](#)

[Adding Advanced Function Printing \(AFP\) support to ITOMweb](#)

[Foreign code page support](#)

To configure ITOMweb for foreign code pages, you must configure the server to support foreign code page conversions to UTF-8. USA English sites do not need this option, the default code set is sufficient. Determine the correct name for the code page your site uses to encode sysouts captured by Output Manager. For example, if your site uses code page IBM-424, make the following changes.

[SSL or TLS support for ITOMweb](#)

Configure SSL or TLS for communication between web browsers and the ITOMweb virtual host.

## Configuring the IBM HTTP Server (powered by Apache) V9R0 for use with Output Manager

If you are configuring Output Manager as a plugin to the newer IBM HTTP Server (powered by Apache) (IHSA) V9R0, follow these instructions.

Output Manager support for IHSA is limited to instances running in 64-bit mode only. It is recommended that ITOM be the only application running in a single instance of IHSA.

This installation uses two port numbers. The first port is for the main server task. The second port is used to configure the virtual host running the ITOMweb services. The second port number must be used in the URL that users specify in their browser to connect to the ITOMweb services.

To create a new instance of the IBM HTTP Server:

1. Log in to the z/OS UNIX® System Services shell with the user ID that runs the installer.
2. Navigate to the directory that ITOMweb was unpackaged into.

For example:

```
cd /u/bjt/httpx/om
```

3. Copy `omweb.vhost.conf.SAMPLE` to `omweb.vhost.conf`. For example:

```
cp omweb.vhost.conf.SAMPLE omweb.vhost.conf
```

Take note of this location, you will need to reference it in a later step.

4. Locate the IBM HTTP Server product code installation directory. For example:

```
cd /usr/lpp/ihsa_zos
```

This example is the default. Ask your administrator for the location of the server product code directory.

5. Set the `umask` value to `022` by specifying `umask 022`.
6. Type the following command to run the installer program that will install the files into the installation directory, perform initial customization, and create symbolic links from the installation directory to the product directory:

```
bin/install_ihs -admin server_installation_directory server_port
```

where:

- The `-admin` keyword is optional and allows you to use the administrative console to modify the `httpd.conf` file.
- `server_installation_directory` is the installation directory for the server instance. This must not be the same as the product directory. The `server_installation_directory` will be created if it does not exist.
- The non-SSL port for the web server is optional. The default port is 80. You can change the port on the `Listen` directive. Ask your administrator which port you should use. This is not the port number for the ITOMweb services.
- Work with your network administrator to determine a port number to use for the ITOMweb server. This port number should not conflict with servers running on the same system.

The following example invokes the command with support for modifying the APACHE `httpd.conf` file:

```
/usr/lpp/ihsa_zos/bin/install_ihs -admin /etc/websrv1 80
```

The following example invokes the command without support for modifying the APACHE `httpd.conf` file via the administration console:

```
bin/install_ihs /etc/websrv1 80
```

7. After you have run the installation, change the ownership of the logs directory in the newly created directory tree:

```
cd server_installation_directory  
chown <webserver user id> logs
```

You may need superuser privileges to issue the `chown` command.

8. Edit `<apache_server_installation_directory>conf/httpd.conf`

**Note:** This is NOT the `httpd.conf.SAMPLE` included in the Output Manager `pax` file.

- a. Update `@@ServerRoot@@` with the location specified for `Server_installation_directory` in step “6” on page 35.
- b. Ensure that the `Listen` port (`@@Port@@`) is set to the ITOMweb server port number specified in step “6” on page 35. For example:

```
Listen 28557
```

**Remember:** Work with your network administrator to determine the port number to use for the ITOMweb server. This port number should not conflict with servers running on the same system.

- c. Update the @@ServerName@@ line with the DNS name where this server will be running.
- d. Update the ServerAdmin line. Change ServerAdmin you@your.address , by customizing it to ServerAdmin ITOM\_Admin@yourcompany.com
- e. Find mod\_authn\_file.so and comment out the following line using a # sign at the beginning of the line:

```
LoadModule authn_file_module modules/mod_authn_file.so
```

- f. Near line 835, in the section beginning with the "z/OS specific modules" comment, ensure that the following line is not commented out:

```
LoadModule authnz_saf_module modules/mod_authnz_saf.so
LoadModule auth_basic_module modules/mod_auth_basic.so
LoadModule authz_core_module modules/mod_authz_core.so
```

- g. At the end of the file, add the ITOMWeb configuration file by adding the following lines, where *itom mount point* is the mount point that you specified when you ran BJT@JCPF:

```
# Include ITOMWeb configuration
Include /u/itom mount point/om/omweb.vhost.conf
```

For example:

```
# Include ITOMWeb configuration
Include /u/web/httpd/om/omweb.vhost.conf
```

9. Modify omweb.vhost.conf (created by the ITOMWeb installation). Replace all ?<xxx>? variables with suitable values for the IHSA server. The variables are:

- *?/ITOMweb mount point?*: Location where ITOMweb was installed.
- *?HTTP\_PORT?*: Port number that this virtual host is listening on. Must be an available port, and cannot be the same as the port used for the main server.

**Note:** This is the port number that users will specify when they connect to the ITOMweb services.

- *?ADMIN\_EMAIL?*: Email address of server administrator
- *?HOST\_NAME?*: Host name server is running on. The host name must be specified in UPPERCASE characters.
- *?DB2SSID?*: The Db2 subsystem name that contains Output Manager Db2 objects.

**Note:** If the subsystem is in a data sharing group and you want Db2 to select which subsystem to use, enter the Group Attachment Name. If you want to specify the specific member of a data sharing group, or if the Db2 subsystem is not a member of a data sharing group, specify the Db2 Subsystem Name.

- *?BJTPLAN?*: Output Manager Plan name prefix
- *?ITOMWEB\_CONFIG?*: Name of ITOMWeb configuration in Policy Administration. The default is "\*".
- *?ITOMWEB\_LOG\_FILE?*: Pathname of file to write ITOMweb specific logging information to.

10. Specify ITOMweb configuration parameters in the Output Manager ISPF interface:

- a) Navigate to the Policy Administration panel (ISPF A.PA).
- b) In the **Subsystem** field, enter the ITOMweb configuration value. This is the value that you specified in the *?ITOMWEB\_CONFIG?* variable above.
- c) In the **Type** field, type ITOMWeb.
- d) On the command line, type E and press Enter.

If the E (edit) fails because the subsystem does not exist, use the I (initialize) command to create the subsystem. To do so, specify the name of the subsystem, type ITOMWeb for the subsystem type, and then enter an "I" command on the command line.

The Policies panel is displayed.

**Note:** The 'I' command is only used to store a new set of Subsystem/Type options when there are no variables in the database for that Subsystem/Type. The initialization sets each of the variables that is relevant to the specified type to the default values. The 'I' command cannot be used to reset existing variables in the Subsystem/Type to the default values.

e) Specify ITOMweb configuration values:

- **ACCOUNTING\_STRING:** Specify a value for a Db2 accounting string. The default is none. If ACCOUNTINGSTRING is not specified, no value is provided to Db2. The ACCOUNTINGSTRING should not begin with the following three-character combinations: ARI, DSN, JCC, QSQ, or SQL. The maximum length is 255 characters. If set to "USERID", USERID is replaced by the concatenation of BJT and the user ID of the requester.
- **ACCOUNTING\_TOKEN:** Specify a value for a Db2 accounting token. The default value is USERID, which uses the requester's user ID. The maximum length of this value is 22 characters.
- **AFP\_CONV:** This AFP support parameter enables the AFP conversion and viewing of reports in ITOMweb. Specify YES to enable AFP conversion.

**Note:** You must also follow the directions in [“Adding Advanced Function Printing \(AFP\) support to ITOMweb”](#) on page 40.

- **AFP\_CONVERSION\_JOB\_n:** This AFP support parameter specifies AFP conversion JOB CARDS. If the JOB card needs more than 72 characters, specify this parameter multiple times. The AFP conversion job invokes the AFP proc specified by AFPPROCPDS and AFPPROCMEMBER.

**Note:** If you used BJTCNVPM to convert the omweb.conf file from a previous release, you will need to manually edit the additional JOB card parameters that were stored in the ITOMWeb subsystem type. On the Policy Administration panel (ISPF A.PA), specify "\*" in the **Subsystem**, and ITOMWeb in the **Type** field to edit the web server parameters. Then, on the Policies panel, add AFP\_CONVERSION\_JOB\_n parameters to define up to 5 additional lines of JOB card options.

- **AFP\_PROC\_MEMBER:** This AFP support parameter specifies the member name for the AFP conversion PROC (discussed in [“Adding Advanced Function Printing \(AFP\) support to ITOMweb”](#) on page 40). It is recommended to keep the original member name, BJT@AFP.
- **AFP\_PROC\_PDS:** This AFP support parameter specifies the library name in which the customized BJT@AFP PROC is saved. This member is discussed in [“Adding Advanced Function Printing \(AFP\) support to ITOMweb”](#) on page 40.
- **Trace levels:** Tracing can significantly increase the number of messages written to the HTTP Server SYSPRINT data set. When 0 (zero) is specified, tracing is disabled. Specify "1" to enable tracing. Tracing parameters include:
  - AUTH\_TRACE\_LEVEL
  - DB2\_TRACE\_LEVEL
  - JS\_TRACE\_LEVEL
  - PRINT\_TRACE\_LEVEL
  - WEB\_TRACE\_LEVEL
- **DEFAULT\_ARCHIVE\_CHARSET:** This parameter is used to support foreign code page conversion to UTF-8. Specify the character set (charset) to assume for archive data sets if there is no other information in the archive data set or history DB that is more specific. USA English sites do not need this option, the default code set is sufficient. Set the argument to the code page for your local language environment.
- **DEFAULT\_BANNER\_PAGE:** Designate a default banner page to be printed with all archive print requests unless overridden by the user. To override the default banner page, a user can assign a different banner page from the **Print Settings** window when printing an archive. The form of this parameter is: <pdsname>(<member>)

**Note:** Reports are printed using the banner linked to the report definition.

- **DEFAULT\_LINE\_COUNT:** Specifies the number of data LINES to return at one time, and the default number of lines displayed when a report is displayed in Line Mode.
- **DEFAULT\_PAGE\_COUNT:** Specifies the number of data pages to return at one time. This parameter also designates the default number of pages displayed in Page Mode.
- **LOCALE:** Specify your local language environment. This value follows the standard internationalization locale naming conventions. For example, US English is En\_Us. This parameter is only required if your local language environment is not US English (En\_US). The suffix should be .lp64
- **MAXIMUM\_CONCURRENT\_REQUESTS:** (Optional) Specify the limit of the number of concurrent requests to be processed by ITOMweb services. When the number of requests sent to the HTTP server exceeds the specified value, additional requests will fail with 503 Server Busy error messages until the active workload drops below the limit. The default is no limit.
- **MAXIMUM\_DOWNLOAD\_LINES:** Specify the maximum number of lines that can be downloaded at one time. Valid values are 0-2147483647. When 0 is specified, there is no limit to the number of lines that can be downloaded at one time.
- **MAXIMUM\_DOWNLOAD\_PAGES:** Specify the maximum number of pages that can be downloaded at one time. Valid values are 0-2147483647. When 0 is specified, there is no limit to the number of pages that can be downloaded at one time.
- **MAXIMUM\_INDEX\_CHOICES:** Specify the number of index values to send to the web client to present to the user. If there are more defined index values that meet the search criteria than the limit set in this parameter allows, a warning is posted next to the index and the user is prompted to narrow the search criteria and try again. The default is 100.
- **MAXIMUM\_LINE\_COUNT:** Specify the maximum number of data lines that can be returned at one time. This parameter also controls the maximum number of lines displayed when a report is displayed in LineMode, the number of lines displayed when a one-page Archived Sysout is displayed in Page Mode, and the maximum number of lines displayed when a report is displayed as an html page (for archive data sets that do not have carriage control characters to start a new page).
- **MAXIMUM\_LINE\_IN\_PAGE:** Specify the maximum number of lines to display per page. This is relevant for archive data sets that do not have carriage control characters to start a new page. If the archive page length exceeds this value, a "more ..." link will appear indicating a partial display.
- **MAXIMUM\_LISTING\_LINES:** Specifies the maximum number of rows to return for archive and report list queries.
- **MAXIMUM\_PAGE\_COUNT:** Specifies the maximum number of data pages that can be returned at one time, and the maximum number of pages displayed in Page Mode.
- Recall Processing: ITOMWeb submits a job to invoke the recall procs named in the following parameters.
  - RECALL\_JOB\_n
  - RECALL\_MEMBER
  - RECALL\_PDS
- **REPORT\_ACCESS\_ID:** Specifies the userid used to access the underlying data set to read a report. Specify the userid of the ITOMweb server.
- **REPORT\_CLICK:** Include this parameter to open reports and archives in a new tab or window when a user clicks a report or archive in a list of results. Your current browser settings determine whether a new tab or window is used. Excluding this command (default), opens the archive or report in the current tab or window, replacing the archive or report list. Use REPORTCLICK to avoid having to re-issue queries to search for archives or reports.
- **REPORT\_DEF\_FILE:** Specify the pathname of the administrative report definition file. The administrative report definition file is typically named adminreports.enc in the WEBROOT directory.

- **SCROLL\_BY\_PAGE:** Determines how the previous ( < ) and next ( > ) buttons operate. Specify YES (default) to scroll by page, one page at a time. Specify NO to scroll by the values specified in the DEFAULTPAGECOUNT / DEFAULTLINECOUNT parameters.
- **SEARCH\_FIRST:** Specify YES or NO to determine whether or not a search panel is displayed automatically before a query is issued when a user clicks the **Reports** or **Archives** buttons on the ITOMweb home page. The default is NO, which will return a list of archives or reports from the last 7 days.
- **SEARCH\_LAST\_N\_DAYS:** Include this parameter to enforce a date range for all ITOMweb searches (unless explicitly overridden), and specify the initial value for LAST N Days. Excluding this parameter allows the search panel to open with no constraints on date range.
- **SHOW\_ARCHIVES:** This is an ITOMweb navigation option. Specify TRUE to enable the **Archives** link on the ITOMweb home page. If FALSE is specified, an "Archive Viewing Not Enabled" error message is displayed when a user clicks the **Archives** link.
- **SHOW\_INDICES:** This is an ITOMweb navigation option. Specify TRUE to allow access to indexed reports. Users can access indexed reports by clicking the **Reports** link and then selecting a report with type "I". If FALSE is specified, an "Index Viewing Not Enabled" error message is displayed when a user clicks an indexed report.
- **SHOW\_INDICES\_IN\_HOMEPAGE:** This is an ITOMweb navigation option. Specify TRUE to display an **Indexed Reports** link on the ITOMweb home page. If FALSE is specified, this link is not displayed but users can still access indexed reports by clicking the Reports link and then selecting a report with type "I" (if SHOWINDICES is also set to TRUE). The default is FALSE.
- **SHOW\_REPORTS:** This is an ITOMweb navigation option. Specifying TRUE will enable the **Reports** link on the ITOMweb home page. If FALSE is specified, a "Report Viewing Not Enabled" error message is displayed when a user clicks the **Reports** link.
- **USE\_FORMATTED\_VIEWS:** Specifies whether or not formatted views are used. Although all users can see and use all views and filters, the privilege of editing or deleting views and filters is controlled by the BJT.?BJTQUAL?.ADM.FVF security profile. Administrators must have ALTER access. Users with UPDATE access can create new views and edit them later. Other users can only edit and delete the views and filters that they have created. When a view or filter is created, the creator's user ID is associated with the new filter or view, and all other users (except administrators) will be prevented from editing or deleting it. Additionally, a filter that is linked to a view cannot be deleted.
- **WEB\_ROOT:** Specify the root USS directory for ITOMweb; the webroot directory.
- **WELCOME\_TEXT:** Include this parameter to specify the "Welcome message" text that appears at the top of the home page. For example, WELCOMETEXT=Welcome to Output Manager

11. To assign an owner to the started task, the stc-owner-userid must have the following RACF requirements:

- stc-owner-userid must be RACF defined with NOPASSWORD
- must have an OMVS segment with a unique UID
- HOME must be a valid directory (for example: ?/ITOMweb mount point?)
- PERMIT stc-proc-name.\* CLASS(FACILITY) STDATA(USER(stc-owner-userid), GROUP(stc-owner-group)) SETROPTS RACLIST(STARTED) REFRESH

12. If you are using Db2 Resource Recovery Services attachment facility, you also need the following additional RACF definition:

```
PERMIT ?DB2SSID?.RRSAF CLASS(DSNR) ACCESS(READ)
ID(stc-owner-userid) SETROPTS RACLIST(DSNR) REFRESH
```

13. You can start the IBM HTTP Server instance from the MVS console by creating a JCL cataloged procedure for the instance.

For example in the started task start procedure HTTPSV9:

```
//*-----
//IHSAPACH PROC ACTION='start',
```

```
// DIR='//u/websrv/bjt/IHSA/V9.0',
// CONF='conf/httpd.conf'
//*-----
//IHS EXEC PGM=BPXBATCH,
// PARM='SH &DIR/bin/apachectl -k &ACTION -f &CONF -DNO_DETACH',
// MEMLIMIT=512M
//STEPLIB DD DSN=DB2A.SDSNEXIT,DISP=SHR
//          DD DSN=DSN.VA10.SDSNLOAD
//OUTDSC  OUTPUT DEST=HOLD
//SYSPRINT DD SYSOUT=A,OUTPUT=(*.OUTDSC)
//STDOUT  DD PATH='&DIR/logs/proc.output',
//          PATHOPTS=(OWRONLY,OCREAT,OTRUNC),
//          PATHMODE=(SIRUSR,SIWUSR,SIRGRP,SIWGRP)
//STDERR  DD PATH='&DIR/logs/proc.errors',
//          PATHOPTS=(OWRONLY,OCREAT,OTRUNC),
//          PATHMODE=(SIRUSR,SIWUSR,SIRGRP,SIWGRP)
//          PEND
```

To start the server, enter "S HTTPS9" on the system console.

**Note:** You can change the value of ACTION from "start" to "restart". This functions like 'start' if the web server is not up and running and will quickly restart it if it is up and running.

To stop the server, enter "P HTTPS9" on the system console.

14. Connect to the ITOMWeb server at the following URL: `http://@@ServerName@@:<APACHE_PORT>/OM`

**Note:** <APACHE\_PORT> is the port number specified in the `omweb.vhost.conf` file and it is different from port number specified in `httpd.conf` file

## Adding Advanced Function Printing (AFP) support to ITOMweb

Viewing AFP documents in your browser requires an AFP viewing plugin. To add AFP viewing support to your browser, download the RICOH InfoPrint Windows™ AFP Viewer Plug-in from the RICOH InfoPrint website.

At the time of this publication, the plug-in is available at the following web address: <http://support.rpp.rioh-usa.com/internet/dcfdata.nsf/vwWeb/P4000233>. In addition, you must have the AFP Conversion and Indexing Facility installed. It is included with IBM Print Services Facility for z/OS version 4.2.0 (or later) (Program Number 5655-M32).

### Related concepts

[Accessing the ITOMweb services](#)

[ITOMweb dependencies with other subsystems](#)

[Installing an instance of the IBM HTTP Server and configuring it for use with Output Manager](#)

You can use IBM HTTP Server (powered by Apache) and configure it for use with Output Manager.

[Foreign code page support](#)

To configure ITOMweb for foreign code pages, you must configure the server to support foreign code page conversions to UTF-8. USA English sites do not need this option, the default code set is sufficient. Determine the correct name for the code page your site uses to encode sysouts captured by Output Manager. For example, if your site uses code page IBM-424, make the following changes.

[SSL or TLS support for ITOMweb](#)

Configure SSL or TLS for communication between web browsers and the ITOMweb virtual host.

## Configuring ITOMweb to support AFP when using the IBM HTTP Server V9R0 powered by Apache

When using IBM HTTP Server (powered by Apache), you adjust your configuration values in the Output Manager ISPF interface.

1. Navigate to the Policy Administration panel (ISPF A.PA).
2. In the **Subsystem** field, enter the ITOMweb configuration value. This is the value that you specified in the `?ITOMWEB_CONFIG?` variable during configuration.



3. In the **Type** field, type ITOMWeb.
4. On the command line, type E and press Enter. The Policies panel is displayed.
5. On the Policies panel, ensure that the following parameters are specified. If a parameter has not been specified, you can type ADD on the command line, press Enter, and select the parameter from a list. Alternatively, you can scroll to the bottom of the Policies panel, and type the parameter name in the **Name** column, and the value in the **Value** column.

- AFP\_CONV=YES - This option enables AFP conversion and viewing for reports in ITOMweb.
- AFP\_PROC\_PDS=MYHLQ.USER.PROCLIB - Specify the library name in which you saved the customized BJT@AFP PROC.
- AFP\_PROC\_MEMBER=BJT@AFP - Specify the member name for the AFP conversion PROC. It was recommended to keep the original member name, BJT@AFP.
- AFP\_CONVERSION\_JOB CARD=//ITOMAFP JOB ,CLASS=A - specifies AFP conversion JOB CARDS. If the JOB card needs more than 72 characters, specify this parameter multiple times. The AFP conversion job invokes the AFP proc specified by AFP\_PROC\_PDS and AFP\_PROC\_MEMBER.

**Note:** If emailing as PDF or downloading as PDF, only code pages where the glyphs exist in Lucida Console may be rendered if using the Lucida Console font. Email only uses Lucida Console and this cannot be currently overridden.

## Foreign code page support

To configure ITOMweb for foreign code pages, you must configure the server to support foreign code page conversions to UTF-8. USA English sites do not need this option, the default code set is sufficient. Determine the correct name for the code page your site uses to encode sysouts captured by Output Manager. For example, if your site uses code page IBM-424, make the following changes.

### Adding foreign code page support when using the IBM HTTP Server (powered by Apache) V9R0

When using IBM HTTP Server (powered by Apache), you adjust your configuration values in the Output Manager ISPF interface:

1. Navigate to the Policy Administration panel (ISPF A.PA).
2. In the **Subsystem** field, enter the ITOMweb configuration value. This is the value that you specified in the `?ITOMWEB_CONFIG?` variable above.
3. In the **Type** field, type ITOMWeb.
4. On the command line, type E and press Enter. The Policies panel is displayed.
5. On the Policies panel, ensure that the following parameters are specified. If a parameter has not been specified, you can type ADD on the command line, press Enter, and select the parameter from a list. Alternatively, you can scroll to the bottom of the Policies panel, and type the parameter name in the **Name** column, and the value in the **Value** column.

- **LOCALE:** Specify your local language environment. This value follows the standard internationalization locale naming conventions. For example, `he_IL.IBM-424`. This parameter is only required if your local language environment is not US English (`En_US`).

For a list of all the code pages supported by IBM, see <http://www-03.ibm.com/systems/i/software/globalization/codepages.html>.

- **DEFAULT\_ARCHIVE\_CHARSET:** This parameter is used to support foreign code page conversion to UTF-8. Specify the character set (charset) to assume for archive data sets if there is no other information in the archive data set or history DB that is more specific. USA English sites do not need this option, the default code set is sufficient. Set the argument to the code page for your local language environment, for example, `IBM-424`.
6. Users must set the encoding of their browsers to UTF-8 to see the correct representation of native language characters in the archives and reports.

## Related concepts

[Accessing the ITOMweb services](#)

[ITOMweb dependencies with other subsystems](#)

[Installing an instance of the IBM HTTP Server and configuring it for use with Output Manager](#)

You can use IBM HTTP Server (powered by Apache) and configure it for use with Output Manager.

[Adding Advanced Function Printing \(AFP\) support to ITOMweb](#)

[SSL or TLS support for ITOMweb](#)

Configure SSL or TLS for communication between web browsers and the ITOMweb virtual host.

## SSL or TLS support for ITOMweb

Configure SSL or TLS for communication between web browsers and the ITOMweb virtual host.

ITOMweb is configured to run on a virtual host within an instance of the IBM HTTP Server (powered by Apache) version 9.0 or later.

For more information about IBM HTTP Server (powered by Apache), refer to the following page:

[https://www-01.ibm.com/servers/resourcelink/svc00100.nsf/pages/zOSV2R3sc278417/\\$file/dpr1cg01.pdf](https://www-01.ibm.com/servers/resourcelink/svc00100.nsf/pages/zOSV2R3sc278417/$file/dpr1cg01.pdf)

Configure SSL or TLS to enable secure communication between web browsers and the ITOMweb virtual host on the IBM HTTP Server (powered by Apache) using either of the following methods:

- [Using X.509 certificates that are stored in a key database.](#)
- [Using X.509 certificates that are stored in a SAF key ring.](#)

## Related concepts

[Accessing the ITOMweb services](#)

[ITOMweb dependencies with other subsystems](#)

[Installing an instance of the IBM HTTP Server and configuring it for use with Output Manager](#)

You can use IBM HTTP Server (powered by Apache) and configure it for use with Output Manager.

[Adding Advanced Function Printing \(AFP\) support to ITOMweb](#)

[Foreign code page support](#)

To configure ITOMweb for foreign code pages, you must configure the server to support foreign code page conversions to UTF-8. USA English sites do not need this option, the default code set is sufficient. Determine the correct name for the code page your site uses to encode sysouts captured by Output Manager. For example, if your site uses code page IBM-424, make the following changes.

## Using X.509 certificates from a key database to configure ITOMweb to support SSL or TLS

Configure SSL or TLS to enable secure communication between web browsers and the ITOMweb virtual host on the IBM HTTP Server (powered by Apache) using the X.509 certificates that are stored in a key database.

The following examples describe the basic steps and required configuration directives. Configure other SSL directives as specified by your organization policies.

1. Uncomment the `LoadModule ibm_ssl_module modules/mod_ibm_ssl.so` configuration directive in the `httpd.conf` file.
2. In the `omweb.vhost.conf` file, add the following lines immediately after the `ServerName` configuration directive:
  - a) `SSLEnable`
  - b) `KeyFile /directory-tree/xxxKeys.kdb`
  - c) `SSLClientAuth Optional`
  - d) `SSLServerCert Host Server Cert Label`

3. Immediately after the configuration directive that ends the virtual host definition (</VirtualHost>), add the following configuration directive:

a) SSLDisable

The key database must contain the server certificate including its private key and all the certificates in the certificate chain all the way back to the Root CA certificate.

```
<VirtualHost *:8392>
ServerAdmin admin@domain.com
DocumentRoot /itom/om
ServerName RS13:8392
SSLEnable
KeyFile itomweb.kdb
SSLStashFile itomweb.sth
SSLClientAuth None
SSLServerCert "RS13"
```

## Using X.509 certificates from a SAF key ring database to configure ITOMweb to support SSL or TLS

Configure SSL or TLS to enable secure communication between web browsers and the ITOMweb virtual host on the IBM HTTP Server (powered by Apache) using the X.509 certificates that are stored in a SAF key ring.

The following examples describe the basic steps and required configuration directives. Configure other SSL directives as specified by your organization policies.

1. Uncomment the LoadModule `ibm_ssl_module` `modules/mod_ibm_ssl.so` configuration directive in the `httpd.conf` file.

2. In the `omweb.vhost.conf` file, add the following lines immediately after the `ServerName` configuration directive:

a) SSLEnable

b) KeyFile */saf key\_ring\_name*

c) SSLClientAuth Optional

d) SSLServerCert *Host Server Cert Label*

3. Immediately after the configuration directive that ends the virtual host definition (</VirtualHost>), add the following configuration directive:

a) SSLDisable

The SAF key ring must contain the server certificate including its private key and all the certificates in the certificate chain all the way back to the Root CA certificate.

```
<VirtualHost *:8392>
ServerAdmin admin@domain.com
DocumentRoot /itom/om
ServerName RS13:8392
SSLEnable
KeyFile /saf ITOMWEB
SSLClientAuth None
SSLServerCert "RS13 Site"
```

Output from `RACDCERT LISTRING (ITOMWEB) ID(WEBSRV)` command:

Digital ring information for user WEBSRV:

```
Ring:
>ITOMWEB<
Certificate Label Name          Cert Owner  USAGE      DEFAULT
-----
rootca                         CERTAUTH   CERTAUTH   NO
Issuing ca                     CERTAUTH   CERTAUTH   NO
RS13 Site                      SITE       PERSONAL   YES
```

The user ID that is used to run the web server must have the appropriate authority to various profiles in the FACILITY, CSFSERV, and CRYPTOZ Class. There are special considerations if the SITE certificate is shared between application servers. In particular for these profiles in the FACILITY Class:

IRR.DIGTCERT.LIST	READ
IRR.DIGTCERT.LISTRING	UPDATE
IRR.DIGTCERT.GENCERT	CONTROL

## ISV recall installation and customization

Output Manager ISV recall converts third-party archived reports and registers them in the Output Manager archive table (BJTARC) so that users can access these reports from the Output Manager interface.

This task is part of the greater task of customizing Output Manager. You must have completed the steps in [“Modify and submit JCL in BJT@PRED and BJT@JCED to configure customization variables”](#) on page 25 to specify customization variables before starting this task.

ISV recall installation and customization is optional. If you do not need to convert third-party archived reports, you do not need to configure ISV recall.

### Note:

All conversions and migrations of third-party report archives (history entries) require services. Contact your IBM sales contact for details.

## Step 1: Customize view recall and related procedures

You must customize the view recall process to use either a fixed jobname or a unique jobname based on VOLSER.

The Output Manager started task initiates the view recall procedures whenever a user requests the recall of a migrated data set that is still in third-party archive format.

**Note:** The view recall procedures require BLP authority to access the third-party archive reports on tape. Contact your system security administrator for assistance with configuring the security settings.

Customize the view recall procedure in one of two ways:

- [“Option 1: ISV recall customization - Fixed jobname model \(recommended\)”](#) on page 44: This is the standard configuration. The view recall process uses a fixed jobname for ISV recall jobs. This configuration is recommended for most customers.
- [“Option 2: ISV recall customization - Unique jobname based on VOLSER ”](#) on page 45: In this configuration, the view recall process allows multiple tape recall requests to run concurrently while preventing multiple jobs from being queued on the same tape VOLSER. This configuration allows a wildcard (\*) in the in the SET statement for RJNPFx=jobname name, and is only recommended for customers that have third-party recall jobs with more than one jobname. This configuration generates unique jobnames based on VOLSER, and is an alternative to the recommended fixed jobname model. Instead, it dynamically builds and submits a separate recall job where the new jobname is based on the tape VOLSER required.

### Option 1: ISV recall customization - Fixed jobname model (recommended)

To customize the view recall procedures to use a fixed jobname, you must modify the following SBJTSAMP member: BJT@PRV.

This task is part of the greater task of customizing Output Manager. You must have completed the steps in [“Modify and submit JCL in BJT@PRED and BJT@JCED to configure customization variables”](#) on page 25 to specify customization variables before starting this task.

To customize the view recall procedures:

Review SBJTSAMP member BJT@PRV and edit the following as needed:

- Ensure that the ?UNIT? variable is the name of the tape unit to be used for reading the archive tapes for the conversion process.
- Change the SELC parameter to identify the selector class that you want to use for the selector definition that is to capture the recalled archive reports. For example, if you specify SELC=J, you must specify the same class (J) in the **Sysout Class** field when you create the selector definition in [“Step 2: Customize Output Manager for ISV recall”](#) on page 45. Otherwise, Output Manager cannot capture the archive reports after they are converted.
- The recall procedure requires Bypass Label Processing (BLP). However, bypass label processing cannot occur if your security system prevents its use. In this case, you must ensure that the library containing the BJTCRCL program is APF authorized to support Bypass Label Processing.

## Option 2: ISV recall customization - Unique jobname based on VOLSER

To customize the view recall procedures to generate unique jobnames based on VOLSER, you must modify the SBJTSAMP members BJT@PRVV and BJT@JCV.

In this configuration, when a recall is requested by an Output Manager user the recall job (BJT@JCV) is submitted as a batch job, and runs the recall PROC (BJT@PRVV).

The RECALL\_PDS parameter declares where the recall job is located. The PROC (BJT@PRVV) should NOT be moved to your PROCLIB, but should remain in the same data set as the recall job (BJT@JCV), in the location specified by the RECALL\_PDS parameter.

**Note:** It is recommended to leave these members in SBJTSAMP and keep the default RECALL\_PDS value of SBJTSAMP.

To customize the view recall procedures:

1. Review SBJTSAMP member BJT@JCV and edit the job card information as needed.
2. Review SBJTSAMP member BJT@PRVV and edit the job card information as needed.
  - a) Set the RJNPFIX value to two (or more) characters, ending with an asterisk "\*" wildcard suffix.

**Note:** These two characters must comply with z/OS job naming rules (for example, they cannot begin with a numeric value). A two character RJNPFIX plus a six character VOLSER will result in an eight character jobname, which guarantees unique jobnames at the VOLSER level. The advantage of using two characters is that recall requests will run concurrently by VOLSER. The disadvantage is that multiple recall requests for different VOLSERS may flood the batch initiators. This problem can be addressed by careful selection of job and initiator classes. Using more than two characters in RJNPFIX will reduce the number of characters chosen from the VOLSER. A five character RJNPFIX, for example, will use only three characters from the VOLSER, leading to fewer possible jobnames. You must determine which approach is most appropriate for your site.

SET RJNPFIX=B2\* is valid

SET RJNPFIX=12\* is invalid (jobnames cannot begin with a number)

The resulting recall jobname will begin with the RJNPFIX value and contain all or part of the specific tape VOLSER.

For example: Given VOLSER=ABCDEF, and RJNPFIX=B2\*, the resulting recall jobname would be B2ABCDEF.

- b) Save this member in the same data set as BJT@JCV; do NOT move it to your PROCLIB.

## Step 2: Customize Output Manager for ISV recall

Complete the following customization steps to ensure that Output Manager can capture the third-party archives that are converted by the ISV recall procedure:

**Note:** All conversions and migrations of third-party report archives (history entries) require services. Contact your IBM sales contact for details.

1. Create a selector definition for capturing the output that is printed by the ISV recall procedure:

- a) From the Output Manager main menu, choose option A, Administrative Functions, and press Enter. The **Administrative Functions** menu is displayed.
  - b) Choose option S, Selector Rules, and press Enter.
  - c) On the command line, type ADD and press Enter to create a new selector rule.
  - d) In the **Sysout Class** field, specify the SYSOUT class that you want to use for capturing the converted archive reports. This value should match the selector class that you specified for the SELC parameter in BJT@PRV. For example, if you specified SELC=J in BJT@PRV, specify J in the **SYSOUT Class** field.
  - e) In the **Combine Sysout** field, ensure that you accept the default value of No. Output Manager cannot recall reports from combined SYSOUTs.
  - f) Press PF3 to exit the **Selector Rules** panel.
2. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter. The **Administrative Functions** menu is displayed.
  3. Choose option **PA**, Policy Administration, and press Enter.
  4. In the **Subsystem** field, type \*.
  5. In the **Type** field, type \*.
  6. Type E (Edit) on the command line, and press Enter. The **Policies** panel is displayed.
  7. In the table provided, specify the following parameters:
    - RECALL\_MEMBER *vrproc*: where *vrproc* is the name of the customized SBJTSAMP member BJT@PRV.
    - RECALL\_JOBNAME\_PATTERN *pattern*: where *pattern* is the job name pattern that you specified in the selector rule that handles recalls.
    - RECALL\_JOB\_*n*: where *n* is 1 to 6. Specify the JOB card for the job that runs the RECALL\_MEMBER. If the JOB card is less than 72 characters, define RECALL\_JOB\_*n* up to 6 times to fully specify the JOB card.

## SMF Activity Logging

---

You can audit the actions of Output Manager users and store this information in SMF records.

Auditable actions include the viewing, printing, emailing, and downloading of archives and reports; the printing and reprinting of report bundles; and the processing of archives or reports in BJTbatch. Output Manager can capture SMF statistics when any of these actions are performed, and store the captured statistics in SMF records, based on your specifications. Use SMF activity logging to help trace the lifecycle of report data, from the originating job all the way through its eventual hardcopy printing.

The number of pages, lines, and bytes that are viewed, printed, emailed, or processed by a request is based on actual data output, except as noted. The recorded counts do not include values added by the operating system. However, these counts do include the number of pages, lines, and bytes in any banners and PRSET members included with the output. They do not include bundle manifests or recipient manifests. Byte counts include the number of bytes necessary to transport the data to its destination.

To enable and configure SMF logging, store a record type value in the BJTCFG table using the BJTCNVPM SBJTSAMP member during Output Manager installation and customization.

You change the record type value using the Output Manager ISPF Policy Administration panels (A.PA). Set the value for the SMF\_RECORD\_TYPE attribute in the global default configuration (Subsystem name = '\*' and type = '\*') to a numeric value, 128 - 255, inclusive. Deleting this attribute, or setting it to 0, or specifying an invalid value disables SMF logging.

The SMF accounting records are written as a user-configurable SMF record type with Output Manager specific subsections. For more information on the subsections specific to Output Manager, see [“SMF Record Layouts”](#) on page 50.

- [“Actions that are logged in SMF”](#) on page 47

- [“Configuration of the SMF Record Type” on page 49](#)
- [“SMF Record Layouts” on page 50](#)

To trace the lifecycle of report data, combine the information found in the SMF records generated by Output Manager with any SMF type X'06' records generated by eventual output.

**Note:** All date and time values are stored in local time. If the timezone cannot be determined, it is recorded as obtained.

**Note:** Enabling SMF logging will have a slight impact on performance.

## Security requirements for ITOMweb SMF logging

To write SMF records for ITOMweb, the user ID assigned to the ITOMweb started task requires READ access to RACF resource profile BPX.SMF in the FACILITY class. For example:

```
RDEFINE FACILITY BPX.SMF UACC(NONE)
PERMIT BPX.SMF CL(FACILITY) ACCESS(READ) ID(ITOMwebid)
SETROPTS RACLIST(FACILITY) REFRESH
```

Where *ITOMwebid* is the user ID that the ITOMweb web server is running under.

## Actions that are logged in SMF

This section lists the auditable actions can occur in ISPF, ITOMweb, the started task, or BJTBTATCH.

### ISPF actions that are logged in SMF

#### ISPF viewing of reports and archives

The generation of SMF records can be triggered when a user views an archive or report using the Output Manager ISPF interface. The SMF record is written when a user exits the viewer or browser, after viewing/browsing a report or an archive using the B (Browse) or V (View) command on either the **Captured Reports** panel, the **Indexed Reports** panel, or the **Archived Reports** panel.

The SMF record contains the captured job and its printer attributes, the Job name, Job ID, User ID, and the effective User ID of the user that viewed the report or archive. The File Transfer section of the SMF record contains the information about the endpoint that the data was sent to. The SMF record does NOT include the number of lines, pages, and bytes actually viewed by the user. Instead, it includes the number of pages, lines, and bytes contained in the object viewed.

#### ISPF printing of reports and archives:

The generation of SMF records can be triggered when a user prints an archive or report using the Output Manager ISPF interface. The SMF record is written when the print function completes after a user issues the P (print) or R (reprint) command is issued on either the **Captured Reports** panel or the **Archived Reports** panel.

The SMF record contains the actual number of lines, pages, and bytes written to SYSOUT. The file transfer section contains information about the number of bytes written. The captured job and printer attributes are included in the SMF record along with the Job name, Job ID, User ID, the effective User ID of the user requesting the print or reprint, together with the actual printer attributes used in the print request.

### ITOMweb actions that are logged in SMF:

#### Viewing of archives and reports in ITOMweb:

When each section of a report or archive is sent to the user's web browser, Output Manager writes an SMF record containing the actual number of lines, pages, and bytes sent to the web browser. This includes the results of “Advanced Find” and other report/archive data, but does not include transactions that load metadata to the browser. The byte count includes the HTML markup and javascript included in the message.

The SMF record contains the captured job and printer attributes, the Job name, Job ID, User ID, the effective User ID, and other recipient data pertaining to the user viewing or downloading the report or archive. The file transfer section contains information about the endpoint the data was sent to.

#### **Printing of archives and reports in ITOMweb:**

When printing takes place in the address space of the web server, Output Manager writes an SMF record containing the actual number of lines, pages, and bytes actually written to SYSOUT (including data contained within banner and PRSET members) after the print function completes.

The SMF record contains the captured job and actual printer attributes, the Job name, Job ID, the effective User ID of the user requesting the print or reprint (the User ID associated with the task performing the print), and the actual printer attributes used in the print request. The file transfer section contains information about the number of bytes written and include information about the endpoint from which the request was made.

#### **Events initiated by the started task that are logged by SMF:**

##### **Email initiated by the started task:**

When the started task initiates the emailing of a report or archive, Output Manager writes an SMF record. These SMF records are generated by the started task email processor whenever a report is sent to the email processor.

The SMF record contains the actual number of lines, pages, and bytes actually written on the SMTP connection. For binary attachments (for example, PDF files), this includes the extra bytes necessary for the encoding used. When the email contains only a URL, the line and page counts are 0, and the byte-count is the byte count of the body of the email that contains the URL. The file transfer section contains information about the number of bytes written, the status, and the email address to which it is being sent. The IP address information is the IP address of the SMTP server. The SMF record contains the captured job and printer attributes, the Job name, Job ID, User ID, and the user requesting the email. The effective user is the user ID associated with the email processor task. Additionally, both the recipient name and recipient user ID attributes are included in the ITOM Accounting Section.

##### **Automated printing initiated by the started task:**

When an automated print function initiated by the started task completes, Output Manager writes an SMF record containing the actual number of lines, pages, and bytes actually written to SYSOUT. The file transfer section contains information about the number of bytes written. The counts include the banners and PRSET data.

The SMF record contains the captured job and printer attributes, the Job name, Job ID, User ID, the effective User ID of the user requesting the print or reprint, and the actual printer attributes used in the print request. Additionally, both the recipient name and recipient user ID attributes are included in the ITOM Accounting Section.

##### **Bundle printing initiated by the started task:**

When a bundle print is initiated by the started task, Output Manager writes an SMF record containing the actual number of lines, pages, and bytes actually written to SYSOUT after each report in the bundle is completed. Because of this, there is one SMF record for each report and recipient instance. The file transfer section contains information about the number of bytes written. The counts include individual banners and PRSET data, but exclude Bundle and Recipient Manifests.

The SMF record contains the captured job and printer attributes, the Job name, Job ID, User ID, the effective User ID of the user requesting the print or reprint, and the actual printer attributes used in the print request. Both the recipient name and recipient user ID attributes are included in the ITOM Accounting Section.



## BJTBATCH actions that are logged by SMF:

### Batch processing in BJTBATCH:

When archives or reports are processed by BJTBATCH, Output Manager writes an SMF record containing the actual number of lines, pages, and bytes actually written to SYSOUT after the output function completes for each report or archive instance.

The SMF record contains the captured job and printer attributes, the Job name, Job ID, User ID, the effective User ID of the user requesting the print or reprint, and the actual printer attributes used in the print request. The file transfer section contains information about the number of bytes written and, where appropriate, includes the counts for the banner and PRSET members.

If the report or archive was processed using the "archive" or "report" control statements, the source of the data is defined as BJTBATCH. If the report or archive was processed using the "archive\_instance" or "report\_instance" control statements, the source of the data is "BATHPRT".

**Note:** Processing for Runmode(List) does not generate SMF Records.

## Configuration of the SMF Record Type

The SMF Record Type is stored in the BJTCFG table with an applicability (subsystem) value of '\*', and a type value of '\*'. It may not be specified for individual configurations or types within an instance of Output Manager, and must be in the range of 128 through 255, inclusive.

When changes are made to the SMF record type, the time that the changes take effect depends on the action to be reported:

### ISPF browsing and viewing:

Changes made to the SMF record type do not take effect until the ISPF application is restarted.

### ITOMweb SMF records (for printing, browsing, and downloading):

Changes made to the SMF type of the BJTCFG file do not take effect until the next time the webserver is cycled.

### Processes initiated by ISPF or the started task (including ISPF printing, bundle printing, and automatic printing):

The updated SMF configuration will be used when these processes are started. These processes do not require the address space to be recycled for the changes to take effect.

## Options for authorizing the ISPF modules in preparation for SMF logging in ISPF

If you plan to use the Output Manager SMF logging facility in ISPF, it is important that the ISPF modules run authorized.

In addition to the changes required for IKJTSoxx, you have the following options to accomplish this:

- (Recommended) Follow the steps in "Make LPA-eligible Output Manager modules available using the LPA"
- Add the library (<BJTHLQ>.SBJTLPA) containing the ISPF modules to the linklist ensuring that they are marked as authorized.
- Add the library (<BJTHLQ>.SBJTLPA) to the STEPLIB in PROC that is used start interactive TSO sessions. For example:

```
//LOGON EXEC PGM=IKJEFT01,REGION=0M,DYNAMNBR=175,PARM='%LOGINIT'  
//STEPLIB DD DISP=SHR,DSN=BJT.BJT310.SBJTLPA
```

- Use the TSO TSOLIB capability and start ISPF from a CLIST. For example:

```
PROC 0  
/*  
/* 5698-AA5  
/* © Rocket Software, Inc. or its affiliates 2011-2014.  
/* All Rights Reserved.
```

```

/*
/* CLIST to start ISPF with ITOM load and LPA libraries
/* active via TSOLIB so that APF authorization can be preserved.
/*
/*
/* Rev   Who    Date    Description
/* 01    CRMB  12/18/13 First version.
/*
/*
/* TSOLIB ACTIVATE DATASET(BJT.BJT310.SBJTLOAD' +
/*                               'BJT.BJT310. SBJTLPA')
ISPF

```

## Specifying the SMF record type

Specifying the SMF\_RECORD\_TYPE configuration parameter enables SMF logging.

1. From the Output Manager main menu, choose option **A**, Administrative Functions, and press Enter.
2. From the **Administrative Functions** menu, choose option **PA**, Policy Administration, and press Enter.
3. In the **Subsystem** field, specify an asterisk (\*).
4. In the **Type** field, specify an asterisk (\*).

**Tip:** Typing an asterisk in both the **Subsystem** and **Type** fields will apply these changes to the global configuration.

5. Type E (Edit) on the command line to edit the policy, and press Enter.  
The **Policies** panel is displayed.
6. Locate the SMF\_RECORD\_TYPE attribute in the **Attribute** column. If the SMF\_RECORD\_TYPE attribute is not already defined, you can add it as follows:
  - a) On the **Policies** panel, type ADD on the command line and press Enter.
  - b) Select SMF\_RECORD\_TYPE from the list that opens
7. In the **Value** column of the SMF\_RECORD\_TYPE line, type a valid value for the SMF\_RECORD\_TYPE attribute. Valid values are numbers between 128 - 255, inclusive.  
If an invalid value is specified, SMF logging is disabled.
8. Type SAVE on the command line and press Enter to return to the **Policy Administration** panel.

## SMF Record Layouts

The accounting information is written as a user-configurable SMF record type with subsections specific to Output Manager.

The following tables include the name, length, format, and description of each value in the SMF record subsections.

- [“Header Section” on page 51](#)
- [“I/O Data Section” on page 53](#)
- [“Common Section” on page 54](#)
- [“File Transfer Section” on page 55](#)
- [“ITOM Accounting Section” on page 55](#)
- [“ITOM Accounting Attribute Section” on page 56](#)

**Note:** The order of the bit encoding in field SMFITOMPAD does not equate to the order of the sections. The sections are ordered in the following sequence: Header, I/O Data, Common, File Transfer, and Accounting.

## Header Section

The record header section is the first section of each SMF record, present in each SMF record written. The record type is user-configurable in BJTCFG, with the attribute name BJT\_SMF\_NUM, and a scope of \* and \*, where the value is a number in the range 128-255 (inclusive).

*Table 5. SMF Record Header Section*

Offsets	Name	Length	Format	Description
0 0	SMFITOMLEN	2	Binary	Record Length.
2 2	SMFITOMSET	2	Binary	Segment Descriptor
4 4	SMFITOMFLG	1	Binary	System indicator
5 5	SMFITOMRTY	1	Binary	Record type (User configurable $\geq$ X'80' and $\leq$ X'FF')
6 6	SMFITOMTME	4	Binary	Time since midnight in hundredths of a second that the record was moved into the SMF buffer.
10 A	SMFITOMDTE	4	Packed	Date when the record was moved into the SMF buffer in the form 0cyydddF.
14 E	SMFITOMSID	4	EBCDIC	System Identification.
18 12	SMFITOMJBN	8	EBCDIC	Original job name.
26 1A	SMFITOMRST	4	Binary	Time since midnight, in hundredths of a second, that the reader recognized the JOB card for this job.
30 1E	SMFITOMRSD	4	Packed	Date when the reader recognized the JOB card for this job, in the form 0cyydddF.
34 22	SMFITOMUIF	8	EBCDIC	User Identification (taken from common exit parameter area, not USER= parameter on Job statement.) Spaces.

Table 5. SMF Record Header Section (continued)

Offsets	Name	Length	Format	Description
42 2A	SMFITOMOWC	1	EBCDIC	SYSOUT CLASS from original Job.
43 2B	SMFITOMWST	4	Binary	Time since midnight in hundredths of a second that the viewer or printer started working on the data for this record.
47 2B	SMFITOMWSD	4	Packed	Date when the viewer or printer started working on the data for this record in the form 0cyydddF.
51 33	SMFITOMNLR	4	Binary	Number of records (lines) viewed, downloaded, or printed.
55 37	SMFITOMIOE	1	Binary	I/O status indicators.
56 38	SMFITOMNDS	1	Binary	Number of copies requested.
57 39	SMFITOMFMN	4	EBCDIC	Form number – only the first 4 bytes appear in this field.

Table 5. SMF Record Header Section (continued)

Offsets	Name	Length	Format	Description
61 3D	SMFITOMPAD	1	Binary	<p>Section indicator. Bit Meaning when set:</p> <ul style="list-style-type: none"> <li>• 0 ITOM Auditing Section Present.</li> <li>• 1 Common Section Present</li> <li>• 2 ITOM Accounting Section Present.</li> <li>• 3 Reserved</li> <li>• 4 File Transfer Section Present.</li> <li>• 5-7 Reserved.</li> </ul> <p><b>Note:</b> The order of the bit encoding in this field does not equate to the order of the sections. The sections are ordered in the following sequence: Header, I/O Data, Common, File Transfer, and Accounting.</p>
62 3E	SMFITOMSBS	2	Binary	<p>Subsystem Identification – X'0080' signifies ITOM.</p>

## I/O Data Section

This section is present for all ITOM accounting records

Table 6. I/O Data Section. This section is present for all ITOM Accounting records

Offsets	Name	Length	Format	Description
0 0	SMFITOMLN1	2	Binary	Length of this section, including this field.
2 2	SMFITOMDCI	1	Binary	Data Set control indicators. 0.
3 3	SMFITOMINDC	1	Binary	Record level indicator. 0.
4 4	SMFITOMJNM	4	EBCDIC	This field contains zeros. The correct job number is found in SMFITOMJBID.
8 8	SMFITOMOUT	8	EBCDIC	Printer Name.
16 10	SMFITOMFCB	4		Reserved.
20 14	SMFITOMUCS	4		Reserved.

Table 6. I/O Data Section. This section is present for all ITOM Accounting records (continued)

Offsets	Name	Length	Format	Description
24 18	SMFITOMPGE	4	Binary	Number of pages viewed, downloaded, or printed.

## Common Section

This section is present for all Output Manager accounting records

This section is present for all Output Manager Accounting records.

Table 7. Common Section

Offsets	Name	Length	Format	Description
0 0	SMFITOMLN2	2	Binary	Length of this section, including this field.
2 2	SMFITOMROUT	4		Reserved.
6 6	SMFITOMEFMN	8	EBCDIC	Output Form Number.
X'00'	RESERVED	16	Binary	Reserved
30 1E	SMFITOMJBID	8	EBCDIC	Job Id.
38 26	SMFITOMSTNM	8	EBCDIC	Step name
46 2E	SMFITOMPRNM	8	EBCDIC	Proc step name
54 36	SMFITOMDNM	8	EBCDIC	DD Name
62 3E	SMFITOMUSID	8	EBCDIC	The user ID associated with the Job/session that created the data set.
70 46	SMFITOMSECS	8	EBCDIC	Reserved.
78 4E	SMFITOMPRMD	8	EBCDIC	Processing mode of the data set
36 56	SMFITOMCDSN	53	EBCDIC	The name of the data set being printed.
X'00'	RESERVED	3	Binary	Reserved
142 8E	SMFITOM OTOK	20	EBCDIC	Output security token
162 A2	SMFITOMD2SS	4	EBCDIC	Db2 subsystem
166 A6	SMFITOMBNAM	8	EBCDIC	BJT name
174 AE	SMFITOMDOWN	8	EBCDIC	Owner/qualifier value

## File Transfer Section

This section is present for all ITOM Accounting SMF Records. If the file has been converted to PDF or AFP, the number of bytes is the number of bytes after conversion. Page and line counts refer to the number of pages before the conversion.

*Table 8. File Transfer Section*

Offsets	Name	Length	Format	Description
0 0	SMFITOMLN3	2	Binary	Length of this section, including this field.
2 2	SMFITOMBYTE	4	Binary	Total number of bytes viewed, downloaded, or printed. If > X'FFFFFFFE', this field contains X'FFFFFFF' and the actual count found in SMFITOMBCTE.
6 6	SMFITOMIP1	1	Binary	1st segment of IP address.
7 7	SMFITOMIP2	1	Binary	2nd segment of IP address.
8 8	SMFITOMIP3	1	Binary	3rd segment of IP address.
9 9	SMFITOMIP4	1	Binary	4th segment of IP address.
10 A		12		Reserved.
22 16	SMFITOBCTE	8	Binary	Total number of bytes viewed, downloaded, or printed.
30 1E	SMFITOMLUN	8	EBCDIC	LU Name of Terminal (ISPF Viewing)
38 26	SMFITOMI6AD	16	Binary	IPv6 Address of target if using IPv6. 0 if IPv6 not in use or destination is not a network destination.
54 36	SMFITOMEMAD	SMFITOMLN3-46	EBCDIC	EMAIL address of recipient if source is EMAIL.
54 36	SMFITOMDSN	SMFITOMLN3-46	EBCDIC	DSN of Output if source is BJTbatch or SYSOUT data set name.

## ITOM Accounting Section

If the ITOM Accounting section is present, the I/O Data Section, Common Section, and File Transfer Sections is also included. This section consists of a header section and a number of Accounting Attribute Sections. The length of the ITOM Accounting Section is the length of the header section and the sum of the lengths of all Attribute Sections.

The remainder of the ITOM Accounting Section consists of a set of Length, Capture/Request, Attribute Name, Attribute Value tuples. The values for capture are those captured from the Job or transaction that created the SYSOUT if ITOM stored this information in its operational data base. The values used for request are those used in the process that caused the output to be viewed, printed, or batch processed.

Table 9. ITOM Accounting Section

Offsets	Name	Length	Format	Description
0 0	SMFITOMLN4	2	Binary	Length of this section, including this field and all accounting attributes.
2 2	SMFITOMRQTM	4	Binary	Time since midnight in hundredths of a second that the requestor made this request.
6 6	SMFITOMRQDT	4	Packed	Date when the requestor made this request in the form 0ccyydddF.
10 A	SMFITOMRQUI	8	EBCDIC	Requestor's User Id.
18 12	SMFITOMRQEU	8	EBCDIC	Effective User Id.
26 1A	SMFITOMRANM	64	EBCDIC	Report/Archive Name
90 5A	SMFITOMSRCE	8	EBCDIC	Source of Request <ul style="list-style-type: none"> <li>• ISPF: View/Browse</li> <li>• ISPFPRNT: ISPF Print</li> <li>• STCPRIINT: STC Initiated Auto Print</li> <li>• EMAILATT: STC initiated EMAIL as EMAIL attachment.</li> <li>• EMAILBDY: STC initiated EMAIL as EMAIL body.</li> <li>• EMAILURL: STC initiated EMAIL as URL.</li> <li>• BUNDLE: Bundle Printing</li> <li>• BJTBTATCH: BJTBTATCH Processing.</li> <li>• BATCHPRT: Batch Print</li> <li>• ITOMWEB Web Browser</li> </ul>
98 62	SMFITOMCNV	1	Binary	Indicates what conversions have been applied, if any. Values are: <ul style="list-style-type: none"> <li>• 0 - None.</li> <li>• 1- PDF.</li> <li>• 2 - AFP.</li> <li>• 3 - CSV.</li> </ul>

### ITOM Accounting Attribute Section

The **SMFITOMAIND** field indicates whether the attribute value is the value that was captured when ITOM captured the SYSOUT or is the value used in submitting this output request. Unused (default) attributes are not recorded in the SMF records.

#### Note:

The relationship between captured and request attributes is not a one-to-one correspondence. Some attributes may have been present in the original capture job and not present when the output was requested.

Capture attributes are only present to the extent that they are present in the Output Manager repository. Whether or not they exist in the repository depends on the archive attribute's dynamic print value, as well as the DYNAMIC\_PRINTER\_ATTRIBUTE\_CAPTURE and DYNAMIC\_PRINTER\_ATTRIBUTE\_USE



configuration attributes. For more information on dynamic print values, see the *IBM Tivoli Output Manager for z/OS Administrator's Guide*.

Some attributes, such as "Formatted View" are specific to Output Manager and only appear as "request" attributes, if present.

Offsets	Name	Length	Format	Description
0 0	SMFITOMALEN	2	Binary	Length of this section, including this field.
2 2	SMFITOMAIND	1	Binary	Indicator as to whether this is a capture attribute or a request attribute. <ul style="list-style-type: none"> <li>• 0 - Capture</li> <li>• 1 - Request</li> </ul>
3 3	SMFITOMANAM	2	Binary	Encoded Attribute Name.
5 5	SMFITOMAVAL	Value of ITOMSMFALEN -5	EBCDIC or binary depending on context	Actual Attribute Value.

## ITOM Attribute Name Encodings

Attributes that exist in the Header, I/O Data, Common, File Transfer, and Accounting sections may not be explicitly encoded as accounting attributes.

Attribute	Encoding Identification	Datatype
Accounting Information field #1.	X'0001'	EBCDIC
Accounting Information field #2.	X'0002'	EBCDIC
Accounting Information field #3.	X'0003'	EBCDIC
Accounting Information field #4.	X'0004'	EBCDIC
Accounting Information field #5.	X'0005'	EBCDIC
Accounting Information field #6.	X'0006'	EBCDIC
Accounting Information field #7.	X'0007'	EBCDIC
Accounting Information field #8.	X'0008'	EBCDIC
Accounting Information field #9.	X'0009'	EBCDIC
Archive or Report Name.	X'000a'	EBCDIC
Name of distribution list.	X'000b'	EBCDIC
Name of recipient.	X'000c'	EBCDIC
Recipient User Id.	X'000d'	EBCDIC
Address Line #1.	X'000e'	EBCDIC
Address Line #2.	X'000f'	EBCDIC
Address Line #3.	X'0010'	EBCDIC

Table 11. ITOM Attribute Name Encodings (continued)

Attribute	Encoding Identification	Datatype
Address Line #4.	X'0011'	EBCDIC
AFPPARMS	X'0012'	EBCDIC
AFPSTATS	X'0013'	EBCDIC
BUILDING	X'0014'	EBCDIC
BURST	X'0015'	EBCDIC
CHARS field #1.	X'0016'	EBCDIC
CHARS field #2.	X'0017'	EBCDIC
CHARS field #3.	X'0018'	EBCDIC
CHARS field #4	X'0019'	EBCDIC
CKPTLINE	X'001a'	EBCDIC
CKPTPAGE	X'001b'	EBCDIC
CKPTSECS	X'001c'	EBCDIC
CLASS	X'001d'	EBCDIC
COLORMAP	X'001e'	EBCDIC
COMPACT	X'001f'	EBCDIC
COMSETUP	X'0020'	EBCDIC
CONTROL	X'0021'	EBCDIC
COPIES	X'0022'	EBCDIC
COPYGROUP Field #1	X'0023'	EBCDIC
COPYGROUP Field #2	X'0024'	EBCDIC
COPYGROUP Field #3	X'0025'	EBCDIC
COPYGROUP Field #4	X'0026'	EBCDIC
COPYGROUP Field #5	X'0027'	EBCDIC
COPYGROUP Field #6	X'0028'	EBCDIC
COPYGROUP Field #7	X'0029'	EBCDIC
COPYGROUP Field #8	X'002a'	EBCDIC
DATAACK	X'002b'	EBCDIC
DD Name	X'002c'	EBCDIC
DEPT	X'002d'	EBCDIC
DEST	X'002e'	EBCDIC
DPAGELBJ	X'002f'	EBCDIC
DUPLEX	X'0030'	EBCDIC
FCB	X'0031'	EBCDIC
FLASH	X'0032'	EBCDIC

Table 11. ITOM Attribute Name Encodings (continued)

Attribute	Encoding Identification	Datatype
FLASHCNT	X'0033'	EBCDIC
FORMDEF	X'0034'	EBCDIC
FORMLEN	X'0035'	EBCDIC
FORMLENMET	X'0036'	EBCDIC
FORMS	X'0037'	EBCDIC
FSSDATA	X'0038'	EBCDIC
GROUPID	X'0039'	EBCDIC
INDEX	X'003a'	EBCDIC
INTRAY	X'003b'	EBCDIC
LINDEX	X'003c'	EBCDIC
LINCT	X'003d'	EBCDIC
MAILBCC Field #1	X'003e'	EBCDIC
MAILBCC Field #2	X'003f'	EBCDIC
MAILBCC Field #3	X'0040'	EBCDIC
MAILBCC Field #4	X'0041'	EBCDIC
MAILBCC Field #5	X'0042'	EBCDIC
MAILBCC Field #6	X'0043'	EBCDIC
MAILBCC Field #7	X'0044'	EBCDIC
MAILBCC Field #8	X'0045'	EBCDIC
MAILBCC Field #9	X'0046'	EBCDIC
MAILBCC Field #10	X'0047'	EBCDIC
MAILBCC Field #11	X'0048'	EBCDIC
MAILBCC Field #12	X'0049'	EBCDIC
MAILBCC Field #13	X'004a'	EBCDIC
MAILBCC Field #14	X'004b'	EBCDIC
MAILBCC Field #15	X'004c'	EBCDIC
MAILBCC Field #16	X'004d'	EBCDIC
MAILBCC Field #17	X'004e'	EBCDIC
MAILBCC Field #18	X'004f'	EBCDIC
MAILBCC Field #19	X'0050'	EBCDIC
MAILBCC Field #20	X'0051'	EBCDIC
MAILBCC Field #21	X'0052'	EBCDIC
MAILBCC Field #22	X'0053'	EBCDIC
MAILBCC Field #23	X'0054'	EBCDIC

Table 11. ITOM Attribute Name Encodings (continued)

Attribute	Encoding Identification	Datatype
MAILBCC Field #24	X'0055'	EBCDIC
MAILBCC Field #25	X'0056'	EBCDIC
MAILBCC Field #26	X'0057'	EBCDIC
MAILBCC Field #27	X'0058'	EBCDIC
MAILBCC Field #28	X'0059'	EBCDIC
MAILBCC Field #29	X'005a'	EBCDIC
MAILBCC Field #30	X'005b'	EBCDIC
MAILBCC Field #31	X'005c'	EBCDIC
MAILBCC Field #32	X'005d'	EBCDIC
MAILCC Field #1	X'005e'	EBCDIC
MAILCC Field #2	X'005f'	EBCDIC
MAILCC Field #3	X'0060'	EBCDIC
MAILCC Field #4	X'0061'	EBCDIC
MAILCC Field #5	X'0062'	EBCDIC
MAILCC Field #6	X'0063'	EBCDIC
MAILCC Field #7	X'0064'	EBCDIC
MAILCC Field #8	X'0065'	EBCDIC
MAILCC Field #9	X'0066'	EBCDIC
MAILCC Field #10	X'0067'	EBCDIC
MAILCC Field #11	X'0068'	EBCDIC
MAILCC Field #12	X'0069'	EBCDIC
MAILCC Field #13	X'006a'	EBCDIC
MAILCC Field #14	X'006b'	EBCDIC
MAILCC Field #15	X'006c'	EBCDIC
MAILCC Field #16	X'006d'	EBCDIC
MAILCC Field #17	X'006e'	EBCDIC
MAILCC Field #18	X'006f'	EBCDIC
MAILCC Field #19	X'0070'	EBCDIC
MAILCC Field #20	X'0071'	EBCDIC
MAILCC Field #21	X'0072'	EBCDIC
MAILCC Field #22	X'0073'	EBCDIC
MAILCC Field #23	X'0074'	EBCDIC
MAILCC Field #24	X'0075'	EBCDIC
MAILCC Field #25	X'0076'	EBCDIC

Table 11. ITOM Attribute Name Encodings (continued)

<b>Attribute</b>	<b>Encoding Identification</b>	<b>Datatype</b>
MAILCC Field #26	X'0077'	EBCDIC
MAILCC Field #27	X'0078'	EBCDIC
MAILCC Field #28	X'0079'	EBCDIC
MAILCC Field #29	X'007a'	EBCDIC
MAILCC Field #30	X'007b'	EBCDIC
MAILCC Field #31	X'007c'	EBCDIC
MAILCC Field #32	X'007d'	EBCDIC
MAILFILE	X'007e'	EBCDIC
MAILFROM	X'007f'	EBCDIC
MAILTO Field #1	X'0080'	EBCDIC
MAILTO Field #2	X'0081'	EBCDIC
MAILTO Field #3	X'0082'	EBCDIC
MAILTO Field #4	X'0083'	EBCDIC
MAILTO Field #5	X'0084'	EBCDIC
MAILTO Field #6	X'0085'	EBCDIC
MAILTO Field #7	X'0086'	EBCDIC
MAILTO Field #8	X'0087'	EBCDIC
MAILTO Field #9	X'0088'	EBCDIC
MAILTO Field #10	X'0089'	EBCDIC
MAILTO Field #11	X'008a'	EBCDIC
MAILTO Field #12	X'008b'	EBCDIC
MAILTO Field #13	X'008c'	EBCDIC
MAILTO Field #14	X'008d'	EBCDIC
MAILTO Field #15	X'008e'	EBCDIC
MAILTO Field #16	X'008f'	EBCDIC
MAILTO Field #17	X'0090'	EBCDIC
MAILTO Field #18	X'0091'	EBCDIC
MAILTO Field #19	X'0092'	EBCDIC
MAILTO Field #20	X'0093'	EBCDIC
MAILTO Field #21	X'0094'	EBCDIC
MAILTO Field #22	X'0095'	EBCDIC
MAILTO Field #23	X'0096'	EBCDIC
MAILTO Field #24	X'0097'	EBCDIC
MAILTO Field #25	X'0098'	EBCDIC

Table 11. ITOM Attribute Name Encodings (continued)

Attribute	Encoding Identification	Datatype
MAILTO Field #26	X'0099'	EBCDIC
MAILTO Field #27	X'009a'	EBCDIC
MAILTO Field #28	X'009b'	EBCDIC
MAILTO Field #29	X'009c'	EBCDIC
MAILTO Field #30	X'009d'	EBCDIC
MAILTO Field #31	X'009e'	EBCDIC
MAILTO Field #32	X'009f'	EBCDIC
MODIFY	X'00a0'	EBCDIC
MODIFYCAT (TRC)	X'00a1'	EBCDIC
NAME	X'00a2'	EBCDIC
NOTIFY	X'00a3'	EBCDIC
OFFSETXB1	X'00a4'	EBCDIC
OFFSETXB2	X'00a5'	EBCDIC
OFFSETXB3	X'00a6'	EBCDIC
OFFSETXB4	X'00a7'	EBCDIC
OFFSETXB5	X'00a8'	EBCDIC
OFFSETXB6	X'00a9'	EBCDIC
OFFSETXB7	X'00aa'	EBCDIC
OFFSETXB8	X'00ab'	EBCDIC
OFFSETXB9	X'00ac'	EBCDIC
OFFSETXB10	X'00ad'	EBCDIC
OFFSETXF1	X'00ae'	EBCDIC
OFFSETXF2	X'00af'	EBCDIC
OFFSETXF3	X'00b0'	EBCDIC
OFFSETXF4	X'00b1'	EBCDIC
OFFSETXF5	X'00b2'	EBCDIC
OFFSETXF6	X'00b3'	EBCDIC
OFFSETXF7	X'00b4'	EBCDIC
OFFSETXF8	X'00b5'	EBCDIC
OFFSETXF9	X'00b6'	EBCDIC
OFFSETXF10	X'00b7'	EBCDIC
OFFSETYB1	X'00b8'	EBCDIC
OFFSETYB2	X'00b9'	EBCDIC
OFFSETYB3	X'00ba'	EBCDIC

Table 11. ITOM Attribute Name Encodings (continued)

Attribute	Encoding Identification	Datatype
OFFSETYB4	X'00bb'	EBCDIC
OFFSETYB5	X'00bc'	EBCDIC
OFFSETYB6	X'00bd'	EBCDIC
OFFSETYB7	X'00be'	EBCDIC
OFFSETYB8	X'00bf'	EBCDIC
OFFSETYB9	X'00c0'	EBCDIC
OFFSETYB10	X'00c1'	EBCDIC
OFFSETYF1	X'00c2'	EBCDIC
OFFSETYF2	X'00c3'	EBCDIC
OFFSETYF3	X'00c4'	EBCDIC
OFFSETYF4	X'00c5'	EBCDIC
OFFSETYF5	X'00c6'	EBCDIC
OFFSETYF6	X'00c7'	EBCDIC
OFFSETYF7	X'00c8'	EBCDIC
OFFSETYF8	X'00c9'	EBCDIC
OFFSETYF9	X'00ca'	EBCDIC
OFFSETYF10	X'00cb'	EBCDIC
OUTBIN	X'00cc'	EBCDIC
OUTCDISP	X'00cd'	EBCDIC
OUTDISP	X'00ce'	EBCDIC
OVERLAYB	X'00cf'	EBCDIC
OVERLAYF	X'00d0'	EBCDIC
OVFL	X'00d1'	EBCDIC
PAGEDEF	X'00d2'	EBCDIC
PIMSG	X'00d3'	EBCDIC
PIMSGCNT	X'00d4'	EBCDIC
PORTNO	X'00d5'	EBCDIC
PRMODE	X'00d6'	EBCDIC
PRTATTRS	X'00d7'	EBCDIC
PRTEROR	X'00d8'	EBCDIC
PRTOPTNS	X'00d9'	EBCDIC
PRTQUEUE	X'00da'	EBCDIC
PRTY	X'00db'	EBCDIC
REPLYTO	X'00dc'	EBCDIC

Table 11. ITOM Attribute Name Encodings (continued)

<b>Attribute</b>	<b>Encoding Identification</b>	<b>Datatype</b>
RESFMT	X'00dd'	EBCDIC
RETAINF	X'00de'	EBCDIC
RETAINS	X'00df'	EBCDIC
RETRYL	X'00e0'	EBCDIC
RETRYT	X'00e1'	EBCDIC
ROOM	X'00e2'	EBCDIC
SYSAREA	X'00e3'	EBCDIC
THRESHLD	X'00e4'	EBCDIC
TITLE	X'00e5'	EBCDIC
TRC	X'00e6'	EBCDIC
UCS	X'00e7'	EBCDIC
USERDATA Field #1	X'00e8'	EBCDIC
USERDATA Field #2	X'00e9'	EBCDIC
USERDATA Field #3	X'00ea'	EBCDIC
USERDATA Field #4	X'00eb'	EBCDIC
USERDATA Field #5	X'00ec'	EBCDIC
USERDATA Field #6	X'00ed'	EBCDIC
USERDATA Field #7	X'00ee'	EBCDIC
USERDATA Field #8	X'00ef'	EBCDIC
USERDATA Field #9	X'00f0'	EBCDIC
USERDATA Field #10	X'00f1'	EBCDIC
USERDATA Field #11	X'00f2'	EBCDIC
USERDATA Field #12	X'00f3'	EBCDIC
USERDATA Field #13	X'00f4'	EBCDIC
USERDATA Field #14	X'00f5'	EBCDIC
USERDATA Field #15	X'00f6'	EBCDIC
USERDATA Field #16	X'00f7'	EBCDIC
USERLIB1	X'00f8'	EBCDIC
USERLIB2	X'00f9'	EBCDIC
USERLIB3	X'00fa'	EBCDIC
USERLIB4	X'00fb'	EBCDIC
USERLIB5	X'00fc'	EBCDIC
USERLIB6	X'00fd'	EBCDIC
USERLIB7	X'00fe'	EBCDIC



Table 11. ITOM Attribute Name Encodings (continued)

Attribute	Encoding Identification	Datatype
USERLIB8	X'00ff'	EBCDIC
USERPATH1	X'0100'	EBCDIC
USERPATH2	X'0101'	EBCDIC
USERPATH3	X'0102'	EBCDIC
USERPATH4	X'0103'	EBCDIC
USERPATH5	X'0104'	EBCDIC
USERPATH6	X'0105'	EBCDIC
USERPATH7	X'0106'	EBCDIC
USERPATH8	X'0107'	EBCDIC
WRITER	X'0108'	EBCDIC
OPTCDJ	X'0109'	EBCDIC
PAGE_COUNT	X'010a'	Binary
LINE_COUNT	X'010b'	Binary
BYTE_COUNT	X'010c'	Binary
SID	X'010d'	EBCDIC
Formatted View	X'010e'	EBCDIC
Processing Mode	X'010f'	EBCDIC
SYSOUT data set name	X'0110'	EBCDIC
Bundle name	X'0111'	EBCDIC
Bundle Activate date	X'0112'	Packed Decimal
Bundle Activate time	X'0113'	Binary
Bundle Deactivate date	X'0114'	Packed Decimal
Bundle deactivate time	X'0115'	Binary
Third-party capture indicator	X'0116'	EBCDIC
Job Name of requestor	X'0117'	Requestor's Job Name
Job ID of requestor	X'0118'	Requestor's Job ID
Job submission date	X'0119'	Date component of BJTARC.INPUT_START
Job submission time	X'0111a'	Time component of BJTARC.INPUT_START
Job execution start date	X'0111b'	Date component of BJTARC.JOBEXEC_START
Job execution time	X'0111c'	Time component of BJTARC.JOBEXEC_START
Spool available date	X'0111d'	Date component of BJTARC.SPOOL_AVAIL

Attribute	Encoding Identification	Datatype
Spool available time	X'0111d'	Time component of BJTARC.SPOOL_AVAIL
Capture date	X'0111f'	Date component of BJTARC.CAPTURE
Capture time	X'0120'	Time component of BJTARC.CAPTURE
JES queue	X'0121'	BJTARC.JESQUEUE
DSID	X'0122'	BJTARC.DSID
MSGCLASS	X'0123'	BJTARC.MSGCLASS

## Reference: BJTCFG configuration parameters

### Configuration value hierarchy

Because some values can be specified for multiple subsystem configurations (different subsystem names and subsystem types), it is important to consider which values take precedence. When a value is specified for more than one subsystem configuration, the value for the more-specific configuration is used first. The value used is based on the following hierarchy:

1. Specific subsystem / specific subsystem type
2. Generic (\*) subsystem / specific subsystem type
3. Generic (\*) subsystem / generic (\*) subsystem type

Values for more-specific configurations always take precedence over values specified for less-specific configurations: even when the more-specific value is blank. If a parameter is specified with a blank value, the default is used. This means that if you specify a parameter with a blank value in a "named subsystem / specific subsystem type" configuration, and you specify that same parameter with a specific value in a generic configuration (\* subsystem name, and \* subsystem type), the default value will be used because the more-specific configuration takes precedence. If you want to use the value specified in a more generic configuration, completely omit the parameter from the more-specific configurations.

**Note:** The following variables can only be specified in a generic (\*/\*) configuration: SAF\_CLASS, ARCFILTER, VARCHIVE, SMF\_RECORD\_TYPE, ARA\_HOST, and ARA\_PORT.

**Note:** To expand any field of parameter name, use PF4 (Having Expand Definition) to add parameter name in expanded field. To scroll any field of parameter name, use PF11 to scroll to right of the field.

### When configuration changes are applied

Configuration parameters are specified in the Policy Administration panels (ISPF A.PA), and are saved in the BJTCFG table. Changes will take effect as follows:

- Changes made to the started task (type STC) are loaded with the LOAD CONFIG command in BJT#IN03.
- Changes made to ITOMweb parameters take effect when the web server is restarted.
- Changes made to ISPF take effect when you start the next ISPF application.

## Output Manager configuration parameters

### **USE\_DISTRIBUTION\_LIST\_PRINTER [YES|NO]**

Specifies whether or not to use the printer associated with the distribution list when capturing report-level dynamic printer attributes. This parameter only controls the capture of the report-level dynamic attributes.

**YES** – When capturing the report-level dynamic printing parameters, use the distribution list printer. If the distribution list printer is not defined, use the report printer.

**NO** – When capturing the report-level dynamic printing parameters, use the report printer if it is defined. NO is the default option.

- Required: No. If not specified, the default is used.
- Relevant subsystem types: STC, and \* (default subsystem)
- Default value: NO

### **DEFAULT\_OUTPUT\_CLASS A**

Establishes a default SYSOUT class for reports that are printed by Output Manager when the class is missing from the printer or the recipient definition. If a print file is generated without a class, the DEFAULT\_OUTPUT\_CLASS value is used. If this parameter is not specified, the default class for print files is class A. A valid class value is one alphanumeric character, A-Z or 0-9.

- Required: No. If not specified, the default is used.
- Relevant subsystem types: STC, and \* (default subsystem)
- Default value: A

### **DEFAULT\_ARCHIVE\_CHARSET *charset***

This optional parameter is used to support foreign code page conversion to UTF-8. Specify the character set (charset) to assume for archive data sets if there is no other information in the archive data set or history database that is more specific. USA English sites do not need this option, the default code set is sufficient. Set the argument to the code page for your local language environment.

- Required: No.
- Relevant subsystem types: ITOMWeb, and \* (default subsystem)
- Default value: 1047

### **ISPF\_OUTPUT\_CLASS**

Used for troubleshooting, this parameter specifies an output class for capturing trace information when a problem is being analyzed. Specify an output class that does not immediately discard what is written to it. The default, \*, writes to the output class that is assigned by default in your system configuration.

- Required: No.
- Relevant subsystem types: ISPF, and \* (default subsystem)
- Default value: \*

### **PRINT\_PDS ?SAMPLQ?.SBJTSAMP**

This required parameter specifies the data set name of the library that contains the Output Manager JCL for printing, re-printing, and bundle printing (BJT@PRAP, BJT@PBN1, and BJT@PBN2). During customization, it was recommended to leave these members in the library that contains all of your customized SBJTSAMP members: ?BJTHLQ?.SBJTSAMP. If you moved these members to a different library, specify that library.

- Required: Yes
- Relevant subsystem types: ISPF, STC, and \* (default subsystem)
- Default value: None

### **DEFAULT\_BANNER\_PAGE *BJT.BANNER.PDS.NAME(MEMBER)***

Use this parameter to specify the default banner page to be used when batch printing archives via the 'PJ' line command from the **Archived Reports** panel. Specify the data set name and member name of the banner as the parameter value.

- Required: No
- Relevant subsystem types: ISPF, ITOMWeb, and \* (default subsystem)
- Default value: None

### **IGNORE\_BLANK\_LINES [YES|NO]**

Specifies whether or not to ignore blank lines while line counting when matching data for custom reports with the layout and for index value generation. When YES is specified, all carriage control that skips lines will only count as a single line if it contains printable data. If the line is blank, it will not be counted. When NO is specified, blank lines are included in the line count.

- Required: No
- Relevant subsystem types: STC
- Default value: NO

### **DESCRIPTOR\_CODE and ROUTE\_CODE**

The write-to-operator (WTO) descriptor and route code for issuing WTO messages.

- Required: No
- Relevant subsystem types: Can be specified only in generic "\*" subsystem name and type (\*/\*)
- Default value: None

## **Security configuration parameters**

### **SAF\_CLASS [FACILITY | XFACILIT]**

Specify the SAF class used by RACF. Valid values include FACILITY or XFACILIT.

- Required: Yes
- Relevant subsystem types: Can be specified only in generic "\*" subsystem name and type (\*/\*)
- Default value: FACILITY

### **REPORT\_ACCESS\_ID *user\_ID***

Specify this optional parameter to enable Report Access ID security, and identify an external security user ID to be temporarily used when a user elects to view or print a report. The user ID specified will access the underlying archive data set(s) when a user requests a report associated with an archive (rather than the RACF user ID of the user). The user ID will then switch back to the original user ID after the data has been accessed. Because it is the temporary user ID that accesses the underlying archive data set(s), individual user IDs do not need access to these data set(s). This feature can be used to allow users to access reports based on archives inside of Output Manager, while preventing users from accessing the underlying archives the reports are based on outside of Output Manager. Your security product will prevent users from browsing the archives.

The user ID specified for the REPORT\_ACCESS\_ID must have access authority to the underlying archive data set(s).

The recommended value for this parameter is: REPORT\_ACCESS\_ID *user\_ID* STCUSERID, where STCUSERID is the user ID that the Output Manager started task runs under. It is also recommended that this user ID is granted full access to the Output Manager archive data sets.

- Required: No.
- Relevant subsystem types: \* (default subsystem) only
- Default value: None

**Note:** If REPORT\_ACCESS\_ID *user\_ID* is specified and you are using the ISPF interface to access reports, you must specify a non-zero value for ARA\_PORT and recycle the started task and the ISPF address spaces prior to viewing reports.

### **VARCHIVE [ALL | NOREPORT]**

This parameter globally controls which archives are presented to the user when they open the **View Archives** panel: either all archives, or only archives that do not have associated reports. When **ALL** is specified, all archives (based on the current search criteria) are displayed. When **NOREPORT** (the default) is specified, only archives that do not have any reports based on the archive are displayed. This parameter does not override permission privileges determined by RACF profiles.

- Required: No. If not specified, the default is used.

**Note:** This may only be specified in the hte \*/\* policy.

- Relevant subsystem types: Can be specified only in generic "\*" subsystem name and type (\*/\*)
- Default value: NOREPORT

### **ARCFILTER [ENABLE|DISABLE]**

When ENABLE is specified, the list of archives that a user sees is limited by their list of Archive Access IDs (defined in their Output Manager recipient ID). If any of the user's Archive Access IDs match an archive name, either generic, or fully-qualified, that user can view that archive.

When DISABLE is specified, the list of archives that a user sees is not filtered by Archive Access IDs. Archive Access IDs do not need to be defined if ARCFILTER is set to DISABLE.

- Required: No.
- Relevant subsystem types: Can be specified only in generic "\*" subsystem name and type (\*/\*)
- Default value: DISABLE

## **Dynamic printing configuration parameters**

### **DYNAMIC\_PRINTER\_ATTRIBUTE\_CAPTURE [DEFINED | ALL | ARCHIVES | REPORTS]**

(Optional) Controls whether or not dynamic printing attributes are captured for archives, reports, or both.

- **DEFINED:** Capture the dynamic printing parameters only when Dynamic Print is set to YES (for archives) or REPORT (for reports) for that archive or report. For archives, dynamic print is set in the associated archive attribute; for reports, it is set in the report definition.
- **ALL :** Capture the dynamic printing parameters for all archives and all reports, regardless of how the **Dynamic Print** field is set in the individual archive attributes and report definitions.
- **ARCHIVES:** Capture the dynamic printing parameters for all archives, and for any reports that are based on a report definition in which the **Dynamic Print** field is set to Report.
- **REPORTS:** Capture the dynamic printing parameters for all defined reports, and for any archives that are based on a set of archive attributes in which the **Dynamic Print** field is set to Report.

Dynamic printing parameters include the JCL parameters CLASS, DEST, FCB, FORMDEF, FORMS, PAGEDDEF, PRMODE, OPTCD=J (a DCB subparameter), TRC, and UCS. Output Manager can dynamically capture these parameters from SYSOUT data sets and the static sets of printer attributes defined and associated with a report.

The captured parameters are stored in the BJTDAT table. You can control the capture of these parameters in the following ways: 1) by specifying this configuration parameter, and 2) by setting the **Dynamic Print** field within the sets of archived attributes and report definitions. This parameter can force the capture of the dynamic printing parameters globally, across all reports or all archives or all reports and archives, even when the **Dynamic Print** field is set to **No** for these objects.

**Note:** The DYNAMIC\_PRINTER\_ATTRIBUTE\_CAPTURE parameter controls only the capture of the dynamic printing parameters, not their use for printing. The **Dynamic Print** settings will still control the actual use of these parameters. If you want to control both the capture and use of the dynamic printing parameters globally, specify the DYNAMIC\_PRINTER\_ATTRIBUTE\_USE parameter instead.

- Required: No
- Relevant subsystem types: STC, and \* (default subsystem)
- Default value: None

## **DYNAMIC\_PRINTER\_ATTRIBUTE\_USE [DEFINED | ALL | ARCHIVES | REPORTS]**

(Optional) Controls the objects for which dynamic printing parameters are captured and used for printing.

- **DEFINED:** Captures and uses the dynamic printing parameters only when Dynamic Print is set to YES (for archives) or REPORT (for reports) for that archive or report. For archives, dynamic print is set in the associated archive attribute; for reports, it is set in the report definition. This option is the default option.
- **ALL:** Capture and use the dynamic printing parameters for all archives and all reports, regardless of how the **Dynamic Print** field is set in the individual archive attributes and report definitions.
- **ARCHIVES:** Capture and use the dynamic printing parameters for printing all archives, and for printing any reports that are based on a report definition in which the **Dynamic Print** field is set to Report.
- **REPORTS:** Capture and use the dynamic printing parameters for printing all reports, and for printing any archives that are based on a set of archive attributes in which the **Dynamic Print** field is set to Report.

Output Manager can dynamically capture certain printing parameters from SYSOUT data sets and the static sets of printer attributes that you define from the Output Manager ISPF interface and associate with a report. The parameters are stored in the BJTDAT table. You can control both the capture and use of these parameters in the following ways: 1) by specifying this parameter, and 2) by setting the **Dynamic Print** field within the sets of archived attributes and report definitions that you define. This parameter can force the capture and use of the dynamic printing parameters globally, across all reports or all archives or all reports and archives, even when the **Dynamic Print** field is set to **No** for these objects.

**Note:** The DYNAMIC\_PRINTER\_ATTRIBUTE\_USE parameter controls both the capture and the use of the dynamic printing parameters globally. If you want to control only the capture of the dynamic printing parameters, specify the DYNAMIC\_PRINTER\_ATTRIBUTE\_CAPTURE parameter instead.

- Required: No.
- Relevant subsystem types: STC, and \* (default subsystem)
- Default value: None

## **ISV recall configuration parameters**

### **Note:**

All conversions and migrations of third-party report archives (history entries) require services. Contact your IBM sales contact for details.

If your site does not allow all users to access tape drives, or submit jobs with all job names, you must also specify ARA\_PORT. Restart the started task after specifying these attributes for the first time.

### **RECALL\_MEMBER (proc)**

(Optional) Specifies the PROC name that you customized to perform recall operations. SBJTSAMP member BJT@PRV is provided as a configurable sample.

**Note:** This PDS is typically allocated as FB LRECL = 80.

- Required: No
- Relevant subsystem types: STC, ISPF, ITOMWeb, and \* (default subsystem)
- Default value: None

### **RECALL\_JOB\_N**

Specify valid job cards for your installation. ITOMweb dynamically builds and submits a batch job to recall reports when requested. *N* is a single digit, 1-6, to allow you to specify up to 6 job cards.

- Required: Yes
- Relevant subsystem types: STC, ISPF, ITOMWeb, and \* (default subsystem)

- Default value: None

### **RECALL\_JOBNAME\_PATTERN** *jobname\_pattern*

This attribute allows Output Manager to perform multiple recall operations with different names. If you use BJT@PRV, specify the job name pattern in BJT@PRV. If you use only one job name for recall jobs, specify the fully-qualified job name. Specifies the recall procedures that the Output Manager started task initiates whenever you request the recall of an archive data set that is in third-party format. RECALL\_JOBNAME specifies the procedure name that is defined in the member BJT@PRV. For more information, see [“ISV recall installation and customization” on page 44](#).

- Required: Yes
- Relevant subsystem types: STC, and \* (default subsystem)
- Default value: None

### **RECALL\_PDS** *SBJTSAMP*

Library that contains the recall PROC member for ISV recall and DFSMSHsm recall. If you have configured Output Manager to process DFSMSHsm recalls and ISV recall recalls through batch jobs, you must use this parameter to declare where the recall procs are located. If necessary, change SBJTSAMP to the data set that contains the SBJTSAMP members BJT@PRV, and BJT@PRVV.

**Note:** It is recommended to leave these members in SBJTSAMP and keep the default RECALL\_PDS value of SBJTSAMP.

- Required: Yes
- Relevant subsystem types: STC, ITOMWeb, ISPF, and \* (default subsystem)
- Default value: SBJTSAMP

## **Archive SYSOUT options**

### **ARCTIME** [**CAPTURE** | **JOB** | **DATASET**]

Controls the date and time associated with archives.

**CAPTURE:** Uses the time that Output Manager captured the spool data set.

**JOB:** Uses the execution start time of the job.

**DATASET:** Uses the data set availability time. This is either the job end-time or the data set deallocation time. See the JCL reference, DD statement, SPIN parameter for more information.

- Required: No
- Relevant subsystem types: STC, and \* (default subsystem)
- Default value: CAPTURE

### **DEFAULT\_GENERATIONS** *nnn*

When included, this parameter defines the default limit of generations to retain. *nnn* is a numerical value in the range of 0 through 999 (inclusive) that specifies the value of the default limit for archive attributes where the base does not exist. Setting DEFAULT\_GENERATIONS to 0 (the default) is the equivalent of disabling the dynamic creation of GDG bases. If DEFAULT\_GENERATIONS is set to 0 and an archive attribute specifies the use of a GDG but the base is not defined, archiving will fail.

- Required: No
- Relevant subsystem types: STC, and \* (default subsystem)
- Default value: 0

### **DETECT\_CARRIAGE\_CONTROL** [**OFF** | **ON**]

Specifies whether or not Output Manager should detect carriage control if a sysout does not declare carriage control in the RECFM.

**OFF:** Output Manager archive data sets always use carriage control. If the sysout does not declare carriage control, Output Manager assumes that ASA carriage control is used, and inserts a blank at the beginning of every line. This is the default.

**ON:** If the sysout does not declare carriage control, Output Manager reads the first 1000 lines of the sysout to detect the carriage control. If Output Manager finds only valid ASA carriage control, the character 'A' is added to the RECFM. If Output Manager finds only valid machine carriage control, the character 'M' is added to the RECFM. If Output Manager finds any line that begins with a character that is neither valid ASA nor machine carriage control, it does not modify the carriage control.

**Note:** Output Manager does not consider channels 2-12 when detecting carriage control.

- Required: No
- Relevant subsystem types: STC, and \* (default subsystem)
- Default value: OFF

#### **CONDITION\_CODE [LASTNONZERO | HIGHEST]**

(Optional) Specifies the option for reporting condition codes. If you specify LASTNONZERO, Output Manager will report the last non-zero condition code from a job on the **Archived Reports** panel. If you specify HIGHEST, Output Manager will report the highest non-zero condition code from a job. If this parameter is not specified, Output Manager uses LASTNONZERO as the default option.

- Required: No.
- Relevant subsystem types: STC, and \* (default subsystem)
- Default value: LASTNONZERO

### **Email configuration parameters**

#### **ENABLE\_EMAIL**

Specify YES or NO to indicate whether distribution via email is enabled.

- Required: No.
- Relevant subsystem types: STC, and \* (default subsystem)
- Default value: NO

#### **EMAIL\_DEFAULT\_PDF\_PAGE\_GEOMETRY**

Specify the default page orientation and geometry of PDF pages distributed by email. Valid values include: Letter (for 8.5" x 11.0"); Letter landscape (for 11.0" x 8.5"); A4 (for 210 x 297 mm); and A4 landscape (for 297 x 210 mm).

- Required: No.
- Relevant subsystem types: STC, and \* (default subsystem)
- Default value: Letter

#### **EMAIL\_DISCLAIMER**

(Optional) This configuration parameter can be used to add a disclaimer message to the end of the message body text for each email sent from Output Manager. Include the disclaimer message in a partitioned data set member or sequential data set, and then specify that data set as the value in this configuration parameter. The contents of the data set is used as the email disclaimer.

#### **EMAIL\_SUBJECT\_INCLUDES\_REPORT\_NAME**

Specify YES or NO to indicate whether or not report distributions by email will include the report name in the email subject line.

- Required: No.
- Relevant subsystem types: STC, and \* (default subsystem)
- Default value: No

#### **EMAIL\_SUBJECT\_INCLUDES\_REPORT\_DESCRIPTION**

Specify YES or NO to indicate whether or not report distributions by email will include the report description in the email subject line.

- Required: No.
- Relevant subsystem types: STC, and \* (default subsystem)



- Default value: No

### **EMAIL\_SMTP\_ADDRESS**

This parameter is required for email distribution support. Specify the host name of the email server that Output Manager will use. Consult your network administrator for the correct SMTP server IP address or DNS name for your local email server and specify the SMTP server in this parameter.

- Required: No.
- Relevant subsystem types: STC, and \* (default subsystem)
- Default value: None

### **EMAIL\_SMTP\_PORT**

Configuration option for report email distribution. Consult your network administrator for the correct SMTP port value for your local mail server and specify the SMTP port in this parameter.

**Note:** This port is usually 25 or 587. Authentication may be enabled on either or both of these ports.

- Required: No.
- Relevant subsystem types: STC, and \* (default subsystem)
- Default value: 25

### **EMAIL\_FROM\_ADDRESS *itomadmin@yourcompany.com***

The email address specified in this parameter is used as the FROM address for Output Manager report email distribution. It is recommended to use a valid email address to allow recipients to respond to the distribution. Additionally, some email server authentications require a valid email address. Consult your local email administrator.

**Tip:** To prevent report email distributions from being marked as spam or junk mail by your email server, ask your email administrator to add this address to your email server's global Safe Sender List. If this can not be configured globally, users may need to add this email address to the safe sender list or contact list in their email client if their filter flags messages sent from this sender as spam.

- Required: No.
- Relevant subsystem types: STC, and \* (default subsystem)
- Default value: None

### **EMAIL\_SMTP\_USER**

Specify the SMTP email user ID assigned to the Output Manager email service.

- Required: No.
- Relevant subsystem types: STC, and \* (default subsystem)
- Default value: None

### **EMAIL\_SMTP\_PASSWORD**

Specify the SMTP password of the email user ID assigned to the Output Manager email service.

- Required: Only required if your SMTP server requires a password.
- Relevant subsystem types: STC, and \* (default subsystem)
- Default value: None

### **EMAIL\_ITOMWEB\_URL *http://mysystem:8081/OM***

This parameter is required if you wish to provide links to reports in ITOMweb when distributing via email. Specify the homepage URL of your ITOMweb service.

- Required: No.
- Relevant subsystem types: STC, and \* (default subsystem)
- Default value: None

## Combine Sysouts

There are four configuration options beginning with COMBINE\_SYSOUTS\_EODS\_WAIT. The last letter of this configuration option describes the situation when each option is used. These options are used to ensure that all the sysouts that should go into a CS YES archive goes into a single archive, rather than sometimes going into two or more archives.

**Note:** These parameters should not be changed, except at the direction of IBM support.

### COMBINE\_SYSOUTS\_EODS\_WAIT\_1

This option applies only to the first sysout in CS=YES archive.

Default is 3000 (30 seconds). Units are 0.01 seconds.

### COMBINE\_SYSOUTS\_EODS\_WAIT\_N

This option applies after the first sysout of a CS YES archive, unless the \_E or \_R option applies. For example, third party recalls, syslogs, or jobs that got errors before running.

Default is 25 (250 ms). Units are 0.01 seconds.

**Note:**

- This option affects the throughput of OM capturing. It is not recommended that you change this option.
- If ALLOW\_SELECT\_BY\_NODE is NO, and the job is remote, COMBINE\_SYSOUTS\_EODS\_WAIT\_N is used instead.

### COMBINE\_SYSOUTS\_EODS\_WAIT\_E

This option applies after the first sysout of a CS YES archive, for jobs that have completed execution. Time is measured from the end time of the job. For JES2, this is the time that the \$HASP395 message is issued.

Default is 500 (5 seconds). Units are 0.01 seconds.

If you are using a JES2 Multi Access Spool, depending on certain performance considerations, you may need to use 10 seconds (1000) or 15 seconds (1500) for this parameter. If the job was completed long enough ago that there would be no wait, then COMBINE\_SYSOUTS\_EODS\_WAIT\_N will determine the wait time.

### COMBINE\_SYSOUTS\_EODS\_WAIT\_R

This option applies after the first sysout of a CS YES archive, for jobs that are still running.

Default is 25 (250 ms). Units are 0.01 seconds.

Configure a value that is greater than the maximum time between when a job produces spun output, and when that job terminates. For example, if you have a job that runs for 5 minutes, and produces spun output in the first step, you should use 5 minutes for this parameter.

If you are using a JES2 Multi Access Spool, depending on certain performance considerations, you may need to increase this value by up to 15 seconds. Find the \$HASP165 message in the system log, and note the time, and compare it to the time of the first TIMEOUT line for the jobid.

**Note:** It is not recommended that this option be configured with a very large value. This is because a very long running job could cause a long pause in one of the Output Manager selectors.

## ARA protocol parameters

The Output Manager Archive and Report Access (ARA) protocol is required when the Report Access ID security feature is used. ARA protocol provides the Output Manager ISPF interface with access to archives and reports, uses TCPIP to connect to the started task for processing. ARA also allows authorized Output Manager users to activate or change the configuration of active selector rules and subselector rules via the POLICY ACTIVATE command in ISPF.

**Note:** If REPORT\_ACCESS\_ID is defined, you must specify ARA parameters or failures will occur if the ISPF user does not have RACF READ authority to the underlying archive data set. Additionally, ARA must

be used to perform ISV recalls if the user does not have access to tape devices or cannot specify an arbitrary preconfigured name for the recall job.

#### **ARA\_PORT *tcpip\_port\_for\_ara***

Specify the number of an available TCPIP port. ARA allows ITOM ISPF to access archive data sets in a secure manner, supplies information about the ITOM started task, allows authorized ITOM ISPF users to perform a POLICY ACTIVATE, activates the policy, and recycles the started task. When port 0 is specified, you can access archives without the started task being up.

When this attribute is specified, it applies to the default subsystem and type (subsystem \*, type \*).

- Required: No.
- Relevant subsystem types: \* (default subsystem)
- Default value: 0

#### **How to choose a port for the ITOMweb and ARA protocols:**

ITOM uses two types of TCP protocols: the web server for ITOMweb, and the ARA (Archive and Report Access) protocol for the Output Manager ISPF interface. The most common ports used for web servers are port 80, 8080, and 8081. Ask your site's Internet or network administration which port to use. If your site does not have an Internet or network administrator, choose a port that is not already in use. You can use the NETSTAT command to determine the ports that are already in use. The NETSTAT command finds the ports used by all listeners, and is available in both TSO and USS:

- The TSO command: NETSTAT SOCKETS (IPADDR 0.0.0.0)
- The USS command: netstat -s -I 0.0.0.0

#### **Tips:**

- If you receive the message EZZ2376I, identify the name of the TCPIP address space that you wish to use (for example, using SDSF) and then use NETSTAT ALLC TCP *tcpaddrspacename* (for TSO), or netstat -a -p *tcpaddrspacename* (for USS).
- If you receive the message "bind errno=1115 EDC8115I Address already in use", find the port that it used in one of the previous lines in the log, then use the TSO command NETSTAT SOCKETS (IPPORT 0.0.0.0+*port*) or the USS command netstat -s -B 0.0.0.0+*port*, where *port* is the port number that it used.
- If you receive other messages, talk to your security administrator.

#### **When to choose a non-zero ARA port:**

You should specify a non-zero ARA port if any of the following situations are true:

- You are using REPORT\_ACCESS\_ID
- You want to perform LOAD CONFIG and POLICY ACTIVATE/DEACTIVATE commands from ISPF
- You use USE\_SERVER\_FOR\_HSM\_RECALL set to YES
- You use USE\_SERVER\_FOR\_ISV\_RECALL set to YES

In all other use cases, it is recommended to use ARA\_PORT=0.

#### **ARA\_HOST *host name***

The TCPIP host name of the LPAR on which Output Manager is running. The host name of the system running the started task.

The *host name* is where the ARA server is running. This must be the same host on which the started task is running. The default value is *localhost*.



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## Chapter 4. Security

Privileges to view, list, and access Output Manager objects are determined by the level of access that a user has to an object's associated security profile, as specified in RACF, as well as any optionally specified Output Manager security configuration parameters.

You create a RACF profile for each Output Manager object type (administrative objects including archive attributes and selector rules, as well as end-users objects such as reports and archives), and then grant each user, or group of users, the appropriate level of access for each Output Manager object profile.

Your security configuration affects both the Output Manager ISPF and the ITOMweb interfaces.

The recommended security configuration is outlined in [“Overview of the recommended security configuration”](#) on page 82. Alternatively, you can have a RACF-only setup, without Output Manager security configuration if you prefer to rely solely on RACF as your means of security.

### Note:

- All security definitions and rules are given assuming you are using RACF Security. If using an alternative External Security Manager (ESM) you will need to convert the security rules to those relevant for your security manager. Also Output Manager makes extensive use of RACROUTE REQUEST=AUTH STATUS=ACCESS calls to self-configure according to the security rules. Some ESMs do not allow this call to be made from code that is running unauthorized and this results in unexpected S047 abends. If you are using such an ESM, consult your security vendors documentation on how to enable this.
- ITOMWeb connects to Db2 using RRSF instead of CAF. If MVS Resource Recovery Services (RRS) is not active, ITOMWeb will force the connection to be via CAF, and a warning message will be output. The started task and all utilities currently continue to connect via CAF.

### Sample security jobs in SBJTSAMP

There are two sample jobs in SBJTSAMP that you can use to define RACF classes and profiles. BJT#RDEF has RDEFINE statements to define each Output Manager profile. BJT#RPER has PERMIT statements for each profile defined in BJT#RDEF.

**Tip:** BJT#RPER can be reused to add additional user IDs and groups, as necessary. For example, for creating the necessary PERMIT statements for job scheduling products that submit Output Manager batch utilities.

The <DB\_QUALIFIER> path name used in the security examples is the value specified for the BJTQUAL variable during customization, and is equal to the owner of the BJT tables.

## Security options for reports

Table 12. Security options for reports	
Security option	Description
General viewing of reports	<p>RACF resource profile BJT.&lt;DB_QUALIFIER&gt;.VIEW.RPRT</p> <p>Create a security profile for viewing reports. The actions that a user can perform are determined by the following levels of access:</p> <ul style="list-style-type: none"> <li>• <b>NONE:</b> Report viewing is disabled for the user. The View Reports ISPF panel and the ITOMweb Reports link are deactivated when the user opens Output Manager.</li> <li>• <b>READ:</b> The user can view reports. The reports that they can and cannot see are determined by whether or not the Access ID (defined in their recipient record) matches at least one of the Access IDs for the recipients in the distribution list, if they are on the report distribution list, and if the level of access granted to them for the RACF profiles of individual report names (BJT.&lt;DB_QUALIFIER&gt;.RPRT.<i>report_name</i>).</li> <li>• <b>CONTROL:</b> The user can view a list of all reports, and can search by user ID in the search panels. Searching by a different user ID allows the user with CONTROL access to check to see which reports that user ID is allowed to access. CONTROL does not allow the user to see the contents of the report. Although they can view search results list, they are restricted from viewing the content of the reports unless their personal user ID has access privileges to the reports (for example, if they also have READ access for the RACF profiles of individual report names).</li> <li>• The reports that they can and cannot see are determined by whether or not the Access ID (defined in their recipient record) matches at least one of the Access IDs for the recipients in the distribution list, if they are on the report distribution list, and if t</li> <li>• <b>ALTER:</b> The user can view a list of all reports, can search by User ID in search panels, and can browse the contents of all reports for which they have READ access to the RACF profiles of individual reports (BJT.&lt;DB_QUALIFIER&gt;.RPRT.<i>report_name</i>. Although these users do not need to be on the distribution list, they do need to have access to BJT.&lt;DB_QUALIFIER&gt;.RPRT.<i>report_name</i>).</li> </ul> <p>Note: For more information on searching by User ID, see <a href="#">“Viewing list panels as a different user ID”</a> on page 88</p> <p><b>Tip:</b> You can grant online report-view access to a RACF group rather than to each user ID individually. For more information, see <a href="#">“Using a RACF group as a recipient for a distribution list”</a> on page 88.</p>

Table 12. Security options for reports (continued)

Security option	Description
Viewing of specific reports	<p>RACF resource profiles BJT.&lt;DB_QUALIFIER&gt;.RPRT.report_name</p> <p>Create a RACF security profile for each report name (or, using wildcards, a group of similarly named report names). The actions that a user can perform on a report are determined by the following levels of access:</p> <ul style="list-style-type: none"> <li>• <b>NONE:</b> The user cannot view reports associated with this RACF security profile.</li> <li>• <b>READ:</b> The user can view reports associated with this RACF security profile.</li> <li>• <b>CONTROL:</b> The user can view reports associated with this RACF security profile.</li> <li>• <b>ALTER:</b> The user can view reports associated with this RACF security profile.</li> </ul>
Printing reports	<p>RACF resource profile BJT.&lt;DB_QUALIFIER&gt;.VIEW.RPRT.PRINT</p> <p>The print actions that a user can perform on a report are determined by the following levels of access:</p> <ul style="list-style-type: none"> <li>• <b>NONE:</b> The user cannot print reports.</li> <li>• <b>READ:</b> The user can print reports.</li> </ul> <p>Set UACC(NONE) if your site policy prohibits printing reports or limits printing to specific users or groups. Set UACC(READ) if you allow most users to print reports.</p>
Downloading reports	<p>RACF resource profile BJT.&lt;DB_QUALIFIER&gt;.VIEW.RPRT.DOWNLOAD</p> <p>The download actions that a user can perform on a report are determined by the following levels of access:</p> <ul style="list-style-type: none"> <li>• <b>NONE:</b> The user cannot download reports.</li> <li>• <b>READ:</b> The user can download reports.</li> </ul> <p>Set UACC(NONE) if your site policy prohibits downloading reports or limits downloading to specific users or groups. Set UACC(READ) if you allow most users to download reports.</p>

Table 12. Security options for reports (continued)

Security option	Description
Reprinting reports	<p>The reprint security profiles define which report administrators are allowed to reprint reports, as well as their level of update privileges for the distribution list. The reprint actions that a user can perform on a report are determined by the levels of access on the following profiles:</p> <ul style="list-style-type: none"> <li>• BJT.&lt;DB_QUALIFIER&gt;.VIEW.RPRT.REPRINT               <ul style="list-style-type: none"> <li>– <b>NONE</b>: The user cannot reprint reports.</li> <li>– <b>READ</b> (or higher): The user can reprint reports.</li> </ul> </li> <li>• BJT.&lt;DB_QUALIFIER&gt;.VIEW.RPRT.REPRINT.DIST               <ul style="list-style-type: none"> <li>– <b>ALTER</b> (or higher): The user can select a different distribution list to perform the reprint.</li> <li>– <b>CONTROL</b>: The user can add recipients to the distribution list selected to perform the reprint.</li> </ul> </li> <li>• BJT.&lt;DB_QUALIFIER&gt;.VIEW.RPRT.REPRINT.REC               <ul style="list-style-type: none"> <li>– <b>READ</b> (or higher): The user can make changes to the recipients in the distribution list.</li> </ul> </li> </ul> <p>It is recommended to set UACC(NONE) for the reprint profiles, and then grant higher permissions to report administrators as appropriate for your site's security policy.</p>
REPORT_ACCESS_ID <i>user_ID</i>	<p>Output Manager internal security configuration parameter, specified in the Recipient ID panels (ISPF A.J).</p> <p>Switches a user's personal user ID to an external security user ID (RACF ID) when they view or print a report. Because it is the temporary user ID that accesses the underlying archive data set(s), individual user IDs do not need access to these data set(s).</p> <p>Output Manager determines a user's access ID by the following hierarchy of access priority:</p> <ol style="list-style-type: none"> <li>1. Finding a recipient definition that matches the current MVS user ID</li> <li>2. Finding a recipient definition that matches the current MVS user ID by a wildcard match</li> <li>3. Finding a recipient entry that specifies a RACF group in which the current MVS user ID is a member</li> <li>4. Defaulting to the user's ACCID and ACCMASK. If not defined, the ACCID and ACCMASK = User ID</li> </ol>
ACCESS MASK	<p>Output Manager internal security configuration parameter, specified in the Policy Administration panels (ISPF A.PA).</p> <p>For users with READ access to BJT.&lt;DB_QUALIFIER&gt;.VIEW.RPRT, the access mask is always used to determine which reports they have access to.</p>



## Security options for archives

Table 13. Security options for archives	
Security option	Description
General viewing of archives	<p>RACF resource profile BJT.&lt;DB_QUALIFIER&gt;.VIEW.ARCH</p> <p>Create a security profile for viewing archives. The actions that a user can perform are determined by the following levels of access:</p> <ul style="list-style-type: none"> <li>• <b>NONE:</b> Archive viewing is disabled for the user. The View Archive ISPF panels and ITOMweb Archives link are deactivated when the user opens Output Manager.</li> <li>• <b>READ:</b> The user can list and view archives. The archives they can and cannot list and view are determined by the archives filtered by the Output Manager ARCFILTER and VARCHIVE configuration settings specified in the next step.</li> <li>• <b>CONTROL:</b> The user can see a list of all archives except those hidden by VARCHIVE. Whether or not they are allowed to view the actual archive is determined by the Output Manager ARCFILTER settings. A user can view the archive if the archive name matches an entry in their archive access list.</li> </ul> <p>CONTROL access does not override the VARCHIVE configuration setting; if VARCHIVE is set to hide archives that contain reports, the archives will remain hidden. However, CONTROL access does override the ARCFILTER setting to control which archive names are displayed in the list.</p> <ul style="list-style-type: none"> <li>• <b>ALTER:</b> The user can list, view, and browse all archives, even those that would normally be filtered by ARCFILTER. ALTER does not override the VARCHIVE configuration specified in the next step.</li> </ul> <p><b>Note:</b> By default, the Data Set Name column is hidden in the Output Manager ISPF interface Archive list panel. A user is allowed to un-hide the Data Set Name column (using the Hide/Unhide option of Options menu) if they have CONTROL or ALTER access to BJT.&lt;DB_QUALIFIER&gt;.VIEW.ARCH</p>
Printing archives	<p>RACF resource profile BJT.&lt;DB_QUALIFIER&gt;.VIEW.ARCH.PRINT</p> <p>The print actions that a user can perform on an archive are determined by the following levels of access:</p> <ul style="list-style-type: none"> <li>• <b>NONE:</b> The user cannot print archives.</li> <li>• <b>READ:</b> The user can print archives.</li> </ul> <p>Set UACC(NONE) if your site policy prohibits printing archives or limits printing to specific users or groups. Set UACC(READ) if you allow most users to print archives.</p>

Table 13. Security options for archives (continued)

Security option	Description
Downloading archives	<p>RACF resource profile BJT.&lt;DB_QUALIFIER&gt;.VIEW.ARCH.DOWNLOAD</p> <p>The download actions that a user can perform on an archive are determined by the following levels of access:</p> <ul style="list-style-type: none"> <li>• <b>NONE:</b> The user cannot download archives.</li> <li>• <b>READ:</b> The user can download archives.</li> </ul> <p>Set UACC(NONE) if your site policy prohibits downloading archives or limits downloading to specific users or groups. Set UACC(READ) if you allow most users to download archives.</p>
VARCHIVE: ALL NOREPORT	<p>Output Manager internal security configuration parameter, specified in the Policy Administration panels (ISPF A.PA).</p> <p>Controls which archives are presented to the user when they open the View Archives panel (V.A in ISPF, or clicks the Archives link in ITOMweb). Specify ALL to display all archives, or NOREPORT to only display archives that do not have associated reports. This setting will not override permission privileges determined by RACF profiles.</p>
ARCFILTER: ENABLE DISABLE	<p>Output Manager internal security configuration parameter, specified in the Policy Administration panels (ISPF A.PA).</p> <p>When ENABLE is specified, the list of archives that a user sees is limited by their list of Archive Access IDs (defined in their Output Manager recipient ID). If any of the user's Archive Access IDs match an archive name, either generic, or fully-qualified, that user can view that archive.</p> <p>When DISABLE is specified, the list of archives that a user sees is not filtered by Archive Access IDs. Archive Access IDs do not need to be defined if ARCFILTER is set to DISABLE.</p>

## Started task resource profiles

Table 14. RACF resource profiles for started task security

Security option	Description
Policy Activate/Deactivate	BJT.<DB_QUALIFIER>.CMND

## Notes on security

### Notes:

- If permission to perform an operation is controlled by more than one resource or flag, you must satisfy both criteria.
- Bundle printing with BJTbatch requires access to BJT.<DB\_QUALIFIER>.ADM.BUN. If you submit bundle printing through the started task via a modify command, the ID of the STC needs access to BJT.<DB\_QUALIFIER>.ADM.BUN. When bundle printing is performed by a user submitting BJT@BUNP, then that user needs appropriate access to BJT.<DB\_QUALIFIER>.ADM.BUN.
- The started task must have ALTER access to BJT.<DB\_QUALIFIER>.VIEW.RPRT for automatic printing.

## Overview of the recommended security configuration

### Recommended security setup overview:

1. Set up archive security:
  - a. Create security profiles for viewing archives, BJT.<DB\_QUALIFIER>.VIEW.ARCH.
  - b. Specify Output Manager security configuration settings for archives:
    - i) VARCHIVE
    - ii) ARCFILTER
2. Set up report security:
  - a. Create RACF security profiles for individual report names, BJT.<DB\_QUALIFIER>.RPRT.name.
  - b. Create RACF security profiles for viewing reports, BJT.<DB\_QUALIFIER>.VIEW.RPRT.
  - c. Specify Output Manager security configuration settings for reports:
    - i) Access IDs
    - ii) REPORT\_ACCESS\_ID
3. Set up administrator security.
4. Ensure that your security policies provide the started task with access to create and modify archives.

## Setting up archive security

Create RACF profiles for viewing archives, and then specify optional Output Manager archive security configuration parameters.

1. In RACF, create a security profile for BJT.<DB\_QUALIFIER>.VIEW.ARCH.

Where *DB\_QUALIFIER* is your database qualifier.

**Tip:** There are two sample jobs in SBJTSAMP that you can use to define RACF classes and profiles. BJT#RDEF has RDEFINE statements to define each Output Manager profile. BJT#RPER has PERMIT statements for each profile defined in BJT#RDEF.

This RACF profile determines if and how a user can view archives. The actions they can perform are determined by the following levels of access:

- **NONE:** Archive viewing is disabled for the user. The View Archive ISPF panels and ITOMweb Archives link are deactivated when the user opens Output Manager.
- **READ:** The user can list and view archives. The archives they can and cannot list and view are determined by the archives filtered by the Output Manager ARCFILTER and VARCHIVE configuration settings specified in the next step.
- **CONTROL:** The user can see a list of all archives except those hidden by VARCHIVE. Whether or not they are allowed to view the actual archive is determined by the Output Manager ARCFILTER settings. A user can view the archive if the archive name matches an entry in their archive access list.  
  
CONTROL access does not override the VARCHIVE configuration setting; if VARCHIVE is set to hide archives that contain reports, the archives will remain hidden. However, CONTROL access does override the ARCFILTER setting to control which archive names are displayed in the list.
- **ALTER:** The user can list, view, and browse all archives, even those that would normally be filtered by ARCFILTER. ALTER does not override the VARCHIVE configuration specified in the next step.

**Note:** Users are permitted access to archives only if the user is allowed to view archives by having READ access to VIEW.ARCH and is granted READ access on the underlying data set by RACF (or equivalent external security manager).

**Note:** By default, the Data Set Name column is hidden in the Output Manager ISPF interface Archive list panel. A user is allowed to un-hide the Data Set Name column (using the Hide/Unhide option of Options menu) if they have CONTROL or ALTER access to BJT.<DB\_QUALIFIER>.VIEW.ARCH

2. Specify Output Manager security configuration settings for archives:
  - a) In the Output Manager ISPF interface, navigate to the policy administration panel (ISPF A.PA).

- b) In the **Subsystem type** field, type an asterisk (\*), which applies this change to the default subsystem.
- c) In the **Type** field, type an asterisk (\*), which applies this change to the non-specific (global) type.
- d) In the command line, type E (Edit), and press Enter. The **Policy Administration** panel is displayed.
- e) Add the following configuration parameters in the lines provided on the **Policy Administration** panel:

**VARCHIVE: ALL|NOREPORT**

This parameter globally controls which archives are presented to the user when they open the **View Archives** panel (V.A in ISPF, or clicks the Archives link in ITOMweb). Specify ALL to display all archives, or NOREPORT to only display archives that do not have associated reports. This setting will not override permission privileges determined by RACF profiles.

**ARCFILTER: ENABLE|DISABLE**

When ENABLE is specified, the list of archives that a user sees is limited by their list of Archive Access IDs (defined in their Output Manager recipient ID). If any of the user's Archive Access IDs match an archive name, either generic, or fully-qualified, that user can view that archive.

When DISABLE is specified, the list of archives that a user sees is not filtered by Archive Access IDs. Archive Access IDs do not need to be defined if ARCFILTER is set to DISABLE.

- f) Type SAVE on the command line to save your changes.

## Setting up report security

Create RACF profiles for viewing reports, and for individual report names or groups or report names, and then specify optional Output Manager report security configuration parameters.

1. In RACF, create a security profile for **BJT.<DB\_QUALIFIER>.RPRT.report\_name**.

Where <DB\_QUALIFIER> is your database qualifier, and *report\_name* is the name of a report, or a wildcarded group of reports.

**Tip:** There are two sample jobs in SBJTSAMP that you can use to define RACF classes and profiles. BJT#RDEF has RDEFINE statements to define each Output Manager profile. BJT#RPER has PERMIT statements for each profile defined in BJT#RDEF.

Create a RACF security profile for each report name (or, using wildcards, a group of similarly named report names). The actions that a user can perform on a report are determined by the following levels of access:

- **NONE:** The user cannot view reports associated with this RACF security profile.
- **READ:** The user can view reports associated with this RACF security profile.
- **CONTROL:** The user can view reports associated with this RACF security profile.
- **ALTER:** The user can view reports associated with this RACF security profile.

For example, granting a user READ access to the security profile BJT.BJT6804.RPRT.HR\* would allow that user to read all reports that begin with "HR".

**Note:** If a report name contains any of the characters &, \*, %, or space, those special characters are converted to an underscore. When defining the RACF profiles for these report names, use an underscore in place of these characters.

2. In RACF, create a security profile for **BJT.<DB\_QUALIFIER>.VIEW.RPRT**.

Where <DB\_QUALIFIER> is your database qualifier.

This RACF profile determines if and how a user can view reports. The actions they can perform are determined by the following levels of access:

- **NONE:** Report viewing is disabled for the user. The **View Reports** ISPF panel and the ITOMweb Reports link are deactivated when the user opens Output Manager.
- **READ:** The user can view reports. The reports that they can and cannot see are determined by whether or not the Access ID (defined in their recipient record) matches at least one of

the Access IDs for the recipients in the distribution list, if they are on the report distribution list, and if the level of access granted to them for the RACF profiles of individual report names (BJT.<DB\_QUALIFIER>.RPRT.report\_name).

- **CONTROL:** The user can view a list of all reports, and can search by User ID in the search panels. The reports that they can and cannot view are determined by whether or not the Access ID (defined in their recipient record) matches at least one of the Access IDs for the recipients in the distribution list, if they are on the report distribution list, and if the level of access granted to them for the RACF profiles of individual report names (BJT.<DB\_QUALIFIER>.RPRT.report\_name).
  - **ALTER:** The user can view a list of all reports, can search by User ID in search panels, and can browse the contents of all reports for which they have READ access to the RACF profiles of individual reports (BJT.<DB\_QUALIFIER>.RPRT.report\_name). Although these users do not need to be on the distribution list, they do need to have access to BJT.<DB\_QUALIFIER>.RPRT.report\_name).
3. Specify Output Manager security configuration settings for reports:
- a) In the Output Manager ISPF interface, navigate to the policy administration panel (ISPF A.PA).
  - b) In the **Subsystem name** field, type an asterisk (\*) to apply this change to the default subsystem.
  - c) In the **Type** field, type an asterisk (\*) to apply this change to the non-specific (global) type.
  - d) In the command line, type E (Edit), and press Enter. The **Policy Administration** panel is displayed.
  - e) Add the following configuration parameter in the lines provided on the **Policy Administration** panel:

**REPORT\_ACCESS\_ID user\_ID**

Specify this optional parameter to specify an external security user ID (such as a RACF ID) to be temporarily used when a user elects to view or print a report. This user ID, rather than the RACF user ID of the user, will be used to access the underlying archive data set(s) when a user requests a report associated with an archive. The user ID will then switch back to the original user ID after the data has been accessed. Because it is the temporary user ID that accesses the underlying archive data set(s), individual user IDs do not need access to these data set(s). This allows users to access reports based on archives inside of Output Manager, while preventing users from accessing the underlying archives the reports are based on outside of Output Manager (your security product will prevent them from browsing the archives).

The user ID specified for the REPORT\_ACCESS\_ID attribute must have access authority to the underlying archive data set(s).

The recommended value for this parameter is the user ID that runs under the Output Manager started task or ITOMweb. It is also recommended that this user ID is granted full access to the Output Manager archive data sets.

In order to use REPORT\_ACCESS\_ID in the Output Manager ISPF interface, you must also specify a value for the ARA\_PORT attribute. Restart the started task and the TSO/ISPF logon after specifying these attributes for the first time.

- f) Type SAVE on the command line to save your changes.
- g) Optional: If desired, configure Access IDs for users.

Access IDs, are an optional security configuration, used in addition to USER ID, used to determine security access. If used, a user's current Access ID supersedes their TSO user ID when attempting to access reports. The Access ID is used to determine which reports a user has access to.

  - i) Navigate to the **Recipient Details** panel (ISPF A.J), and select a recipient ID to edit.
  - ii) Determine whether or not a user has the ability to change their ID by specifying a value in the **Access Mask** field. To allow a user to change their Access ID, specify an Access Mask with a wildcard. To prevent a user from changing their Access ID, specify a fully-qualified access mask. For example, the access mask value ACCMASK = XYZ\* would allow the user to change their Access ID to any value beginning with XYZ. If the Access Mask were full-qualified, such as ACCMASK = XYZ1 , the user's Access ID is XYZ1 and cannot be changed.
  - iii) In the **Access ID** field, type an Access ID for the user. This user ID will be used instead of their TSO user ID to access reports.

## Setting up administrator security

Create RACF profiles for each Output Manager administrative object type.

1. In RACF, create a security profile for each of the following Output Manager administrative objects:

<i>Table 15. Security resource profiles for Output Manager administrative objects</i>	
<b>Output Manager administrative object</b>	<b>Security resource profile</b>
Archive attributes	BJT.<DB_QUALIFIER>.ADM.ATT
Selector rules	BJT.<DB_QUALIFIER>.ADM.SEL
TPL rules	BJT.<DB_QUALIFIER>.ADM.TPL
Report layouts	BJT.<DB_QUALIFIER>.ADM.LAY
Report selection rules	BJT.<DB_QUALIFIER>.ADM.RSEL
Report definitions	BJT.<DB_QUALIFIER>.ADM.REP
Recipient IDs	BJT.<DB_QUALIFIER>.ADM.REC
Distribution lists	BJT.<DB_QUALIFIER>.ADM.DIST
Printer attributes	BJT.<DB_QUALIFIER>.ADM.PRT
Banner pages	BJT.<DB_QUALIFIER>.ADM.BANN
PRSET members	BJT.<DB_QUALIFIER>.ADM.PRST
Bundle administration	BJT.<DB_QUALIFIER>.ADM.BUN
Policy administration	BJT.<DB_QUALIFIER>.ADM.PA
User variables	BJT.<DB_QUALIFIER>.ADM.UV
User messages	BJT.<DB_QUALIFIER>.ADM.UM
Universal Batch Utility (UBU)	BJT.<DB_QUALIFIER>.ADM.UBU
CATSYNC	BJT.<DB_QUALIFIER>.ADM.CSNC
Formatted views and filters	BJT.<DB_QUALIFIER>.ADM.FVF
CMND	BJT.<DB_QUALIFIER>.CMND
STC tracing	BJT.<DB_QUALIFIER>.STC.TRACE
Administrative reports	BJT.<DB_QUALIFIER>.ARPT

Where *DB\_QUALIFIER* is your database qualifier.

**Tip:** There are two sample jobs in SBJTSAMP that you can use to define RACF classes and profiles. BJT#RDEF has RDEFINE statements to define each Output Manager profile. BJT#RPER has PERMIT statements for each profile defined in BJT#RDEF.

2. Grant privileges for these Output Manager objects to your administrative users.

These RACF profiles determine if and how a user can view that administrative object. The actions they can perform are determined by the following levels of access:

- **NONE:** The corresponding menu or option is unavailable. If the user attempts to access the object, an error message is displayed. When applied to formatted views and filter resources, users with NONE level of access do not have ability to create, edit or delete formatted views and filters.
- **READ:** The user can select and view the corresponding menu or option to access the resource. However, they cannot create, delete, or modify that object type. When applied to formatted views

and filter resources, users with READ access do not have ability to create, edit or delete formatted views and filters.

- **UPDATE:** The user can select the corresponding menu or option to access the resource, as well as view and update the resource and extract and modify that object type in UBU. However, they cannot create or delete objects of the specified type. When applied to formatted views and filter resources, users with UPDATE access can create, edit, and delete his or her own formatted views and filters.
- **CONTROL:** The user can select the corresponding menu or option to access the resource, as well as view and update the resource, extract and modify that object type in UBU. However, they cannot create or delete them objects of that type. Additionally, if applied to the bundle resource, the user will be able to activate, deactivate, or reactivate bundles. When applied to formatted views and filter resources, users with CONTROL access can edit filters and formatted views created by anyone.
- **ALTER:** The user will be able to select the corresponding menu or UBU option to access resources, as well as view, update, create and delete that object type. When applied to formatted views and filter resources, users with ALTER access can edit and delete formatted views and filters created by anyone.

## Provide the started task and web server with security access

1. Ensure that your security policies provide the started task with access to create and modify archives.
2. Ensure that the started task has ALTER privileges on the BJT.<DB\_QUALIFIER>.VIEW.RPRT resource.
3. Ensure that the ITOMweb web server has ALTER privileges on all of the defined Output Manager RACF security profiles.

## RACF-only security setup

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As an alternative to the recommended configuration documented in the previous section, you can have a RACF-only setup, without Output Manager security configuration if you prefer to rely solely on RACF as your means of security.

1. In RACF, create a security profile for **BJT.DB\_QUALIFIER.RPRT.report\_name**.

Where *DB\_QUALIFIER* is your database qualifier, and *report\_name* is the name of a report, or a wildcarded group of reports.

Create a RACF security profile for each report name (or, using wildcards, a group of similarly named report names). The actions that a user can perform on a report are determined by the following levels of access:

- **NONE:** The user cannot view reports associated with this RACF security profile.
- **READ:** The user can view reports associated with this RACF security profile.
- **CONTROL:** The user can view reports associated with this RACF security profile.
- **ALTER:** The user can view reports associated with this RACF security profile.

For example, granting a user READ access to the security profile BJT.BJT6804.RPRT.HR\* would allow that user to read all reports that begin with “HR”.

**Note:** If a report name contains any of the characters &, \*, %, or space, those special characters are converted to an underscore. When defining the RACF profiles for these report names, use an underscore in place of these characters.

2. In RACF, create a security profile for **BJT.DB\_QUALIFIER.VIEW.RPRT**, and grant all users ALTER access to this profile.

Where *DB\_QUALIFIER* is your database qualifier.

Access to reports is solely determined by which reports the user has READ access to for the BJT.DB\_QUALIFIER.RPRT.reportname profiles.

3. In RACF, create a security profile for BJT.<DB\_QUALIFIER>.VIEW.ARCH.

Where *DB\_QUALIFIER* is your database qualifier.

In this security model, grant all users ALTER access to this profile. Access to reports is solely determined by RACF data set security.

4. In the Output Manager ISPF interface, navigate to the policy administration panel (ISPF A.PA).
  - a) In the Subsystem type field, type an asterisk (\*) to indicate the default subsystem.
  - b) In the Type field, type an asterisk (\*) to apply this change to the non-specific (global) type.
  - c) In the command line, type E (Edit), and press Enter. The Policy Administration panel is displayed.
  - d) Add the following configuration parameter in the lines provided on the Policy Administration panel:

**VARCHIVE: ALL**

This parameter globally controls which archives are presented to the user when they open the View Archives panel (V.A in ISPF, or clicks the Archives link in ITOMweb). This security configuration requires you to specify ALL to display all archives.
  - e) Type SAVE on the command line to save your changes.
  - f) Press F3 to return to the Policy Administration panel.
  - g) Type I (Initialize policies) on the command line of the Policy Administration panel, and press Enter to initialize your changes.
  - h) Set up RACF data set profiles for the archives to prevent unauthorized access. You will need to set up appropriate Archive Masks in your Archive Attributes and apply generic RACF data set profiles to these masks to control who can read the data sets. Note that the started task must always have ALTER access to Archives.

## Viewing list panels as a different user ID

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Administrators with the appropriate security privileges can use the View As User field of the report and archive search panels to check to see which reports and archives that user ID is allowed to access.

When you specify another user ID in the **View as User** field, you can see the list of report or archive names that the user ID has access to. Although you can view search results list, you are restricted from viewing the content of the reports unless your personal user ID has access privileges to the reports.

To specify a different user ID in a search panel:

1. Navigate to the Search for Reports (V.R) or Search for Archives (V.A) panel.
2. In the **View as User** field, specify the user ID that you want to view the list as.
3. Press Enter. The list displayed contains the reports or archives that the user ID would be able to access.

## Using a RACF group as a recipient for a distribution list

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You can specify a RACF group as a recipient in a Output Manager distribution list to allow an entire RACF group to view reports online.

Specifying RACF groups as recipients allows sites with high turnover or large groups to grant report-view-access to an entire group rather than individually for each user ID. When a new employee is added to (or removed from) a RACF group that has access to a report, the report-viewing privileges for that employee are automatically updated.

RACF groups as recipients in distribution lists are for online viewing only. RACF groups must have an MVS group ID, and everyone in the RACF group must have the same permissions.

### To add a RACF group to a distribution list

1. Create a recipient ID for the RACF group. In the **User** field of the Recipient Details panel, type up to eight (8) characters for the MVS user ID, RACF Group ID, or wildcarded MVS User ID for the recipient(s).
2. Create your distribution list. When the Recipient Selection panel pops up, select the recipient ID that you created for the RACF group.



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## Chapter 5. Third-party archive conversion

The ISV recall component of Output Manager converts unencrypted third-party archive reports for use in Output Manager.

**Note:**

**All conversions and migrations of third-party report archives (history entries) require services. Contact your IBM sales contact for details. The contents of this chapter is valid only when working with services consultants.**

All output management independent software vendors (ISV) formats their archived reports differently. Therefore, there is not one approach that will recall report archive entries the same way. Each ISV requires a unique migration tool to handle the recalling of report archives entries into Output Manager. With the help of services consultants, you can use the ISV recall component of Output Manager to convert compressed or unencrypted third-party report archives for use in Output Manager. This one-time conversion process consists of multiple steps that leverage some third-party unload utilities as well as ISV recall. For a list of the third-party products supported by Output Manager ISV recall, see [“Supported third-party ISV products”](#) on page 6.

**Note:** If you're migrating from RMDS, see [“Converting RMDS archive reports for use in Output Manager”](#) on page 91.

Review the following topics for a description of conversion steps and processing:

- [“Summary of conversion steps”](#) on page 89
- [“Converting the master index”](#) on page 90
- [“Editing the control card file”](#) on page 92
- [“How Output Manager converts archived reports”](#) on page 93
- [“Repeating a third-party archive conversion”](#) on page 95

Before you attempt a third-party archive conversion, ensure that you have properly installed and customized ISV recall procedures. For instructions, see [Chapter 3, “Customizing Output Manager,”](#) on page 19.

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

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### Summary of conversion steps

The conversion of archive reports from third-party format to Output Manager format entails two main steps:

1. **Master index conversion.** In this step, you must perform several substeps to convert and process the third-party master index information for the reports to be converted: 1) unload the third-party master index to a sequential file, 2) analyze the master index information, and 3) register the archive files that you want to convert in the Output Manager ISV recall tables.
2. **Archived report conversion.** In this step, Output Manager ISV recall processing is used as a “point-in-time” recall when requested by end users. ISV recalls can also be performed proactively via batch (refer to SBJTSAMP member BJTRECAL). You can use administrative reports in ITOMweb to help you determine how many reports remain to be recalled from the ISV product data store. For more information on administrative reports, see the *IBM Tivoli Output Manager User's Guide*.

**Note:** ISV recall is intended to be a one-time conversion process rather than a routine method of recalling third-party archive reports.

If your third-party archive reports are stored in multiple databases, you must complete these conversion steps once for each database.

## Master index conversion

In this step, the third-party master index is unloaded to a sequential file and analyzed.

In this step, you must perform several substeps to convert and process the third-party master index information for the reports to be converted: 1) unload the third-party master index to a sequential file, 2) analyze the master index information, and 3) register the archive files that you want to convert in the Output Manager ISV recall tables.

Based on the archive information in the master index, ISV recall registers the third-party archive reports to be converted in the Output Manager archive table (BJTARC).

For step-by-step instructions on master index conversion—from master index analysis to archived reports registration—see [“Converting the master index”](#) on page 90.

### Master index unload

You must unload the third-party master index to a sequential file that ISV recall can analyze.

The master index contains metadata about the third-party archives. To unload the index, you use the unload utility that is provided with your third-party archive software (for example, the CA-View SARDBASE utility). If your third-party archives reports are stored in multiple databases, you will need to create and maintain a separate master-index unload file for each database.

**Note:** To use a third-party unload utility, you must be licensed for the third-party software. After an unload file is created, that license is no longer required to proceed with the conversion process.

## Archived report conversion

When you select a third-party archive report that has a **Migrated** status of **ISV** on the Archived Reports panel of the Output Manager interface, Output Manager calls the procedure BJT@PRV to recall and print the report.

Output Manager updates the ISV recall tables to indicate that the report is no longer only in a foreign archive store. When the recall and capture process is complete, Output Manager notifies you that the report is available for viewing. The **Migrated** status for the report changes to **No**. For more information, see [“How Output Manager converts archived reports”](#) on page 93.

## Converting the master index

---

The following procedure converts an unloaded third-party master index to an Output Manager data set. This procedure converts only the master index information, not the data in the third-party archive reports.

The procedure uses the following SBJTSAMP members: BJTJCV1 , BJTJCV2 and BJTJCV3. These members contain the JCL that is needed to generate control cards from a third-party master index and to convert the index to an Output Manager data set.

- BJTJCV1 unloads the data from one IDXOUT file.
- BJTJCV2 unloads the data from the database and merges it with the data from each run of BJTJCV1.
- BJTJCV3 loads the unloaded data. This replaces all the existing data in seven Output Manager tables with the new, merged data produced by the last step of BJTJCV2.

You must have previously unloaded the third-party master index to a sequential file by using the appropriate third-party unload utilities.

**Important:** If you previously converted third-party archive reports and tapes (for example, for testing purposes) and want to convert them again, you must delete all entries for the previously converted reports and tapes in the Output Manager BJTAVI, BJTAVR, BJTAVT, BJTDAT, and BJTARC tables (for CA-View) and BJTARC and BJTAVR tables prior to performing this procedure. For more information, see [“Repeating a third-party archive conversion”](#) on page 95. If you do not delete this information first, Output Manager might not be able to find the archived reports or might display the reports from the previous conversion, which are out-of-date.

## Converting RMDS archive reports for use in Output Manager

---

The ISV recall component of Output Manager enables you to convert RMDS archive reports for use in Output Manager.

**Note:** All conversions and migrations of third-party report archives (history entries) require services. Contact your IBM sales contact for details.

Before you attempt a third-party archive conversion, ensure that you have properly installed and customized ISV recall procedures. For instructions, see [Chapter 3, “Customizing Output Manager,” on page 19.](#)

The conversion of archive reports from RMDS format to Output Manager format entails two main steps:

1. **Report index conversion.** In this step, you must perform several substeps to convert and process the RMDS index information for the reports to be converted: 1) unload the RMDS tables to sequential files, 2) analyze the RMDS information, and 3) create Output Manager definitions from the RMDS information and 4) register the archive files that you want to convert in the Output Manager ISV recall tables.
2. **Archived report conversion.** In this step, Output Manager ISV recall converts a third-party archive report to Output Manager format when a user selects the report from the Output Manager ISPF interface. This point-of-recall conversion process entails low resource usage. Because the conversion is asynchronous and involves multiple steps, it is likely to be slower than recalling a third-party archive directly from the third-party software that created it.

**Note:** ISV recall is intended to be a one-time conversion process rather than a routine method of recalling third-party archive reports.

If your third-party archive reports are stored in multiple databases, you must complete these conversion steps once for each database.

### Converting the RMDS report index

The variables in the conversion changes jobs are automatically customized if the job BJT@JCED was used during installation. If you did not use BJT@JCED, you must manually change the following variables:

- Change #jobcard\_account\_info to an account number and any other accounting information that your installation requires.
- Change #jobcard\_jobclass to assign the job to a class
- Change #jobcard\_msgclass to assign the job log to an output class
- Change #jobcard\_progname to identify the person or group responsible for the job.
- Change ?BJTHLQ? to the HLQ where the Output Manager executables were installed
- Change ?BJTFILE? to the HLQ of the tables that are created for use in the conversion process.
- Change ?HLQV? to the HLQ of the unloaded Db2 tables
- Change ?UBUHLQ? to the HLQ of the UBU files (Universal Batch Utility is a process used to load data into the Output Manager database. For more information, see [Chapter 6, “Extracting and Modifying Data with IBM Tivoli Output Manager using the Universal Batch Utility,” on page 97.](#)
- Change ?UBUUSER? to the Db2 USER for the Db2 database
- Change ?SDSNLOAD? to the name of the Db2 load library
- Change ?RUNLIB? to the name of the Db2 RUN library
- Change ?TEPPLAN? to the name of the DSNTEP2 program
- Change ?DB2SSID? with the Db2 sub-system name
- Change ?BJTBASE? to the name of the Output Manager database
- Change ?BJTPLAN? with the name to be used for the UBU and Index Load plans
- Change ?BJTCOL? to the name of a package used during bind
- Change ?BJTQUAL? to the name of the database qualifier

### Running the conversion jobs to load the report index

You must convert the RMDS report definition meta data to Output Manager before the report index can be loaded. All jobs should end with RC = 0, unless otherwise specified.

1. Unload the RMDS tables that contain the definitions and the list of current reports.

**Note:** Refer to your RMDS Data Collection Guide for sample JCL used to unload the RMDS tables.

2. Submit **BJT3JLU** to extract a list of valid RACF USERIDS with USERID name.
3. Submit **BJT3JCIT** to create a table of valid USERIDS that are verified using RACF data.
4. Submit **BJT3JCWT** to creates six tables used for the conversion of the RMDS definitions.
5. Submit **BJT3JGRO** to adjust the row number for field definitions. RMDS does not check carriage control, but Output Manager uses carriage control for row number.

**Note:** If you did not use BJT@JCED for customization, change ?ROWNM? to the name of table created to hold the row number adjustment information.

6. Submit **BJT3JRUU** to create the user and “ALL USER” distribution list UBU files.
7. Submit **BJT3JRRU** to create all of the rest of the UBU files needed for report definitions and selection.

**Note:** If you did not use BJT@JCED for customization, make the following changes before submitting:

- Change ?P1? to the SYSOUT class to be used for selector definition.
  - Change ?P2? SYSOUT class to be used to re-queue the SYSOUT if a selector has a disposition of KEEP.
  - Change ?P3? to the SYSOUT class to be used if there is an error during processing.
  - Change ?P4? HLQ to be used for all archive attribute names.
8. Make sure that plans ?BJTPLAN?N and ?BJTPLAN?B exist in the database. ?BJTPLAN?N is created by member BJT@JCBI and ?BJTPLAN?B is created by member BJT@JCBU.
  9. Submit **BJT3JRLU** to load the UBU data into the Output Manager database. The BJT3JRLU step UBUCUST may have return code 4.

**Note:** If you did not use BJT@JCED for customization, change ?UBUUSER? to the name of the Db2 user.

10. Submit **BJT3JILR** to load the report index into the Output Manager database.

**Note:** If you did not use BJT@JCED for customization, make the following changes before submitting:

- Change ?FILEREPORTS? to the name of the unloaded RMDS report file.
- Change ?P1? to the same SYSOUT class as was used for ?P1? in BJT3JRUU.

## RMDS GDG

If RMDS GDG is in use, two data sets created after the conversion: ?BJTFILE?.GDG.DEFINE and ?BJTFILE?.JCL.DEFINE. GDG.DEFINE contains the IDCAMS define statements to define the GDG data sets, and JCL.DEFINE is the JCL to initialize the GDG data sets.

## Editing the control card file

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You can perform limited editing of the control card file to control the third-party archive conversion process.

The control cards are input to the BJTBIXC2 and BJTBIXC4 programs. These programs register information about the third-party archive tapes and reports that you want to convert in the appropriate Output Manager tables.

When editing the control card file, consider the following points:

- You can remove or comment out control cards to restrict the third-party archive tapes and reports to register in the Output Manager tables and to convert. For example, you might want to remove control cards for expired reports. To comment out a control card, place an asterisk (\*) or C in column one.

- Do not remove a tape control card if a report control card refers to it. The TAPSEQ column that appears in both tape and report control cards links these two types of control cards together.
- Do not change or reformat the content of any control card.
- Control cards are column-sensitive.
- Each control card includes a sequence number that can be used to return the card to its original order before the BJTBOX2 or BJTBOX4 program processes it. The control card sequence numbers in the file must be in ascending order to be successfully processed by BJTBOX2 or BJTBOX4.
- By default, the fields in the control cards are delimited by blanks for ease of viewing. However, you can specify another delimiter character by using the EXEC PARM. If you do so, the fields in the control cards will be delimited by that character. A delimited heading record will be written for each set of control cards. The control card file can then be used as input to a program such as a spreadsheet for further analysis.

## How Output Manager converts archived reports

---

Output Manager converts each third-party archive report individually at the point in time when a user selects it for viewing from the Output Manager interface.

This "just-in-time" conversion process avoids the high resource usage that would occur if Output Manager attempted to convert all third-party archive reports at a single time. Output Manager converts the report by printing it and capturing its SYSOUT.

**Note:** Alternatively, SBJSAMP member BJTRECAL can be used for batch recalls.

To convert third-party archive reports, Output Manager uses the third-party archive information that is recorded in several Output Manager tables during the report registration step of the master index conversion. Output Manager uses the BJTARC table as a catalog of the third-party archive reports to be converted and uses the BJTAVR and BJTAVT tables to access these reports.

The BJTARC table contains two columns of importance to the third-party archive conversion process:

### MIGRATED

This column reflects the status of the report conversion. It is updated by the catalog synchronization process and the master index migration process. Valid values for this column are:

- **No:** Indicates that the archived report has not been migrated by DFSMSHsm to another storage level. It is currently available for viewing.
- **Yes:** Indicates that the archived report has been migrated to DFSMSHsm-managed storage (or equivalent), off of DASD.
- **ISV:** Indicates that the archived report is a third-party archive report that is still in the foreign archive store. The report has been registered in the Output Manager BJTARC, BJTAVR, and BJTAVT tables but has not yet been converted for use in Output Manager.
- **Expired:** Indicates that the archived report is not on DASD and has not been migrated off of DASD. It is unavailable for viewing.

### MIGSTATE

This column reflects the state of an archive report as it is being recalled. Valid values for this column are:

- **Not Migrated:** Indicates the normal state of non-migrated archived reports.
- **Submit:** Indicates that Output Manager has started the recall procedure for the archived report.
- **Fail:** Indicates that the recall procedure for the archived report has failed or abended.
- **Print:** Indicates that the recall procedure has printed the archived report as SYSOUT.
- **ErrorCap:** Indicates that the capture process for the converted archived report has failed.
- **Capture:** Indicates that the capture process has completed for the converted archived report. When the MIGSTATE value changes to **Capture**, the MIGRATED value changes to **No** (no longer migrated).

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

**Note:** If you attempt to view an archived report that is in the process of being recalled, Output Manager displays a pop-up window that shows the MIGSTATE value 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-up windows to set the MIGSTATE back to **No** so that the process can be restarted, if necessary.

## Archive data set creation process

Once the third party archive recall process has delivered the third party archive to the spool, there are three steps involved in creating the archive data set and updating the Output Manager database entries.

### 1. Initial capture by a selector and subselector rule:

Third party archive recall needs a selector or subselector rule to capture the SYSOUT from the recall job. You can use any existing selector, or, if there is a spare sysout class, you can use a new selector. If you choose to use an existing selector, you must add a subselector to it for third party recall. This new subselector or selector should specify:

- JOBNAME=(the recall job, which must match either the job name in RECALL\_JOB\_1 or RECALL\_JOBNAME\_PATTERN)
- DESTINATION=(the value of &SELD in the recall procedure BJT@PRV if &SELD was set)
- SYSOUT CLASS=(the value of &SELC in the recall procedure BJT@PRV)

Additionally, the archive attributes should be the default archive attributes that will be used if the recalled output's original attributes do not match a selector or subselector.

### 2. Determination of the best selector and subselector based on the original attributes:

Once the sysout is captured, Output Manager substitutes the job's original attributes. However, Output Manager does not have values for JOBCLASS, STEPNAME, PROCSTEPNAME, and DDNAME, so will substitute "?" for these values. Therefore, Output Manager will be unable to find a subselector. Instead, Output Manager will locate a subselector that was generated from VIEW, and will match the subselector's archive name pattern against the archive name (which is the SYSOUTID/RID from the IDXOUT).

### 3. Determination of the best report selector based on the original attributes:

Just as looking up a subselector fails, so will looking up the report selector (if the usual matching is performed), so Output Manager looks for a report selector by (1) finding the report named by the Archive Name, and then (2) looking for a report selector that has the same layout as the report, or the same report name (if the report selector has Match=Y or no layout).

## Recalling third party conversions as reports

---

Custom reports and indexes can be created when recalling ISV recall archives.

A captured third party report is never automatically printed, nor is it added to any of the currently open bundles. Reports returned from ISV recall are managed as basic reports.

When third party data sets marked as reports are encountered:

### 1. The third party data set is checked for a match with exactly one report selector rule.

- If no matching report selector rules are found, one is created (with no layout)
- If one or more matching report selector rules are found, a layout is not used in the next step.

2. If there are no reports with the same name as the third party report, excluding reports that have a different layout than the report selector's layout (if it had one), then a basic report is created.

**Note:** In order to create a report, the name of the Output Manager started task must be specified in the NAME=name parameter in BJT@PRX2.

3. A report instance is created in BJTRIX for every matching report.

When setting up selector rules, subselector rules, and report selector rules, the SYSOUT class and the SELC must be customized. A DEST=&SELDEST parameter can also optionally be added on the RPTOUTP OUTPUT statement, where SELDEST is defined in a similar way as SELC. This is useful if you have more than one Output Manager started task running, such as a production system and a test system. Both systems could use the same SELC, but different values for SELDEST. In this case, the two systems would have a selector that selects according to JOBNAME, SYSOUT CLASS, and DESTINATION.

The SYSOUT disposition and archive attributes are taken from one of the following:

- The selector that captured the recall job SYSOUT.
- The selector that matches the attributes of the original data set (if one is found).
- If a selector matching the attributes of the original data set is found, a subselector that matches the attributes of the original data set may also be used.

**Note:** The "Combine SYSOUT" feature does not apply to third party archive or reports; this attribute is ignored.

If the third party recall was for a report, a matching report selector for the report may have been found already by BJT@JCX2, and saved in the database. If this is the case, the best report selector is found, and then a basic or custom report with the same name as the archived report is created. Even when a custom report is created, all the pages of the archived report are maintained, there is no custom report page matching. No other custom or basic reports associated with the report selector are created. However, if any indexed reports associated with the report selector match any pages of the report, they are created.

If BJT@JCX2 found more than one report selector, then the report selectors are compared in order and until a match is found, as usual. However, the desired report selector may not match, for certain SYSOUT attributes may have the value "?", so it is recommended to create a default report selector for each job that has different report selectors for different steps or ddnames.

## Repeating a third-party archive conversion

---

If you previously converted third-party archived reports and you want to convert these same archived reports again, you must first delete all of the existing entries for the archive reports and their tapes from the Output Manager BJTAVI, BJTA VR, BJTAVT, BJTDAT, and BJTARC tables.

This situation could occur, for example, if you performed a test conversion of a subset of reports and now want to convert all reports for your users.

Consequently, Output Manager looks for the archive tapes that were recorded from the previous conversion. If those tapes were scratched, Output Manager cannot recall the archived reports and will issue an error. If an archived report was moved to another tape and you attempt to view that report, Output Manager might display the previously captured report at the old tape location.

To delete archive table entries from a previous conversion, use the SBJTSAMP member BJT@DELA. The BJT@DELA SBJTSAMP member contains the SQL statements that are necessary to delete the old archived report and tape entries from the BJTAVI, BJTA VR, BJTAVT, BJTDAT, and BJTARC tables. Edit the member to replace all occurrences of the ?BJTQUAL? variable with the name of the creator that was used to create the Output Manager tables during product customization. To execute the SQL statements, use the JCL in the SBJTSAMP member BJT@JCUT. You must edit this JCL to point to the BJT@DELA member. Also make the other changes described in the JCL comments. Ensure that you run this job *before* you begin the master index conversion step of the repeat conversion process.





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# Chapter 6. Extracting and Modifying Data with IBM Tivoli Output Manager using the Universal Batch Utility

IBM Tivoli Output Manager provides a batch utility program, the Universal Batch Utility (UBU), which allows report administrators to extract and modify administrative data in the Output Manager Db2 tables. UBU provides two key functions for report administrators:

1. To obtain a flat file listing of specific administrative data from the Output Manager database.
2. To make changes to the Output Manager database using the contents of a flat file.

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## What the Universal Batch Utility does

The primary purpose of this utility is to support the cloning of existing objects. For example, suppose you have a series of report definitions that all have names beginning with the string of letters ABC, and you want to clone the data, but change the names of the clones to begin with DEF. UBU allows you to extract all report definitions with names beginning ABC, and copy all of the extracted data to a list in a flat file. Then, using a custom-developed program, you can edit the output flat file and change the string 'ABC' in the names to 'DEF', and specify ADD for each object changed. The modified output file can then be used as input to UBU, which then adds the new object definitions to the Output Manager database, resulting in clones of ABC with the names DEF.

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## Output Manager administrative Db2 tables

The Universal Batch Utility can extract and modify data from the following Output Manager Db2 tables:

<b>Table Name</b>	<b>Table Contents</b>
BJTATT	Archive attributes
BJTBAN	Banner pages
BJTBUC	Recipients within a bundle
BJTBUI	Bundle special instructions
BJTBUN	Bundle definitions
BJTBUP	Reports for a recipient within a bundle
BJTFVD	Formatted view definitions
BJTFVH	Formatted view page header definitions
BJTFVC	Formatted view column definitions
BJTFVF	Formatted views and filters
BJTFVT	Highlighting
BJTDDS	Selector and report selection rules
BJTDID	Recipients
BJTDST	Distribution lists

Table 16. Output Manager Db2 tables for which the Universal Batch Utility (UBU) can be used to extract and modify administrative data (continued)

Table Name	Table Contents
BJTLAY	Report layouts
BJTPRT	Printer attributes
BJTRPT	Report definitions
BJTUAM	User archive mappings
BJTTPL	TPL rule definitions
BJTTPX	TPL rule and selector rule mappings

**Note:** Refer to the security section. In order to make add, modify, and extract with the Universal Batch Utility, you must have the appropriate access privileges to the Universal Batch Utility, as well as access to the administrative object type that you are attempting to perform an action on.

## Extraction and modification of data

Universal Batch Utility (UBU) can be executed in Extract mode or in Modify mode. When operating in Extract mode, UBU reads the parameters from the SYSIN DD statement and then connects to the specified Db2 subsystem (DB2SSID). UBU extracts the specified object types from the desired table, and writes the data to a flat file named BJTDATA. This output can then be modified and used as input to UBU in modify mode. Any modifications made to the data in the BJTDATA file are loaded into the specified Db2 subsystem (DB2SSID) by UBU.

### Extracting data with UBU

When operating in Extract mode (RUNMODE(EXTRACT)), UBU queries the Output Manager database and writes the results of the query to a single flat file for subsequent processing outside of Output Manager administrative dialogs.

This is conceptually similar to a SELECT ... WHERE query issued with SPUFI. The key difference is that you do not need to know or understand the inter-table relationships in order to issue the query and obtain the results.

### Modifying data with UBU

When operating in Modify mode (RUNMODE(MODIFY)), UBU provides the ability to add, update or delete Output Manager administrative data by specifying the requested operation (add, update, or delete), and the necessary data to be modified, in the BJTDATA input file.

This is similar to INSERT and UPDATE ... WHERE processing entered with SPUFI. The key difference is that you do not need to know or understand the inter-table relationships needed to accomplish the processing.

The SYSIN DD is mandatory; the sections included in the SYSIN DD determine whether UBU operates in Extract or Modify mode. If you include the optional input section SELECT, UBU will execute in Extract mode. If the SELECT input section is omitted, UBU will execute in Modify mode. In addition, the SYSIN DD controls contain parameters for execution. For descriptions of these sections and parameters, see “[Overview of the parameters used to control UBU execution \(SYSIN\)](#)” on page 100.

BJTDATA is the flat file output of UBU Extract, and the flat file input of UBU Modify. The data in the output file BJTDATA can be changed with a custom-developed program or a text editor, and used as input for UBU Modify. BJTDATA consists of several columns: the UBU header columns (H\_ACT\_REQ, H\_DD\_DEF, H\_ROWID), and columns containing the extracted administrative data. When using UBU to modify the Output Manager database, specify the action to perform on the data (ADD, UPDATE, or DELETE), in the H\_ACT\_REQ column of the BJTDATA file, and specify the new value in the appropriate columns to be modified.

**Note:** When performing UPDATE and DELETE operations, do not modify the data in the H\_ROWID, for this data is used to identify the data in the tables.

Figure 3 on page 99 summarizes the overall architecture of the utility.

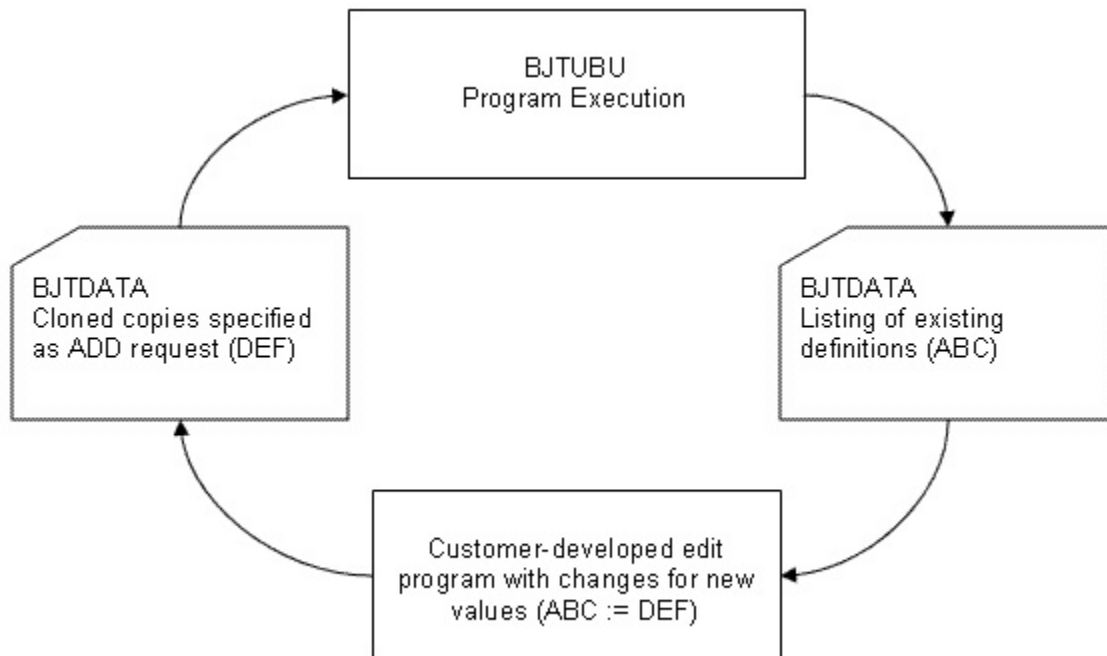


Figure 3. Overall architecture of the Universal Batch Utility

## Input and output data sets

The Universal Batch Utility (UBU) uses three types of input and output data sets: SYSIN (UBU control card sections), SYSOUT (the output data set BJTDATA), and SYSPRINT (output messages).

### SYSIN – UBU control card sections

You control the operation of UBU using input data sets.

You control the operation of the Universal Batch Utility by defining the control card sections and parameters, which you specify on the SYSIN DD card. For more information on defining these parameters, see “[Overview of the parameters used to control UBU execution \(SYSIN\)](#)” on page 100.

### BJTDATA

The Universal Batch Utility output or input data set BJTDATA.

The ddname BJTDATA is the actual data that has been extracted via UBU (in EXTRACT mode), or is the UBU input data (in INPUT mode).

### SYSPRINT – UBU output messages (output)

UBU output messages are sent to SYSPRINT.

DDname SYSPRINT contains all messages generated during UBU processing. Refer to the messages documentation to read more about available UBU log messages.

Specify a SYSPRINT DD card for the log messages that are generated by UBU. Normally, this DD card will direct the message output to the spool by using the parameter SYSOUT=\*. You can then print or view the messages. If you do not include a SYSPRINT DD card, UBU will not write any log messages at all.

# Overview of the parameters used to control UBU execution (SYSIN)

You control the operation of the Universal Batch Utility by defining the control card sections and parameters. These sections and parameters are specified on the SYSIN DD card.

## **SYSIN – UBU control card sections:**

The sections included in the SYSIN file determine whether UBU should execute in Extract or Modify mode. The RUNMODE parameter of the OPTIONS section of the SYSIN specifies in which mode UBU should execute.

UBU control cards can consist of the following sections:

- OPTIONS
- SELECT
- FIELDS
- SORT-BY

Each section name must be followed by a colon character, ":". Otherwise, the section will be not recognized by UBU and utility behavior can be unpredictable.

## **SYSIN – UBU control card parameters:**

Each of the parameters has the following syntax:

```
PARMNAME (value)
```

Do not include any spaces or blanks anywhere within a parameter specification, such as between the parameter name and the opening parenthesis. Also, when specifying multiple parameters in the SYSIN DD statement, either place the parameters on separate lines (the preferred method), or if you want to place the parameters on a single line, separate them from one another by using one or more spaces or new-line characters. A parameter cannot span multiple lines.

## **OPTIONS section**

The following SYSIN DD parameters are supported for the OPTIONS section:

The OPTIONS section is always required. This section specifies settings for the execution of the utility. The following options can be specified:

### **DB2SSID(ssid):**

This required parameter specifies the Db2 subsystem id (SSID) that UBU is to connect to.

### **DB2PLAN(plan\_name):**

This optional parameter specifies the name of the UBU program plan. If not specified, the default plan name BJTUBU is used.

### **USER(user\_id):**

This parameter identifies the z/OS user identifier associated with the permissions that UBU will use to access Db2. If you do not specify this user id, UBU will access Db2 under the permissions of the current z/OS user.

### **OWNER(owner):**

This parameter specifies the Db2 owner that is used as a qualifier for the Output Manager Db2 tables. UBU requires this value for accessing the Output Manager database tables.

### **RUNMODE(EXTRACT | MODIFY)**

Specifies the mode of the utility run. This parameter is required. Valid values include:

- **EXTRACT:** If EXTRACT is specified, UBU queries the Output Manager database and writes the results of the query to a single flat file for subsequent processing outside of Output Manager administrative dialogs.
- **MODIFY:** IF MODIFY is specified, UBU provides the ability to add, update or delete Output Manager administrative data by specifying the requested operation (add, update, or delete), and the necessary data to be modified, in the BJTDATA input file.

**OBJTYPE(object\_type):**

Specifies which type of Output Manager administrative objects will be extracted or modified by UBU. This parameter requires one of the following values:

- ARCHIVE\_ATTRIBUTE
- REPORT\_LAYOUT
- BANNER\_PAGE
- PRINTER\_ATTRIBUTE
- RECIPIENT\_ID
- DISTRIBUTION\_LIST
- CUSTOM\_REPORT
- REPORT\_SELECTION\_RULE
- SELECTOR\_RULE
- BUNDLE\_DEFINITION
- BUNDLE\_RECIPIENT
- BUNDLE\_REPORT
- BUNDLE\_INSTRUCTION
- USER\_ARCHIVE\_MAPPING
- FORMATTED\_VIEW
- FILTER
- TPL\_RULE
- TPL\_RULE\_USAGE
- PRSET\_MEMBER

**HORIZ\_DELIM(delimiter\_character):**

Specifies the symbol to be used as a horizontal delimiter in the flat file. This symbol is used to separate the header from the data area, and must be one character only. If no character is specified, the default character, '-' (minus), is used.

**Note:** The character specified in the HORIZ\_DELIM field of the UBU Modify input file must be the same character used in the UBU Extract input file.

**VERT\_DELIM(delimiter\_character):**

Specifies the symbol to be used as vertical delimiter in flat file. This symbol is used to separate fields (columns) in the flat file, and must be one character only. If no character is specified, the default character, '|' (vertical bar), is used.

**Note:** The character specified in the HORIZ\_DELIM field of the UBU Modify input file must be the same character used in the UBU Extract input file.

**PREP4CLON (NO | YES):**

Automatically prepares flat file data for object cloning. Specify YES when the output of an extract will be used as input for an ADD. Works only in Extract mod. For more information about clone preparation, see the Cloning Data section.

**WARN\_ON\_NON\_UNIQUE (NO | YES):**

(Optional) Enables additional check for uniqueness of object names for some of the object types. Works only in RUNMODE(EXTRACT) mode. This check is made to prevent the errors in data which might occur during further loading back into Output Manager database with RUNMODE(MODIFY) parameter.

**VERBOSE(NO | YES):**

(Optional) Controls whether additional messages, such as debugging messages, are included in the message output.

**COMMIT\_INTERVAL (nnnn):**

(Optional) Specifies the number of records (*nnnn*) that will be processed from the flat file for add, modify, or delete before the utility issues a COMMIT. This number must be a positive number of 1 or greater. If this option is omitted, the utility issues a COMMIT after handling all of the records from the flat file.

**PREFERRED\_ACTION (NONE | ADD | MOD | DEL):**

(Optional) Specifies which action (ADD, MOD, DEL, or no action) to perform on undefined records in the flat file. The action specified in the value of this option will be used for each record in the flat file that does not have an action defined by the user in that flat file. If NONE is specified, records without actions specified (neither a block actions nor a line action) will be ignored.

**Tip:** This option is useful when you want to do ADD or DEL actions for all of the records in a flat file.

**SYSIN\_SELECT\_SYNTAX (UBU | SQL)**

(Optional) This option specifies the syntax to use while writing a WHERE clause in the SELECT section for extraction mode. If UBU is specified, then the WHERE clause is written in UBU-native syntax, which uses names of linked objects as linking keys. In this case, a WHERE clause (before being used in SQL) will be additionally transformed into SQL-native form according to internal UBU rules. If SQL is specified, then the WHERE clause is written in SQL-native form and it will be used for extraction as it is. UBU is the default.

**SELECT section**

The SELECT section is an optional section that is used to specify the criteria that is used for RUNMODE(EXTRACT).

This section can contain record selection conditions used to define the subset of records that are to be extracted.

Record selection conditions must use the following syntax:

```
SELECT:
  WHERE condition1 [WHERE condition2] ... [WHERE conditionN]
```

Each condition must be a syntactically valid SQL WHERE clause using only those fields defined for the target object type. If multiple conditions are used, then two adjacent clauses must be separated by a space character or by a newline.

**Note:** The order of conditions in the record selection defines the order for results in the output file (DD:BJTDATA). The extract of *condition1* will go first, extract of *condition2* will go second, and so on. Sample of SELECT section:

```
WHERE NAME LIKE 'John%'
WHERE DEPARTMENT LIKE 'QA%'
WHERE DEPARTMENT LIKE 'IT%'
```

If you want to select all the objects of the specified OBJTTYPE, then you can do one of following:

1. Omit the SELECT section entirely
2. Specify an empty SELECT section

Sample of SELECT section:

```
SELECT:
  WHERE NAME LIKE 'MY%' OR
  NAME LIKE 'YOUR%'
```

When using UBU-native syntax (see the SYSIN\_SELECT\_SYNTAX section of “OPTIONS section” on page 100 for syntax descriptions), and cross-table key fields are represented in the selection criteria, you must reference the named value from the link table as it is present in the flat file. For example, to extract all

selector rules that are referred to archive attribute with NAME='ArchAttr55' and ROWID=55. Then SELECT section must be:

```
SELECT:
    WHERE ATTRIBUTE_ID = 'ArchAttr55'
```

However, if SQL-native syntax is specified, the SELECT section for the same example must be:

```
SELECT:
    WHERE ATTRIBUTE_ID = 55
```

When you specify sub-criteria for the TARGET\_ID field of the SELECT section while extracting DISTRIBUTION\_LIST object types, UBU extracts occurrences of Recipient Entries (ROWTYPE='R' record) where this sub-criteria is met. This allows you to extract all appearances of the specified recipient from distribution lists.

In the following example, UBU will extract appearances of the recipient with the name “John Johnson” in Distribution Lists starting with “DL”:

```
WHERE SUBSTR(DNAME,1,2)='DL' AND
      TARGET_ID='John Johnson'
```

**Note:** To omit the SELECT section, use dashes (--) to comment it out. The following is an example of the SELECT section for modification:

```
-- SELECT:
-- WHERE NAME LIKE 'MY%' OR
--      NAME LIKE 'YOUR%'
```

## FIELDS section

The FIELDS section specifies which fields are to be extracted or modified.

You have several options for specifying which fields are to be included: you can list each field to include, you can specify ALL to include all fields, or you can specify EXCEPT and list which fields to exclude to include all fields except those listed. The FIELDS section is required; a blank or omitted FIELDS section results in a critical program error.

**Note:** The fields specified in the UBU Modify SYSIN must be the same fields specified in the UBU Extract SYSIN.

- **To list the fields to be included:** specify the field names in a list under the FIELDS section heading. For example, the following is a sample FIELDS list for OBJTYPE(ARCHIVE\_ATTRIBUTE):

```
FIELDS:
    NAME
    MASK
    STORCLAS
    MGMTCLAS
    DATACLAS
```

An extraction with this FIELDS section will produce a flat file with these fields for each extracted archive attribute: H\_ACT\_REQ, H\_DD\_DEF, H\_ROWID, NAME, MASK, STORCLAS, MGMTCLAS, DATACLAS.

**Note:** The fields H\_ACT\_REQ, H\_DD\_DEF, and H\_ROWID are headers used for any type of object and for any list from the FIELDS section specified by the user.

- **To include all fields:** specify ALL under the FIELDS section heading. For example, the following is a sample FIELDS section that specifies all fields types for OBJTYPE(ARCHIVE\_ATTRIBUTE):

```
FIELDS:
    ALL
```

An extraction with this FIELDS section will produce a flat file with all fields associated with the specified object type.

**Note:** The fields H\_ACT\_REQ, H\_DD\_DEF, and H\_ROWID will also be returned. These fields are headers used for any type of object and for any list from the FIELDS section specified by the user.

- **To include all fields except a list of fields to be excluded:** specify ALL under the FIELDS section heading, then specify EXCEPT, and list the fields to be excluded. Any fields listed under EXCEPT will not be extracted or modified. For example, the following is a sample FIELDS section that extracts all possible fields for OBJTYPE(ARCHIVE\_ATTRIBUTE) except the fields H\_SEQ\_NUM, ROWID and NAME\_UPPER:

```
FIELDS:
  ALL
  EXCEPT H_SEQ_NUM ROWID NAME_UPPER
```

An extraction with this FIELDS section will produce a flat file with all fields associated with the specified object type except the fields H\_SEQ\_NUM, ROWID and NAME\_UPPER.

**Note:** The fields H\_ACT\_REQ, H\_DD\_DEF, and H\_ROWID will also be returned. These fields are headers used for any type of object and for any list from the FIELDS section specified by the user.

## SORT-BY section

The SORT-BY section is an optional section that is used to specify the sort order of the extraction results of each SELECT section condition (the results of RUNMODE(EXTRACT)).

**Restriction:** Do not include the SORT-BY section when you are using the Universal Batch Utility with the selector analysis utility. The selector analysis utility determines the sort order and the sort order should not be changed.

SORT sections must use the following syntax:

```
SORT-BY:
  field1[(A|D)] field2[(A|D)] ... fieldN[(A|D)]
```

where the *field* names are a set of fields defined for the target object-type, and the value specified in the brackets specifies the SORT direction. Valid sort direction values include *A* (ascending) or *D* (descending). If no sort direction is specified after the field, then *A* (ascending) is used by default.

For example:

```
SORT-BY:
  NAME(A) DEPARTMENT USERID(D)
```

In this example, the result of each WHERE clause from the SELECT section will be sorted by NAME in ascending order, then DEPARTMENT in ascending order, and then USERID in descending order. This is the equivalent of ORDER BY NAME ASC, DEPARTMENT ASC, USERID DESC in SQL.

**Note:** Grouped objects (such as layouts and selectors) can only be sorted by the fields of header records. This avoids possible problems during cloning procedures.

**Note:** For distribution lists, if the TARGET\_ID field is specified in the SORT-BY section, then the SORT sub-criteria is also used to order the recipient entries of each resulting distribution list.

## BJTDATA – UBU Flat File

When UBU is running in Extract mode, BJTDATA is the flat file output listing. When edited and then used as input to UBU in Modify mode, this flat file allows users to manipulate Output Manager Db2 data and carry changes in the data to the Output Manager database.

The output data set must have the following characteristics:

- Organization: PS
- Record format: VB (recommended) or FB
- Record length: 32756



Use modification actions and block actions to make changes to the BJTDATA file. Modification actions, also known as line actions, take precedence over block actions. If neither a line action nor a block action is specified for an object, a 'preferred action' can be used, if specified in the SYSIN option PREFERRED\_ACTION. If PREFERRED\_ACTION(NONE) is specified and neither a line action nor a block action is specified for an object, no action will be performed on that object.

For more information, see sample BJTDATA files.

**Note:** When using the Universal Batch Utility (UBU) for extracting and modifying data, it is recommended to allocate the BJTDATA DD name as DCB=(RECFM=VB,LRECL=32756,BLKSIZE=32760). Refer to SBJTSAMP member BJTUUBU.

## Modification actions

Users can make changes to the BJTDATA file manually or with a customer-developed editing program.

UBU can perform the following modification actions to the Output Manager database:

- ADD – Add new objects
- DEL – Delete existing objects
- MOD – Modify or update existing objects
- SKIP – Skip current record

Specify which modification action is to be performed in the H\_ACT\_REQ field of the BJTDATA input file for each row to be modified. The action in the H\_ACT\_REQ field specifies what rows are to be modified, and which modification action is to be performed. For example, if ADD is specified in the H\_ACT\_REQ field of a row, UBU will add the data in that row to the Output Manager database.

**Note:** Do not SORT the BJTDATA file. This file has two header rows containing service data that must remain at the top of the file. If the file is sorted, and these two rows are no longer at the top, input may be disrupted with unpredictable results.

**Note:** For the DELETE and MODIFY actions, UBU uses the H\_ROWID field value to identify the objects to be deleted or modified. Do not change the values in the H\_ROWID column of the flat file, because it may cause deletion/modification of the wrong target objects. If you are not sure if H\_ROWID has been changed since the original extract, re-extract the data.

### ADD – Add new object

The ADD action inserts a new object into the Output Manager Db2 database, and maintains cross-table links and references.

The ADD action inserts a new object into the Output Manager Db2 database, and maintains cross-table links and references. If ADD is specified in the H\_ACT\_REQ field of a row, the data definitions in the other columns of the row will be added as new data definitions in the Output Manager database. ADD can be used to easily clone existing objects. For an example of the ADD action, see the cloning example in the “Cloning Data” section.

The format of UBU files used for ADD must be in PREP4CLON(YES).

**Note:** Do not use the same flat file for a MOD or DEL operation after and ADD operation. Because the H\_ROWID field changes after an ADD operation, you must re-extract data and work only with the new extraction.

### DEL – Delete object

The DEL action deletes existing objects.

The DELETE action deletes the specified existing objects from the Output Manager Db2 database. Rows with DEL specified in the H\_ACT\_REQ field will be deleted from the Output Manager database.

**Note:** When deleting an object that has dependent objects, UBU only deletes the dependent links and does not delete the linked objects. However, dependent objects are always deleted for

BUNDLE\_DEFINITIONS and BUNDLE\_RECIPIENTS. In addition, if the head record of a group of rows (i.e. head record of CUSTOM\_REPORT object) is deleted, then all records of the group will be also deleted.

## MOD – Modify object

The MOD action modifies existing objects.

The MOD action allows you to modify existing objects. If MOD is specified in the H\_ACT\_REQ field of a row, the existing data definitions in the Output Manager database will be updated and replaced with the modified data definitions in BJTDATA. The MOD action maintains database integrity by updating all cross-table links if necessary.

All of the fields in the extract record (excluding header fields and the ROWID field) will be rewritten in the database even if some or all of them were not changed manually.

**Note:** When DEL or MOD action is specified, UBU uses the H\_ROWID field value to identify which object must be deleted or modified. Therefore, it is strongly recommended not to change H\_ROWID in the flat file, because it may cause deletion/modification of false-target object. If you are not sure that H\_ROWID is kept unchanged from the time of original extract, re-extract the data and work only with new extraction.

Because the H\_ROWID field is ignored for ADD operations, it can contain any value for ADD operations.

Do not use the same flat file used in an ADD operation for a MOD or DEL operation, for the H\_ROWID field may change after an ADD operation.

**Note:** When modifying a parent selector rule, ensure that any edits made to the selection criteria of a parent selector rule are still compatible with any existing linked child subselector rules. The selection criteria of subselector rules must be derivative of the selection criteria of their parent selector rules. If you attempt to make modifications to the parent selector rule that would result in orphaning its child subselector rules, error messages will be issued and processing will terminate. The error messages will indicate the field values of the child subselector rule that are inconsistent with the selection criteria of the parent selector rule.

The format of UBU files used for MOD must be in PREP4CLON(NO).

## SKIP – Skip record

The Skip action excludes a specific record from handling.

Use this action in conjunction with block actions or when the PREFERRED\_ACTION is specified. For example, if you want to delete all objects from the flat file except one, mark the exception with SKIP in the H\_ACT\_REQ field and then run UBU with PREFERRED\_ACTION (DEL). In this example, all unmarked objects will be deleted, but the object with SKIP will remain. You can find more examples of the SKIP action in the [“Priorities of action types” on page 107](#) section, and more information on Block actions in the [“Block actions” on page 106](#) section.

## Block actions

Users can make changes to sections (or ‘blocks’) of the BJTDATA file using block actions.

Block actions allow you to make changes to an entire section of the BJTDATA file by marking the first and last records of a block rather than marking each record with an action. The modification action (ADD, MOD, DEL, or SKIP) is applied to all records within the block.

### Creating a block section

To create a block section:

1. Specify the start of a block action by typing “//action” (where action is the type of modification action to be performed) in the H\_ACT\_REQ field of the first record to be included in the block.

Valid values include:

- //ADD

- //MOD
  - //DEL
  - //SKIP
2. Specify the end of a block section by typing a double slash (//) in the H\_ACT\_REQ field of the last record in the block.

## Block action rules

The following rules apply to block actions.

If the block action does not have an end marker, then it ends on the record preceding the next block section. If there are no other block sections in that file, then the block section ends at the last record of the flat file. Examples:

- The following is an example of a block section that does not have an end marker and is followed by another block section:

H_ACT_REQ	Comment
//ADD	start of block section ADD
...	end of block section ADD
//MOD	start of block section MOD

Comment

- The following is an example of a block section that does not have an end marker and is not followed by another block section:

H_ACT_REQ	Comment
//ADD	start of block section ADD
...	end of block section ADD
<end of data>	

- Line actions take precedence over block actions. For example, if you have a block section with modification action of ADD that starts on line 1 and ends on line 5, and you have also specified a DEL modification action on line 3 (within the block section), the line action DEL takes precedence and will be used on line 3, and the block action ADD will apply to the rest of the block:

H_ACT_REQ	Comment
//ADD	start of block section ADD
...	(within ADD block section)
DEL	(DEL line action takes precedence)
...	(within ADD block section)
//	end of block section ADD

## Priorities of action types

UBU supports three different types of actions (line action, block action, and preferred action).

Any of these types can be crossed with each other in their influence on a record from flat data. The following action types are listed by priority in descending order:

1. Line action
2. Block action
3. Preferred action (SYSIN option PREFERRED\_ACTION)

The following examples displays how UBU handles multiple action types:

- Example 1:

```
DD:SYSIN
    PREFERRED_ACTION(DEL)
DD:BJTDATA
    H_ACT_REQ
```

<b>Action type</b>	<b>Action issued</b>
001	DEL (preferred)
002 SKIP	<i>no action</i> (line)
003	DEL (preferred)
004	DEL (preferred)
End of data	

- Example 2:

```
DD:SYSIN
    PREFERRED_ACTION(DEL)
DD:BJTDATA
    H_ACT_REQ
```

<b>Action type</b>	<b>Action issued</b>
001	DEL (preferred)
002 //MOD	MOD (block)
003	MOD (block)
004 //	MOD (block)
005	DEL (preferred)
End of data	

- Example 3:

```
DD:SYSIN
    PREFERRED_ACTION(ADD)
DD:BJTDATA
    H_ACT_REQ
```

<b>Action type</b>	<b>Action issued</b>
001	ADD (preferred)
002 //SKIP	<i>No action</i> (block)
003	<i>No action</i> (block)
004 DEL	DEL (line)
005	<i>No action</i> (block)
006 //	<i>No action</i> (block)
007	ADD (preferred)
008 //DEL	DEL (block)
009	DEL (block)
End of data	

- Example 4:

```
DD:SYSIN
    PREFERRED_ACTION(NONE)

DD:BJTDATA
    H_ACT_REQ
```

Action type	Action issued
001	No action (preferred)
002 //DEL	DEL (block)
003 SKIP	No action (line)
004	DEL (block)
005 //ADD	ADD (block)
006 MOD	MOD (line)
007 //	ADD (block)
008	No action (preferred)
009	No action (preferred)
End of data	

## Cloning data

---

Simple cloning of data involves making exact duplicates of a specified object type within a Output Manager database instance, or to another Output Manager database instance.

UBU can be used to clone data of the following object types: ARCHIVE\_ATTRIBUTE, BANNER\_PAGE, PRINTER\_ATTRIBUTE, RECIPIENT\_ID, REPORT\_SELECTION\_RULE, SELECTOR\_RULE, BUNDLE\_DEFINITION, BUNDLE\_RECIPIENT, BUNDLE\_REPORT, BUNDLE\_INSTRUCTION, REPORT\_LAYOUT, DISTRIBUTION\_LIST, PRSET, TPL\_RULE, and CUSTOM\_REPORT. There are two processes for basic cloning of data: a process for cloning data without row-group restrictions, and a process for cloning data with row-group restrictions. Objects with row-group restrictions include REPORT\_LAYOUT, DISTRIBUTION\_LIST, and CUSTOM\_REPORT.

### Cloning notes:

- The PREP4CLON parameter automatically changes the negative (-) values in the GroupID fields to positive values by replacing the minus characters (-) with blanks.
- When used for object types with row-group restriction, the PREP4CLON parameter can only be used for basic cloning purposes; if you plan to clone and then **MODIFY** data of these object types, you cannot use this parameter. Instead, you must make an additional change in the BJTDATA file. When editing the BJTDATA file (step 2), type ADD in the H\_ACT\_REQ for all rows that you want to clone, and change the minus (-) character to a blank character in the LID field (for REPORT\_LAYOUT object types), the LIST\_ID field (for DISTRIBUTION\_LIST object types), or the RID field (for CUSTOM\_REPORT object types).
- If you want to add some object to an existing group, leave the GroupId field negative (-). For example, if you want to add another CUSTOM\_REPORT\_CONDITION object into some existing CUSTOM\_REPORT, the RID field must be negative and have the RID value (a row id) of the target CUSTOM\_REPORT.

The result of group cloning with UBU is guaranteed only when all the records of each group are placed in one non-break row-frame inside the flat file. This means that all rows of the each group must be placed in one-by-one order. Otherwise, the result can be unpredictable, with some objects missing from the group.

## Cloning object types without row-group restrictions

Objects without row-group restrictions include: ARCHIVE\_ATTRIBUTE, BANNER\_PAGE, PRINTER\_ATTRIBUTE, RECIPIENT\_ID, REPORT\_SELECTION\_RULE, BUNDLE\_DEFINITION, BUNDLE\_RECIPIENT, BUNDLE\_REPORT, and BUNDLE\_INSTRUCTION.

1. Extract the data using UBU in Extract mode.
2. Edit the resulting BJTDATA output file by manually typing ADD in the H\_ACT\_REQ for all rows that you want to clone
3. Use the edited BJTDATA file as input to UBU in Modify mode.

## Cloning object types with row-group restrictions

Objects with row-group restrictions include: REPORT\_LAYOUT (field LAY-LID), DISTRIBUTION\_LIST (field DST-LIST-ID), and CUSTOM\_REPORT (field RPT-RID). To clone these object types, you must change the GroupID field from a negative to a blank for all rows you clone (all rows you specify ADD in the H\_ACT\_REQ field).

1. Extract the data using UBU in Extract mode. In the OPTIONS section of the SYSIN card, ensure that you set the PREP4CLON parameter to YES.  
**Note:** Do not use PREP4CLON if the extracted rows will be used with MOD in the H\_ACT\_REQ field. It may cause damage to the group object structure.
2. Edit the resulting BJTDATA output file by manually typing ADD in the H\_ACT\_REQ for all rows that you want to clone.
3. Use this edited BJTDATA file as input to UBU in Modify mode.

## Cloning Selector Rules and Subselector rules

To clone SELECTOR\_RULES, the value in the field DDSS-SELECTOR-COUNT of subselector rules must contain the value from the DDSS-SCHENV field of its parent selector rule, with an additional "+" character before the value.

For example, if the parent selector rule has the value "Selector55" in the SCHENV field, the subselector rule must have the value "+Selector55" in the SELECTOR\_COUNT field. Refer to the following table:

	DDSS-SCHENV	DDSS-SELECTOR-COUNT
Parent selector	Selector55	2
Subselector	Sselector11	+Selector55

To clone SELECTOR\_RULES:

1. Extract the data using UBU in Extract mode. In the OPTIONS section of the SYSIN card, ensure that you set the PREP4CLON parameter to YES. This parameter automatically changes the DDSS-SELECTOR-COUNT field of Subselector rules to the '+SchenvParentSelector' value.  
**Note:** Do not use PREP4CLON if the extracted rows will be used with MOD in the H\_ACT\_REQ field. It may cause damage to the group object structure.
2. Edit the resulting BJTDATA output file by manually typing ADD in the H\_ACT\_REQ for all rows that you want to clone.  
**Note:** In this case, you must manually add the '+' character to the SELECTOR\_COUNT fields in the subselector rules.
3. Use this edited BJTDATA file as input to UBU in Modify mode.

## Cloning and modifying data

The following is an example of using UBU to clone data, alter values in the output file, and then load the altered clone into the Output Manager database.

In this example, UBU is used to clone custom reports with names ABC, change the names of the clones to DEF, and then load the cloned data into the Output Manager database. This would result in new custom reports with the name DEF that have the same data definitions as the existing custom reports ABC.

To clone data, modify the cloned data, and load the modified data into the Output Manager database:

1. Use UBU in Extract mode to extract the objects you want to clone (for example, custom reports with names ABC).
2. In the BJTDATA output file, manually write ADD in the H\_ACT\_REQ fields of rows that you want to clone
3. In the BJTDATA output file manually edit the objects to be modified. (For example, change ABC in the RNAME column to DEF).
4. Use the modified BJTDATA file as input to UBU in Modify mode.

## Sample BJTDATA files

The following are examples of BJTDATA files: an example of the output of UBU extract mode, and the input of UBU in modify mode.

### Sample BJTDATA (UBU Extract mode output):

The following is a sample of the BJTDATA file, where the BJTDATA file is the output of the Universal Batch Utility run in Output mode.

**Note:** In this example, a customer-developed edit program changes ABC to ADDS for DEF.

```
Menu Utilities Compilers Help
Browse BJT.UBUEX.OUTPUT Line 00000000 Col 001 080
Command ==> Scroll ==> CSR
***** Top of Data *****/*****
|H_ACT_REQ|H_DD_DEF|H_ROWID|H_ITM_NAM|/|RNAME
|-----|-----|-----|-----|/|-----
| |CUSTOM_REPORT|1575|ABC01|/|ABC01
| |CUSTOM_REPORT|1576|ABC02|/|ABC02
| |CUSTOM_REPORT_CONDITION|1577|ABC02|/|ABC02
| |CUSTOM_REPORT|1578|ABC03|/|ABC03
| |CUSTOM_REPORT_CONDITION|1579|ABC03|/|ABC03
***** Bottom of Data *****/*****
```

### BJTDATA (UBU Modify mode input):

The following is a sample of the BJTDATA file, where the BJTDATA file is the input to the Universal Batch Utility run in Modify mode.

```
Menu Utilities Compilers Help
Browse BJT.UBUEX.INPUT Line 00000000 Col 001 080
Command ==> Scroll ==> CSR
***** Top of Data *****/*****
|H_ACT_REQ|H_DD_DEF|H_ROWID|H_ITM_NAM|/|RNAME
|-----|-----|-----|-----|/|-----
|ADD|CUSTOM_REPORT|1575|ABC01|/|DEF01
|ADD|CUSTOM_REPORT|1576|ABC02|/|DEF02
|ADD|CUSTOM_REPORT_CONDITION|1577|ABC02|/|DEF02
|ADD|CUSTOM_REPORT|1578|ABC03|/|DEF03
|ADD|CUSTOM_REPORT_CONDITION|1579|ABC03|/|DEF03
***** Bottom of Data *****/*****
```

## Error conditions

---

Currently, all messages are written to SYSOUT.

If you specify the VERBOSE(YES) parameter in the SYSIN DD statement, additional debugging messages for diagnostic use will also be written to the log. Each log message has the following format:

```
BJTUnnns <MESSAGE_TEXT>
```

Where:

- *nnn* – message code across the utility (integer between 000 and 999)
- *s* – severity code

Possible values for the SEVERITY code include:

- **I** – informational or debug message
- **W** – warning message
- **E** – error message
- **S** – severe error message

Message type details:

- Debug messages provide more information about error conditions when errors occur. Dumping specific diagnostic information to SYSPRINT DD is controlled by the VERBOSE option from the OPTIONS section in SYSIN.
- Informational messages provide information about reaching a step in program flow.
- Warning messages tell the user that an insignificant error occurred. Messages of this type are commonly ignored, but may have significant effects on further program steps.
- Error messages tell the user that a serious error occurred in the work of the program. Some of these errors can cause program exit, but in most of cases program flow continues.
- Severe error messages tell the user that a fatal error occurred. This type of error always causes program exit.

All possible program log messages are listed in the *IBM Tivoli Output Manager Installation and Customization Guide*.

Possible program return codes include:

- 0 – Successful execution of program
- 4 – Warning messages were issued during program execution
- 12 – Serious errors occurred while handling input records
- 16 – Severe error occurred at program option's loading or while establishing connection to target Db2 subsystem

For a summary of error conditions and their return codes, see the *IBM Tivoli Output Manager Installation and Customization Guide*.

## Usage considerations

---

Review the following considerations before using the Universal Batch Utility.

### Delimiters:

It is recommended to use the same set of delimiters (VERT\_DELIM and HORIZ\_DELIM) while using consecutive Extract and Modify mode calls for the same flat file. Using different sets of delimiters can end in unpredictable results. This suggestion is valid only for the cases when the user doesn't change delimiters in the flat file manually or by using external program.



## Db2 privileges and concurrency:

To work properly in EXTRACT mode, UBU requires that all necessary Output Manager Db2 tables be available for reading. The user id under which UBU is running must have permission to run SELECTs on the Output Manager Db2 tables.

To work properly in modify mode, UBU requires that all necessary Output Manager Db2 tables be available for locking in share mode. This means that other concurrent applications may have read-only access to the specified BJT tables while the utility executes. If a concurrent application has write access while the utility executes, the results of UBU execution will be unpredictable.

## Sample JCL:

The BJTUUBU member in SBJTSAMP is sample JCL to run UBU. Fill in the required values in the OPTIONS section. Change ?OUTFILE? to the path for your flat file to receive the extracts or provide updates to the Db2 tables. OUTFILE is the output data set for extracted data, and should be allocated with DCB=(RECFM=VB,LRECL=32756).

## Summary of UBU error conditions and return codes

This topic lists the Universal Batch Utility error conditions and their associated return codes and message IDs.

The possible return codes are:

Return code	Description
0	The program completed successfully.
4	Some warning messages were issued.
12	A serious error occurred while the utility was processing.
16	A severe error occurred while the utility was connecting to the target Db2 subsystem, while writing to the output data set, or while the SYSIN DD parameters were loading.

### Exception: Failed to open program options

Reason: The program options file is unavailable for reading.

Return code: 16

Messages IDs: BJTU014S

### Exception: Required option was not found

Reason: A required program option was not found in the SYSIN data set.

Return code: 16

Messages IDs: BJTU012S

### Exception: Required option has wrong value

Reason: A required program option has an unrecognized value or a value that is too long.

Return code: 16

Messages IDs: BJTU0134S

### Exception: Target Db2 subsystem unavailable

Reason: The program could not establish a connection to the target Db2 subsystem.

Return code: 16

Messages IDs: BJTU002S, BJTU003S, BJTU004S, BJTU005S, BJTU006S, BJTU009S, BJTU010S, BJTU011S

**Exception: Target Output Manager Db2 tables do not exist**

Reason: No Output Manager Db2 tables were found in the target Db2 subsystem under the specified OWNER value.

Return code: 16

Messages IDs: BJTU007S

**Exception: Set of target Output Manager Db2 tables is incomplete**

Reason: Several of the Output Manager Db2 tables that are needed were not found in the target Db2 subsystem under the specified OWNER value.

Return code: 16

Messages IDs: BJTU008S

**Exception: Output file is unavailable**

Reason: The program failed to open a required output DD for writing records.

Return code: 16

Messages IDs: BJTU015S

**Exception: Failed to write to the output data set**

Reason: The program failed writing a record to the output DD.

Return code: 16

Messages IDs: BJTU016S

**Exception: Failed to retrieve file info**

Reason: The program failed to retrieve information about the output data set.

Return code: 16

Messages IDs: BJTU017S

**Exception: Wrong record format**

Reason: The output data record format is not VB or FB.

Return code: 16

Messages IDs: BJTU018S

**Exception: Failed to read data from the input data set**

Reason: The program failed to read a record from the output DD.

Return code: 16

Messages IDs: BJTU019S

**Exception: Db2 operations error (SQL)**

Reason: The program failed to execute some commands such as PREPARE SELECT or OPEN CURSOR.

Return code: 12

Messages IDs: BJTU210E, BJTU211E, BJTU212E, BJTU213E

**Exception: Wrong object type**

Reason: SYSIN DD has an unrecognized object type specified for extracting/modifying.

Return code: 12

Messages IDs: BJTU204E

**Exception: Syntax error in SYSIN DD**

Reason: There is a syntax error in the control statements in the SYSIN DD.

Return code: 12

Messages IDs: BJTU205E, BJTU206E

**Exception: Error in SYSIN data set**

Reason: There are incorrect values in the FIELDS section of the SYSIN data.

Return code: 12

Messages Ids: BJTU020S, BJTU021S, BJTU215E, BJTU224E.

**Exception: Heap memory exception**

Reason: Not enough memory for object.

Return code: 12

Messages IDs: BJTU219E.

**Exception: Records not found in the tables**

Reason: The values specified for the selection criteria did not match any records in the database, or a cross-table link did not find the required record.

Return code: 12

Messages IDs: BJTU220E, BJTU221E, BJTU225E, BJTU227E.

**Exception: Insufficient data**

Reason: The flat file records do not include all required fields for an ADD operation

Return code: 12

Messages IDs: BJTU226E



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# Chapter 7. Migrating from a previous version of Output Manager

This migration process does not change your existing Output Manager database. The migration runs from a copy of your existing Output Manager database.

Migrating data to Output Manager V3R1 from a previous version of Output Manager involves two stages:

1. Making a copy of your current Output Manager database.
2. Converting the copy to the Output Manager V3R1 format.

This process ensures that your current Output Manager setup will remain untouched during the migration.

## Note:

It is highly recommended to do a trial run of the migration before migrating over your production system. In a trial run, you do not capture output. Instead, you test that you can view and reprint output captured by the previous version of Output Manager. You can also use a trial to validate that the related functions are working with the new database, including catalog synchronization, RUNSTATS, backups, and the web server.

## Before you begin:

Decide whether you are going to create the Output Manager V3R1 database in the same Db2 subsystem as your previous Output Manager database:

- If your V3R1 database will be on the same subsystem as your previous version, you will need to use new plan names and a new database name.
- If your V3R1 database will be on a different Db2 subsystem, you can use the same plan names and database name. However, to help distinguish between your existing installation and V3R1, it is recommended to use new names.

The Output Manager customization members provided in SBJTSAMP are used to perform the copy and the formatting. Each stage of the migration process requires its own set of SBJTSAMP members; be prepared to create a data set for each one.

The following members are used to create these libraries:

- **BJT@CPY2:** This member copies specific members from the SBJTSAMP installation library to a new HLQ, making a second samplib. The members in this samplib are used to unload the data from the current database.
- **BJT@CPY3:** This member copies specific members from the SBJTSAMP installation library to a new HLQ, making a third samplib. The members in this samplib are used to create the new database for V3R1.
- **BJT@CPYU:** This member copies all members from the SBJTSAMP installation library to a fourth samplib. The members in this samplib are customized for production.

**Note:** At the end of the migration process, follow the procedures in the [Chapter 4, “Security,” on page 77](#) chapter.

## Performing a trial run of the migration

When doing a trial run, you complete some or all of the migration steps without impacting your existing installation. The key point of a trial is go through the migration steps without using the new installation to capture sysouts that are expected to be captured by your previous version that is still running.

In V3R1 you can test many of the functions available from the ISPF panels without running a started task. For testing during a trial run, you can bring up the started task with all selectors inactive by removing the

"POLICY ACTIVATE" statement near the end of the V3R1 BJT#IN03 member. As a further safeguard while you are validating the V3R1 setup, you can use the admin panels to disable each selector.

You can also test the viewing and printing of reports from the V3R1 ISPF panels. If you have bundles configured, you can test bundle reprint for bundles that were already printed by your original Output Manager started task.

You can repeat each step of the migration. Once the copies of SBJTSAMP have been customized, there is no need to rebuild them. You repeat the migration by submitting the jobs that copy and rebuild the database, and submitting BJTCNPVM to load the configuration table.

When you are ready to switch production to V3R1, shutdown the original Output Manager started task. Run each migration job as described earlier in this chapter, starting with BJT@JCUO to unload the original database.

## Migration overview

Migration from a previous version of Output Manager involves the following tasks:

<i>Table 19. Overview of migration procedure</i>	
<b>Step</b>	<b>Description</b>
Install Output Manager V3R1 in a separate SMP/E zone.	Follow the installation procedure documented in the <i>Program Directory for Tivoli Output Manager for z/OS</i> .
<a href="#">“Make a copy of the complete SBJTSAMP library using BJT@CPYU” on page 119</a>	In this step, you copy and customize the complete set of SBJTSAMP members used to run Output Manager and perform setup and maintenance tasks. You modify and submit members BJT@PRED and BJT@JCED to specify configuration values for the new copy of SBJTSAMP.
<a href="#">“Modify a copy of SBJTSAMP for unloading your existing Output Manager database” on page 120</a>	In this step, you submit BJT@CPY2 to copy members from the provided SBJTSAMP into a new HLQ, modify members BJT@PRE2 and BJT@JCE2 to specify configuration values that will aid in unloading your existing database, and then submit the BJT@JCED job.
<a href="#">“Modify an additional copy of SBJTSAMP to create the Output Manager V3R1 database” on page 122</a>	In this step, you submit BJT@CPY3 to copy members from the provided SBJTSAMP into a separate HLQ, BJT@310.SBJTSAMP, and then modify and submit members BJT@PRE3 and BJT@JCE3 to specify configuration values for the new Output Manager V3R1 database.
<a href="#">“Specify initial configuration parameters in BJTCNPVM” on page 124</a>	BJTCNPVM updates the configuration table using your original configuration members (BJT#IN03 and BJT#IN05).
<a href="#">“Submit SBJTSAMP members to reformat the copy of your current database” on page 125</a>	HLQ.OLDDB and HLQ.BJT@310. BJT@SAMP members that were configured in the previous steps are submitted to unload the old database, load to a new database and reformat the new Output Manager V3R1 tables.

Table 19. Overview of migration procedure (continued)

Step	Description
<p><u>“Complete Output Manager customization after migrating your existing data” on page 125</u></p>	<p>The database migration is complete. Perform additional steps to complete the customization of V3R1.</p> <ul style="list-style-type: none"> <li>• If this was a trial migration, you are ready to repeat the migration process for production.</li> <li>• When you are ready to switch production over to the V3R1 installation, make a backup of your old PROC and old EXEC and replace them with the ones created for production.</li> </ul>

**Related concepts**

Impactful differences between Output Manger V3R1 and previous versions of Output Manger

The following changes implemented in Output Manager V3R1 require action.

Legacy security model emulation

(*Not recommended*) Although it is not recommended, users who want to maintain the security models they have implemented in previous versions of Output Manager can do so with the following emulations:

**Make a copy of the complete SBJTSAMP library using BJT@CPYU**

SBJTSAMP member BJT@CPYU is provided to copy the installation libraries (SBJTSAMP and SBJTEXEC) to a new HLQ. In this step, you customize the complete set of SBJTSAMP members used to run Output Manager and perform setup and maintenance tasks. You also customize members in SBJTEXEC used to access the Output Manager panels.

1. Copy BJT@CPYU from your SMP/E install library to a separate JCL library.
2. Modify the copy of BJT@CPYU to specify a new location for a copy of the SBJTSAMP and SBJTEXEC libraries:
  - **?BJTHLQ?**: Specify a high-level qualifier for the copy of SBJTSAMP and SBJTEXEC.
  - **?SAMPLHQ?**: Specify a data set name for the copy of SBJTSAMP.
  - **?EXECHLQ?**: Specify a data set name for the copy of SBJTEXEC.
3. Submit the copy of BJT@CPYU.  
BJT@CPYU creates copies of SBJTSAMP and SBJTEXEC in the specified library.
4. Navigate to the copy of SBJTSAMP that you created using **BJT@CPYU**. This way, the original version of SBJTSAMP is preserved.
5. Modify BJT@PRED to specify your custom configuration parameters. The configuration parameter definitions and recommended values are described in comments within BJT@PRED.  
The values that you specify refer to the 3.1 database, plans and users.
6. Modify BJT@JCED:
  - Replace the ?SAMPLHQ? variable with the high level qualifier for your SBJTSAMP library.
  - Replace the ?BJTHLQ? variable with the high level qualifier for your Output Manager product libraries.
  - Update <JOB PARAMETERS> with job parameters used by your installation.

**Important:** Never run BJT@JCED against your SMPE applied library.
7. Submit BJT@JCED. BJT@JCED automatically modifies all of the members of the specified SBJTSAMP library according to the values specified in BJT@PRED.

## Modify a copy of SBJTSAMP for unloading your existing Output Manager database

SBJTSAMP member BJT@CPY2 is provided to copy members from the installation library, SBJTSAMP, to a new HLQ.

In this step, you use BJT@CPY2 to copy specific members from the SBJTSAMP that was provided with the installation into a new HLQ, and then modify members BJT@PRE2 and BJT@JCE2 to specify configuration values that will aid in unloading your existing database. You then submit member BJT@JCE2.

In the following sections, the high level qualifiers "HLQ.OLDDB" and "HLQ.BJT@310" are used to distinguish between the SBJTSAMP used to unload the source database, and the SBJTSAMP used to load the new database. You do not have to use these literal values in your edits, but keep track of the values that you specify.

**Note:** The SBJTSAMP library created in this step will be used to unload your existing Output Manager Database. Do not use the customized SBJTSAMP of your existing Output Manager installation for this step.

1. Copy BJT@CPY2 from your SMP/E install library to a separate JCL library.
2. Modify the copy of BJT@CPY2 to specify a new location for a copy of the specific members of the SBJTSAMP library:
  - **?BJTHLQ?**: Specify the high-level qualifier for the V3R1 Output Manager product libraries. This high-level qualifier was specified during the installation process, as documented in the *Program Directory for Tivoli Output Manager for z/OS*.
  - **?SAMPHLQ?**: Specify a high-level qualifier for the copy of specific members in SBJTSAMP. In the following examples, the value **HLQ.OLDDB** is used.
3. Submit the copy of BJT@CPY2.  
BJT@CPY2 creates a copy of the members of SBJTSAMP required to perform the Db2 unload.
4. Modify HLQ.OLDDB.SBJTSAMP (**BJT@JCE2**) to replace the ?SAMPHLQ? variable with the high level qualifier for this newly copied SBJTSAMP library, and replace the ?BJTHLQ? variable with the high level qualifier for your Output Manager V3R1 product libraries.

**Important:** Never run BJT@JCE2 against your SMPE applied library.

5. Modify <JOB PARAMETERS> on the job card.
6. Modify HLQ.OLDDB.SBJTSAMP (**BJT@PRE2**). Follow instructions within the member and specify the configuration parameters.

Some parameter values can be reused from the V2.3 BJT@PRED, some can be copied from the V3.1 BJT@PRED, and some require new values. The **Source** column of the following table indicates where you can copy the value from (if applicable).

Parameter	Source	Notes
?SAMPHLQ?	(New)	Specify the high-level-qualifier of this newly copied version of SBJTSAMP. For example, HLQ.OLDDB.
?BJTHLQ?	V3.1 BJT@PRED	The high-level qualifier of the <i>new</i> Output Manager V3R1 product libraries.
?ACCT?	V3.1 BJT@PRED	Optional parameter for setting up JOB cards.
?PROGRAMMER NAME?	V3.1 BJT@PRED	Optional parameter for setting up JOB cards.
?JOBCLASS?	V3.1 BJT@PRED	Optional parameter for setting up JOB cards.
?MSGCLASS?	V3.1 BJT@PRED	Optional parameter for setting up JOB cards.



Table 20. BJT@PRE2 configuration parameters (continued)		
Parameter	Source	Notes
?SDSNEXIT?	V2.3 BJT@PRED	?SDSNEXIT? is the EXIT library for your Db2 subsystem. Specify the value for your source/current Output Manager database.
?SDSNLOAD?	V2.3 BJT@PRED	?SDSNLOAD? is the Db2 LOAD library for your Db2 subsystem. Specify the value for your source/current Output Manager database.
?RUNLIB?	V2.3 BJT@PRED	?RUNLIB? is the Db2 RUN library. Specify the value for your source/current Output Manager database.
?TEPPLAN?	V2.3 BJT@PRED	?TEPPLAN? is the plan name for the DSNTEP2 program. Specify the value for your source/current Output Manager database.
?PLANOWNER?	V3.1 BJT@PRED	Specify the authorization ID of the owner for the plans and packages. If your site has no specific security requirements for the Output Manager database and plans, set this to the user ID that submits the jobs to BIND the packages and plans.
?OWNER?	V3.1 BJT@PRED	Specify the authorization ID of the owner of the new Output Manager database. If your site has no specific security requirements for the database, set this to the user ID that submits the job to create the database.
?DB2SSID?	V2.3 BJT@PRED	Specify values of your source (current, such as V2R3) Output Manager database.
?BJTBASE?	V2.3 BJT@PRED	Specify values of your source (current, such as V2R3) Output Manager database.
?BJTQUAL?	V2.3 BJT@PRED	Specify values of your source (current, such as V2R3) Output Manager database.
?BJTPLAN?	V2.3 BJT@PRED	The ?BJTPLAN? value in <i>HLQ.OLDDDB</i> must be different than the value used in your source/current Output Manager installation. The recommended value for this step is BJTPLN2.
?BJTCOL?	V2.3 BJT@PRED	The ?BJTCOL? value in <i>HLQ.OLDDDB</i> must be different than the value used in your source/current Output Manager. The recommended value for this step is BJTCOL2.
?UNLDDACL?	(New)	Specify the unload dataclass for your unload data sets.
?UNLDHLQ?	(New)	Specify the unload high-level qualifier for your unload data sets.
CHANGE DATACLAS	(New)	This parameter is commented out by default. If your site has a dataclass requirement for this job, remove the comment characters (--) and specify a dataclass. If your site does not have a dataclass requirement, you can leave the comment characters as-is.
?NEWBASE?	V3.1 BJT@PRED	Specify values for the <i>new</i> Output Manager V3R1 database to be created.

Table 20. BJT@PRE2 configuration parameters (continued)		
Parameter	Source	Notes
?NEWQUAL?	V3.1 BJT@PRED	Specify values for the <i>new</i> Output Manager V3R1 database to be created.
?BJTHLQ?	V3.1 BJT@PRED	(This variable must be specified in two locations in BJT@PRE2.) Specify the high-level qualifier of the <i>new</i> Output Manager V3R1 product libraries.

- Submit *HLQ.OLDDDB.SBJTSAMP (BJT@JCE2)*. BJT@JCE2 automatically modifies all of the members of the specified SBJTSAMP library according to the values specified in BJT@PRE2.

## Modify an additional copy of SBJTSAMP to create the Output Manager V3R1 database

In this step, you copy specific members from the SBJTSAMP that was provided with the installation into a separate HLQ, and then modify and submit members BJT@PRE3 and BJT@JCE3 to specify configuration values for the new Output Manager V3R1 database.

- Copy BJT@CPY3 from your SMP/E install library to a separate JCL library.
- Modify the copy of BJT@CPY3 to specify a new location for the new Output Manager V3R1 libraries:
  - ?BJTHLQ?**: The high-level qualifier of the new Output Manager V3R1 product libraries. This high-level qualifier was specified during the installation process, as documented in the *Program Directory for Tivoli Output Manager for z/OS*.
  - ?SAMPHLQ?**: Specify a high-level qualifier for the copy of specific members in SBJTSAMP. In the following examples, the value *HLQ.BJT@310* is used.

**Note:** This version of SBJTSAMP will be used to create the new Output Manager V3R1 database, and should not be in the same high-level qualifier as your existing Output Manager installation, nor in the same high-level qualifier as the SBJTSAMP created in the previous step (*HLQ.OLDDB*).

- Submit the copy of BJT@CPY3.  
BJT@CPY3 creates a copy of the members of SBJTSAMP required to load the new Output Manager database for V3R1.
- Modify *HLQ.BJT@310.SBJTSAMP (BJT@JCE3)*. Follow instructions within the member and specify the following configuration parameters:
  - ?BJTHLQ?**: The high-level qualifier of the *new* Output Manager V3R1 product libraries.
  - ?SAMPHLQ?**: Specify the high level qualifier for the new *HLQ.BJT@310.SBJTSAMP* library.

**Important:** Never run BJT@JCE3 against your SMPE applied library.

- Modify <JOB PARAMETERS> on the job card.
- Modify *HLQ.BJT@310.SBJTSAMP (BJT@PRE3)* to specify the following configuration parameters

Some parameter values can be reused from the V3.1 BJT@PRED, some can be copied from the V3.1 BJT@PRE2, and some require new values. The **Source** column of the following table indicates where you can copy the value from (if applicable).

Table 21. BJT@PRE3 configuration parameters		
Parameter	Source	Notes
?SAMPHLQ?	(New)	Specify the high-level-qualifier of this version of SBJTSAMP. For example, <i>HLQ.BJT@310</i> . This is the location where you are building the jobs to complete the migration steps.
?BJTHLQ?	V3.1 BJT@PRED	Specify the high-level qualifier of the <i>new</i> Output Manager V3R1 product libraries.

Table 21. BJT@PRE3 configuration parameters (continued)		
Parameter	Source	Notes
?ACCT?	V3.1 BJT@PRED	Optional parameter for setting up JOB cards.
?PROGRAMMER NAME?	V3.1 BJT@PRED	Optional parameter for setting up JOB cards.
?JOBCLASS?	V3.1 BJT@PRED	Optional parameter for setting up JOB cards.
?MSGCLASS?	V3.1 BJT@PRED	Optional parameter for setting up JOB cards.
?SDSNEXIT?	V3.1 BJT@PRED	?SDSNEXIT? is the EXIT library for your Db2 subsystem. Specify values for your <i>new</i> Output Manager database.
?SDSNLOAD?	V3.1 BJT@PRED	?SDSNLOAD? is the Db2 LOAD library for your Db2 subsystem. Specify values for your <i>new</i> Output Manager database.
?RUNLIB?	V3.1 BJT@PRED	?RUNLIB? is the Db2 RUN library. Specify values for your <i>new</i> Output Manager database.
?TEPPLAN?	V3.1 BJT@PRED	?TEPPLAN? is the plan name for the DSNTEP2 program. Specify values for your <i>new</i> Output Manager database.
?PLANOWNER?	V3.1 BJT@PRED	Specify the authorization ID of the owner for the plans and packages. If your site has no specific security requirements for the Output Manager database and plans, set this to the user ID that submits the jobs to BIND the packages and plans.
?OWNER?	V3.1 BJT@PRED	Specify the authorization ID of the owner of the new Output Manager database. If your site has no specific security requirements for the database, set this to the user ID that submits the job to create the database.
?DB2SSID?	V3.1 BJT@PRED	Specify values of your <i>new</i> Output Manager database.
?BJTBASE?	V3.1 BJT@PRED	Specify values of your <i>new</i> Output Manager database.
?BJTQUAL?	V3.1 BJT@PRED	Specify values of your <i>new</i> Output Manager database.
?BJTPLAN?	V3.1 BJT@PRED	The ?BJTPLAN? value in <i>HLQ.OLDDDB</i> must be different than the value that you specified for ?BJTPLAN? in the <i>HLQ.OLDDDB</i> version. The recommended value for this step is BJTPLN3.
?BJTCOL?	V3.1 BJT@PRED	The ?BJTCOL? value in <i>HLQ.OLDDDB</i> must be different than the value that you specified for ?BJTCOL? in the <i>HLQ.OLDDDB</i> version. The recommended value for this step is BJTCOL3.
CHANGE DATACLAS	(New)	This parameter is commented out by default. If your site has a dataclass requirement for this job, remove the comment characters (--) and specify a dataclass. If your site does not have a dataclass requirement, you can leave the comment characters as-is.
?REORGLHQL?	(New)	The high level qualifier that is used to allocate work data sets used by the Db2 REORG utility.
?COPYHLQL?	(New)	The high level qualifier that is used to allocate image copies for the tablespaces.. The name must be 9 characters or less.

Table 21. BJT@PRE3 configuration parameters (continued)		
Parameter	Source	Notes
?UNLDDACL?	V3.1 BJT@PRE2	Specify the same dataclass for the unload data sets that was specified in <i>HLQ.OLDDDB.SBJTSAMP(BJT@JCE2)</i>
?UNLDHLQ?	V3.1 BJT@PRE2	Specify the same high-level qualifier for the unload data sets that was specified in <i>HLQ.OLDDDB.SBJTSAMP(BJT@JCE2)</i>
?NEWBASE?	V3.1 BJT@PRE2	Specify values for the <i>new</i> Output Manager V3R1 database to be created.
?NEWQUAL?	V3.1 BJT@PRE2	Specify values for the <i>new</i> Output Manager V3R1 database to be created.
?BJTADMIN?	V3.1 BJT@PRED	For this security configuration variable, specify the user ID or group of the Output Manager administrator.
?PRSET_DSN?	(New)	The DSN of the library containing the PRSET members used for printing.
?BJTHLQ?	V3.1 BJT@PRED	(This variable must be specified in two locations in BJT@PRE3.) Specify the high-level qualifier of the <i>new</i> Output Manager V3R1 product libraries. This high-level qualifier was specified during the installation process, as documented in the <i>Program Directory for Tivoli Output Manager for z/OS</i> .

7. If your site security policies require privileges to be defined for each user, make the following edits to these members in *HLQ.BJT@310.SBJTSAMP*:
  - In BJT@JCLO, uncomment and edit the set of GRANTS in the SYSIN DD for the APPLY step.
  - In BJT@JCLD, uncomment the DD statement for BJT@TBGR in the SYSIN DD for the CREATE step
8. Submit *HLQ.BJT@310.SBJTSAMP(BJT@JCE3)*. BJT@JCE3 automatically modifies all of the members of the specified SBJTSAMP library according to the values specified in BJT@PRE3.

## Specify initial configuration parameters in BJTCNVPM

For a migration, BJTCNVPM updates the configuration table using your original configuration members (BJT#IN03 and BJT#IN05). If you are using ITOMWeb, you can also import the settings from *omweb.conf*.

1. Modify SBJTSAMP member BJTCNVPM to specify configuration parameters. BJTCNVPM contains modification instructions in the comments.
2. Submit SBJTSAMP member BJTCNVPM
3. After you have run BJTCNVPM, several of the options for the web server might need to be changed to match your V3R1 environment. Once you are able to start the ISPF session, go to A.PA Policy Administration and review the values in Subsystem = \*, Type = ITOMWeb. If these are not correct for your migration, update the values to reference your V3R1 libraries and member names:
  - WEB\_ROOT
  - AFP\_PROC\_PDS
  - AFP\_PROC\_MEMBER
  - RECALL\_PDS
  - RECALL\_MEMBER
  - REPORT\_DEF\_FILE

### What to do next

If you are ready to move the database migration to production, there are additional steps to complete the environment setup. Continue to [“Complete Output Manager customization after migrating your existing data”](#) on page 125 and [“Impactful differences between Output Manger V3R1 and previous versions of Output Manger”](#) on page 127. Note that security in Output Manager V3R1 is updated, so it is important to follow the procedures in [Chapter 4, “Security,”](#) on page 77 section for configuring Output Manager V3R1.

## Submit SBJTSAMP members to reformat the copy of your current database

SBJTSAMP members that were configured in the previous steps are submitted to unload the old database, load the new copy of the database, and then reformat the new Output Manager V3R1 tables.

**Note:** The SBJTLOAD and SBJTLPA libraries must be APF-authorized before submitting these jobs.

1. In *HLQ.OLDDB.SBJTSAMP*, submit these jobs in the following order (note that each job must complete successfully before submitting the next job in the sequence):
  - a. If required by your Db2 site security policies, submit BJT@JCGU to grant CREATE on the collections created by running BJT@JCBU.
  - b. BJT@JCBU (binds utility plans), must end in RC = 0.
  - c. BJT@JCUO (unload the old database). All steps must end with RC = 0, with the exception of RSSPACE, which can end in RC = 4. Steps RSSTERM and UNLDTERM should FLUSH.

**Note:** If this is a trial run of the migration, change ACCESS(RO) to ACCESS(RW) in step DBRW so that you can continue to capture sysouts in the original database. When you are ready to switch to V3R1 for production, make sure the current database is set to RO (read only).
  - d. Submit BJT@JCFO to free the plans created by BJT@JCBU. These plans are only needed to run BJT@JCUO.
2. In *HLQ.BJT@310.SBJTSAMP*, submit these jobs in the following order (note that each job must complete successfully before submitting the next job in the sequence):
  - a. BJT@JCLO (loads the new database, and applies updates to convert the data to a state where it can be loaded into the V3R1 database.) The JOBLIB contains a commented DD card for the SBJTLPA library. Uncomment the DD card if the Output Manager LPA modules were not added to the LPA. All steps must end with RC = 0, with the exception of LOAD, RSSPACE, and SQNMx, which can end in RC = 4. Steps LOADTERM and RSSTERM should FLUSH.

**Tip:** If you encounter errors when running BJT@JCLO, you need to run BJT@JCDO before you can re-run BJT@JCLO. BJT@JCDO drops the database that was created by running BJT@JCLO.
  - b. BJT@JCUL (unloads the altered database built by BJT@JCLO). All steps must end with RC = 0, with the exception of RSSPACE, which can end in RC = 4. Steps RSSTERM and UNLDTERM should FLUSH.
  - c. BJT@JCDR (drops the database), must end in RC = 0.
  - d. BJT@JCLD (reloads all of the current database data into the new database, using the V3R1 database object definitions). All steps must end with RC = 0, with the exception of step LOAD, which can end in RC = 4. Steps LOADTERM, COPYTERM, and REORGTRM should FLUSH.

**Tip:** If you encounter errors when running BJT@JCLD, you need to run BJT@JCDR before you can re-run BJT@JCLD. BJT@JCDR drops the database that was created by running BJT@JCLD.

The database migration is complete. If this was a trial run. all of the jobs can be run again to capture a new copy of the original database and reformat the data for V3R1.

## Complete Output Manager customization after migrating your existing data

When you are ready to promote your migrated database to production, complete the following migration tasks.

1. Proceed with customizing Output Manager, as described in [Chapter 3, “Customizing Output Manager,”](#) on page 19, but skip the step titled "Run the job to create the Output Manager database". The following table is an overview of the customization steps for migration that need to be completed after migrating the database::

<i>Table 22. Overview of steps for customizing Output Manager after migrating an existing Output Manager database</i>	
<b>Step</b>	<b>Description</b>
1	<a href="#">“APF-authorize the load library and LPA library” on page 27</a>
2	<a href="#">“Enable DFSMSshm and ISV recall processing ” on page 27</a>
3	<a href="#">“Modify the started task JCL” on page 27</a>
4	<a href="#">“Authorize the started task” on page 28</a>
5	<a href="#">“Define RACF classes and profiles with BJT#RDEF and BJT#RPER” on page 28</a>
6	<a href="#">“Create access to the Output Manager interface ” on page 29</a>
7	<a href="#">“Make Output Manager modules available ” on page 29</a>
8	<a href="#">“Update your TSO configuration” on page 30</a>
9	<a href="#">“Start the started task and verify the ISPF installation ” on page 30</a>
10	<a href="#">“Specify configuration parameters from the Output Manager ISPF interface” on page 31</a>

2. If you are keeping the V3R1 members separate from the original jobs (as recommended), you must modify PRINT\_PDS. BJTCNVPM sets PRINT\_PDS using the value assigned to JCCLIB in the old BJT#IN03 member.
3. Complete the security setup, as described in the [Chapter 4, “Security,” on page 77](#) chapter.
4. Verify the new installation (for example, by accessing the ISPF interface).
5. Convert the bundle jobs.
  - a) Follow the instructions in [“Convert your existing Output Manager bundle print jobs” on page 126](#).
  - b) Test the result of BJT@BUNJ by reprinting a bundle or part of a bundle; one recipient out of many, or just one or two reports for one recipient.
6. If you have a recall selector defined, check to make sure it matches the SELC, and SELD parameters of HLQ.BJT@310.SBJTSAMP member BJT@PRV.

## **Convert your existing Output Manager bundle print jobs**

SBJTSAMP member BJT@BUNJ is provided to assist you in converting your existing Output Manager bundle print jobs and reformat them into the new Output Manager V3R1 format.

The SBJTLPA library of this job is commented out in the STEPLIB. If SBJTLPA is not in the Dynamic Linklist, you must remove comment characters and you must verify that the SBJTLPA library is APF authorized. Additionally, uncomment the SBJTLPA DD card in the two templates, BJT@PBN1 and BJT@PBN2.

Submit BJT@BUNJ using the SBJTSAMP that was created by BJT@CPYU.

When BJT@BUNJ is submitted, it looks through INPDS for each PRINTJ member name listed in the BJT@BUN bundles table in the Output Manager database. If the member is found, it is converted to the new Output Manager V3R1 format and written to OUTPDS.

If a member name is not found, an RC=4, error message is printed. An error message will be printed for every job that was not converted.

INPDS disp=shr

OUTPDS disp=old

## Impactful differences between Output Manger V3R1 and previous versions of Output Manger

---

The following changes implemented in Output Manager V3R1 require action.

- Output Manager V3R1 includes a new Catsync program and JCL. Stop running the old version. Catsync is now protected by a RACF profile, ensure that it is included in your security settings.
- You no longer need to cleanup old rows in the activity table. Stop running the old job that deleted rows from BJTACT. In previous releases, SBJTSAMP contained JCL member BJT@JCAC that processed the SQL DELETE statement in member BJT@PRAC
- If you use bundle printing, update the job that you run to delete old bundle history to use the V3R1 version of SBJTSAMP(BJT@BNCL).
- There is a new ISPF exec. Replace your old exec with an edited copy of BJTUI.
- The V3R1 web server is a complete replacement of the previous web server. Follow the instructions in [“Installing an instance of the IBM HTTP Server and configuring it for use with Output Manager” on page 34](#) for installing the V3R1 web server. Do not use the old web server with the V3R1 database.
- The recall JCL has changed for HSM and third party archives. Follow the instructions on [“ISV recall installation and customization” on page 44](#) for setting up the recall procs in V3R1. Do not use the old recall jobs with the V3R1 database.

### Related concepts

[Migration overview](#)

Migration from a previous version of Output Manager involves the following tasks:

[Legacy security model emulation](#)

*(Not recommended)* Although it is not recommended, users who want to maintain the security models they have implemented in previous versions of Output Manager can do so with the following emulations:

## Legacy security model emulation

---

*(Not recommended)* Although it is not recommended, users who want to maintain the security models they have implemented in previous versions of Output Manager can do so with the following emulations:

- The security model “NONE (PROTVIEW OFF)” can be recreated by creating a RACF profile in the appropriate class of the form BJT.DB\_QUALIFIER.\*\* UACC(ALTER) for an instance of Output Manager.
- The security model “PROTVIEW USER” can be recreated by giving READ access to the report profiles.
  - BJT.DB\_QUALIFIER.VIEW.RPRT: allows users to search for reports.
  - BJT.DB\_QUALIFIER.RPRT.\*: allows users to read reports.
- The “AUDIT” and “ADMIN” PROTVIEW values have been replaced with access levels specified at the individual administrative object level.

### Related concepts

[Migration overview](#)

Migration from a previous version of Output Manager involves the following tasks:

[Impactful differences between Output Manger V3R1 and previous versions of Output Manger](#)

The following changes implemented in Output Manager V3R1 require action.





## Chapter 8. Reference

Reference information supports the tasks that you must complete to install, customize, and use Output Manager.

### Output Manager Messages

This section describes the messages that Output Manager generates in the following order:

- **Started task and program messages:** The messages from the Output Manager started task and programs have message numbers that use the format *BJTnnnnn*, where *nnnnn* is a number.
- **ISPF interface messages:** The messages from the Output Manager ISPF interface have message numbers that use the format *BJTMnnnl*, where *nnn* is a number and *l* is a letter.
- **Universal Batch Utility messages:** The messages from the Output Manager Universal Batch Utility have message numbers that use the format *BJTUnnnl*, where *nnn* is a number and *l* is a letter.
- **BJTBATCH messages:** The messages from the Output Manager BJTBATCH program have message numbers that use the format *BJTPnnnl*, where *nnn* is a number and *l* is a letter.
- **Common messages:** The messages from common components, such as the SORT function, have message numbers that use the format *BJTnnn*, where *nnn* is a number.

In all messages, variables are shown in *italics*. Some messages end with one of the following severity codes:

Severity Code	Description
I	Informational message. No error occurred, and no user action is required. The message is informational only.
W	Warning message. No error occurred but results might not be as expected or incomplete.
E	Error message. Some errors can be corrected by users, for example, by changing the JCL change or a parameter. The User Response provides the suggested course of action. Output may not have been generated.
S	Severe error message. A severe syntax, internal, or environmental error occurred. The User Response provides the suggested course of action. Users may need to call IBM Software Support for assistance in resolving these errors.

Command and response messages are recorded in the started task DDname SYSPRINT.

**BJT1102E** TPL requires Metal/C, which requires z/OS 1.9 or higher.

#### Explanation

Current operating system level does not support the Text Processing Language (TPL) feature of Output Manager. If you plan to use TPL rules, you must install Metal/C, which requires z/OS 1.9 or higher. If you do not plan to use TPL rules, you can ignore this message.

#### System action

TPL processing is disabled.

#### User response

None required.

**BJT01001I** Product(*product\_name*) is already running

## Explanation

This message is informational only.

## User response

No action is required.

## Module

BJTSTART

---

**BJT01002I**      **Name Token retrieve failed,**  
**rc=return\_code**

## Explanation

A problem occurred during product startup.

## User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

## Module

BJTSTART

---

**BJT01006I**      **Unable to create name token,**  
**rc=return\_code**

## Explanation

A problem occurred during product startup.

## User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

## Module

BJTSTART

---

**BJT01007I**      **Product parm block acquired**  
**at(location)**

## Explanation

This message is informational only.

## User response

No action is required.

## Module

BJTSTART

---

**BJT01008I**      **Unable to obtain storage for**  
**product block, rc=return\_code**

## Explanation

A problem occurred during product startup.

## User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

## Module

BJTSTART

---

**BJT01011I**      **Unable to obtain storage for**  
**initialize WS, rc=return\_code**

## Explanation

A problem occurred during product startup.

## User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

## Module

BJTSTART

---

**BJT01012I**      **Attach of initializer subtask failed,**  
**rc=return\_code**

## Explanation

A problem occurred during product startup.

## User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

## Module

BJTSTART

---

**BJT01014I**      **Product High Availability INIT**  
**Success**

## Explanation

This message is informational only.

## User response

No action is required.

## Module

BJTSTART

---

**BJT01015I**      **Product High Availability INIT  
Failed, rc=\*\*\*\*\*,rs=\*\*\*\*\***

## Explanation

A problem occurred during product High Availability startup.

## User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

## Module

BJTSTART

---

**BJT01016I**      **Product High Availability Wait  
Failed**

## Explanation

A problem occurred during product High Availability startup.

## User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

## Module

BJTSTART

---

**BJT02001I**      **No plist passed to BJTSINIT**

## Explanation

A problem that is associated with product initialization occurred.

## User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

## Module

BJTSINIT

---

**BJT02002I**      **No PARMs in plist passed to  
BJTSINIT**

## Explanation

A problem that is associated with product initialization occurred.

## User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

## Module

BJTSINIT

---

**BJT02003I**      **No INIW block passed to  
BJTSINIT**

## Explanation

A problem that is associated with product initialization occurred.

## User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

## Module

BJTSINIT

---

**BJT02004I**      **Bad INIW block passed to  
BJTSINIT**

## Explanation

A problem that is associated with product initialization occurred.

## User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

## Module

BJTSINIT

---

**BJT02005I**      **No PROD block passed to  
BJTSINIT**

## Explanation

A problem that is associated with product initialization occurred.

## User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

## Module

BJTSINIT

---

<b>BJT02006I</b>	<b>Bad PROD block passed to BJTSINIT</b>
------------------	--

## Explanation

A problem that is associated with product initialization occurred.

## User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

## Module

BJTSINIT

---

<b>BJT02007I</b>	<b>Unable to acquire private storage, rc=return_code</b>
------------------	--

## Explanation

A problem that is associated with product initialization occurred.

## User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

## Module

BJTSINIT

---

<b>BJT02008I</b>	<b>Unable to open report file, rc=return_code</b>
------------------	---

## Explanation

A problem that is associated with product initialization occurred.

## User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

## Module

BJTSINIT

---

<b>BJT02009I</b>	<b>Function table is corrupted a(*****)</b>
------------------	---

## Explanation

A problem that is associated with product initialization occurred.

## User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

## Module

BJTSINIT

---

<b>BJT02010I</b>	<b>Product block located at <i>location</i></b>
------------------	---

## Explanation

This message is informational only.

## User response

No action is required.

## Module

BJTSINIT

---

<b>BJT02011I</b>	<b>Unable to format dataspace, rc=return_code, rs=reason_code</b>
------------------	---

## Explanation

A problem that is associated with product initialization occurred.

## User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

## Module

BJTSINIT

---

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

**Explanation**

Output Manager product startup is complete.

**User response**

No action is required.

**Module**

BJTSINIT

---

**BJT02013I**      **Shutdown process is beginning**

**Explanation**

Output Manager is in the process of shutting down.

**User response**

No action is required.

**Module**

BJTSINIT

---

**BJT02014I**      **Service subtasks being terminated**

**Explanation**

Output Manager is in the process of shutting down.

**User response**

No action is required.

**Module**

BJTSINIT

---

**BJT02015I**      **Subtask manager acknowledges shutdown request**

**Explanation**

Output Manager is in the process of shutting down.

**User response**

No action is required.

**Module**

BJTSINIT

---

**BJT02016I**      **Service subtasks termination complete**

**Explanation**

Output Manager is in the process of shutting down.

**User response**

No action is required.

**Module**

BJTSINIT

---

**BJT02017I**      **ETDIS failed rc=return\_code**

**Explanation**

A problem that is associated with product initialization occurred.

**User response**

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

**Module**

BJTSINIT

---

**BJT02018I**      **ETDES failed rc=return\_code**

**Explanation**

A problem that is associated with product initialization occurred.

**User response**

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

**Module**

BJTSINIT

---

**BJT02019I**      **Starting Module Residency Initialization**

**Explanation**

Output Manager is in the process of starting.

**User response**

No action is required.

**Module**

BJTSINIT

---

**BJT02020I**      **Resource Manager Stub has bad footprint, a=\*\*\*\*\***

### Explanation

A problem that is associated with product initialization occurred.

### User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

### Module

BJTSINIT

### Explanation

A problem that is associated with product initialization occurred.

### User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

### Module

BJTSINIT

---

**BJT02021I**      **Can not obtain storage for resmgr, rc=return\_code**

### Explanation

A problem that is associated with product initialization occurred.

### User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

### Module

BJTSINIT

---

**BJT02028I**      **Unable to obtain function block storage rc=(return\_code)**

### Explanation

A problem that is associated with product initialization occurred.

### User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

### Module

BJTSINIT

---

**BJT02022I**      **RESMGR ADD for \*\*\*\* failed rc=return\_code**

### Explanation

A problem that is associated with product initialization occurred.

### User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

### Module

BJTSINIT

---

**BJT02029I**      **Function block obtained at A(\*\*\*\*\*)**

### Explanation

This message is informational only.

### User response

No action is required.

### Module

BJTSINIT

---

**BJT02023I**      **RESMGR DELETE for \*\*\*\* failed rc=return\_code**

---

**BJT02033I**      **Error loading module *module*, rc=return\_code**

### Explanation

A problem that is associated with product initialization occurred.

## User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

## Module

BJTSINIT

---

**BJT02034I**      **Error loading module *module*,  
rc=*return\_code*, rs=*reason\_code***

## Explanation

A problem that is associated with product initialization occurred.

## User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

## Module

BJTSINIT

---

**BJT02038I**      **Starting configuration file  
processing**

## Explanation

Output Manager has begun processing the contents of the CONFIGUR DD in the started task JCL as part of started task startup.

## User response

No action is required.

## Module

BJTSINIT

---

**BJT02039I**      **DD(*ddname*) is not present in JCL,  
can not process configuration file**

## Explanation

The JCL in the PROC for starting the Output Manager started task contains an error. As a result, the configuration information that is specified by the CONFIGUR DD cannot be processed.

## User response

Notify your report administrator or systems administrator about the problem.

## Module

BJTSINIT

---

**BJT02040I**      **Unable to obtain storage for  
configuration file, rc=*return\_code***

## Explanation

A problem that is associated with product initialization occurred.

## User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

## Module

BJTSINIT

---

**BJT02041I**      **Unable to open configuration file**

## Explanation

A problem that is associated with product initialization occurred.

## User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

## Module

BJTSINIT

---

**BJT02043I**      **Allocation of ABEND table failed  
rc=*return\_code***

## Explanation

A problem that is associated with product initialization occurred.

## User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

## Module

BJTSINIT

---

**BJT02044I**      **Product diagnostic  
token=*token\_value***

## Explanation

This message is informational only.

## User response

No action is required.

## Module

BJTSINIT

---

**BJT02045I**      **Db2 critical resource is unavailable**

## Explanation

Db2 is running, but a Db2 resource that Output Manager requires is unavailable. For example, a table might be unavailable for updating because it is in RO (read only) mode. As a result, the Output Manager started task will shut down in a controlled manner.

## User response

Correct the situation that is preventing access to the required Db2 resource, and then restart the Output Manager started task.

## Module

BJTSINIT

---

**BJT02046I**      **Db2 connection failure detected**

## Explanation

While Output Manager was running, its connection to the Db2 subsystem that contains its database was lost. As a result, Output Manager terminates any active selector tasks and shuts down in a controlled manner. No report SYSOUT that is on the JES spool will be lost.

## User response

Restart the Db2 subsystem, if necessary. Then, restart the Output Manager started task.

## Module

BJTSINIT

---

**BJT02047I**      **Db2 subsystem outage detected**

## Explanation

Db2 was not running when the Output Manager started task started, or Db2 terminated unexpectedly while Output Manager was running. As a result, Output

Manager will shut down in a controlled manner. No report SYSOUT that is on the JES spool will be lost.

## User response

Start Db2, and then restart the Output Manager started task. Output Manager will then activate the selector tasks and archive the report SYSOUT.

## Module

BJTSINIT

---

**BJT02049I**      **SQL error code detected = *sql\_code***

## Explanation

A database error occurred that prevented normal product processing from continuing. The Output Manager started task has shut down. This message provides the SQL error code that was issued.

## User response

Provide the text of this message, including the SQL error code, to your Db2 systems administrator for diagnostic use.

## Module

BJTSINIT

---

**BJT02050S**      **Command processor abended**

## Explanation

The Output Manager command that was issued terminated abnormally.

## User response

Contact your report administrator or systems administrator.

## Module

BJTSINIT

---

**BJT02051E**      **Command processor failed**

## Explanation

The Output Manager command that was issued completed with a non-zero return code.

## User response

Contact your systems administrator to investigate the problem.



## Module

BJTSINIT

---

**BJT02052I** Starting file processing for preconfiguration

## Explanation

Output Manager has begun processing the contents of the configuration file that is specified by the PRECONFG DD in the started task JCL. This "preconfiguration" processing occurs early in the startup of the started task.

## User response

No action is required.

## Module

BJTSINIT

---

**BJT02053I** DD(*ddname*) is not present in JCL, can not process preconfiguration file

## Explanation

The PROC for starting the Output Manager started task does not contain the required PRECONFG DD statement. As a result, the configuration file that is specified by the PRECONFG DD cannot be processed.

## User response

Add the PRECONFG DD statement to the started task JCL. This DD specifies the preconfiguration file that contains the startup commands to be processed early in the startup of the started task. Although the PRECONFG DD is required and must specify the preconfiguration file (BJT#IN05 by default), the commands in the preconfiguration file are optional and can be commented out.

## Module

BJTSINIT

---

**BJT02054I** Unable to obtain storage for preconfiguration file, rc=*return\_code*

## Explanation

Sufficient storage cannot be obtained for the started task preconfiguration file probably because the Output Manager region does not have enough virtual memory.

## User response

Try increasing the storage for the preconfiguration file.

## Module

BJTSINIT

---

**BJT02055I** Unable to open preconfiguration file

## Explanation

The preconfiguration file that is specified by the PRECONFG DD in the started task JCL cannot be opened because it is either missing or improperly configured.

## User response

Ensure that the PRECONFG DD in the started task JCL is correctly specified.

## Module

BJTSINIT

---

**BJT02056I** Primary JES subsystem is active: JES2

## Explanation

At product startup, JES2 has been detected as the primary job entry subsystem.

## User response

No action is required.

## Module

BJTSINIT

---

**BJT02057I** Primary JES subsystem is active: JES3

## Explanation

At product startup, JES3 has been detected as the primary job entry subsystem.

## User response

No action is required.

## Module

BJTSINIT

---

**BJT02058I** Allocation of TKAN failed  
rc=\*\*\*\*\*

### Explanation

At product startup, the allocation of the TKANBLOK data area failed. As a result, the report access identity security feature (implemented through SET REPACC and SET REPACCID) will be unavailable for use.

### User response

Contact your systems programmer.

### Module

BJTSINIT

---

**BJT02059I** ITOM Started  
task USER=\*\*\*\*\*  
GROUP=\*\*\*\*\*

### Explanation

This message is informational only, and issued at product start up. It indicates the user id and group that the ITOM started task is using.

### User response

No action is required.

### Module

BJTSINIT

---

**BJT03001E** No command entered

### Explanation

This message is informational only.

### User response

No action is required.

### Module

BJTRCMDS

---

**BJT03002E** Command *command\_name* is not a  
valid command

### Explanation

An invalid command was specified.

### User response

Specify a valid command.

### Module

BJTRCMDS

---

**BJT03003I** Command received: *command*

### Explanation

This message is informational only.

### User response

No action is required.

### Module

BJTRCMDS

---

**BJT03004I** Trace functionality has not been  
initialized

### Explanation

This message is informational only.

### User response

No action is required.

### Module

BJTRCMDS

---

**BJT03005E** Trace control block is corrupted  
*a(location)*

### Explanation

This message indicates a problem with the product's internal trace routines.

### User response

No action is required if the product is otherwise operating normally.

### Module

BJTRCMDS

---

**BJT03006I** Trace table has not yet been  
acquired

## Explanation

This message indicates a problem with the product's internal trace routines.

## User response

No action is required if the product is otherwise operating normally.

## Module

BJTRCMDS

---

**BJT03007I** Trace table exists at(*location*) for a length of *nnnnnnnn*

## Explanation

This message is informational only.

## User response

No action is required.

## Module

BJTRCMDS

---

**BJT03008I** Tracing is currently *status*

## Explanation

This message is informational only.

## User response

No action is required.

## Module

BJTRCMDS

---

**BJT03009I** A trace table is pending deletion *a(\*\*\*\*\*)*

## Explanation

This message indicates a problem with the product's internal trace routines.

## User response

No action is required if the product is otherwise operating normally.

## Module

BJTRCMDS

---

**BJT03010I** A prior trace table delete is pending, enter the TRACECOMMIT command, *a(\*\*\*\*\*)*

## Explanation

This message indicates a problem with the product's internal trace routines.

## User response

No action is required if the product is otherwise operating normally.

## Module

BJTRCMDS

---

**BJT03011E** Trace table must be greater than zero and less than 64K, requested=*amount*

## Explanation

This message indicates a problem with the product's internal trace routines.

## User response

No action is required.

## Module

BJTRCMDS

---

**BJT03012E** Storage obtain failed for trace table, *rc-return\_code*

## Explanation

This message indicates a problem with the product's internal trace routines.

## User response

No action is required if the product is otherwise operating normally.

## Module

BJTRCMDS

---

**BJT03013E** Trace table has been corrupted, *a(\*\*\*\*\*)*

## Explanation

This message indicates a problem with the product's internal trace routines.

## User response

No action is required if the product is otherwise operating normally.

## Module

BJTRCMDS

---

**BJT03014I** Trace table exists at(*location*) for a length of *nnnnnnnn*

## Explanation

This message is informational only.

## User response

No action is required.

## Module

BJTRCMDS

---

**BJT03015E** Trace control does not currently exist

## Explanation

This message indicates a problem with the product's internal trace routines.

## User response

No action is required if the product is otherwise operating normally.

## Module

BJTRCMDS

---

**BJT03016E** Trace control has been corrupted

## Explanation

This message indicates a problem with the product's internal trace routines.

## User response

No action is required if the product is otherwise operating normally.

## Module

BJTRCMDS

---

**BJT03017I** A prior trace table delete is pending, enter the TRACE COMMIT command, a(*\*\*\*\*\**)

## Explanation

This message indicates a problem with the product's internal trace routines.

## User response

No action is required if the product is otherwise operating normally.

## Module

BJTRCMDS

---

**BJT03018I** Trace table is ready for deletion, enter the TRACE COMMIT command, a(*\*\*\*\*\**)

## Explanation

This message indicates a problem with the product's internal trace routines.

## User response

No action is required if the product is otherwise operating normally.

## Module

BJTRCMDS

---

**BJT03019E** Trace control does not currently exist

## Explanation

This message indicates a problem with the product's internal trace routines.

## User response

No action is required if the product is otherwise operating normally.

## Module

BJTRCMDS

---

**BJT03020E** Trace control has been corrupted

## Explanation

This message indicates a problem with the product's internal trace routines.

## User response

No action is required if the product is otherwise operating normally.

## Module

BJTRCMDS

---

**BJT03021E      No trace table is pending delete**

## Explanation

This message indicates a problem with the product's internal trace routines.

## User response

No action is required if the product is otherwise operating normally.

## Module

BJTRCMDS

---

**BJT03022E      Trace table has been corrupted  
a(\*\*\*\*\*)**

## Explanation

This message indicates a problem with the product's internal trace routines.

## User response

No action is required if the product is otherwise operating normally.

## Module

BJTRCMDS

---

**BJT03023I      Trace table at(*location*) of  
len(*length*) has been freed**

## Explanation

This message indicates a problem with the product's internal trace routines.

## User response

No action is required if the product is otherwise operating normally.

## Module

BJTRCMDS

---

**BJT03024E      Trace control does not currently  
exist**

## Explanation

This message indicates a problem with the product's internal trace routines.

## User response

No action is required if the product is otherwise operating normally.

## Module

BJTRCMDS

---

**BJT03025E      Trace control has been corrupted**

## Explanation

This message indicates a problem with the product's internal trace routines.

## User response

No action is required if the product is otherwise operating normally.

## Module

BJTRCMDS

---

**BJT03026E      Trace stub is not present**

## Explanation

This message indicates a problem with the product's internal trace routines.

## User response

No action is required if the product is otherwise operating normally.

## Module

BJTRCMDS

---

**BJT03027I      Trace has now been turned on**

## Explanation

This message is an internal trace message.

## User response

No action is required.

## Module

BJTRCMDS

---

**BJT03028E** Trace table is missing or bad  
a(\*\*\*\*\*)

### Explanation

This message indicates a problem with the product's internal trace routines.

### User response

No action is required if the product is otherwise operating normally.

### Module

BJTRCMDS

---

**BJT03032I** Trace has now been turned off

### Explanation

This message is an internal trace message.

### User response

No action is required.

### Module

BJTRCMDS

---

**BJT03034E** Trace control does not currently  
exist

### Explanation

This message indicates a problem with the product's internal trace routines.

### User response

No action is required if the product is otherwise operating normally.

### Module

BJTRCMDS

---

**BJT03035E** Trace control has been corrupted

### Explanation

This message indicates a problem with the product's internal trace routines.

### User response

No action is required if the product is otherwise operating normally.

### Module

BJTRCMDS

---

**BJT03036E** Trace table does not exist

### Explanation

This message is an internal trace message.

### User response

No action is required.

### Module

BJTRCMDS

---

**BJT03037E** Trace table has been corrupted  
a(\*\*\*\*\*)

### Explanation

This message indicates a problem with the product's internal trace routines.

### User response

No action is required if the product is otherwise operating normally.

### Module

BJTRCMDS

---

**BJT03038I** Trace has been reset

### Explanation

This message is an internal trace message.

### User response

No action is required.

### Module

BJTRCMDS

---

**BJT03039I** Storage obtain failed for trace  
control, rc=*return\_code*

### Explanation

This message indicates a problem with the product's internal trace routines.

## User response

No action is required if the product is otherwise operating normally.

## Module

BJTRCMDS

---

**BJT03040I**      **Storage obtain failed for trace stub, rc=return\_code**

## Explanation

This message indicates a problem with the product's internal trace routines.

## User response

No action is required if the product is otherwise operating normally.

## Module

BJTRCMDS

---

**BJT03085E**      **Errors encountered...command terminated**

## Explanation

An error occurred during command processing within the product started task.

## User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

## Module

BJTRCMDS

---

**BJT03086E**      **Selection policy activation failed, rc=return\_code**

## Explanation

An error occurred during command processing within the product started task.

## User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

## Module

BJTRCMDS

---

**BJT03087E**      **Data set attribute processing failed rc=return\_code**

## Explanation

An error occurred during command processing within the product started task.

## User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

## Module

BJTRCMDS

---

**BJT03089E**      **Dsn mask in archive attribute name has bad variable construct**

## Explanation

Validation of the specified set of archive attributes failed. The archive mask is invalid.

## User response

Notify your report administrator about the problem. The administrator can then correct the problem.

## Module

BJTRCMDS

---

**BJT03090E**      **Dsn mask in archive attribute name has level greater than 8**

## Explanation

Validation of the specified set of archive attributes failed. The archive mask is invalid.

## User response

Notify your report administrator about the problem. The administrator can then correct the problem.

## Module

BJTRCMDS

---

**BJT03091E**      **Dsn mask in archive attribute name has unknown variable name**

## Explanation

Validation of the specified set of archive attributes failed. The archive mask is invalid.

## User response

Notify your report administrator about the problem. The administrator can then correct the problem.

## Module

BJTRCMDS

---

**BJT03092E**      **Dsn mask in archive attribute name has too many levels**

## Explanation

Validation of the specified set of archive attributes failed. The archive mask is invalid.

## User response

Notify your report administrator about the problem. The administrator can then correct the problem.

## Module

BJTRCMDS

---

**BJT03093E**      **No storage available for selections, rc=return\_code ,rs=reason\_code**

## Explanation

An error occurred during command processing within the product started task.

## User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

## Module

BJTRCMDS

---

**BJT03094E**      **DB2® SET requires ID or TABLE parameter**

## Explanation

An error occurred when Output Manager was processing an interactive command or a product startup command (a command in the configuration member that is specified in the CONFIGUR DD statement of the started task JCL).

## User response

Notify your report administrator about the problem. The administrator can then correct any errors in the command syntax.

## Module

BJTRCMDS

---

**BJT03095E**      **A Db2 ID is required for the DB2 SET ID command**

## Explanation

An error occurred when Output Manager was processing an interactive command or a product startup command (a command in the configuration member that is specified in the CONFIGUR DD statement of the started task JCL).

## User response

Notify your report administrator about the problem. The administrator can then correct any errors in the command syntax.

## Module

BJTRCMDS

---

**BJT03096E**      **Db2 ID length of number\_of\_characters is too long, 4 char max**

## Explanation

An error occurred when Output Manager was processing an interactive command or a product startup command (a command in the configuration member that is specified in the CONFIGUR DD statement of the started task JCL).

## User response

Notify your report administrator about the problem. The administrator can then correct any errors in the command syntax.

## Module

BJTRCMDS

---

**BJT03097I**      **Db2 ID has been set to ssid**

## Explanation

This message is issued in response to the DB2 SET ID command. It indicates that the Db2 subsystem ID



has been successfully set for the subsystem that the Output Manager started task will use.

### User response

No action is required.

### Module

BJTRCMDS

---

**BJT03098E**      **A Db2 PLAN is required for the DB2 SET PLAN command**

### Explanation

The startup command DB2 SET PLAN was issued without a required plan name.

### User response

Notify your report administrator about the problem. The administrator can then specify a plan name to correct the command syntax.

### Module

BJTRCMDS

---

**BJT03099E**      **Db2 PLAN length of *number\_of\_characters* is too long, 8 char max**

### Explanation

The DB2 SET PLAN command was issued with a plan name that is longer than the specified maximum number of characters for this value. The plan name must be eight characters or less.

### User response

Notify your report administrator about the problem. The administrator can then correct the plan name so that it is eight characters or less.

### Module

BJTRCMDS

---

**BJT03100I**      **Db2 PLAN has been set to *plan\_name***

### Explanation

This message is issued in response to the DB2 SET PLAN command. It indicates that the name of the Db2 plan for accessing Output Manager tables has been successfully set.

### User response

No action is required.

### Module

BJTRCMDS

---

**BJT03101E**      **DB2 QUERY requires ID or TABLE parameter**

### Explanation

An error occurred when Output Manager was processing an interactive command or a product startup command (a command in the configuration member that is specified in the CONFIGUR DD statement of the started task JCL).

### User response

Notify your report administrator about the problem. The administrator can then correct any errors in the command syntax.

### Module

BJTRCMDS

---

**BJT03102I**      **Db2 ID has not yet been set**

### Explanation

An error occurred when Output Manager was processing an interactive command or a product startup command (a command in the configuration member that is specified in the CONFIGUR DD statement of the started task JCL).

### User response

Notify your report administrator about the problem. The administrator can then correct any errors in the command syntax.

### Module

BJTRCMDS

---

**BJT03103I**      **Db2 ID is *ssid***

### Explanation

This message is issued in response to the DB2 QUERY ID command. It identifies the Db2 subsystem ID that is currently set for the Output Manager started task (the ID that was set with the DB2 SET ID command).

## User response

No action is required.

## Module

BJTRCMDS

---

**BJT03104I** Db2 PLAN has not yet been set

## Explanation

A Db2 plan name has not yet been set with the DB2 SET PLAN command. A plan name is required for the Output Manager started task.

## User response

Notify your report administrator. The administrator can then set the plan name by issuing the DB2 SET PLAN command with a valid plan name.

## Module

BJTRCMDS

---

**BJT03105I** Db2 PLAN is *plan\_name*

## Explanation

This message is issued in response to the DB2 QUERY TABLE command. It indicates the name of the Db2 plan that is currently used to access the Output Manager tables (the plan name that was set with the DB2 SET PLAN command).

## User response

No action is required.

## Module

BJTRCMDS

---

**BJT03106E** SAF SET requires ID parameter

## Explanation

The SAF SET ID command was issued without a required ID value. A SAF ID is required to implement Output Manager external security.

## User response

Notify your report administrator about the problem. The administrator can then re-issue the SAF SET ID command with a valid ID value of 3 to 8 characters in length.

## Module

BJTRCMDS

---

**BJT03107E** SAF ID length of *number\_of\_characters* is too long, 8 char max

## Explanation

This message is issued in response to the SAF SET ID command. It indicates that the SAF ID that was specified is longer than the maximum allowable length of eight characters. The SAF ID is used for external security.

## User response

Notify your report administrator about the problem. The administrator can reset the SAF ID to ensure that it is eight characters or less in length.

## Module

BJTRCMDS

---

**BJT03108E** SAF ID length of *number\_of\_characters* is too short, 3 char min

## Explanation

This message is issued in response to the SAF SET ID command. It indicates that the SAF ID that was specified is shorter than the minimum allowable length of three characters. The SAF ID is used for external security.

## User response

Notify your report administrator about the problem. The administrator can reset the SAF ID to ensure that it is at least three characters in length.

## Module

BJTRCMDS

---

**BJT03109I** SAF ID has been set to *value*

## Explanation

This message is issued in response to the SAF SET ID command. It indicates that the SAF ID was successfully set to specified value for the Output Manager started task. This ID is required to implement external security.

## User response

No action is required.

## Module

BJTRCMDS

---

**BJT03110I**      **SAF ID has been reset**

## Explanation

This message indicates that the SAF ID value has been reset. You set this ID by using the SAF SET ID global command. The ID is required to implement Output Manager external security.

## User response

No action is required.

## Module

BJTRCMDS

---

**BJT03111E**      **SAF Class length of  
*number\_of\_characters* is too long, 8  
char max**

## Explanation

This message is issued in response to the SAF SET CLASS command. It indicates that the SAF class that was specified is longer than the maximum allowable length of eight characters. This class is used in implementing external security on Output Manager resources.

## User response

Notify your report administrator about the problem. The administrator can reset the SAF class to ensure that it is eight characters or less in length.

## Module

BJTRCMDS

---

**BJT03112E**      **SAF Class length of  
*number\_of\_characters* is too short,  
3 char min**

## Explanation

This message is issued in response to the SAF SET CLASS command. It indicates that the SAF class that was specified is shorter than the minimum allowable length of three characters. This class is used in

implementing external security on Output Manager resources.

## User response

Notify your report administrator about the problem. The administrator can reset the SAF class to ensure that it is at least three characters in length.

## Module

BJTRCMDS

---

**BJT03113I**      **SAF Class has been set to *class***

## Explanation

This message is issued in response to the SAF SET CLASS command. It indicates that the SAF class has been successfully set to the specified value. A SAF class can be used for Output Manager external security.

## User response

No action is required.

## Module

BJTRCMDS

---

**BJT03114E**      **No SAF Class specified on set  
command**

## Explanation

An SAF class was not set. This class is required for implementing Output Manager external security.

## User response

Notify your report administrator about the problem. The administrator can then set the SAF class.

## Module

BJTRCMDS

---

**BJT03115I**      **SAF ID has not yet been set**

## Explanation

This message is issued in response to the SAF QUERY ID command. It indicates that a SAF ID has not yet been set for the Output Manager started task. A SAF ID is required to implement external security on Output Manager resources.

## User response

Notify your report administrator. The administrator can then set the SAF ID by issuing the SAF SET ID command.

## Module

BJTRCMDS

---

**BJT03116I** SAF ID is *identifier*

## Explanation

This message identifies the SAF ID that is currently set for the Output Manager started task. You specify this plan name with the SAF SET ID command.

## User response

No action is required.

## Module

BJTRCMDS

---

**BJT03117I** SAF Class has not yet been set

## Explanation

This message is issued in response to the SAF QUERY CLASS command. It indicates that a SAF class has not yet been set for the Output Manager started task. A SAF class is required to implement external security on Output Manager resources.

## User response

Notify your report administrator. The administrator can then set the SAF Class by issuing the appropriate command.

## Module

BJTRCMDS

---

**BJT03118I** SAF Class is *class*

## Explanation

This message identifies the SAF class that is currently set for the Output Manager started task. This class is used for implementing external security on Output Manager resources.

## User response

No action is required.

## Module

BJTRCMDS

---

**BJT03119E** LOG SET requires option to be set

## Explanation

An error occurred when Output Manager was processing an interactive command or a product startup command (a command in the configuration member that is specified in the CONFIGUR DD statement of the started task JCL).

## User response

Notify your report administrator about the problem. The administrator can then correct any errors in the command syntax.

## Module

BJTRCMDS

---

**BJT03141E** ON or OFF must be specified for LOG SET FMTSYSO command

## Explanation

The LOG SET FMTSYSO command was issued without the required ON or OFF option.

## User response

Notify your report administrator about the problem. The administrator can then re-issue the command using the correct syntax: the command name followed by the option ON or OFF.

## Module

BJTRCMDS

---

**BJT03142E** Sysout class must be 1 character in length

## Explanation

An invalid SYSOUT class was specified for the log. A SYSOUT class can be only one character in length.

## User response

Notify your report administrator about the problem. The administrator can re-issue the command with a valid SYSOUT class.

## Module

BJTRCMDS

---

**BJT03143E** *class is not a valid sysout class*

### Explanation

An invalid SYSOUT class was specified for the log.

### User response

Notify your report administrator about the problem. The administrator can re-issue the command with a valid one-character SYSOUT class.

### Module

BJTRCMDS

---

**BJT03144I** *Log sysout class has been set to class*

### Explanation

The SYSOUT class for the log was successfully set to the specified one-character class value.

### User response

No action is required.

### Module

BJTRCMDS

---

**BJT03160E** *LOG CLOSE function failed, rc=return\_code*

### Explanation

The LOG CLOSE function failed with the specified return code.

### User response

Contact your report administrator to diagnose the problem. Provide the administrator with specified return code.

### Module

BJTRCMDS

---

**BJT03161I** *LOG CLOSE function scheduled*

### Explanation

The LOG CLOSE function has been scheduled for execution.

### User response

No action is required.

### Module

BJTRCMDS

---

**BJT03168I** *VARIABLE SET requires a NAME=VALUE specification*

### Explanation

The VARIABLE SET command was issued without a required variable name and value. This command is used to specify a value for a reserved or user-defined banner page variable.

### User response

Notify your report administrator about the error. The administrator can then re-issue the VARIABLE SET command with the name of a valid banner variable and a variable value.

### Module

BJTRCMDS

---

**BJT03169I** *VARIABLE variable\_name set value*

### Explanation

This message indicates that the named variable was set to the specified value by the VARIABLE SET command.

### User response

No action is required.

### Module

BJTRCMDS

---

**BJT03170I** *VARIABLE DELETE requires a variable name and value*

### Explanation

The VARIABLE DELETE command was issued without a required banner variable name and value.

### User response

Notify your report administrator about the problem. The administrator can then re-issue the command with the name and value of a banner variable that was previously set.

## Module

BJTRCMDS

---

**BJT03171I**      **VARIABLE DELETE failed,  
variable\_name not found**

## Explanation

The VARIABLE DELETE command was issued with an invalid variable name. You must specify the name of a banner variable that was previously set with the VARIABLE SET command.

## User response

Notify your report administrator about the problem. The administrator can then re-issue the command with a valid banner variable name and value.

## Module

BJTRCMDS

---

**BJT03172I**      **VARIABLE variable\_name deleted**

## Explanation

The specification for the named banner variable was deleted with the VARIABLE DELETE command.

## User response

No action is required.

## Module

BJTRCMDS

---

**BJT03173I**      **VARIABLE DISPLAY could not find  
the variable**

## Explanation

The VARIABLE DISPLAY command could not display a banner variable value because the variable could not be found.

## User response

Notify the report administrator about the problem. The administrator can check the variable name and then re-issue the VARIABLE DISPLAY command with the correct name.

## Module

BJTRCMDS

---

**BJT03174I**      **VARIABLE variable\_name set,  
value**

## Explanation

The named variable is set to the specified value.

## User response

No action is required.

## Module

BJTRCMDS

---

**BJT03175I**      **PROTVIEW option set to value**

## Explanation

This message identifies the security option that was set by the PROTVIEW command.

## User response

No action is required.

## Module

BJTRCMDS

---

**BJT03176I**      **PROTVIEW option is invalid,  
PROTVIEW currently set to value**

## Explanation

The PROTVIEW command was specified with an invalid value for the security option.

## User response

Notify the report administrator about the problem. The administrator can correct the command syntax and then re-issue the command. Valid options are OFF, USER, AUDIT, ADMIN, and SAF.

## Module

BJTRCMDS

---

**BJT03177E**      **SUBMIT SET requires logical name**

## Explanation

A SUBMIT SET command was specified without a required logical name.

## User response

Notify the report administrator about the problem. The administrator can re-issue the command with a valid logical name.

## Module

BJTRCMDS

---

**BJT03178E      SUBMIT SET requires PROC name**

## Explanation

A SUBMIT SET command was specified without a required PROC name (for example, the PROC for recalling HSM-migrated data sets).

## User response

Notify the report administrator about the problem. The administrator can re-issue the command with a valid PROC name.

## Module

BJTRCMDS

---

**BJT03179E      SUBMIT SET logical name length  
not positive**

## Explanation

A SUBMIT SET command was specified with an invalid logical name length.

## User response

Notify the report administrator about the problem. The administrator can re-issue the command with a valid logical name.

## Module

BJTRCMDS

---

**BJT03180E      SUBMIT SET logical name too long,  
8 char max**

## Explanation

A SUBMIT SET command was specified with a logical name that is longer than the maximum allowable length of eight characters for this value.

## User response

Notify the report administrator about the problem. The administrator can re-issue the command with a logical name that is eight characters or less in length.

## Module

BJTRCMDS

---

**BJT03181E      SUBMIT SET PROC name length  
not positive**

## Explanation

A SUBMIT SET command was specified with an invalid PROC name length.

## User response

Notify the report administrator about the problem. The administrator can re-issue the command with a valid PROC name.

## Module

BJTRCMDS

---

**BJT03182E      SUBMIT SET PROC name too long,  
8 char max**

## Explanation

A SUBMIT SET command was specified with a PROC name that is longer than the maximum allowable length of eight characters for this value.

## User response

Notify the report administrator about the problem. The administrator can re-issue the command with a PROC name that is eight characters or less in length.

## Module

BJTRCMDS

---

**BJT03183E      No storage available for lnam  
block, rc=return\_code**

## Explanation

An error occurred during command processing within the product started task. No storage is available for the logical name block.

## User response

Contact your systems programmer. If the problem persists, gather all details and contact Technical Support for assistance.

## Module

BJTRCMDS

---

**BJT03184E** Logical name block at *location* is bad id = *identifier*

### Explanation

An error occurred during command processing within the product started task.

### User response

Contact your systems programmer. If the problem persists, gather all details and contact Technical Support for assistance.

### Module

BJTRCMDS

---

**BJT03185I** Logical name *lname* has been set to PROC *proc\_name*

### Explanation

This message is displayed in response to the SUBMIT SET command. It indicates that the logical name has been set to the specified PROC name.

### User response

No action is required.

### Module

BJTRCMDS

---

**BJT03186E** Logical name block at *location* is bad id = *identifier*

### Explanation

An error occurred during command processing within the product started task.

### User response

Contact your systems programmer. If the problem persists, gather all details and contact Technical Support for assistance.

### Module

BJTRCMDS

---

**BJT03187I** Logical name *lname* is mapped to PROC *proc\_name*

### Explanation

This message is displayed in response to the SUBMT QUERY command. It identifies the logical name that is currently mapped to the specified PROC name.

### User response

No action is required.

### Module

BJTRCMDS

---

**BJT03196E** Activate Selector error, rc=*return\_code*, rs=*reason\_code*

### Explanation

An error occurred during command processing within the product started task.

### User response

Contact your systems programmer. If the problem persists, gather all details and contact Technical Support for assistance.

### Module

BJTRCMDS

---

**BJT03198E** *value* is not a valid verb for the *command\_name* command

### Explanation

An error occurred while processing the specified command. An invalid verb value was encountered.

### User response

Notify your report administrator about the problem. The administrator can re-issue the command with a valid verb value.

### Module

BJTRCMDS

---

**BJT03199E** *command\_name* command requires parameters

### Explanation

The specified command was issued without its required parameters.



## User response

Notify your report administrator about the problem. The administrator can re-issue the command with the required parameters.

## Module

BJTRCMDS

---

**BJT03200E SET CONDCODE requires a value**

## Explanation

A parameter value was not specified for the SET CONDCODE command, or the parameter value was specified incorrectly for this command in the SBJTSAMP member BJT#IN03.

## User response

Specify one of the following valid parameter values for the SET CONDCODE command: LASTNONZERO or HIGHEST. If you specify LASTNONZERO, the **Cond** column on the Archived Reports panel will display the last non-zero condition code for a job. If you specify HIGHEST, the **Cond** column will display the highest condition code. To specify the command, you can use the Modify operator command as follows: */F product instance, SET CONDCODE parameter*. If you specified the SET CONDCODE command as a startup command, check the BJT#IN03 member to ensure that you specified the parameter correctly.

## Module

BJTRCMDS

---

**BJT03201E SET CONDCODE parameter is not valid, parameter**

## Explanation

The specified parameter value that was set by the SET CONDCODE command is not a valid value. The SET CONDCODE parameter determines whether the **Cond** column on the Archived Reports panel displays the last non-zero condition code for a job or the highest condition code.

## User response

Specify either SET CONDCODE LASTNONZERO or SET CONDCODE HIGHEST. You can specify the command as a startup command in the SBJTSAMP member BJT#IN03 or by using the Modify (/F) operator command. If you specify the LASTNONZERO parameter value, the **Cond** column on the Archived Reports panel will display the last non-zero condition

code for a job. If you specify the HIGHEST parameter value, the **Cond** column will display the highest condition code.

## Module

BJTRCMDS

---

**BJT03202I CONDCODE has been set to parameter**

## Explanation

This message is issued after the SET CONDCODE command is successfully processed. It identifies the condition code parameter that was set by the command. If the parameter value is LASTNONZERO, the **Cond** column on the Archived Reports panel will display the last non-zero condition code for a job. If the parameter value is HIGHEST, the **Cond** column will display the highest condition code.

## User response

No action is required.

## Module

BJTRCMDS

---

**BJT03203I CONDCODE is set to parameter**

## Explanation

This message is issued in response to the QUERY CONDCODE command. It identifies how the condition code parameter is set. If the parameter value is LASTNONZERO, the **Cond** column on the Archived Reports panel displays the last non-zero condition code for a job. If the parameter value is HIGHEST, the **Cond** column displays the highest condition code.

## User response

No action is required.

## Module

BJTRCMDS

---

**BJT03204E SET LOGCLASS requires a value**

## Explanation

The SET LOGCLASS command was issued without a required class value. The command specifies the SYSOUT class to use for the ACTIVITY DD sysout for the Output Manager started task if the started task terminates.

## User response

Notify your report administrator about the problem. The administrator can re-issue the command with a valid one-character class.

## Module

BJTRCMDS

---

**BJT03205I**      **SET PRSETPDS command no longer specifies a PDS name value**

## Explanation

The SET PRSETPDS command was issued without a PDS name. Therefore, no PRSET PDS is currently set for the Output Manager started task. Possibly, the command was issued without a name to disable PRSET processing globally for the Output Manager instance.

## User response

If the PDS name was inadvertently omitted, specify the SET PRSETPDS command again and include the PDS name. If you want PRSET processing to be disabled, no action is required.

## Module

BJTRCMDS

---

**BJT03206E**      **SET PRSETPDS command specifies a PDS name that is too long**

## Explanation

The SET PRSETPDS command was issued with a PDS name that is too long. A PDS name can be a maximum of 44 characters in length.

## User response

Specify the SET PRSETPDS command again with a PDS name that is 44 characters or less in length.

## Module

BJTRCMDS

---

**BJT03207I**      **PRSETPDS is not set**

## Explanation

The QUERY PRSETPDS command was issued to determine the name of the PRSET partitioned data set (PDS) that is currently set for the Output Manager

started task. However, no PRSET PDS is currently specified.

## User response

No action is required.

## Module

BJTRCMDS

---

**BJT03208I**      **PRSETPDS is set to *prset\_pds\_name***

## Explanation

This message identifies the name of the PRSET partitioned data set (PDS) that is set for the Output Manager started task. It is displayed after the SET PRSETPDS command is successfully issued. The PRSET PDS stores binary characters that can be used to control printing on some printers.

## User response

No action is required.

## Module

BJTRCMDS

---

**BJT03209E**      **SET KEEPDEST requires a value**

## Explanation

The SET KEEPDEST command was issued without a destination value. This startup command specifies a mask that is used to generate keep destinations for temporarily holding SYSOUT data sets. These keep destinations are only for SYSOUT data sets that are captured based on a selector or subselector rule that specifies both a **Combine Sysout** value of **YES** and a normal **Disposition** value of **DELETE**. If you specify no destination value for the SET KEEPDEST command, Output Manager will use the default mask of TOMGR.

## User response

Specify a five-character mask with the SET KEEPDEST command, or accept the default mask of TOMGR. Ensure that any mask you use will not generate keep destinations that conflict with the existing keep destinations that are in use at your site.

## Module

BJTRCMDS

---

**BJT03210E**      **SET BUNDJCL requires a value**

## Explanation

The SET BUNDJCL command was issued without a required partitioned data set (PDS) name. This startup command identifies the name of the global PDS that holds all of the bundle print jobs for printing and reprinting report bundles.

## User response

After "SET BUNDJCL," specify the name of the PDS that you created for storing the JCL for printing and reprinting bundle instances.

## Module

BJTRCMDS

---

**BJT03211E BUNDLE ACT requires a value**

## Explanation

The BUNDLE ACT command was issued without a bundle name. This command requires the name of the report bundle that you want to activate, as specified in a bundle definition.

## User response

After "BUNDLE ACT," specify the unique bundle name of the bundle to be activated.

## Module

BJTRCMDS

---

**BJT03212E BUNDLE DEACT requires a value**

## Explanation

The BUNDLE DEACT command was issued without a bundle name. This command requires the name of the report bundle that you want to deactivate, as specified in a bundle definition.

## User response

After BUNDLE DEACT, specify the unique bundle name of the bundle instance that you want to deactivate.

## Module

BJTRCMDS

---

**BJT03213E SET AFPDETCT requires a value**

## Explanation

The SET AFPDETCT command was issued without a required option. The command name must be followed by either the value ON or OFF.

## User response

After the SET AFPDETCT command, specify either ON or OFF. Specify ON only if you use AFP printers and want Output Manager to use any hexadecimal 5A characters that occur in captured SYSOUTs to determine where new pages begin. The correct detection of new pages is required for matching the index fields and condition entries that are specified in layouts against a SYSOUT. Any other ASA or Machine print-control characters that exist will also still be used.

## Module

BJTRCMDS

---

**BJT03214I PRSETPDS is active:  
*prset\_pds\_name***

## Explanation

This message identifies the name of the PRSET partitioned data set (PDS) that is currently active for the Output Manager started task. This message is displayed in response to the QUERY PRSETPDS command. The PRSET PDS stores binary characters that can be used to control printing on some printers. The PDS name is specified by the SET PRSETPDS startup command.

## User response

No action is required.

## Module

BJTRCMDS

---

**BJT03215I LIMIT *limit\_type* is set to value**

## Explanation

This message is displayed in response to the QUERY LIMITS command. It identifies the limit that is currently set for the maximum number of activity results, archived reports, or captured reports to display (that is, a limit that was set by the SET ACTLIMIT, SET ARCLIMIT, or SET RPTLIMIT startup command).

## User response

No action is required.

## Module

BJTRCMDS

---

**BJT03216E**      **SET *limit\_type* requires limit value**

## Explanation

The specified SET command was issued without a required limit value. The SET ACTLIMIT, SET ARCLIMIT, and SET RPTLIMIT commands must be followed by a 6-digit number from 000000 through 100000. These commands limit the number of activity results, archived reports, or captured reports that are reported.

## User response

Edit the specified command by adding a number from 000000 through 100000 after the command name. If you specify 000000, the product default of 010000 will be used.

## Module

BJTRCMDS

---

**BJT03217E**      **SET *limit\_type* parameter must be numeric, \*\*\***

## Explanation

The specified SET command was issued with an invalid non-numeric value. The SET ACTLIMIT, SET ARCLIMIT, and SET RPTLIMIT commands must be followed by a 6-digit number from 000000 through 100000. These commands limit the number of activity results, archived reports, or captured reports that are reported.

## User response

Edit the value that occurs after the specified command to specify a number from 000000 through 100000. If you specify 000000, the product default of 010000 will be used.

## Module

BJTRCMDS

---

**BJT03218E**      **SET *limit\_type* parameter can not be greater than *value***

## Explanation

The specified SET command was issued with a numeric value that is greater than the maximum allowable value. The SET ACTLIMIT, SET ARCLIMIT, and SET RPTLIMIT commands must be followed by a 6-digit number from 000000 through 100000. These commands limit the number of activity results, archived reports, or captured reports that are reported.

## User response

Edit the value that occurs after the specified command to specify a number from 000000 through 100000. If you specify 000000, the product default of 010000 will be used.

## Module

BJTRCMDS

---

**BJT03219I**      ***Parameter\_name* has been set to *value***

## Explanation

This message indicates the value that was set for the specified parameter (usually by a startup command).

## User response

No action is required.

## Module

BJTRCMDS

---

**BJT03220E**      **SET LRECLARC has invalid parameter**

## Explanation

An invalid parameter value was specified for the SET LRECLARC startup command. This command specifies the LRECL value (in bytes) to use for all of your Output Manager archived data sets.

## User response

Specify a number from 0 through 32760 for the SET LRECLARC startup command. The LRECL value should be high enough to accommodate your largest archive data sets.

## Module

BJTRCMDS

---

**BJT03221I**      **Db2 requests Queued=nnnnnnnn  
Total=nnnnnnnn Tasks=nnnn**

### Explanation

This message is issued in response to the DB2 QUERY QUEUES operator command. The message identifies: 1) the number of requests to the Output Manager Db2 database that are currently queued (that is, because all Db2 tasks are busy), 2) the total number of Db2 requests, and 3) the total number of Db2 tasks that are active for the Output Manager started task.

### User response

No action is required.

### Module

BJTRCMDS

---

**BJT03222E**      **SET DB2THD has invalid  
parameter**

### Explanation

An invalid parameter is specified for the SET DB2THD command in the SBJTSAMP member BJT#IN05. This command sets the number of Db2 tasks to use for the Output Manager started task. Valid values are from 1 through 5. By default, two tasks are used when this command is not specified.

### User response

In the SBJTSAMP member BJT#IN05, specify a number up to 5 for the SET DB2THD command. Use the following syntax: SET DB2THD *n* where *n* is a number from 1 through 5.

### Module

BJTRCMDS

---

**BJT03224E**      **Invalid ACTION *action\_type*  
specified for the DB2 ERROR  
command**

### Explanation

A DB2 ERROR command in the SBJTSAMP member BJT#IN05 contains an invalid value for the ACTION keyword. The ACTION keyword indicates the type of action that Output Manager should take when a specific SQL error causes an INSERT operation to fail. Only the following ACTION values are valid: DEFAULT, ERROR, TERMINATE.

### User response

In the SBJTSAMP member BJT#IN05, check the DB2 ERROR commands that include the ACTION keyword. Ensure that each ACTION keyword specifies one of the following valid values:

- **DEFAULT** - The default behavior. Refer to the comments in the BJT#IN05 member for an explanation.
- **ERROR** - Issue an error after retrying the INSERT operation the number of times that is specified by the COUNT option.
- **TERMINATE** - Terminate the Output Manager started task after retrying the INSERT operation the number of times that is specified by the COUNT option.

Alternatively, you can remove the ACTION keyword from the command if the default behavior is acceptable.

### Module

BJTRCMDS

---

**BJT03225E**      **Invalid RECONNECT *value*  
specified for the DB2 ERROR  
command**

### Explanation

A DB2 ERROR command in the SBJTSAMP member BJT#IN05 contains an invalid value for the RECONNECT keyword. The RECONNECT keyword indicates whether Output Manager should attempt to reconnect to its Db2 database to retry a failed INSERT operation that is related to a specific SQL error.

### User response

In the SBJTSAMP member BJT#IN05, check the DB2 ERROR commands that include the RECONNECT keyword. Ensure that each RECONNECT keyword specifies either YES or NO. Alternatively, you can remove the RECONNECT keyword if the default value of NO is acceptable.

### Module

BJTRCMDS

---

**BJT03226E**      **SET RDATASTH requires a value**

### Explanation

The SET RDATASTH command was issued without a required value. The command either enables or disables the use of the printer associated with the

distribution list when capturing report-level dynamic printer attributes.

### User response

Notify your report administrator about the problem. The administrator can re-issue the command with a value of either: ENABLE or DISABLE.

### Module

BJTRCMDS

---

**BJT03227E**      **SET OUTCLASS requires a value**

### Explanation

The SET OUTCLASS command was issued without a required class value. The command specifies the default SYSOUT class to be used for printed reports when the class is missing from the printer or the recipient definition.

### User response

Notify your report administrator about the problem. The administrator can re-issue the command with a valid one-character class.

### Module

BJTRCMDS

---

**BJT03228E**      **SET VARCHIVE requires a value**

### Explanation

The SET VARCHIVE command was issued without a required value. The command allows either all archives to be viewed by the user, or only those archives which do not have any reports based on them.

### User response

Notify your report administrator about the problem. The administrator can re-issue the command with a value of either: ALL (view all archives) or NOREPORT (view only archives which generated no reports).

### Module

BJTRCMDS

---

**BJT03229E**      **SET DYNBRMOD requires a value**

### Explanation

The SET DYNBRMOD command was issued without a required value. The command specifies a default print

model to be used for basic report definitions that are created dynamically by Output Manager.

### User response

Notify your report administrator about the problem. The administrator can re-issue the command with a value of either: CLASSIC or REPORT.

### Module

BJTRCMDS

---

**BJT03230E**      **SET REPACC requires a value**

### Explanation

The SET REPACC command was issued without a required value. The command is used to enable or disable the Report Access Identity security feature.

### User response

Notify your report administrator about the problem. The administrator can re-issue the command with a value of either: ENABLE or DISABLE. Also see the command SET REPACCID.

### Module

BJTRCMDS

---

**BJT03231E**      **SET REPACCID requires a value**

### Explanation

The SET REPACCID command was issued without a required value. The command is used to establish an alternative identity or user ID to be used when viewing or printing reports, as part of the report access identity security feature.

### User response

Notify your report administrator about the problem. The administrator can re-issue the command with the name of a USER ID, which must be valid with the external security product (such as RACF). Also see the command SET REPACC.

### Module

BJTRCMDS

---

**BJT13001I**      **Output Manager selector (*selector\_id*, TCB:*task\_control\_block*, DEST:*destination*) started**

## Explanation

The specified selector is active.

## User response

No action is required.

## Module

BJTRSPAR

---

**BJT13002I**      **Output Manager selector  
(*selector\_id*) has terminated  
normally**

## Explanation

The specified selector terminated normally.

## User response

No action is required.

## Module

BJTRSPAR

---

**BJT13003E**      **Output Manager selector  
(*selector\_id*) has terminated  
abnormally *rc=return\_code***

## Explanation

The specified selector task failed, possibly because of invalid or inaccurate values in the selector definition or the associated set of archive attributes.

## User response

For more information about the error, check the ACTIVITY DD sysout for the Output Manager started task for any exceptions that are related to the selector and check the console log messages that are associated with the Output Manager started task. Also, ensure that all field values in the selector definition and in the associated set of archive attributes are valid.

## Module

BJTRSPAR

---

**BJT13009E**      **Failed to select *dsn\_name* after  
number of attempts**

## Explanation

This message is issued when there is an attempt to create two selector rules on the same SYSOUT.

## User response

Avoid creating two selector rules on the same SYSOUT. Run the Selector Analyze report and fix the overlapping Selector. For more information, see [Resolving conflicts in selection rules with the Selector Rule Analysis Utility \(BJT@ANLZ\)](#). Contact Technical Support for assistance.

## Module

BJTRSPAR

---

**BJT13010E**      **Error reading from DSN name**

### Explanation:

Error occurs when the capture process receives an error from JES while reading the sysout.

### User response:

Refer to the messages in either JESMSGLG, ACTIVITY DD, or on the console for guidance.

### Module:

BJTRSPAR

---

**BJT13016I**      **JES archive failure**

### Explanation:

JES failure. There should be additional messages in the system log around the time BJT13016I is written that indicate what was failing.

### User response:

Contact your System Administrator.

### Module:

BJTRSPAR

---

**BJT13017I**      **JES archive abended**

### Explanation:

JES failure. There should be additional messages in the system log around the time BJT13017I is written that indicate what was failing.

### User response:

Contact your System Administrator.

### Module:

BJTRSPAR

---

**BJT16001I**      **Connect for Db2 failed  
*rc=return\_code rs=reason\_code***

## Explanation

An error occurred when the Output Manager started task attempted to connect to the Db2 subsystem that is named in the startup commands member.

## User response

Verify that the Db2 subsystem is active. Then attempt to restart Output Manager. If the problem persists, contact Technical Support.

## Module

BJTRDB2R

---

**BJT16002I**      **Open for Db2 failed rc=return\_code  
rs=reason\_code**

## Explanation

An error occurred when the Output Manager started task attempted to connect to the Db2 subsystem that is named in the startup commands member.

## User response

Verify that the Db2 subsystem is active. Then attempt to restart Output Manager. If the problem persists, contact Technical Support.

## Module

BJTRDB2R

---

**BJT16003I**      **Translation service failed  
rc=return\_code rs=reason\_code**

## Explanation

An error occurred when the Output Manager started task attempted to connect to the Db2 subsystem that is named in the startup commands member.

## User response

Verify that the Db2 subsystem is active. Then attempt to restart Output Manager. If the problem persists, contact Technical Support.

## Module

BJTRDB2R

---

**BJT16004I**      **SQL Error PROGN=dbrm\_member  
STNUM=statement\_number  
STYPE=db2\_statement\_type**

## Explanation

This message is issued when a Db2 error occurs. The message BJT16005I and a Db2 error message (as decoded by DSNTIAR) follow this message and provide additional information.

## User response

No action is required.

## Module

BJTRDBDR

---

**BJT16005I**      **SQL Error CODE=-sqlcode  
ACTION=option**

## Explanation

The SQL error that has the specified SQLCODE occurred. As a result, Output Manager took the specified action. The type of action that Output Manager takes for a SQL error is determined by a Db2 ERROR startup command in the SBJTSAMP member BJT#IN05. A Db2 error message (as decoded by DSNTIAR) follows this message.

## User response

Look up the SQLCODE that is provided by the related Db2 error message in the *Db2 Messages and Codes* manual to determine how to respond to the error.

## Module

BJTRDBDR

---

**BJT16006I**      **BJTDBSAV record count is  
record\_count**

## Explanation

The connection to the Db2 database failed. To preserve the records for captured SYSOUTs that were produced by active jobs but not yet committed, Output Manager writes these records to the BJTSAVE data set. (This data set is allocated by the BJTDBSAV DD in the started task JCL.) This message identifies the number of records that were written to the BJTSAVE data set. The next time the Output Manager started task is started, these records will be automatically inserted into the database.

## User response

No action is required.

## Module

BJTRDBDR

---

**BJT28001I**      **Selector selector\_name failed,  
reason**



## Explanation

The selector *selector\_name* has invalid selection criteria, see the *reason* for details.

## User response

- If "*reason*" is "Authorization failed", provide at least SAF UPDATE authority for the JESSPOOL to the started task.
- For any of the following *reason* codes, fix the specified field in the selector, and do a POLICY ACTIVATE again: Invalid destination specified, USERID has error, DESTINATION has error, JOBNAME has error, FORM has error, WRITER has error, PRMODE has error, CLASS has error, FCB has error, UCS has error, CHAR has error, MOD has error, FLASH has error, new sysout class not A-Z and not 0-9, new sysout class has error, new FORMS has error, new WRITER has error, new DEST has error
- For any other *reason* message, contact customer support

## Module

BJTRSPGR SAPIIF

---

**BJT29001E**      **Archive data set deleted,  
dsname=dsname**

## Explanation

This message is issued when an archive attribute has an abnormal disposition of delete, and there was an error while writing an archive. The archive data set is deleted at the time it is unallocated, and then this message is issued.

## User response

Check the ITOM job logs for X37 errors.

### Module:

BJTRDSNS ARCDSDDEL

---

**BJT29002E**      **Archive data set deleted,  
Zero length archive created,  
dsname=dataset\_name**

## Explanation

A problem occurred during selector processing that caused an empty archive data set to be generated. When archives are listed, this row will appear with "Line count" equal to 0 (zero).

## User response

Notify your systems programmer about the problem. View Archives to identify the jobname and jobID - expect to find two rows with the same job attributes; one with zero lines, the other with lines > 0. Select the row with zero lines to obtain the data set name. Delete this data set from the system catalog. The empty row will be deleted during the next CATSYNC run.

If the problem persists, set the following SLIP trap and contact Technical Support for dump analysis:

```
SLIP SET, JOBNAME=started_task_name,  
MSGID=BJT29002E, ACTION=SVCD,  
SDATA=(PSA,CSA,SQA,SUM,RGN,TRT), END
```

### Module:

BJTRDSNS ARCZERO

---

**BJT29004E**      **The gdg version  
dsname=gdg\_version\_dsname is  
already in the catalog**

## Explanation

A GDG version data set was not allocated because the data set already exists in the catalog. This problem can occur if an existing data set name conflicts with the generation data set to be allocated, or if the GDG generation number overflows and old (rolled-off) generation data sets have not been deleted.

## User response

Delete the conflicting or rolled-off data set. Use IDCAMS to do a LISTCAT ALL LEVEL(*gdg\_base\_dsname*). If you see that all versions of this data set became rolled-off, choose the most recent version, and use IDCAMS to do an ALTER *gdg\_version\_dsname* ROLLIN

### Module:

BJTRDSNS

---

**BJT29007I**      **Create Archive Failure**

### Explanation:

DFSMS failure. There should be additional messages in the system log around the time BJT29007I is written that indicate what was failing.

### User response:

Check on IEC\*\*\* message. If there is any abend associated with the message check the web for an APAR. Contact your Storage Administrator.

### Module:

BJTRDSNS

---

**BJT30001E**      **Requesting SVCDUMP,  
title=title\_string**

## Explanation

Output Manager is requesting a dump because an abend occurred. The dump may not actually be produced if there is a SLIP trap with ACTION=NOSVCD, or because of the dump elimination (DAE) feature of MVS.

## User response

If the dump is due to SB37, SD37, or SE37, find the corresponding IEC030I, IEC031I, or IEC032I message, read the explanation of the IEC message in the IBM manual, and adjust the settings in the corresponding Output Manager Archive Attributes.

- For D37, in the Archive attributes, either use "Auto Calculate" Yes or specify a non zero "Secondary quantity".
- For B37 and E37 abends, (1) make the primary and secondary allocations larger (by adjusting the Archive Attributes), (2) specify more volumes in the Archive Attributes, or (3) specify a volume count greater than 1 in the Data Class. The Data Class is selected by your site's ACS rules, and (depending on the ACS rules) can be directly specified in the Archive Attributes.

If a dump was produced, send it to customer support.

## Module

BJTRSTSK SVCDTITL

---

**BJT35001I**      **No Partner Info, reason**

## Explanation

EZBDDOMAIN has not been set up in the SERVAUTH class (SERVAUTH class must be active and raclisted). Reason is:

- V1R12 or newer required
- The partner is not in the same sysplex
- The security domain name is not defined
- The security domain name is not the same

## User response

Contact your system security administrator.

---

**BJT35003E**      **The port has not been set, rc=return\_code**

## Explanation

A problem occurred during product startup.

## User response

Notify your systems programmer about the problem. You may need to check your ARA\_PORT in policy administration of your product setup. If the problem persists, gather all details and contact Technical Support for assistance.

## Module

BJTCSRVR

---

**BJT35004E**      **Out of memory in ARA sever**

## Explanation

A problem occurred during product startup.

## User response

Notify your systems programmer about the problem. You may need to check policy administration of your product setup. If the problem persists, gather all details and contact Technical Support for assistance.

## Module

BJTCARAS

---

**BJT35005E**      **Setting DISCONNECT\_TIMESTAMP of ARA\_SESSION row failed with SQLCODE=-sqlcode**

## Explanation

A problem occurred during product usage due to a Db2 database issue.

## User response

Notify your systems programmer about the ARA SERVER issue that occurs when trying to view archive data. Your data in the Db2 database is either incorrect or you are not allowed to update the table. You may need to check your Db2 access permissions. If the problem persists, gather all details and contact Technical Support for assistance.

## Module

BJTCARAS

---

**BJT35006E**      **Deleting old ARA\_SESSION rows failed with SQLCODE=-sqlcode**

## Explanation

A problem occurred during product usage due to a Db2 database issue.

## User response

Notify your systems programmer about the ARA SERVER issue that occurs when trying to view archive data. Your data in the Db2 database is either incorrect or you are not allowed to delete the table. You may need to check your Db2 access permissions. If the problem persists, gather all details and contact Technical Support for assistance.

## Module

BJTCARAS

---

**BJT6039E**      **Not authorized to (*function*)**

## Explanation

The user is not allowed to perform the specified function using the BJTCATS program. BJTCATS is used for catalog synchronization and for deleting job output from active bundles.

Function is:

- run BJTCTSN
- use ALLOW\_UPDATE = YES
- use ALLOW\_DELETE = YES

## User response

Contact your system security administrator. The function is protected by the the BJT.<DB\_QUALIFIER>.ADM.CSNC profile.

---

**BJT77019E**      **Cannot open codepage converter  
%s from %s**

## Explanation

The problem could be one of the following:

- An invalid multibyte sequence is encountered in the input.
- The input byte sequence has been entirely converted, that is \*inbytesleft has gone down to 0.
- An incomplete multibyte sequence is encountered in the input, and the input byte sequence terminates after it.
- The output buffer has no more room for the next converted character.

## User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Product Support for assistance.

---

**BJT77020E**      **Cannot convert codepage**

## Explanation

Error generated by the IBM call utility 'iconv' while converting characters in file from one code page set to another. The converted text is written to standard output (stdout).

## User response

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Product Support for assistance.

---

**BJT77022E**      **Failed to find static file '%s',  
rc=%d**

## Explanation

Error Generated by Apache call filename Present in the error is not present in respective location.

## User response

Correct the error by having a filename given in error at designated location. For more information, please contact product support.

---

**BJT77033W**      **unknown printAttr %s**

## Explanation

The printer attributes is not specified correctly or not defined.

## User response

Defined the printer attributes in A.K of ITOM ISPF panel and activate the policy.

---

**BJT77034I**      **unknown banner substitution  
variable %.\*s**

## Explanation

Message is generated because the required banner variable cannot be substituted as it is not present in the list.

## User response

Declare the required banner variable.

---

**BJT77037E**      **x37 abend in writing %x**

## Explanation

During writing to disk from the z/OS server, x37 Abends can occur more readily when data sets are created with small SPACE primary and secondary allocation units.

## User response

For the z/OS server to avoid possible x37 Abends, data sets should be allocated with primary and secondary SPACE allocation units to fit the largest byte data stream from an NFS client. Contact your system admin for space availability.

---

**BJT77038E**      **other problem printing archive/  
report errno=%d errno2=%d**

## Explanation

An abend other than x37 occurred while printing archive or report.

## User response

Look for abend code and contact your administrator for further assistance.

---

**BJT77051E**      **Could not connect to DB2**

## Explanation

Error generated when connection to DB2 failed.

## User response

Make sure your Db2 connection is up and running. If issue persists, contact your system administrator.

---

**BJT7705E**      **initialization incomplete, PLAN, or  
SUBSYSTEM missing**

## Explanation

Db2 initialization, PLAN, or SUBSYSTEM is missing.

## User response

Make sure you have initialised DB2 properly. If issue persists, contact your system administrator.

---

**BJT77061W**      **DB2 fetch failed from BJTARC**

## Explanation

Warning is generated when DB2 fetch is failed for BJTARC Table and result is not returned.

## User response

Contact your DB2 administrator.

---

**BJT77063W**      **page bounds out of range  
lastIndex=%d pageCount=%d**

## Explanation

Warning appears if last index is greater than page count.

## User response

No user action required.

---

**BJT77064W**      **DB2 prepare/open failed from  
BJTARC**

## Explanation

Warning is generated when DB2 Open or DB2 Prepare statement fails for the BJTARC TABLE.

## User response

Contact your DB2 administrator and ensure DB2 connection is getting established successfully.

---

**BJT77066E**      **Could not get filter for id=%d**

## Explanation

This error message indicates that filter is not created properly.

## User response

The issue is with BJTFVF table. Check if the **Name** column of BJTFVF table has filter name. Also, its associated ROWID having value not equal to **0**. For more information, please contact DB2 administrator.

---

**BJT7706E**      **OM web server not initialized.**

## Explanation

OM Web Server was not initialized properly.

## User response

Refer to logs and Contact your administrator

---

**BJT77071E**      **no print attrs found for archive**

## Explanation

This message indicates that no print attributes were found for archive.

## User response

Validate if print attributes are defined correctly.

---

**BJT77071AE**      **no print attrs found for report**

## Explanation

This message indicates that no print attributes were found for report.

## User response

Validate if print attributes are defined correctly.

---

**BJT77072**      **could not allocate print dataset**

## Explanation

This error might occur when printing dataset through BJTBatch and dataset name specified in RUNMODE=OUTPUT is not created.

## User response

Check if parameters specified for print dataset are correct or not.

---

**BJT77077W**      **failed to make FV iterator**

## Explanation

Formatted view iterator is not created successfully for chosen view.

## User response

Ensure that parameters given in formatted view are correct with respect to specific report or archive.

---

**BJT77078W**      **no data set to iterate %s**

## Explanation

Archived Dataset name not found to perform iteration.

## User response

Ensure that archived dataset is not deleted.

---

**BJT77079W**      **could not open archive containing report for printing %s**

## Explanation

Archived Dataset name not found for printing.

## User response

Ensure that archived dataset is not deleted.

---

**BJT7708E**      **Unknown Parameter: %s**

## Explanation

Unknown parameter name specified in the policy admin of ITOMWeb.

## User response

Ensure to give correct parameter name from the list.

---

**BJT77091E**      **Bad page range %s**

## Explanation

Incorrect page range specified in the print option.

## User response

Specify the correct page range to allow printing.

---

**BJT77092E**      **Internal error, no column type %c**

## Explanation

Invalid column type value is assigned.

## User response

From Formatted Views, select the appropriate column type value. Appropriate value for column type are **Extract From Line** and **Literal Text**.

---

**BJT77093E**      **Internal error, no heading type %c**

## Explanation

Invalid header type value is assigned.

## User response

From Formatted Views, select the appropriate column type value. Appropriate value for column type are **Extract From Line**, **Literal Text**, and **Whole Line**.

---

**BJT77092W**      **cannot email migrated dataset %s**

## Explanation

The requested dataset is migrated.

## User response

Recall the requested dataset.

---

**BJT77092AW**      **cannot email unknown dataset %s**

## Explanation

The requested dataset is not found to email.

### User response

Ensure that the requested dataset is present and not deleted.

---

**BJT77092BW** cannot email 3rd party archive unknown dataset %s

### Explanation

3rd party Archive which is migrated using ISV recall cannot be emailed.

### User response

No user action required.

---

**BJT77093W** Request rejected. Maximum concurrent request limit exceeded

### Explanation

HTTP service call is rejected as maximum concurrent request limit exceeded.

### User response

Please ensure if HTTP instance is configured correctly. If issue persists, contact HTTP support team.

---

**BJT77095AE** User %s is not authorized to print report data for %s

### Explanation

User do not have access to perform print operation for choosen report.

### User response

Contact your admin to provide access.

---

**BJT77096E** User %s is not authorized to see report data for %s.

### Explanation

Specified user is not authorised to see report data. It could be due to insufficient access to report.

### User response

Please contact your Admin to provide access.

---

**BJT77097E** User %s is not authorized to download report data for %s

### Explanation

Specified user is not authorised to see report data. It could be due to insufficient access to download report.

### User response

Please contact your Admin to provide access.

---

**BJT77098W** unknown pdf page geomtry '%s'

### Explanation

Invalid page size choosen for PDF email attachment.

### User response

Select appropriate page dimension specified on panel.

---

**BJT77099E** bad email address for userid=%s

### Explanation

No email address is specified for a given userid.

### User response

Specify correct email address.

---

**BJT77101W** ACCOUNTINGTOKEN is too long and will be truncated.

### Explanation

Lenght of *ACCOUNTINGTOKEN* is more than 21 charcter in policy admin. The result will be truncated.

### User response

Set the lenght of *ACCOUNTINGTOKEN* with character length less than 22.

---

**BJT77102W** ACCOUNTINGSTRING is too long and will be truncated.

### Explanation

Lenght of *ACCOUNTINGSTRING* is more than 254 charcter in policy admin. The result will be truncated.

### User response

Set the lenght of *ACCOUNTINGSTRING* with character length less than 255.

---

**BJT77103W** ACCOUNTINGSTRING starts with predefined characters.

## Explanation

The *ACCOUNTINGSTRING* values begin with the following three-character combinations: ARI, DSN, JCC, QSQ, or SQL in policy admin.

## User response

The *ACCOUNTINGSTRING* should not begin with the following three-character combinations: ARI, DSN, JCC, QSQ, or SQL.

---

**BJT77104E**      **User %s is not authorized to see archive data for %s.**

---

## Explanation

Specified user is not authorised to see archive data. It could be due to insufficient access to archive.

## User response

Contact your Admin to provide access.

---

**BJT77105E**      **User %s is not authorized to print archive data for %s.**

---

## Explanation

Specified user is not authorised to print archive data. It could be due to insufficient access to print archive.

## User response

Contact your Admin to provide access.

---

**BJT77106W**      **SAF Class %s is not allowed. SAF Class will be set to %s.**

---

## Explanation

SAF Class other than FACILITY or XFACILIT is not allowed. The default will be set to FACILITY.

## User response

No user action required.

---

**BJT77112E**      **AFP View cannot be applied in this context**

---

## Explanation

View Name cannot be one of these reserved names: NoCC, UnformattedView, LineMode, AFP.

## User response

Keep viewname other than NoCC, UnformattedView, LineMode or AFP.

---

**BJT77113W**      **Unable to open LogFile %s, errno=%d, errno2=%08X**

---

## Explanation

Log file was not opened as user do not have appropriate permission to log file.

## User response

Check the appropriate permission given to the logfile for a user to access.

---

**BJT77115E**      **Unable to open html template %s, errno=%d, errno2=%08X**

---

## Explanation

User or user group do not have access to html file.

## User response

User or User group need access to extracted html files. It is recommended to have appropriate access to all extracted ITOMWEB files.

---

**BJT77116E**      **Unable to open static file %s, errno=%d, errno2=%08X**

---

## Explanation

Unable to open static files on ITOMWEB.

## User response

Ensure that user or user group have appropriate access to all extracted ITOMWEB files.

---

**BJT77117E**      **invalid DSNAME specification '%s'**

---

## Explanation

Invalid dataset length is specified.

## User response

Ensure that generated dataset has with standard dataset length

---

**BJT77119W**      **Unable to set locale to '%s'.**

---

## Explanation

LOCALE parameter in Policy Admin is not specified correctly.

## User response

Specify appropriate LOCALE value in Policy Admin.

---

**BJT77120E**      **User %s has no permission to download archives.**

### Explanation

User do not have access to perform download archive operation for choosen archive.

### User response

Contact your Admin to provide access.

---

**BJT77121E**      **User %s has no permission to download reports.**

### Explanation

User do not have access to perform download report operation for choosen report.

### User response

Contact your Admin to provide access.

---

**BJT77122E**      **User %s has no permission to print archives.**

### Explanation

User do not have access to perform print archive operation for choosen archive.

### User response

Contact your Admin to provide access.

---

**BJT77123E**      **User %s has no permission to print reports.**

### Explanation

User do not have access to perform print report operation for choosen report.

### User response

Contact your Admin to provide access.

---

**BJT77135W**      **Unable to open report definitions %s**

### Explanation

Invalid path of REPORT\_DEF\_FILE given in Policy Admin of ITOMWeb.

### User response

Provide appropriate adminreports.enc file path generated by extracting om directory. Activate the

policy and bounce ITOMWeb instance in order to pick the changes.

---

**BJT7751W**      **unknown charset %s**

### Explanation

The value entered as input in Admin report section is not alphanumeric.

### User response

Specify alphanumeric values in the Admin Report section fields.

---

**BJT7754W**      **Parameter name too long at %d in %s**

### Explanation

Parameter length exceeds 255 character length.

### User response

Specify the paramter length with less than 255 character length.

---

**BJTZ114**      **The requested function is still under construction.**

### Explanation:

An attempt was made to utilize an Output Manager enhancement function that is not yet complete.

### User response:

No response required.

---

**BJTZ115**      **Abend (abend code) has occurred, reason (reason code)**

### Explanation:

An abend occurred when Output Manager attempted an operation. As a result, the program cannot complete and will terminate. This message provides the abend code and reason code that was returned from the operation.

### User response:

To determine the cause of the error, look up the abend code that this message provides in the IBM MVS documentation.

---

**BJTZ119**      **Policy activation command is issued.**

### Explanation:

The Output Manager policy activate command has been issued.

### User response:

No response required.



---

**BJTZ120**      **You no longer have access to this report****Explanation:**

You attempted to access a report that you are not authorized to access. As a result, the report is not displayed.

**User response:**

If you need to access the report, contact your report administrator for assistance.

---

**BJTZ12**      **Access ID (access ID) does not comply to Access Mask (access mask name).****Explanation:**

An invalid value was specified in the Access ID field. An Access ID must be derived from the Access Mask.

**User response:**

Type a valid access ID in the Access ID field.

---

**BJTZ122**      **Access mask was changed by administrator****Explanation:**

Your access mask was changed by an administrator. Access masks determine which access IDs a user can switch to, and your access ID must be a derivative of your new access mask.

**User response:**

Specify an access ID that is derivative of the new access mask.

---

**BJTZ123**      **You are not authorized to access this archive****Explanation:**

You attempted to access an archive that you are not authorized to access. As a result, the archive is not displayed.

**User response:**

If you need to access the archive, contact your report administrator for assistance.

---

**BJTZ124**      **Invalid line command****Explanation:**

An invalid line command was issued.

**User response:**

Specify a valid line command. For a full list of valid line commands for a panel, refer to that panel's Help by pressing PF1 or selecting Help from the drop-down list.

---

**BJTZ125**      **The job associated with this report ran, but no data was generated for this report****Explanation:**

This message is meant to inform you that the job associated with a report ran successfully, but no data was captured because no data matched the selection criteria specified in the report selector rule.

**User response:**

No response required.

---

**BJTZ126**      **Referenced object has been deleted from the database, and the reference to it has been erased****Explanation:**

You successfully deleted an Output Manager object from the database. This object was referenced by another Output Manager object, and that reference was successfully deleted as well.

**User response:**

No response required.

---

**BJTZ127**      **No enabled custom reports found for this layout. Status changed to disabled****Explanation:**

An attempt was made to enable a layout, however, layouts can only be enabled when they have one or more custom reports enabled.

**User response:**

Leave the layout disabled, or enable a custom report for this layout.

---

**BJTZ128**      **TPL rule expression must not be blank.****Explanation:**

You are attempting to save a TPL rule definition that does not contain a TPL rule expression. A TPL rule expression is required in the TPL Rule field of the TPL Rules Details panel.

**User response:**

Type a valid TPL rule expression in the TPL Rule field. For more information on TPL rules, view the help panel of the TPL Rules Details panel.

---

**BJTZ129**      **TPL rule expression must not be longer than 440 lines****Explanation:**

You are attempting to save a TPL rule definition, but the TPL rule expression is too long. TPL rule expressions must not exceed 440 lines.

**User response:**

Edit the TPL rule expression in the TPL Rule field to be 440 lines or less. For more information on TPL rules, view the help panel of the TPL Rules Details panel.

---

**BJTZ135:**      **Request Canceled****Explanation:**

You successfully canceled this process.

**User response:**  
No action is required.

---

**BJTZ138**      **Program storage exhausted. Enter more specific search criteria to shorten the list of displayed items**

**Explanation:**  
The total number of result rows that Output Manager returned for the panel exceeds the number of rows that can be listed on the panel at one time due to storage limitations. This situation can occur if you specified very general search criteria or if you have not previously specified any search criteria for this panel.

**User response:**  
To reduce the number of result rows, you can enter more specific search criteria by choosing option 1 (Enter Search Criteria) from the Search pull-down menu.

---

**BJTZ140**      **Invalid character. Only alphanumeric characters are allowed (A-Z,a-z,0-9)**

**Explanation:**  
An invalid value was specified in a field that supports only alphanumeric characters (A-Z,a-z,0-9).

**User response:**  
When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify alphanumeric characters (A-Z,a-z,0-9) in that field.

---

**BJTZ141**      **Invalid character. Only alphanumeric characters and wildcards allowed (A-Z,a-z,0-9,?\*)**

**Explanation:**  
An invalid value was specified in a field that supports only alphanumeric characters (A-Z,a-z,0-9) and wildcards (? and \*).

**User response:**  
When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify alphanumeric characters (A-Z,a-z,0-9) or wildcards (? and \*) in that field.

---

**BJTZ142**      **Invalid character. Only alphanumeric and national characters allowed (A-Z,a-z,0-9,@,#,\$)**

**Explanation:**  
An invalid value was specified in a field that supports only alphanumeric and national characters (A-Z,a-z,0-9,@,#,\$).

**User response:**  
When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify alphanumeric and national characters (A-Z,a-z,0-9,@,#,\$) in that field.

---

**BJTZ143**      **Invalid character. Only alphanumeric, national characters, and wildcards are allowed (A-Z,a-z,0-9,@,#,\$,?\*)**

**Explanation:**  
An invalid value was specified in a field that supports only alphanumeric, national, and wildcard characters (A-Z,a-z,0-9,@,#,\$,?\*)).

**User response:**  
When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify alphanumeric, national, and wildcard characters (A-Z,a-z,0-9,@,#,\$,?\*) in that field.

---

**BJTZ144**      **Invalid character. Only alphanumeric, national characters, and period are allowed (A-Z,a-z,0-9,@,#,\$,.). The first character must be non-numeric.**

**Explanation:**  
An invalid value was specified in a field that supports only alphanumeric characters, national characters, and period ((A-Z,a-z,0-9,@,#,\$,.). The first character cannot be a number.

**User response:**  
When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify alphanumeric characters, national characters, and period (A-Z,a-z,0-9,@,#,\$,.) in that field. The first character cannot be a number.

---

**BJTZ145**      **Invalid character. Only alphanumeric, national characters, period, and wildcards allowed (A-Z,a-z,0-9,@,#,\$,.,?\*) . The first character must be non-numeric**

**Explanation:**  
An invalid value was specified in a field that supports only alphanumeric characters, national characters, wildcard characters, and period (A-Z,a-z,0-9,@,#,\$,.,?\*) . The first character cannot be a number.

**User response:**  
When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify alphanumeric, national, and wildcard characters, and period (A-Z,a-z,0-9,@,#,\$,.,?\*) in that field. The first character cannot be a number.

---

**BJTZ146**      **Blank not allowed. A blank value is not allowed.**

**Explanation:**  
A blank was specified in a field that cannot have blanks.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a valid value in that field.

---

**BJTZ147**      **Invalid character. Only alphanumeric and national characters allowed (A-Z,a-z,0-9,@,#,\$), except exceptions.**

**Explanation:**

An invalid value was specified in a field that supports only alphanumeric and national characters (A-Z,a-z,0-9,@,#,\$), with the exception of the words displayed in the message.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify alphanumeric and national characters (A-Z,a-z,0-9,@,#,\$) in that field. Make sure you do not include the invalid words displayed in this message.

---

**BJTZ148**      **Invalid character. Only alphanumeric, national, and wildcard characters allowed (A-Z,a-z,0-9,@,#,\$,?), except words exceptions.**

**Explanation:**

An invalid value was specified in a field that supports only alphanumeric, national, and wildcard characters (A-Z,a-z,0-9,@,#,\$,?), with the exception of the words displayed in the message.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify alphanumeric, national, and wildcard characters (A-Z,a-z,0-9,@,#,\$,?) in that field. Make sure you do not include the invalid words displayed in this message.

---

**BJTZ149**      **Invalid value. Field value is not compatible with parent item field values**

**Explanation:**

An invalid value was specified in a field of a child object. The fields of child objects must be derivative of the fields of the parent object.

**User response:**

Compare the fields of the parent object with the fields of the child object and specify derivative values in the child object fields.

---

**BJTZ150**      **Invalid value. Only Yes and No are allowed**

**Explanation:**

A value other than Yes or No was specified in a field that only supports Yes or No.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Type Yes or No in that field.

---

**BJTZ151**      **Invalid email address. Email address must be in the format "xx.xx.xx@yy.y.zz"**

**Explanation:**

An invalid email address was specified.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Type an email address in the format xx.xx.xx@yy.y.zz

---

**BJTZ152**      **Invalid value. Either "Able to access via ITOMWEB" or "Able to access via ISPF" must be "Yes"**

**Explanation:**

You must specify YES in either the "Able to access via ITOMWEB" field or the "Able to access via ISPF" field to specify the accessible interface.

**User response:**

Type YES in either the "Able to access via ITOMWEB" field or the "Able to access via ISPF" field.

---

**BJTZ153**      **Duplicate name. Recipient name is not unique**

**Explanation:**

The specified recipient name was not inserted into the Output Manager database because a recipient name with that value already exists. Recipient names must be unique.

**User response:**

Type a unique value in the recipient name field.

---

**BJTZ154**      **Invalid value. Job records must begin with //**

**Explanation:**

An invalid value was specified. Job records must begin with two slashes (/).

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Type a job record that begins with //.

---

**BJTZ155**      **Invalid jobclass. Job class must be one alphanumeric character (0-9, uppercase A-Z, or lowercase s or t).**

**Explanation:**

An invalid value was specified in the jobclass field. Job class must be one alphanumeric character (0-9, uppercase A-Z, or lowercase s or t). Lowercase s is used when job type is STC, and lowercase t is used when job type is TSU.

**User response:**

Type a valid value in the jobclass field.

---

**BJTZ156 Duplicate name. Selector name is not unique**

**Explanation:**

The specified selector name was not inserted into the Output Manager database because a selector name with that value already exists. Selector names must be unique.

**User response:**

Type a unique value in the selector name field.

---

**BJTZ157 Invalid character. Only alphanumeric and national characters are allowed (A-Z,a-z,0-9,@,#,\$), except words (INTRDR, STDWTR, NJERDR)**

**Explanation:**

An invalid value was specified in a field that supports only alphanumeric and national characters (A-Z,a-z,0-9,@,#,\$), with the exception of the words displayed in the message.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify alphanumeric and national characters (A-Z,a-z,0-9,@,#,\$) in that field. Make sure you do not include the invalid words displayed in this message.

---

**BJTZ158 Duplicate name. Rule name is not unique**

**Explanation:**

The specified rule name was not inserted into the Output Manager database because a rule name with that value already exists. Rule names must be unique.

**User response:**

Type a unique value in the rule name field.

---

**BJTZ159 Duplicate name. Rule name is not unique.**

**Explanation:**

The specified rule name was not inserted into the Output Manager database because a rule name with that value already exists. Rule names must be unique.

**User response:**

Type a unique value in the rule name field.

---

**BJTZ160 Invalid value. There are subselectors conflicting with this selector configuration.**

**Explanation:**

An invalid value was specified in one or more of the selection fields. This selector rule is a parent selector rule, and this modification would result in orphaning one or more of its child subselector rules, the

modification was not applied. The selection criteria of subselector rules must be derivative of the associated parent selector rule.

**User response:**

To return to editing the parent selector, press Enter or type CANCEL. To review the list of conflicting subselector rules, including the fields in conflict, type CONFLIST on the command line and press Enter.

---

**BJTZ161 Invalid email. Email address must contain one and only one @ symbol.**

**Explanation:**

An invalid email address was specified. The value specified is either missing an @ symbol, or it contains too many @ symbols. One and only one @ symbol is required.

**User response:**

Specify a valid email address with one and only one @ symbol.

---

**BJTZ162 Invalid email. There is more than one @ symbol in email.**

**Explanation:**

An invalid email address was specified. The value specified contains too many @ symbols. One and only one @ symbol is required.

**User response:**

Specify a valid email address with one and only one @ symbol.

---

**BJTZ163 Invalid email. @ symbol cannot be the first or last character of email.**

**Explanation:**

An invalid email address was specified. The value specified either begins with or ends with an @ symbol, but the @ symbol cannot be the first or last character of an email address.

**User response:**

Specify a valid email address with one and only one @ symbol that is not the first or last character.

---

**BJTZ164 Invalid Job Class. Job Class must contain only "A-Z 0-9" symbols when Job Type is Batch.**

**Explanation:**

An invalid value was specified in the Job Class field. When the Job Type is set to BATCH, valid characters are A-Z 0-9.

**User response:**

Specify a valid value in the job class field.

---

**BJTZ165 Invalid Job Class. Job Class must be blank or "s" when Job Type is STC.**

**Explanation:**

An invalid value was specified in the Job Class field. When the Job Type is set to STC, job class must be blank or lowercase s.

**User response:**

Specify a valid value in the job class field.

---

**BJTZ166**      **Invalid Job Class. Job Class must be blank or "t" when Job Type is TSO.**

**Explanation:**

An invalid value was specified in the Job Class field. When the Job Type is set to TSO, job class must be blank or lowercase t.

**User response:**

Specify a valid value in the job class field.

---

**BJTZ167**      **Invalid Job Class. Job Class must contain only "A-Z 0-9" symbols when Job Type is Appc.**

**Explanation:**

An invalid value was specified in the Job Class field. When the Job Type is set to Appc, job class must be uppercase A-Z, or numbers 0-9. It cannot be lowercase s or t.

**User response:**

Specify a valid value in the job class field.

---

**BJTZ168**      **Invalid Job Class. Job Class must contain only uppercase A-Z, lowercase s or t, or 0-9 symbols when Job Type is All.**

**Explanation:**

An invalid value was specified in the Job Class field. When the Job Type is set to All, job class must be uppercase A-Z, lowercase s or t, or numbers 0-9.

**User response:**

Specify a valid value in the job class field.

---

**BJTZ169**      **Invalid Destination. Destination contains an invalid value.**

**Explanation:**

An invalid value was specific in the Destination field.

**User response:**

Specify a valid value in the destination field.

---

**BJTZ170**      **Invalid character. Only alphanumeric and national characters allowed (A-Z,a-z,0-9,@,#,\$). The first character must be non-numeric.**

**Explanation:**

An invalid value was specified in a field that supports only alphanumeric and national characters (A-Z,a-z,0-9,@,#,\$).

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify alphanumeric and national characters (A-Z,a-z,0-9,@,#,\$) in that field.

---

**BJTZ171**      **Invalid character. Only alphanumeric and national characters allowed (A-Z,a-z,0-9,@,#,\$), except words (invalid words). The first character must be non-numeric.**

**Explanation:**

An invalid value was specified in a field that supports only alphanumeric and national characters (A-Z,a-z,0-9,@,#,\$), with the exception of the words displayed in the message.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify alphanumeric and national characters (A-Z,a-z,0-9,@,#,\$) in that field. Make sure you do not include the invalid words displayed in this message.

---

**BJTZ172**      **Invalid character. Only alphanumeric, national, and wildcard characters are allowed (A-Z,a-z,0-9,@,#,\$,\*,?). First character must be non-numeric.**

**Explanation:**

An invalid value was specified in a field that supports only alphanumeric characters, national characters, wildcard characters (A-Z,a-z,0-9,@,#,\$,\*,?). The first character cannot be a number.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify alphanumeric, national, and wildcard characters (A-Z,a-z,0-9,@,#,\$,\*,?) in that field. The first character cannot be a number.

---

**BJTZ173**      **Invalid character. Only alphanumeric, national, and wildcard characters are allowed (A-Z,a-z,0-9,@,#,\$,\*,?). The first character must be non-numeric.**

**Explanation:**

An invalid value was specified in a field that supports only alphanumeric, national, and wildcard characters (A-Z,a-z,0-9,@,#,\$,\*,?), with the exception of the words displayed in the message. The first character cannot be a number.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify

alphanumeric, national, and wildcard characters (A-Z,a-z,0-9,@,#,\$,?,\*) in that field. Make sure you do not include the invalid words displayed in this message. The first character cannot be a number.

---

**BJTZ174**      **Invalid argument. Positive integer argument expected.**

**Explanation:**

An invalid argument was specified. Only positive numbers are allowed.

**User response:**

Specify a positive number for the argument.

---

**BJTZ175**      **Database connection failed.**

**Explanation:**

While Output Manager was running, its connection to the Db2 subsystem that contains its database was lost. As a result, Output Manager terminates any active selector tasks and shuts down in a controlled manner. No report SYSOUT that is on the JES spool will be lost.

**User response:**

Restart the Db2 subsystem, if necessary. Then, restart the Output Manager started task.

---

**BJTZ176**      **Archive row not found in database.**

**Explanation:**

Output Manager did not find an entry for the archive in the database.

**User response:**

No action is required.

---

**BJTZ177**      **Report row not found in database.**

**Explanation:**

Output Manager did not find an entry for the report in the database.

**User response:**

No action is required.

---

**BJTZ178**      **Duplicate name. Archive Attribute name is not unique.**

**Explanation:**

The specified archive attribute name was not inserted into the Output Manager database because an archive attribute with that name already exists. Archive attribute names must be unique.

**User response:**

Type a unique value in the archive attribute name field.

---

**BJTZ179**      **Duplicate name. Layout Field name is not unique.**

**Explanation:**

The specified layout field name was not inserted into the Output Manager database because a layout field with that name already exists. Layout field names must be unique.

**User response:**

Type a unique value in the layout field name field.

---

**BJTZ200A**      **Invalid color. Only Red, Pink, Green, Yellow, Blue, Turquoise or White allowed**

**Explanation:**

An invalid color was specified in a color field on the User Preferences panel. This message identifies the valid colors.

**User response:**

Specify a valid color by typing the first letter of the color name, as follows: R (red), P (pink), G (green), Y (yellow), B (blue), T (turquoise), or W (white).

---

**BJTZ200B**      **Invalid hilite. Only None, Blink, Reverse, or Uscore allowed.**

**Explanation:**

An invalid value was specified for a hilite field on the User Preferences panel. A hilite value indicates how to highlight a specified type of information. This message identifies the valid hilite values.

**User response:**

Type one of the following valid values: Blink (display flashing text), Reverse (reverse the background and foreground colors), Uscore (underscore the text), or None (do not use highlighting).

---

**BJTZ200C**      **Invalid intensity. Only Low or High allowed.**

**Explanation:**

An invalid value was specified in an intensity field on the User Preferences panel. An intensity value indicates the level of brightness. The only valid values are Low and High.

**User response:**

Type either Low or High for the intensity.

---

**BJTZ200D**      **Preferences saved in your profile dataset.**

**Explanation:**

The preferences that you specified have been successfully saved to your ISPF profile data set. These preferences will be used for your future Output Manager sessions until you change them.

**User response:**

No action is required.

---

**BJTZ203**      **Subsystem type is incorrect. Only \*, STC, ITOMWeb, and ISPF are allowed.**

**Explanation:**

An invalid value was specified for the subsystem name. The subsystem type must be \*, STC, ITOMWeb, ISPF, or BJTBTATCH.

**User response:**

Type \*, STC, ITOMWeb, or ISPF in the subsystem type field.

---

**BJTZ204**            **Blank is not allowed. Subsystem name must not be blank.**

**Explanation:**

An invalid value was specified for the subsystem name. The subsystem name cannot be blank.

**User response:**

Specify a valid subsystem name.

---

**BJTZ205**            **Policy updated.**

**Explanation:**

The Output Manager policy was successfully updated. Any new or updated rules have read into memory and available for use by Output Manager.

**User response:**

No action is required.

---

**BJTZ206:**            **Policy deleted.**

**Explanation:**

You successfully deleted a policy.

**User response:**

No action is required.

---

**BJTZ207**            **Subsystem type must be 'Started task' for policy activation**

**Explanation:**

You issued the policy activate command, but the value in the Type field is not Started Task. Policy Activate can only be used for Started Task type.

**User response:**

Type Started Task in the Type field.

---

**BJTZ210C**            **Invalid Exists. Only Leave, Replace, or Extend are allowed**

**Explanation:**

An invalid value was specified in the Exists field. This field indicates what Output Manager should do if an archive already exists.

**User response**

In the Exists field, type one of the following valid values:

- Replace - To replace the data in the archive with the new data
- Leave - To leave the old data in the archive and not update it, and to keep the new data on the spool
- Extend - To write the new data at the end of the old archive data set

---

**BJTZ210D**            **Invalid Status. Only Enabled, Disabled, or Skip are allowed.**

**Explanation:**

An invalid value was specified in the Status field for the rule. Only Enabled, Disabled, and Skip are valid values.

**User response:**

In the Status field, type either Enabled (to make the rule active and available for processing), Disabled (to make the rule unavailable), or Skip (to skip the rule and continue processing).

---

**BJTZ210E**            **Invalid combine option. Only Yes or No allowed.**

**Explanation:**

An invalid value was specified in the Combine Sysout field. This field indicates whether Output Manager should combine multiple SYSOUTs from the job that is specified in the selector rule into a single archive file. The only valid values are Yes and No.

**User response:**

Specify either Yes or No in the Combine Sysout field.

---

**BJTZ210G**            **Invalid Job type. Only All, Batch, Tso, Stc, or APPC are allowed.**

**Explanation:**

An invalid value was specified in the Job Type field. This field indicates the type of job to which the selector rule applies.

**User response:**

In the Job Type field, type one of the following valid values: - All: For all jobs - Batch: For only jobs that are processed in batch mode - Appc: For only jobs that are associated with a specific application - Tso: For only jobs that are processed on TSO systems - Stc: For only jobs that are related to the started task

---

**BJTZ210H**            **Invalid jesqueue. Only All, Hold, External Writer, or Write are allowed.**

**Explanation:**

An invalid value was specified in the JES Queue field. This field indicates what to do with the jobs in the JES queue that will be archived.

**User response:**

In the JES Queue field, type one of the following valid values: - All: To select all jobs in the JES queue - External: To select the jobs that are assigned to a special, external writer, which may or may not be a printer - Write: To select the jobs that are ready to be written to a printer - Hold: To select the jobs that are held on the JES queue but are not ready to be written

---

**BJTZ210I**            **Invalid archive source. Only J, W, or U are allowed.**

**Explanation**

An invalid value was specified in the Source field, which is part of the archive name rule for the selector

rule or subselector rule. This field determines how Output Manager generates a logical archive name (archived report name). Valid values are:

- J: Use the job name as the archive name
- W: Use a writer name that you optionally specified in the JCL for the job
- U: Use an optional user exit that gathers the text for the archive name from comments that are embedded in the JCL

**User response:**

Specify one of the following values: J (for the job name), W (for the Writer name), or U (for the user exit).

---

**BJTZ210M**      **Invalid name out. Name out can only be Yes or No.**

**Explanation:**

An invalid value was specified in the Name Out field on the Recipient Details panel. This field indicates whether the recipient's name should be generated as part of the output card.

**User response:**

Type either Yes or No in the Name Out field.

---

**BJTZ210P**      **Invalid access ID. Access ID must be derived from Access Mask.**

**Explanation:**

The Access ID value does not match the mask value of the specified row. ACCID must be a derivative of ACCMASK.

**User response:**

Change the access ID and/or the access mask values to make the access ID value derivative of the value specified in access mask field.

---

**BJTZ210R**      **Invalid access mask. A blank value in Access Mask is not allowed.**

**Explanation:**

You must specify a value in the Access Mask field.

**User response:**

Type a valid value in the Access Mask field. You can specify a fully-qualified Access Mask, or you can include a wildcard in the Access Mask.

---

**BJTZ210Q**      **Invalid copies value. The Copies value must be a number from 0-255.**

**Explanation:**

An invalid value was specified in the Copies field on the Recipient Details panel. This field specifies the number of report copies to print for the recipient.

**User response:**

Specify a number from 0 through 255 in the Copies field. If you accept the default value of zero, the report will be distributed online but will not be printed.

---

**BJTZ210S**      **Invalid duplex. Only No, Normal, or Tumble are allowed.**

**Explanation:**

An invalid value was specified in the Duplex field. This field indicates whether or not to print in duplex mode (double-sided). This message identifies the valid values.

**User response:**

In the Duplex field, type one of the following valid values: - No: Do not print the archive in duplex mode - Normal: Print the archive in duplex mode and bind the archive along the long edge of the paper. - Tumble: Print the archive in duplex mode and bind the archive along the short edge of the paper.

---

**BJTZ210T**      **Invalid burst. Only Yes or No are allowed.**

**Explanation:**

An invalid value was specified in the Burst field. This field indicates whether to physically separate a report into smaller reports based on specific criteria, for example, a branch ID.

**User response:**

In the Burst field, type either Yes or No.

---

**BJTZ210U**      **Invalid label. Only Yes or No are allowed.**

**Explanation:**

An invalid value was specified in the Label field. This field indicates whether to print a security label with the recipient's reports.

**User response:**

In the Label field, type either Yes or No.

---

**BJTZ210V**      **Invalid sysarea. Only Yes or No are allowed.**

**Explanation:**

An invalid value was specified in the Sys Area field. This field indicates whether a system area label is printed with the recipient's reports.

**User response:**

In the Sys Area field, type either Yes or No.

---

**BJTZ210W**      **Try REPrint, Print, REAL, None, All, Requested, Custom, or Mixed.**

**Explanation:**

An invalid value was specified in the Attr Usage field on the Recipient Details panel. This field indicates under what conditions the linked set of printer attributes should be used for the recipient. The message identifies the valid values for this field.



**User response:**

In the Attr Usage field, specify one of these valid values: - Reprint: Use for Reprint requests only - Print: Use for Print requests only - Real: Use for real-time printing only - None: Use for no types of printing (Print, Reprint, and real-time) - All: Use for all types of printing - Requested: Use for any Print or Reprint request made by the recipient - Custom: Use for the real-time printing or reprinting of custom reports - Mixed: Use for real-time printing or reprinting of custom and basic reports

---

**BJTZ210X**      **Invalid attr usage. Only REPrint, Print, REAL, None, All, Requested, Custom, or Mixed are allowed.**

**Explanation:**

An invalid value was specified in the Attr Usage field on the Recipient Details panel. This field indicates under what conditions the linked set of printer attributes should be used for the recipient. The message identifies the valid values for this field.

**User response:**

In the Attr Usage field, specify one of these valid values: - Reprint: Use for Reprint requests only - Print: Use for Print requests only - Real: Use for real-time printing only - None: Use for no types of printing (Print, Reprint, and real-time) - All: Use for all types of printing - Requested: Use for any Print or Reprint request made by the recipient - Custom: Use for the real-time printing or reprinting of custom reports - Mixed: Use for real-time printing or reprinting of custom and basic reports

---

**BJTZ214**      **Only Keep, Delete, Hold, Syshold, or Release are allowed.**

**Explanation:**

An invalid value was specified in the Disposition, Error Disp, or Limit Disp field for this selector rule. The Disposition field applies when archiving is successful. The Error Disp field applies when archiving fails. The Limit Disp field applies when the output data set exceeds the line limit that you specify.

**User response:**

Specify one of the following valid values in the Disposition, Error Disp, or Limit Disp field: - Keep: To keep the data on the spool in the same location and make a copy of it for the archive - Delete: To remove the data from the spool after making a copy of it for the archive - Hold: To keep the data on the JES spool and place it in the hold queue - Syshold: To keep the data on the JES spool and place it in the syshold queue - Release: To keep the data on the JES spool and place it in the write queue

---

**BJTZ215**      **Invalid archive source. Only J, W, or U are allowed.**

**Explanation**

An invalid value was specified in the Source field, which is part of the archive name rule for the selector rule or subselector rule. This field determines how Output Manager generates a logical archive name (archived report name). Valid values are:

- J: Use the job name as the archive name
- W: Use a writer name that you optionally specified in the JCL for the job
- U: Use an optional user exit that gathers the text for the archive name from comments that are embedded in the JCL

**User response:**

Specify one of the following values: J (for the job name), W (for the writer name), or U (for the user exit).

---

**BJTZ216**      **Invalid Job type. Only All, Batch, Tso, Stc, or APPC are allowed.**

**Explanation:**

An invalid value was specified in the Job Type field. This field indicates the type of job to which the selector rule applies.

**User response:**

In the Job Type field, type one of the following valid values: - All: For all jobs - Batch: For only jobs that are processed in batch mode - Appc: For only jobs that are associated with a specific application - Tso: For only jobs that are processed on TSO systems - Stc: For only jobs that are related to the started task

---

**BJTZ217**      **Invalid Status. Only Enabled, Disabled, or Skip are allowed.**

**Explanation:**

An invalid value was specified in the Status field for the rule. Only Enabled, Disabled, and Skip are valid values.

**User response:**

In the Status field, type either Enabled (to make the rule active and available for processing), Disabled (to make the rule unavailable), or Skip (to skip the rule and continue processing).

---

**BJTZ218**      **Invalid Exists. Only Leave, Replace, or Extend are allowed.**

**Explanation:**

An invalid value was specified in the Exists field. This field indicates what Output Manager should do if an archive already exists.

**User response**

In the Exists field, type one of the following valid values:

- Replace - To replace the data in the archive with the new data

- Leave - To leave the old data in the archive and not update it, and to keep the new data on the spool
- Extend - To write the new data at the end of the old archive data set

---

**BJTZ219**      **Invalid jesqueue: Only All, Hold, External Writer, or Write are allowed.**

**Explanation:**

An invalid value was specified in the JES Queue field. This field indicates what to do with the jobs in the JES queue that will be archived.

**User response:**

In the JES Queue field, type one of the following valid values: - All: To select all jobs in the JES queue - External: To select the jobs that are assigned to a special, external writer, which may or may not be a printer - Write: To select the jobs that are ready to be written to a printer - Hold: To select the jobs that are held on the JES queue but are not ready to be written

---

**BJTZ220A**      **Not a valid number. Only numeric values are allowed.**

**Explanation:**

A non-numeric character was specified in a field that only supports numeric values.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Type a number in that field.

---

**BJTZ220B**      **Invalid name. A field name is required.**

**Explanation:**

An invalid value was specified in the field name field. The field was not inserted into the Output Manager database.

**User response:**

Type a valid value in the field name field.

---

**BJTZ220D**      **Invalid CC. Only DCB, ASA, or Machine are allowed.**

**Explanation:**

An invalid value was specified in the CC field on the Layout panel. This field indicates the type of printer control that will be used with this report layout

**User response:**

In the CC field, specify one of the following valid values: - DCB: To use the spacing that is assigned to the report by the application - ASA: To use ANSI-standard spacing - Machine: To use machine carriage control If you do not know which value to enter, accept the default value of DCB.

---

**BJTZ220E**      **Invalid name. A layout name is required.**

**Explanation:**

An invalid value was specified in the layout name field. The layout was not inserted into the Output Manager database.

**User response:**

Type a valid value in the layout name field.

---

**BJTZ220G**      **Invalid name. An invalid PRSET member name was specified.**

**Explanation:**

An invalid value was specified in the PRSET member name field.

**User response:**

Type a valid value in the PRSET member name field.

---

**BJTZ220I**      **Invalid description. An attribute description is required**

**Explanation:**

An invalid value was specified in the description field.

**User response:**

Type a valid value in the description field.

---

**BJTZ220J**      **Invalid input. Only the characters A-Z, #, \$, @, and 0-9 are allowed.**

**Explanation:**

An invalid value was specified in a field that supports only the characters A-Z, #, \$, @, and 0-9.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a valid character (A-Z, #, \$, @, and 0-9) in that field.

---

**BJTZ220K**      **Invalid input. Table reference character can only be Yes or No**

**Explanation:**

An invalid value was specified in the Table ref chr field. This field indicates whether the data contains table reference characters (TRC) codes. (A TRC code indicates which font in the Char arg tbl field should be used to print the record.)

**User response:**

In the Table ref chr field, type either Yes or No.

---

**BJTZ220L**      **Invalid CopyGroup value: a non-zero value cannot be preceded by a zero value.**

**Explanation:**

An invalid value was specified in the Copy Group field. In this field, a non-zero value cannot be preceded by 0.

**User response:**

Type a valid value in the CopyGroup field.

---

**BJTZ220M**      **Invalid sum. Sum of group-values must not exceed 255.**

**Explanation:**

An invalid value was specified in one or more of the Copy Group fields. The sum of all Copy Group fields must not exceed 255.

**User response:**

Adjust the values specified in the Copy Group fields so that the sum of the Copy Group values are less than or equal to 255.

---

**BJTZ220Q**      **Invalid control. Control can only be Program, Single, Double, or Triple.**

**Explanation:**

An invalid value was specified in the Control field. This field indicates the printer control to use for spacing the output. This message identifies the valid values for the field.

**User response:**

In the Control field, type one of these valid values: - Program: To start each logical record with a carriage control character - Single: To print the output with single spacing - Double: To print the output with double spacing - Triple: To print the output with triple spacing

---

**BJTZ220R**      **Invalid resolution. Resolution format can only be P240 or P300**

**Explanation:**

An invalid value was specified in the Resolution field. This field indicates the type of resolution that is used to format the printed data set.

**User response:**

In the Resolution field, type one of the following valid values: - P240: To format the printed data set using 240 pels per inch - P300: To format the printed data set using 300 pels per inch

---

**BJTZ220S**      **Invalid disposition. Disposition can only be Hold, Keep, Leave, Purge, or Write.**

**Explanation:**

An invalid value was specified in the Disp field. This field indicates the disposition of the SYSOUT data set when a job completes normally.

**User response:**

In the Norm Disp field, type one of the following valid options: Write, Hold, Keep, Leave, or Purge. For information about these options, see the online Help.

---

**BJTZ220T**      **Invalid print errors. Print errors can only be Yes or No.**

**Explanation:**

An invalid value was specified in the Print Errors field. The first line of this field indicates whether all error messages should be printed at the end of the output data set. The second line of this field indicates the

maximum number of error messages to allow before canceling the printing of the current data set.

**User response:**

On the first line of the Print Errors field, type either Yes or No to indicate whether all error messages should be printed at the end of the output data set. If you type No, only the messages that force an early termination of the print job are printed. On the second line, type a number from 0 through 999 to indicate the maximum number of error messages to allow before canceling the printing. A value of zero means an infinite number. This message count includes all error messages that are generated by PSF (even if you specified No on the first line to prevent the printing of error messages).

---

**BJTZ220U**      **Invalid disposition. Print error disposition can only be Quit or Hold.**

**Explanation:**

An invalid value was specified in the Error Disp field. This field indicates what to do if an error occurs that forces the early termination of a print job.

**User response:**

In the Error Disp field, type one of these valid values: - Quit - To release the data set to JES as complete, even if an early termination error occurs during printing - Hold - To keep the data set on the spool until a system operator releases it.

---

**BJTZ220V**      **Invalid error blocking. Error blocking can only be Block, Char blk, Pos blk, Unblock.**

**Explanation:**

An invalid value was specified in the Err Blocking field. This field indicates how to handle the following types of errors: - Print-positioning errors - Errors that occur when the printed data goes beyond the physical limits of the page or beyond the overlay or logical page that is associated with a print job - Invalid-character errors - Errors that occur when a text character is not part of a font set This message indicates the valid values for this field.

**User response:**

In the Err Blocking field, type one of these valid values: - Block - To not report print-positioning errors and invalid-character errors to PSF - Unblock - To report print-positioning errors and invalid-character errors to PSF - Char blk - To block invalid-character errors but report print-positioning errors - Pos blk - To block print-positioning errors but report invalid-character errors

---

**BJTZ220W**      **Invalid length. Form length metric can only be Inches or CM.**

**Explanation:**

An invalid value was specified on the second line of the Form Length field. This field identifies the page length that can be printed without reconfiguring the printer; the second line indicates the unit of measurement (inches or centimeters) for the page length.

**User response:**

On the second line of the Form Length field, type either Inches (with an uppercase "I") or CM

---

**BJTZ221**            **Invalid CC. Only DCB, ASA, or Machine are allowed.**

**Explanation:**

An invalid value was specified in the CC field on the Layout panel. This field indicates the type of printer control that will be used with this report layout

**User response:**

In the CC field, specify one of the following valid values: - DCB: To use the spacing that is assigned to the report by the application - ASA: To use ANSI-standard spacing - Machine: To use machine carriage control If you do not know which value to enter, accept the default value of DCB.

---

**BJTZ222**            **Invalid value. Invalid value, must be integer in range of 1-999.**

**Explanation:**

An invalid value was specified. Only numbers 1-999 are allowed.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a number 1-999 in that field.

---

**BJTZ223**            **Invalid value. Invalid value, must be integer in range of 0-999.**

**Explanation:**

An invalid value was specified. Only numbers 0-999 are allowed.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a number 0-999 in that field.

---

**BJTZ224**            **Invalid disposition. Disposition can only be Hold, Keep, Leave, Purge, or Write.**

**Explanation:**

An invalid value was specified in the Norm Disp field. This field indicates the disposition of the SYSOUT data set when a job completes normally.

**User response:**

In the Norm Disp field, type one of the following valid options: Write, Hold, Keep, Leave, or Purge.

---

**BJTZ225**            **Numeric field. Only digits 1-9 are allowed.**

**Explanation:**

An invalid value was specified. Only numbers 1-9 are allowed.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a number 1-9 in that field.

---

**BJTZ226**            **Invalid resolution. Resolution format can only be P240 or P300.**

**Explanation:**

Resolution field on the Print Attributes Detail panel. This field indicates the type of resolution that is used to format the printed data set.

**User response:**

In the Resolution field, type one of the following valid values: - P240 - To format the printed data set using 240 pels per inch - P300 - To format the printed data set using 300 pels per inch

---

**BJTZ227**            **Invalid value. Value must be a number in the range of 0-99.**

**Explanation:**

An invalid value was specified. Only numbers 0-99 are allowed.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a number 0-99 in that field.

---

**BJTZ228**            **Invalid length. Form length metric can only be Inches or CM.**

**Explanation:**

An invalid value was specified on the second line of the Form Length field on the Print Attributes Detail panel. This field identifies the page length that can be printed without reconfiguring the printer; the second line indicates the unit of measurement (inches or centimeters) for the page length.

**User response:**

On the second line of the Form Length field, type either Inches (with an uppercase "I") or CM.

---

**BJTZ229**            **Invalid value. Line Count must be a number in the range of 0-2500.**

**Explanation:**

An invalid value was specified in the line count field. Only numbers 0-2500 are allowed.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a number 0-2500 in that field.

---

**BJTZ230A**            **Invalid var value. Invalid value specified in the Var column.**

**Explanation:**

An invalid value was specified in the Var column. Only numeric values from 0 through 99 are valid.

**User response**

Specify a valid numeric value from 0 through 99 in the Var column, as follows:

- Specify 0 if you want Output Manager to look for the condition entry field only at the exact location that is defined in the layout.
- Specify a number from 1 through 98 if you want Output Manager to look for the start of the field in the starting column that is defined in the layout and in each column to the right of that starting column, up to the number of columns that you specify for this variance.
- Specify 99 if you want Output Manager to look for the start of the field in the defined starting column and in each column to the right, up to the end of the row.

---

**BJTZ230B**      **Invalid case sensitive. Only Yes or No are allowed.**

**Explanation:**

An invalid value was specified in the case sensitive field.

**User response:**

Type YES in the case sensitive field to indicate that the same case is required. Type NO in the case sensitive field to indicate that case sensitivity is not required.

---

**BJTZ230C**      **Invalid field value. Invalid value specified in the Value column.**

**Explanation:**

An invalid value was specified in the Value field. The value field specifies the character string that will be compared to the data in the captured sysout to satisfy the match condition.

**User response:**


---

**BJTZ230D**      **Invalid operator. Invalid operator specified in the Operator column.**

**Explanation:**

When defining a custom report, you specified an invalid value in the Operator column.

**User response:**

In the Operator column, type one of the following valid values: EQ (equals), GT (is greater than), GE (is greater than or equal to), LT (is less than), LE (is less than or equal to), or NE (is not equal to).

---

**BJTZ230E**      **Invalid status. Status can only be Enabled or Disabled.**

**Explanation:**

An invalid value was specified in the Status field. Only Enabled and Disabled are valid values.

**User response:**

In the Status field, type either Enabled (to make the rule active and available for processing) or Disabled (to make the rule unavailable).

---

**BJTZ230F**      **Invalid name. A report name is required.**

**Explanation:**

An invalid value was specified in the report name field

**User response:**

Specify a name for the report in the Report Name field. This name can be up to 24 characters in length

---

**BJTZ230H**      **Only Yes or No are allowed in contiguous report field.**

**Explanation:**

An invalid value was specified in the Contiguous field. This field indicates whether the pages in the custom report occur consecutively in the SYSOUT. The only valid values are Yes and No.

**User response:**

In the Contiguous field, type either Yes or No.

---

**BJTZ230I**      **Invalid print model. Only Classic or Report are allowed.**

**Explanation:**

An invalid value was specified in the Print Model field. The only valid values are Classic and Report. This field determines which static, user-defined set of printer attributes (if any) to use for printing the report instances or the indexed report pages that are based on this report definition.

**User response:**

Type either Classic or Report in the Print Model field. Specify Classic to use the sets of printer attributes that are linked to the recipient IDs on the distribution list that is assigned to the report definition. Specify Report to use the set of printer attributes that is linked directly to the report definition. If you specify Report, you will be able to override any Class, Copies, and Dest information from the report's set of printer attributes for individual recipients on the distribution list. You do so from the Distribution List panel.

---

**BJTZ230J**      **Invalid dynamic print. Only No or Report are allowed.**

**Explanation:**

An invalid value was specified in the Dynamic Print field. The only valid values are No and Report. This field determines whether to use the "dynamic printing parameters" from the BJTDAT table for printing report instances or indexed report pages that are based on this report definition. For reports, Output Manager can capture certain key printing parameters from the

SYSOUT and from the set of printer attributes that is linked to 1) the distribution list for the report or 2) the report definition. These "dynamic printing parameters" are stored in the BJTDAT table and merged at report print time.

**User response:**

Type either No or Report in the Dynamic Print field. Specify No to obtain all printing parameters from the recipient IDs on the distribution list and the applicable user- defined set of printer attributes. (The Print Model field determines which set of printer attributes applies.) Specify Report to obtain the set of "dynamic printing parameters" from the BJTDAT table. (Any other printing parameters that are specified in the applicable set of printer attributes will still be used.)

---

**BJTZ230M**      **Invalid status. Only Enabled, Disabled, or blank is valid for the Status field.**

**Explanation:**

An invalid value was specified in the Status field on the Search panel. Only Enabled or Disabled are allowed. You can also leave the field blank if you do not want to search for objects based on a status value.

**User response:**

Specify Enabled or Disabled in the Status field. Alternatively, leave the field blank if you do not want to search for objects based on their statuses.

---

**BJTZ230N**      **Rule name is required. Rule name is required.**

**Explanation:**

A required field is blank.

**User response:**

Specify a rule name in the rule name field.

---

**BJTZ230P**      **Numeric value required. Specify a number from 0-99999999 for the line limit.**

**Explanation:**

An invalid value was specified. Only numbers 0-99999999 are allowed.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a number 0-99999999 in that field.

---

**BJTZ230Q**      **Invalid status. Only Enabled, Disabled, Skip, or blank is valid for the Status field.**

**Explanation:**

An invalid value was specified in the Status field on the Search panel. Only Enabled or Disabled is valid. You can also leave the field blank if you do not want to search for objects based on a status value.

**User response:**

Specify Enabled or Disabled in the Status field. Alternatively, leave the field blank if you do not want to search for objects based on their statuses.

---

**BJTZ230S**      **Rule name is required. Rule name is required.**

**Explanation:**

A required field is blank.

**User response:**

Specify a rule name in the rule name field.

---

**BJTZ230U**      **Invalid type. Only Basic, Custom, Undefined, Noreports, or All are valid.**

**Explanation:**

The value that you specified in the Report Type field is not supported.

**User response:**

Enter one of the following valid report types: Basic, Custom, Undefined, Noreports, All, or leave the field blank. A blank value will return both basic and custom reports.

---

**BJTZ232**      **Invalid status. Status can only be Enabled or Disabled.**

**Explanation:**

An invalid value was specified in the Status field. Only Enabled and Disabled are valid values.

**User response:**

In the Status field, type either Enabled (to make the rule active and available for processing) or Disabled (to make the rule unavailable).

---

**BJTZ233**      **Invalid print model. Only Classic or Report are allowed.**

**Explanation:**

An invalid value was specified in the Print Model field. The only valid values are Classic and Report. This field determines which static, user-defined set of printer attributes (if any) to use for printing the report instances or the indexed report pages that are based on this report definition.

**User response:**

Type either Classic or Report in the Print Model field. Specify Classic to use the sets of printer attributes that are linked to the recipient IDs on the distribution list that is assigned to the report definition. Specify Report to use the set of printer attributes that is linked directly to the report definition. If you specify Report, you will be able to override any Class, Copies, and Dest information from the report's set of printer attributes for individual recipients on the distribution list. You do so from the Distribution List panel.

---

**BJTZ234 Invalid dynamic print. Only No or Report are allowed.****Explanation:**

An invalid value was specified in the Dynamic Print field. The only valid values are No and Report. This field determines whether to use the "dynamic printing parameters" from the BJTDAT table for printing report instances or indexed report pages that are based on this report definition. For reports, Output Manager can capture certain key printing parameters from the SYSOUT and from the set of printer attributes that is linked to 1) the distribution list for the report or 2) the report definition. These "dynamic printing parameters" are stored in the BJTDAT table and merged at report print time.

**User response:**

Type either No or Report in the Dynamic Print field. Specify No to obtain all printing parameters from the recipient IDs on the distribution list and the applicable user- defined set of printer attributes. (The Print Model field determines which set of printer attributes applies.) Specify Report to obtain the set of "dynamic printing parameters" from the BJTDAT table. (Any other printing parameters that are specified in the applicable set of printer attributes will still be used.)

---

**BJTZ235 Invalid var value. Invalid value specified in the Var column.****Explanation:**

An invalid value was specified in the Var column. Only numeric values from 0 through 99 are valid.

**User response**

Specify a valid numeric value from 0 through 99 in the Var column, as follows:

- Specify 0 if you want Output Manager to look for the condition entry field only at the exact location that is defined in the layout.
- Specify a number from 1 through 98 if you want Output Manager to look for the start of the field in the starting column that is defined in the layout and in each column to the right of that starting column, up to the number of columns that you specify for this variance.
- Specify 99 if you want Output Manager to look for the start of the field in the defined starting column and in each column to the right, up to the end of the row.

---

**BJTZ236 Invalid operator. Invalid operator specified in the Operator column, valid operators are: EQ, NE, GT, LT, GE, and LE.****Explanation:**

When defining a custom report, you specified an invalid value in the Operator column on the Report Condition Entry panel.

**User response:**

In the Operator column, type one of the following valid values: EQ (equals), NE (is not equal to), GT (is greater than), LT (is less than), GE (is greater than or equal to), or LE (is less than or equal to).

---

**BJTZ238 Invalid case sensitive. Only Yes or No are allowed.****Explanation:**

An invalid value was specified in the case sensitive field.

**User response:**

Type YES in the case sensitive field to indicate that the same case is required. Type NO in the case sensitive field to indicate that case sensitivity is not required.

---

**BJTZ239 Duplicate name. Report name is not unique.****Explanation:**

The specified report name was not inserted into the Output Manager Db2 tables because a report already exists with that name. Reports must have unique names.

**User response:**

Specify a unique name for the report.

---

**BJTZ240A Invalid type. Invalid View Type: specify Exceptions, Normal, or All****Explanation:**

An invalid value was specified in the View field on the Search panel. Only Exceptions, Normal, or All are valid. You can also leave the field blank if you do not want to search for activities based on a view value.

**User response:**

Specify a valid value in the View field. Valid values include: - Exceptions - To only view activities for which an exception occurred - Normal - To only view the normal activities that do not have exceptions - All - To view all activities, both normal activities and those with exceptions.

---

**BJTZ240B Invalid date. Relative date must be in the format of "T-nnnn", where nnnn is the number of days prior to today****Explanation:**

A relative date was specified in the incorrect format in either the Before date field or the After date field. Relative dates must have the format T-nnnn, where "T" represents today and nnnn is a number of days prior to today.

**User response:**

To specify a relative date, use the format T-nnnn. Alternatively, you can enter a specific date in the format YYYY/MM/DD, or type only T for today.

---

**BJTZ240C**      **Invalid date. Date must be valid and in the format of YYYY/MM/DD.**

**Explanation:**

A relative date was specified in the incorrect format in either the Before date field or the After date field. Relative dates must have the format T-nnnn, where "T" represents today and nnnn is a number of days prior to today.

**User response:**

Specify a date that is composed of valid values for the year, month, and day and that is in the format YYYY/MM/DD.

---

**BJTZ240D**      **Invalid time. Time must be valid and in the format of HH:MM:SS.**

**Explanation:**

An invalid time value was specified. Time must be specified in the format HH:MM:SS.

**User response:**

Specify a 24-hour time that is composed of valid hour, minute, and second values and that is in the format HH:MM:SS.

---

**BJTZ240**      **Invalid combine option. Only Yes or No are allowed.**

**Explanation:**

An invalid value was specified in the Combine Sysout field. This field indicates whether Output Manager should combine multiple SYSOUTs from the job that is specified in the selector rule into a single archive file. The only valid values are Yes and No.

**User response:**

Specify either Yes or No in the Combine Sysout field.

---

**BJTZ242**      **Specify DD name, Writer, or Form name. At least one of DD Name, Writer Name, or Form Name is required.**

**Explanation:**

A value is required in at least one of the specified fields for the rule.

**User response:**

Specify a value in the DD Name, Writer Name, or Form Name field.

---

**BJTZ243**      **Specify step name, procstep, or step num. At least one of step name, procstep, or step number is required.**

**Explanation:**

A value is required in at least one of the specified fields for the rule.

**User response:**

Specify a valid value in at least one of the following fields: Step Name, Proc Step, and Step Number.

---

**BJTZ244**      **Invalid input. Only Yes or No are allowed.**

**Explanation:**

An value was specified in a field that can only have Yes or NO as valid values.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify Yes or No in that field.

---

**BJTZ245**      **Invalid status. Only Enabled or Disabled are allowed.**

**Explanation:**

An invalid value was specified in a field that can only have Enabled or Disabled as valid values.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify Enabled or Disabled in that field.

---

**BJTZ246**      **Non-blank value expected. At least one of Step Name and Proc Step Name must be non-blank and not equal to "\*".**

**Explanation:**

A non-blank, non-wildcard value is required in at least one of the specified fields for the rule.

**User response:**

Specify a valid non-wildcard value in at least one of the following fields: Step Name, Proc Step.

---

**BJTZ247**      **Non-blank value expected. At least one of DDName, Writer and Form must be non-blank and not equal to "\*".**

**Explanation:**

A non-blank, non-wildcard value is required in at least one of the specified fields for the rule.

**User response:**

Specify a valid non-wildcard value in the DD Name, Writer Name, or Form Name field.

---

**BJTZ248**      **Non-blank value expected. Job Name must be non-blank and not equal to "\*".**

**Explanation:**

A wildcard was specified in a field that requires a non-wildcard value.

**User response:**



When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a valid job name in that field.

---

**BJTZ249**      **Invalid archive mask. Archive mask cannot start with an ampersand.**

**Explanation:**

An invalid archive mask value is specified in the Archive Mask field. Archive masks cannot begin with a variable.

**User response:**

Specify a valid value in the archive mask field. This value must be a valid data set name, can be up to 44 characters in length, and cannot begin with an ampersand.

---

**BJTZ250**      **Invalid value. Value must be a number from 0-32767.**

**Explanation:**

An invalid value was specified. Only numbers 0-32767 are allowed.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a number 0-32767 in that field.

---

**BJTZ251**      **Invalid value. Value must be a valid name: up to eight alphanumeric characters (A-Z, #, \$, @, 0-9). The first character must be alphabetic (A-Z, \$, @, or #).**

**Explanation:**

An invalid value was specified in a field. This field requires a value that is eight characters long, consisting of alphanumeric characters (A-Z, #, \$, @, 0-9), and the first character must be alphabetic.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify an eight character value of alphanumeric characters (A-Z,a-z,0-9,@,#,\$) in that field, with an alphabetic character first.

---

**BJTZ252**      **Invalid control. Control can only be Program, Single, Double, or Triple.**

**Explanation:**

An invalid value was specified in the Control field on the Print Attributes Detail panel. This field indicates the printer control to use for spacing the output. This message identifies the valid values for the field.

**User response:**

In the Control field, type one of these valid values: - Program - To start each logical record with a carriage control character - Single - To print the output with

single spacing - Double - To print the output with double spacing - Triple - To print the output with triple spacing

---

**BJTZ253**      **Invalid value. Value must be a number from 0-255.**

**Explanation:**

An invalid value was specified. Only numbers 0-255 are allowed.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a number 0-255 in that field.

---

**BJTZ254**      **Invalid sum. Sum of group-values must not exceed 255.**

**Explanation:**

An invalid value was specified in one or more of the Copy Group fields. The sum of all Copy Group fields must not exceed 255.

**User response:**

Adjust the values specified in the Copy Group fields so that the sum of the Copy Group values are less than or equal to 255.

---

**BJTZ255**      **Invalid error blocking. Error blocking can only be Block, Char blk, Pos blk, or Unblock.**

**Explanation:**

An invalid value was specified in the Err Blocking field on the Print Attributes Detail panel. This field indicates how to handle the following types of errors: - Print-positioning errors - Errors that occur when the printed data goes beyond the physical limits of the page or beyond the overlay or logical page that is associated with a print job - Invalid-character errors - Errors that occur when a text character is not part of a font set This message indicates the valid values for this field.

**User response:**

In the Err Blocking field, type one of these valid values: - Block - To not report print-positioning errors and invalid-character errors to PSF - Unblock - To report print-positioning errors and invalid-character errors to PSF - Char blk - To block invalid-character errors but report print-positioning errors - Pos blk - To block print-positioning errors but report invalid-character errors

---

**BJTZ256**      **Invalid disposition. Print error disposition can only be Quit or Hold.**

**Explanation:**

An invalid value was specified in the Error Disp field on the Print Attributes Detail panel. This field indicates what to do if an error occurs that forces the early termination of a print job.

**User response:**

In the Error Disp field, type one of these valid values: -  
Quit - To release the data set to JES as complete, even if an early termination error occurs during printing -  
Hold - To keep the data set on the spool until a system operator releases it

---

**BJTZ257**      **Invalid value. Value must be a number from 0-999.**

**Explanation:**

An invalid value was specified. Only numbers 0-999 are allowed.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a number 0-999 in that field.

---

**BJTZ258**      **Invalid CopyGroup. Invalid CopyGroup value: a non-zero value cannot be preceded by a zero value.**

**Explanation:**

An invalid value was specified in the Copy Group field. In this field, a non-zero value cannot be preceded by 0.

**User response:**

Type a valid value in the CopyGroup field.

---

**BJTZ259**      **Invalid value. Value must be a number from 0-65535.**

**Explanation:**

An invalid value was specified. Only numbers 0-65535 are allowed.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a number 0-65535 in that field.

---

**BJTZ280**      **Print configuration issue**

**Explanation:**

You don't have authority to change print configuration.

**User response:**

Contact your Administrator or technical support to give print configuration access.

---

**BJTZ282**      **Authority issue**

**Explanation:**

The report does not have a distribution list and you have no authority to add one or print the report. Request disallowed.

**User response:**

Add a distribution list and contact your Administrator or technical support to give an access to add a report or print a report.

---

**BJTZ283**      **Yes, No or blank are valid values for the 'With reports' field**

**Explanation:**

An invalid value was specified in the With report field. The only valid values are Yes, No, and a blank.

**User response:**

In the 'with report' field, specify Yes or No. Alternatively, leave the field blank for the 'with reports' field.

---

**BJTZ286**      **Top of data reached. Chars (character string) not found. Press RFIND key to continue from bottom.**

**Explanation:**

The character string was not found in the data.

**User response:**

Press the RFIND key to continue searching from the bottom.

---

**BJTZ287**      **Specify a valid variable.**

**Explanation:**

An invalid variable was specified in the Archive Mask field.

**User response:**

Ensure that all of the variable references in the archive mask point to valid variables. You can refer to the Archive Attributes Details panel help for the full list of valid variables.

---

**BJTZ301**      **You are in read-only mode, and cannot delete an entry.**

**Explanation:**

You cannot delete an entry because you are in read-only mode. Your deletion request is ignored.

**User response:**

If the entry needs to be deleted, contact your report administrator for assistance. Otherwise, no action is needed

---

**BJTZ302**      **This command is only available for Unformatted view.**

**Explanation:**

A command was issued, but that command is not available for this object type.

**User response:**

No response required.

---

**BJTZ303**      **Text type must be either PLAIN or HTML.**

**Explanation:**

An invalid value was specified in the text type field. Valid values include PLAIN or HTML to specify the type of text to include in an email distribution.

**User response:**

Type either PLAIN or HTML in the text type field.

---

**BJTZ304**      **Invalid attachment type. Attachment type must be either PDF or TEXT.**

**Explanation:**

An invalid value was specified in the Attachment Type field. Valid values include PDF or TEXT to specify the type of attachment to include in an email distribution.

**User response:**

Type either PDF or TEXT in the Attachment Type field.

---

**BJTZ305**      **Invalid type. Type can only be Both, Heading, or Trailing.**

**Explanation:**

An invalid value was specified in the Type field. This field indicates where the banner page information will be printed. Valid values are Both (before and after the report data), Heading (before the report data only), and Trailing (after the report data only).

**User response:**

Specify a valid value in the Type field.

---

**BJTZ306**      **Invalid value. Value must be a number from 0-9999.**

**Explanation:**

An invalid value was specified. Only numbers 0-9999 are allowed.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a number 0-9999 in that field.

---

**BJTZ307**      **Duplicate name. Banner name is not unique.**

**Explanation:**

The banner name that was specified in the Name field duplicates a name that was specified for another banner. Each banner name must be unique.

**User response:**

Specify a unique name for the banner.

---

**BJTZ308**      **Duplicate name. Prset member name is not unique.**

**Explanation:**

The Prset member name that was specified in the PRSET field duplicates a name that was specified for another Prset member. Each Prset member name must be unique.

**User response:**

Specify a unique name for the Prset member.

---

**BJTZ309**      **Duplicate name. Printer attribute name is not unique.**

**Explanation:**

The printer attribute name that was specified in the Name field duplicates a name that was specified for another printer attribute. Each printer attribute name must be unique.

**User response:**

Specify a unique name for the printer attribute.

---

**BJTZ310**      **Invalid page. Page number is out of range.**

**Explanation:**

A page range was specified that exceeds the number of pages in the report or archive. Pages that exceed the page range are ignored.

**User response:**

Correct input, specifying a valid page count.

---

**BJTZ311**      **Invalid line. Line number is out of range.**

**Explanation:**

A line number was specified that exceeds the number of lines in the report or archive. Lines that exceed the line range are ignored.

**User response:**

Correct input, specifying a valid line number.

---

**BJTZ440A**      **Invalid input. Control can only be Program, Single, Double, or Triple.**

**Explanation:**

An invalid value was specified in the Control field. This field indicates the printer control to use for spacing the output. This message identifies the valid values for the field.

**User response:**

In the Control field, type one of these valid values: - Program: To start each logical record with a carriage control character - Single: To print the output with single spacing - Double: To print the output with double spacing - Triple: To print the output with triple spacing

---

**BJTZ440B**      **Invalid input. Normal disposition can only be Write, Hold, Keep, Leave, or Purge.**

**Explanation:**

An invalid value was specified in the Norm Disp field. This field indicates the disposition of the SYSOUT data set when a job completes normally.

**User response:**

In the Norm Disp field, type one of the following valid options: Write, Hold, Keep, Leave, or Purge. For information about these options, see the associated Help panel.

---

**BJTZ440C**      **Invalid input Abnormal disposition can only be Write, Hold, Keep, Leave, or Purge.**

**Explanation:**

An invalid value was specified in the Cond Disp field. This field indicates the disposition of a SYSOUT data set when a job ends abnormally.

**User response:**

In the Cond Disp field, type one of the following valid options: Write, Hold, Keep, Leave, or Purge. For details on these options, see the associated Help panel.

---

**BJTZ440D**      **Invalid input. Form length metric can only be Inches or CM.**

**Explanation:**

An invalid value was specified on the second line of the Form Length field. This field identifies the page length that can be printed without reconfiguring the printer; the second line indicates the unit of measurement (inches or centimeters) for the page length.

**User response:**

On the second line of the Form Length field, type either Inches (with an uppercase "I") or CM.

---

**BJTZ440E**      **Invalid input. Error blocking can only be Block, Unblock, Char blk, or Pos blk.**

**Explanation:**

An invalid value was specified in the Err Blocking field. This field indicates how to handle the following types of errors: - Print-positioning errors - Errors that occur when the printed data goes beyond the physical limits of the page or beyond the overlay or logical page that is associated with a print job - Invalid-character errors - Errors that occur when a text character is not part of a font set This message indicates the valid values for this field.

**User response:**

In the Err Blocking field, type one of these valid values: - Block - To not report print-positioning errors and invalid-character errors to PSF - Unblock - To report print-positioning errors and invalid-character errors to PSF - Char blk - To block invalid-character errors but report print-positioning errors - Pos blk - To block print-positioning errors but report invalid-character errors

---

**BJTZ440F**      **An invalid value was specified in the Print Errors field.**

**Explanation:**

An invalid value was specified in the Print Errors field. The first line of this field indicates whether all error messages should be printed at the end of the output data set. The second line of this field indicates the maximum number of error messages to allow before canceling the printing of the current data set.

**User response:**

On the first line of the Print Errors field, type either Yes or No to indicate whether all error messages should be

printed at the end of the output data set. If you type No, only the messages that force an early termination of the print job are printed. On the second line, type a number from 0 through 999 to indicate the maximum number of error messages to allow before canceling the printing. A value of zero means an infinite number. This message count includes all error messages that are generated by PSF (even if you specified No on the first line to prevent the printing of error messages).

---

**BJTZ440G**      **Invalid input. Print error disposition can only be Quit or Hold.**

**Explanation:**

An invalid value was specified in the Error Disp field. This field indicates what to do if an error occurs that forces the early termination of a print job.

**User response:**

In the Error Disp field, type one of these valid values: - Quit - To release the data set to JES as complete, even if an early termination error occurs during printing - Hold - To keep the data set on the spool until a system operator releases it.

---

**BJTZ440I**      **Invalid input. Table reference character can only be Yes or No.**

**Explanation:**

An invalid value was specified in the Table ref chr field. This field indicates whether the data contains table reference characters (TRC) codes. (A TRC code indicates which font in the Char arg tbl field should be used to print the record.)

**User response:**

In the Table ref chr field, type either Yes or No.

---

**BJTZ440J**      **Invalid input. Resolution format can only be P240 or P300.**

**Explanation:**

An invalid value was specified in the Resolution field. This field indicates the type of resolution that is used to format the printed data set.

**User response:**

In the Resolution field, type one of the following valid values: - P240: To format the printed data set using 240 pels per inch - P300: To format the printed data set using 300 pels per inch

---

**BJTZ440K**      **Printer attribute data saved.**

**Explanation:**

The information that you specified for the set of printer attributes was saved.

**User response:**

No action is required.

---

**BJTZ440L**      **An attribute description is required.**

**Explanation:**

A name for the set of printer attributes must be specified in the Name field.

**User response:**

Type a descriptive name for the set of printer attributes in the Name field. This value can be up to 24 characters in length.

---

**BJTZ440M**      **Printer attributes updated for this print request.**

**Explanation:**

Changes have been made to the set of printer attributes for the current print request.

**User response:**

No action is required.

---

**BJTZ440N**      **Invalid input. Only the characters A-Z, #, \$, @, and 0-9 are allowed.**

**Explanation:**

An invalid value was specified in the Format Def or Page Def field.

**User response:**

Type a valid value in the Format Def or Page Def field. In each field, you can specify a value of up to 6 characters in length that is composed of alphanumeric characters and national characters (\$, #, @) only.

---

**BJTZ440O**      **Invalid input. The range must be in the format N or N:M, where N and M are integers and N is less than or equal to M. Only values from 1 to total pages are allowed. There is to be no space before or after the ":" (colon) sign, but there must be at least one space between two ranges.**

**Explanation:**

An invalid value was entered in the PAGES field. This field specifies which pages are to be printed for a recipient. Valid values include single pages with a space between each page number, and a range of pages with a colon (:) between the first page number in the range and the last page number in the range (which a space between multiple ranges). The second number in a range must be greater than the first number in the range. For example, to print pages 5 through 10, specify 5:10. To print pages 5 through 10 AND pages 12 through 15, but not pages 11 and 12, specify 5:10 12:15.

**User response:**

Specify a valid page number, or a valid range of page numbers in the PAGES field.

---

**BJTZ440P**      **Invalid CopyGroup value: a non-zero value cannot be preceded by a zero value.**

**Explanation:**

An invalid value was specified in the Copy Group field. In this field, a non-zero value cannot be preceded by 0.

**User response:**

Type a valid value in the CopyGroup field.

---

**BJTZ440R**      **Sum of group-values must not exceed 255.**

**Explanation:**

An invalid value was specified in one or more of the Copy Group fields. The sum of all Copy Group fields must not exceed 255.

**User response:**

Adjust the values specified in the Copy Group fields so that the sum of the Copy Group values are less than or equal to 255.

---

**BJTZ441**      **Invalid input. The range must be in the format N or N:M, where N and M are integers and N is less than or equal to M. Only values from 1 to total pages are allowed. There is to be no space before or after the ":" (colon) sign, but there must be at least one space between two ranges.**

**Explanation:**

An invalid value was entered in a range field. Valid values include single pages with a space between each page number, and a range of pages with a colon (:) between the first page number in the range and the last page number in the range (which a space between multiple ranges). The second number in a range must be greater than the first number in the range. For example, to print pages 5 through 10, specify 5:10. To print pages 5 through 10 AND pages 12 through 15, but not pages 11 and 12, specify 5:10 12:15.

**User response:**

Specify a valid page number, or a valid range of page numbers in the PAGES field.

---

**BJTZ442**      **Invalid time value. The time value must be either FOREVER or in format HHHH:MM:SS.**

**Explanation:**

An invalid time value was specified. Time must be either FOREVER or in the format HHHH:MM:SS.

**User response:**

Either specify FOREVER, or Specify a 24-hour time that is composed of valid hour, minute, and second values and that is in the format HHHH:MM:SS.

---

**BJTZ443**      **Invalid time value. The time value must be in format HHHH:MM:SS.**

**Explanation:**

An invalid time value was specified. Time must be specified in the format HHHH:MM:SS.

**User response:**

Specify a 24-hour time that is composed of valid hour, minute, and second values and that is in the format HHHH:MM:SS.

---

**BJTZ444**      **Invalid value. The value must be in format {NODE.}USERID, where both NODE and USERID must be a valid name: up to eight alphanumeric characters (A-Z, #, \$, @, 0-9). The first character must be alphabetic (A-Z, \$, @, or #).**

**Explanation:**

An invalid value was specified in the PSF Notify ID field. This field indicates the User ID of the person to be notified when the output is printed. Specify a NODE.USERID, where both NODE and USERID are a valid name. This field can be up to 17 characters total.

**User response:**

Edit the value specified in the PSF Notify ID field and type a valid value.

---

**BJTZ445**      **Invalid data set name. The value must be a valid data set name.**

**Explanation:**

An invalid value was specified in a field that requires a valid data set name.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a valid data set name in that field.

---

**BJTZ500**      **The specified PRSET member does not exist.**

**Explanation:**

The PRSET member specified does not exist in the partitioned data set specified.

**User response:**

Specify the name of an existing member in the partitioned data set or restore the missing member.

---

**BJTZ501**      **Changes saved. PRSET member saved.**

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ502**      **PRSET member has been deleted.**

**Explanation:**

You successfully deleted an object.

**User response:**

No response required.

---

**BJTZ503**      **Changes saved. PRSET member updated.**

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ504**      **Changes saved. PRSET member inserted.**

**Explanation:**

The changes that you specified have been successfully saved and the object has been inserted.

**User response:**

No response required.

---

**BJTZ505**      **Cut. PRSET member has been copied to the clipboard and cut from the list.**

**Explanation:**

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ506**      **Copied PRSET member has been copied to the clipboard.**

**Explanation:**

Information for the object has been copied to the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ507**      **Pasted PRSET member has been pasted from the clipboard.**

**Explanation:**

The information for the object that was copied to the Clipboard has been pasted to the current location.

**User response:**

No action is required.

---

**BJTZ508**      **Unable to delete this PRSET, because one or more object is connected to it.**

**Explanation:**

You attempted to delete a PRSET member that is currently linked to one or more Output Manager objects. A PRSET member connected to other objects cannot be deleted.

**User response:**

Determine which objects are linked to this PRSET member, then unlink them. After you have unlinked the layout from all objects, you can delete the PRSET member.

---

**BJTZ509**      **Subsystem doesn't exist. The specified subsystem does not exist.**

**Explanation:**

The subsystem that you specified does not exist.

**User response:**

Specify an existing subsystem.

---

**BJTZ510**      **Blank not allowed. The Name field cannot be blank.**

**Explanation:**

A blank was specified in a field that cannot be blank.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a valid value in that field.

---

**BJTZ511**      **Invalid value. Value must be numeric.**

**Explanation:**

A non-numeric character was specified in a field that only supports numeric values.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Type a number in that field.

---

**BJTZ512**      **Invalid value. Value must be in range from 0-16777215.**

**Explanation:**

An invalid value was specified. Only numbers 0-16777215 are allowed.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a number 0-16777215 in that field.

---

**BJTZ513**      **Invalid value. Value must be in range from 0-65535.**

**Explanation:**

An invalid value was specified. Only numbers 0-65535 are allowed.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a number 0-65535 in that field.

---

**BJTZ514**      **Invalid value. Value must be in range from 0-32756.**

**Explanation:**

An invalid value was specified. Only numbers 0-32756 are allowed.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a number 0-32756 in that field.

---

**BJTZ515**      **Your cursor is currently at page (page), line (line), column (column).**

**Explanation:**

This message displays the location of your cursor.

**User response:**

No action is required.

---

**BJTZ516**      **Your mark is currently at page (page), line (line), column (column), width (width), height (height).**

**Explanation:**

This message displays the location of your mark.

**User response:**

No action is required.

---

**BJTZ560**      **Cannot contain spaces. User variable name should not contain embedded spaces.**

**Explanation:**

An invalid value was specified for the user variable name. The user variable name cannot contain embedded spaces.

**User response:**

Specify a valid value for the user variable name.

---

**BJTZ561**      **Selector Name is (selector name).**

**Explanation:**

This message displays the name of the selector.

**User response:**

No action is required.

---

**BJTZ562**      **Report Selector Name is (report selector name).**

**Explanation:**

This message displays the name of the report selector rule.

**User response:**

No response is required.

---

**BJTZ563**      **Move Block command cannot be performed when records are filtered out or non-default sorting is used.**

**Explanation:**

An attempt was made to move a block of records, but the records were not moved because some records in

the selection are not displayed, or because they were sorted with a non-default sort.

**User response:**

Display all of the records in the default sorting option before moving a block of records.

---

**BJTZ570**            **Changes saved. User variable inserted.**

**Explanation:**

The changes that you specified have been successfully saved and the object has been inserted.

**User response:**

No response required.

---

**BJTZ571**            **Cut. User variable has been copied to the clipboard and cut from the list.**

**Explanation:**

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ572**            **Copied. User variable has been copied to the clipboard.**

**Explanation:**

Information for the object has been copied to the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ573**            **Pasted. User variable has been pasted from the clipboard.**

**Explanation:**

The information for the object that was copied to the Clipboard has been pasted to the current location.

**User response:**

No action is required.

---

**BJTZ574**            **Unable to delete this User variable.**

**Explanation:**

You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

**User response:**

Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

---

**BJTZ575**            **Changes saved. User variable has been saved.**

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ576**            **Deleted. User variable has been deleted.**

**Explanation:**

You successfully deleted an object.

**User response:**

No response required.

---

**BJTZ577**            **Changes saved. User variable has been updated.**

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ578**            **Blank name is not allowed.**

**Explanation:**

A blank was specified in a field that cannot be blank.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a valid value in that field.

---

**BJTZ579**            **Duplicate name. User variable name is not unique.**

**Explanation:**

The specified user variable name was not inserted into the Output Manager database because a user variable name with that value already exists. User variable names must be unique.

**User response:**

Type a unique value in the User variable name field.

---

**BJTZ580**            **Command not allowed. The Copy command can be issued only on a layout field.**

**Explanation:**

An attempt was made to copy a layout page or area, but only fields can be copied.

**User response:**

No action is required. Use the IP (Insert Page), or IA (Insert Area) to add new pages and areas to the layout.

---

**BJTZ581**            **Invalid place. The Paste command can be issued only on a field area.**

**Explanation:**

An attempt was made to paste a layout field, but the location of the paste was invalid.

**User response:**



Paste the field after another field. You cannot paste a field on a page or area.

---

**BJTZ582**      **Invalid value. Relative Position can only be Adjacent, Below, or Diagonal.**

**Explanation:**

An invalid value was specified in the Relative Position field. Valid values include Adjacent, Below, or Diagonal.

**User response:**

Specify the relative position with one of the following options to indicate where the new field is located in relation to the relative field: - Adjacent (starts in the next column to the right, on the same row) - Below (starts in the same column, on the next row down) - Diagonal (starts in the next column to the right and in the next row).

---

**BJTZ583**      **Cannot delete. Last page remaining cannot be deleted.**

**Explanation:**

An attempt was made to delete the only page in the layout. A layout requires at least one page, so the page was not deleted.

**User response:**

No action is required.

---

**BJTZ584**      **Wrong subsystem type. The subsystem type must be \* for the specification of User Variables.**

**Explanation:**

User variables can only be specified when a wildcard is used in the subsystem type field.

**User response:**

Type an asterisk (\*) in the subsystem type field before specifying user variables.

---

**BJTZ585**      **Cannot open data set. Check that you have access to it.**

**Explanation:**

An attempt to open a data set failed.

**User response:**

Ensure that you have access to the data set. If you require access, contact your administrator. Otherwise, no action is required.

---

**BJTZ586**      **(Command) of the policy for configuration (configuration), type (type) is not allowed.**

**Explanation:**

The command specified for the configuration of the type specified is not allowed.

**User response:**

No action is required.

---

**BJTZ590**      **Changes saved. Instruction inserted.**

**Explanation:**

The changes that you specified have been successfully saved and the object has been inserted.

**User response:**

No response required.

---

**BJTZ591**      **Cut. Instruction has been copied to the clipboard and cut from the list.**

**Explanation:**

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ592**      **Copied. Instruction has been copied to the clipboard.**

**Explanation:**

Information for the object has been copied to the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ593**      **Pasted. Instruction has been pasted from the clipboard.**

**Explanation:**

The information for the object that was copied to the Clipboard has been pasted to the current location.

**User response:**

No action is required.

---

**BJTZ594**      **Unable to delete this Instruction.**

**Explanation:**

You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

**User response:**

Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

---

**BJTZ595**      **Changes saved. Instruction saved.**

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ596**      **Instruction has been deleted.**

**Explanation:**

You successfully deleted an object.

**User response:**

No response required.

---

**BJTZ597**            **Changes saved. Instruction updated.**

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ598**            **This Instruction does not exist.**

**Explanation:**

The instruction member specified does not exist in the partitioned data set specified.

**User response:**

Specify the name of an existing member in the partitioned data set or restore the missing member.

---

**BJTZ599**            **Archive attribute must contain at least one period.**

**Explanation:**

The value specified for the archive attribute does not contain a period, but archive attributes require at least one period.

**User response:**

Include a period in the value specified for the archive attribute.

---

**BJTZ600**            **Record has been inserted.**

**Explanation:**

The changes that you specified have been successfully saved and the object has been inserted.

**User response:**

No response required.

---

**BJTZ601**            **Record has been copied to the clipboard and cut from the list.**

**Explanation:**

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ602**            **Record has been copied to the clipboard.**

**Explanation:**

Information for the object has been copied to the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ603**            **Record has been pasted from the clipboard.**

**Explanation:**

The information for the object that was copied to the Clipboard has been pasted to the current location.

**User response:**

No action is required.

---

**BJTZ604**            **Unable to delete this record, one or more objects are connected to it.**

**Explanation:**

You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

**User response:**

Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

---

**BJTZ605**            **Record has been saved.**

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ606**            **Record has been deleted.**

**Explanation:**

You successfully deleted an object.

**User response:**

No response required.

---

**BJTZ607**            **Record has been updated.**

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ608**            **Cannot paste, clipboard is empty.**

**Explanation:**

An attempt was made to paste from the clipboard, but the clipboard was empty.

**User response:**

Use the C (Copy) command on an object to copy its object details to the clipboard. You can then use the T (pasTe) command to paste the object.

---

**BJTZ609**            **Record does not exist.**

**Explanation:**

The record member specified does not exist in the partitioned data set specified.

**User response:**

No action is required.

---

**BJTZ610**      **Changes saved. Archive attribute inserted.**

**Explanation:**

The changes that you specified have been successfully saved and the object has been inserted.

**User response:**

No response required.

---

**BJTZ611**      **Cut. Archive attribute has been copied to the clipboard and cut from the list.**

**Explanation:**

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ612**      **Copied. Archive attribute has been copied to the clipboard.**

**Explanation:**

Information for the object has been copied to the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ613**      **Pasted. Archive attribute has been pasted from the clipboard.**

**Explanation:**

The information for the object that was copied to the Clipboard has been pasted to the current location.

**User response:**

No action is required.

---

**BJTZ614**      **Unable to delete this archive attribute, one or more rule is connected.**

**Explanation:**

You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

**User response:**

Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

---

**BJTZ615**      **Changes saved. Archive attribute saved.**

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ616**      **Archive attribute has been deleted.**

**Explanation:**

You successfully deleted an object.

**User response:**

No response required.

---

**BJTZ617**      **Changes saved. Archive attribute updated.**

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ621**      **Cut. Selector rule has been copied to the clipboard and cut from the list.**

**Explanation:**

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ622**      **Copied. Selector rule has been copied to the clipboard.**

**Explanation:**

Information for the object has been copied to the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ623**      **Pasted. Selector rule has been pasted from the clipboard.**

**Explanation:**

The information for the object that was copied to the Clipboard has been pasted to the current location.

**User response:**

No action is required.

---

**BJTZ624**      **Unable to delete this selector rule, one or more rule is connected to it.**

**Explanation:**

You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

**User response:**

Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

---

**BJTZ625**      **Changes saved. Selector rule attribute saved.**

---

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ626**      **Selector rule has been deleted.**

---

**Explanation:**

You successfully deleted an object.

**User response:**

No response required.

---

**BJTZ627**      **Changes saved. Selector rule updated.**

---

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ628**      **This selector rule does not exist.**

---

**Explanation:**

The record member specified does not exist in the partitioned data set specified.

**User response:**

No action is required.

---

**BJTZ629**      **Status set to disabled because the rule is not linked to an archive attribute.**

---

**Explanation:**

The status of the selector rule has been set to Disabled because no set of archive attributes is linked to the rule. You will not be able to change the status to Enabled (active) until you link a set of archive attributes to the rule.

**User response:**

Link a set of archive attributes to the selector rule using the LINK drop-down menu.

---

**BJTZ630**      **Layout field has been inserted to local storage.**

---

**Explanation:**

The changes that you specified have been successfully saved and the object has been inserted.

**User response:**

No response required.

---

**BJTZ631**      **Layout field has been copied to the clipboard and cut from local storage.**

---

**Explanation:**

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ632**      **Layout field has been copied to the clipboard.**

---

**Explanation:**

Information for the object has been copied to the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ633**      **Layout field has been pasted from the clipboard.**

---

**Explanation:**

The information for the object that was copied to the Clipboard has been pasted to the current location.

**User response:**

No action is required.

---

**BJTZ634**      **Unable to delete this layout field, one or more rule is connected to it.**

---

**Explanation:**

You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

**User response:**

Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

---

**BJTZ635**      **Layout field has been saved to local storage.**

---

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ636**      **Layout field has been deleted from local storage**

---

**Explanation:**

You successfully deleted an object.

**User response:**

No response required.

---

**BJTZ637**      **Layout field has been updated in local storage**

---

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**  
No response required.

---

**BJTZ638**      **This layout field does not exist**

**Explanation:**  
The layout specified does not exist.

**User response:**  
No action is required.

---

**BJTZ640**      **Changes saved. Report rule inserted**

**Explanation:**  
The changes that you specified have been successfully saved and the object has been inserted.

**User response:**  
No response required.

---

**BJTZ641**      **Cut. Report rule has been copied to the clipboard and cut from the list**

**Explanation:**  
The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

**User response:**  
No action is required.

---

**BJTZ642**      **Copied. Report rule has been copied to the clipboard**

**Explanation:**  
Information for the object has been copied to the Clipboard and is available to paste to another location.

**User response:**  
No action is required.

---

**BJTZ643**      **Pasted. Report rule has been pasted from the clipboard**

**Explanation:**  
The information for the object that was copied to the Clipboard has been pasted to the current location.

**User response:**  
No action is required.

---

**BJTZ644**      **Unable to delete this report rule, one or more rules are connected to it**

**Explanation:**  
You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

**User response:**  
Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

---

**BJTZ645**      **Changes saved. Report rule attribute saved**

**Explanation:**  
The changes that you specified have been successfully saved.

**User response:**  
No response required.

---

**BJTZ646**      **Report rule has been deleted**

**Explanation:**  
You successfully deleted an object.

**User response:**  
No response required.

---

**BJTZ647**      **Changes saved. Report rule updated**

**Explanation:**  
The changes that you specified have been successfully saved.

**User response:**  
No response required.

---

**BJTZ648**      **This report rule does not exist**

**Explanation:**  
The report rule specified does not exist.

**User response:**  
No action is required.

---

**BJTZ649**      **Unable to delete this banner, one or more objects are connected to it**

**Explanation:**  
You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

**User response:**  
Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

---

**BJTZ650**      **Data set not cataloged. Data set was not found in catalog.**

**Explanation:**  
The specified data set could not be found in the MVS catalog.

**User response:**  
Ensure that the data set name is correct.

---

**BJTZ651**      **Member not found. Member (member) not found in data set (data set)**

**Explanation:**  
The specified data set could not be found in the MVS catalog. This message displays the member name and data set name.

**User response:**

Ensure that the data set name is correct.

---

**BJTZ652**            **The banner page does not exist.**

**Explanation:**

The banner page specified does not exist.

**User response:**

No action is required.

---

**BJTZ653**            **Changes saved. Banner page saved**

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ654**            **Banner page has been deleted.**

**Explanation:**

You successfully deleted an object.

**User response:**

No response required.

---

**BJTZ655**            **Changes saved. Banner page updated**

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ656**            **Changes saved. Banner page inserted**

**Explanation:**

The changes that you specified have been successfully saved and the object has been inserted.

**User response:**

No response required.

---

**BJTZ657**            **Cut. Banner page has been copied to the clipboard and cut from the list**

**Explanation:**

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ658**            **Copied. Banner page has been copied to the clipboard**

**Explanation:**

Information for the object has been copied to the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ659**            **Pasted. Banner page has been pasted from the clipboard**

**Explanation:**

The information for the object that was copied to the Clipboard has been pasted to the current location.

**User response:**

No action is required.

---

**BJTZ660**            **Changes saved. Printer attribute inserted.**

**Explanation:**

The changes that you specified have been successfully saved and the object has been inserted.

**User response:**

No response required.

---

**BJTZ661**            **Cut. Printer attribute has been copied to the clipboard and cut from the list.**

**Explanation:**

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ662**            **Copied. Printer attribute has been copied to the clipboard.**

**Explanation:**

Information for the object has been copied to the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ663**            **Pasted. Printer attribute has been pasted from the clipboard.**

**Explanation:**

The information for the object that was copied to the Clipboard has been pasted to the current location.

**User response:**

No action is required.

---

**BJTZ664**            **Unable to delete this printer attribute, one or more rules are connected to it**

**Explanation:**

You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

**User response:**

Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

---

**BJTZ665**      **Changes saved. Printer attribute saved.**

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ666**      **Printer attribute has been deleted**

**Explanation:**

You successfully deleted an object.

**User response:**

No response required.

---

**BJTZ667**      **Changes saved. Printer attribute updated**

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ668**      **This printer attribute does not exist.**

**Explanation:**

The printer attribute specified does not exist.

**User response:**

No action is required.

---

**BJTZ670**      **Changes saved. Recipient inserted.**

**Explanation:**

The changes that you specified have been successfully saved and the object has been inserted.

**User response:**

No response required.

---

**BJTZ670A**      **Only Yes or No are allowed.**

**Explanation:**

A value other than Yes or No was specified in a field that only supports Yes or No.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Type Yes or No in that field.

---

**BJTZ671**      **Cut. Recipient has been copied to the clipboard and cut from the list**

**Explanation:**

The specified object was deleted from the list by using the X (Cut) line command. Information for the object

now resides on the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ672**      **Copied. Recipient has been copied to the clipboard.**

**Explanation:**

Information for the object has been copied to the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ673**      **Pasted. Recipient has been pasted from the clipboard.**

**Explanation:**

The information for the object that was copied to the Clipboard has been pasted to the current location.

**User response:**

No action is required.

---

**BJTZ674**      **Unable to delete this recipient, one or more rules are connected to it**

**Explanation:**

You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

**User response:**

Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

---

**BJTZ675**      **Changes saved. Recipient attribute saved.**

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ676**      **Recipient has been deleted.**

**Explanation:**

You successfully deleted an object.

**User response:**

No response required.

---

**BJTZ677**      **Changes saved. Recipient updated.**

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ678**      **This recipient does not exist****Explanation:**

The recipient specified does not exist.

**User response:**

No action is required.

---

**BJTZ679**      **Userid exists. Recipient with this  
userid already exists.****Explanation:**

The specified recipient name was not inserted into the Output Manager database because a recipient with that user ID already exists.

**User response:**

Type a unique value in the Userid field.

---

**BJTZ680**      **Changes saved. Report definition  
inserted.****Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ681**      **Cut. Report definition has been  
copied to the clipboard and cut  
from the list.****Explanation:**

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ682**      **Copied. Report definition has been  
copied to the clipboard.****Explanation:**

Information for the object has been copied to the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ683**      **Pasted. Report definition has been  
pasted from the clipboard****Explanation:**

The information for the object that was copied to the Clipboard has been pasted to the current location.

**User response:**

No action is required.

---

**BJTZ684**      **Unable to delete this report  
definition, one or more rules are  
connected to it.****Explanation:**

You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

**User response:**

Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

---

**BJTZ685**      **Saved. Report definition saved.****Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ686**      **Report definition has been  
deleted.****Explanation:**

You successfully deleted an object.

**User response:**

No response required.

---

**BJTZ687**      **Changes saved. Report definition  
updated.****Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ688**      **This report definition does not  
exist.****Explanation:**

The report definition specified does not exist.

**User response:**

No action is required.

---

**BJTZ689**      **You can define only one index.****Explanation:**

An attempt was made to define a new index by specifying the ADDINDEX primary command when an index was already defined for the report. You can define only one index in a report definition. The index can contain from one to eight fields.

**User response:**

No action is required. You can edit the existing index if necessary.

---

**BJTZ690**      **Changes saved. Distribution list  
inserted.****Explanation:**

The changes that you specified have been successfully saved and the object has been inserted.

**User response:**



No response required.

---

**BJTZ691**      **Cut. Distribution list has been copied to the clipboard and cut from the list.**

**Explanation:**

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ692**      **Copied. Distribution list has been copied to the clipboard.**

**Explanation:**

Information for the object has been copied to the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ693**      **Pasted. Distribution list has been pasted from the clipboard.**

**Explanation:**

The information for the object that was copied to the Clipboard has been pasted to the current location.

**User response:**

No action is required.

---

**BJTZ694**      **Unable to delete this distribution list, one or more rules are connected to it.**

**Explanation:**

You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

**User response:**

Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

---

**BJTZ695**      **Changes saved. Distribution list saved.**

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ696**      **Distribution list has been deleted.**

**Explanation:**

You successfully deleted an object.

**User response:**

No response required.

---

**BJTZ697**      **Changes saved. Distribution list updated.**

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ698**      **This distribution list does not exist.**

**Explanation:**

The distribution list specified does not exist.

**User response:**

No action is required.

---

**BJTZ699**      **Duplicate name. Distribution list name is not unique.**

**Explanation:**

The specified distribution list name was not inserted into the Output Manager database because a distribution list with that name already exists. Distribution list names must be unique.

**User response:**

Type a unique value in the distribution list name field.

---

**BJTZ700**      **Line command N (Index) is not allowed because the Index field is set to No.**

**Explanation:**

The N (Index) line command was used, but there are no index fields.

**User response:**

No action is required.

---

**BJTZ701**      **Layout has not been linked to the report definition.**

**Explanation:**

An attempt was made to save the report definition. However, because a report layout has not been linked to the report definition, this attempt failed. Report definitions with conditions or indexes must be linked to a report layout.

**User response:**

Either link a report layout to the report definition, or cancel your changes. Use the LINK menu to link to a report layout. Type CANCEL on the command line to cancel your changes.

---

**BJTZ702**      **Field (field name) is missing in the layout linked to this report definition.**

**Explanation:**

The field name specified in the condition is not present in the layout linked to the report definition.

**User response:**

Specify a valid field included in the layout linked to the report definition. For a list of valid fields included in the linked layout, specify FIELDS on the command line.

---

**BJTZ703 Value cannot be empty.****Explanation:**

A blank was specified in a field that cannot have blanks.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a valid value in that field.

---

**BJTZ704 Condition fields must be defined consecutively.****Explanation:**

An attempt was made to save an index field name that was not specified in consecutive order. When defining an index for a report definition, you must specify the index field names from top to bottom (from field 1 to field 8), without leaving any intervening lines blank.

**User response:**

Specify the index field names on consecutive lines, starting with Field 1 Name. Then save your index entry.

---

**BJTZ705 Cannot delete Begin condition because End condition exists.****Explanation:**

An attempt was made to delete a BEGIN condition when an END condition still exists. An END condition requires the presence of a BEGIN condition.

**User response:**

First delete the END condition, and then delete the BEGIN condition.

---

**BJTZ707 End condition inserted.****Explanation:**

The changes that you specified have been successfully saved and the object has been inserted.

**User response:**

No response required.

---

**BJTZ708 Layout fields: (fields).****Explanation:**

This message displays the list of layout fields.

**User response:**

No response required.

---

**BJTZ709 Report definition contains condition or index but is not linked to layout.****Explanation:**

An attempt was made to save the report definition. However, because a report layout has not been linked to the report definition, this attempt failed. Report definitions with conditions or indexes must be linked to a report layout.

**User response:**

Either link a report layout to the report definition, or cancel your changes. Use the LINK menu to link to a report layout. Type CANCEL on the command line to cancel your changes.

---

**BJTZ710 You are in read-only mode, you cannot add an entry.****Explanation:**

You cannot add an entry because you are in read-only mode. Your add request is ignored.

**User response:**

If the entry needs to be added, contact your report administrator for assistance. Otherwise, no action is needed.

---

**BJTZ711 Report "name" is queued for printing.****Explanation:**

The specified report has been placed on the queue for print processing.

**User response:**

No action is required.

---

**BJTZ712 Archive "name" is queued for printing.****Explanation:**

The specified archived report has been placed on the queue for print processing.

**User response:**

No action is required.

---

**BJTZ713 JobName with JobID has been submitted.****Explanation:**

The archive print job has been successfully submitted and will be printed in full or in part, depending on your specifications.

**User response:**

No action is required.

---

**BJTZ714 Data contains invalid (non-display) characters. Use command ===> FIND P"." to position cursor to the invalid characters.****Explanation:****User response:**

---

**BJTZ715**      **Enter a FIND command. The RFIND and FX keys work only after a FIND character string is entered.**

**Explanation:**

The RFIND or FX keys were pressed, but a FIND command has not been entered.

**User response:**

Enter a FIND command before using the RFIND and FX keys.

---

**BJTZ716**      **Bottom of data reached. Chars (character string) not found. Press RFIND key to continue from top.**

**Explanation:**

The character string was not found in the data.

**User response:**

Press the RFIND key to continue searching from the top.

---

**BJTZ717**      **CHARS (character string) found. Search for CHARS (character string) in columns A to B was successful.**

**Explanation:**

The character string that you searched for was found.

**User response:**

No response required.

---

**BJTZ720**      **Changes saved. Bundle definition inserted.**

**Explanation:**

The changes that you specified have been successfully saved and the object has been inserted.

**User response:**

No response required.

---

**BJTZ721**      **Cut. Bundle definition has been copied to the clipboard and cut from the list.**

**Explanation:**

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ722**      **Copied. Bundle definition has been copied to the clipboard.**

**Explanation:**

Information for the object has been copied to the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ723**      **Pasted. Bundle definition has been pasted from the clipboard.**

**Explanation:**

The information for the object that was copied to the Clipboard has been pasted to the current location.

**User response:**

No action is required.

---

**BJTZ724**      **Unable to delete this bundle definition.**

**Explanation:**

You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

**User response:**

Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

---

**BJTZ725**      **Changes saved. Bundle definition saved.**

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ726**      **Bundle definition has been deleted.**

**Explanation:**

You successfully deleted an object.

**User response:**

No response required.

---

**BJTZ727**      **Changes saved. Bundle definition updated.**

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ728**      **This bundle definition does not exist.**

**Explanation:**

The bundle definition specified does not exist.

**User response:**

No action is required.

---

**BJTZ729**      **Duplicate name. Bundle definition name is not unique.**

**Explanation:**

The specified bundle name was not inserted into the Output Manager database because a bundle name

with that value already exists. Bundle names must be unique.

**User response:**

Type a unique value in the Bundle name field.

---

**BJTZ730 Bundle recipient inserted**

**Explanation:**

The changes that you specified have been successfully saved and the object has been inserted.

**User response:**

No response required.

---

**BJTZ731 Bundle recipient has been copied to the clipboard and cut from the list**

**Explanation:**

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ732 Bundle recipient has been copied to the clipboard**

**Explanation:**

Information for the object has been copied to the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ733 Bundle recipient has been pasted from the clipboard**

**Explanation:**

The information for the object that was copied to the Clipboard has been pasted to the current location.

**User response:**

No action is required.

---

**BJTZ734 Unable to delete this bundle recipient, one or more rules are connected to it.**

**Explanation:**

You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

**User response:**

Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

---

**BJTZ735 Bundle recipient saved**

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ736 Bundle recipient has been deleted**

**Explanation:**

You successfully deleted an object.

**User response:**

No response required.

---

**BJTZ737 Bundle recipient updated**

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ738 This bundle recipient does not exist**

**Explanation:**

The bundle recipient specified does not exist.

**User response:**

No action is required.

---

**BJTZ739 Bundle recipient name is not unique.**

**Explanation:**

The specified bundle recipient name was not inserted into the Output Manager database because a bundle recipient with that name already exists. Bundle recipient names must be unique.

**User response:**

Type a unique value in the Bundle recipient name field.

---

**BJTZ740 Condition inserted.**

**Explanation:**

The changes that you specified have been successfully saved and the object has been inserted.

**User response:**

No response required.

---

**BJTZ741 Condition has been copied to the clipboard and cut from the list.**

**Explanation:**

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ742 Condition has been copied to the clipboard.**

**Explanation:**

Information for the object has been copied to the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ743**      **Condition has been pasted from the clipboard.**

**Explanation:**

The information for the object that was copied to the Clipboard has been pasted to the current location.

**User response:**

No action is required.

---

**BJTZ744**      **Unable to delete this condition, one or more rules are connected to it.**

**Explanation:**

You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

**User response:**

Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted

---

**BJTZ746**      **Condition has been deleted.**

**Explanation:**

You successfully deleted an object.

**User response:**

No response required.

---

**BJTZ747**      **Condition updated.**

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ748**      **You cannot have an END condition without a BEGIN condition.**

**Explanation:**

An attempt was made to insert an END condition without first defining the BEGIN condition. An END condition requires the presence of a BEGIN condition.

**User response:**

First define the BEGIN condition, and then define the END condition.

---

**BJTZ749**      **This condition does not have any fields.**

**Explanation:**

An attempt was made to save a condition, but the condition does not have any fields.

**User response:**

Add fields to the condition before saving it.

---

**BJTZ750**      **Index inserted**

**Explanation:**

The changes that you specified have been successfully saved and the object has been inserted.

**User response:**

No response required.

---

**BJTZ751**      **Index has been copied to the clipboard and cut from the list**

**Explanation:**

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ752**      **Index has been copied to the clipboard**

**Explanation:**

Information for the object has been copied to the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ753**      **Index has been pasted from the clipboard**

**Explanation:**

The information for the object that was copied to the Clipboard has been pasted to the current location.

**User response:**

No action is required.

---

**BJTZ754**      **Unable to delete this index, one or more rules are connected to it**

**Explanation:**

You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

**User response:**

Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

---

**BJTZ755**      **Index saved**

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ756**      **Index has been deleted**

**Explanation:**

You successfully deleted an object.

**User response:**

No response required.

---

**BJTZ757**      **Index updated**

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ758**      **This index does not exist**

**Explanation:**

The index specified does not exist.

**User response:**

No action is required.

---

**BJTZ759**      **This index does not have any fields**

**Explanation:**

An attempt was made to save an index, but the index does not have any fields.

**User response:**

Add fields to the condit index before saving it.

---

**BJTZ760**      **Bundle special instruction has been inserted**

**Explanation:**

The changes that you specified have been successfully saved and the object has been inserted.

**User response:**

No response required.

---

**BJTZ761**      **Bundle special instruction has been cut from the list and placed in clipboard**

**Explanation:**

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ762**      **Bundle special instruction has been copied to the clipboard**

**Explanation:**

Information for the object has been copied to the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ763**      **Bundle special instruction has been pasted from the clipboard**

**Explanation:**

The information for the object that was copied to the Clipboard has been pasted to the current location.

**User response:**

No action is required.

---

**BJTZ764**      **Unable to delete this bundle special instruction**

**Explanation:**

You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

**User response:**

Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

---

**BJTZ765**      **Bundle special instruction saved**

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ766**      **Bundle special instruction has been deleted**

**Explanation:**

You successfully deleted an object.

**User response:**

No response required.

---

**BJTZ767**      **Bundle special instruction has been updated**

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ768**      **This bundle special instruction does not exist**

**Explanation:**

The bundle special instruction specified does not exist

**User response:**

No action is required.

---

**BJTZ769**      **Invalid access ID. Access ID must be derived from access mask.**

**Explanation:**

An invalid value was specified in the Access ID field. An Access ID must be derived from the Access Mask.

**User response:**

Type a valid access ID in the Access ID field.

---

**BJTZ770**      **Bundle report has been inserted**

**Explanation:**

The changes that you specified have been successfully saved and the object has been inserted.

**User response:**  
No response required.

---

**BJTZ771**      **Bundle report has been cut from the list and placed in clipboard**

**Explanation:**  
The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

**User response:**  
No action is required.

---

**BJTZ772**      **Bundle report has been copied to the clipboard**

**Explanation:**  
Information for the object has been copied to the Clipboard and is available to paste to another location.

**User response:**  
No action is required.

---

**BJTZ773**      **Bundle report has been pasted from the clipboard**

**Explanation:**  
The information for the object that was copied to the Clipboard has been pasted to the current location.

**User response:**  
No action is required.

---

**BJTZ774**      **Unable to delete this bundle report**

**Explanation:**  
You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

**User response:**  
Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

---

**BJTZ775**      **Bundle report is saved**

**Explanation:**  
The changes that you specified have been successfully saved.

**User response:**  
No response required.

---

**BJTZ776**      **Bundle report has been deleted**

**Explanation:**  
You successfully deleted an object.

**User response:**  
No response required.

---

**BJTZ777**      **Bundle report has been updated**

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**  
No response required.

---

**BJTZ778**      **This bundle report does not exist**

**Explanation:**  
The bundle report specified does not exist.

**User response:**  
No action is required.

---

**BJTZ779**      **Invalid access mask. Blank access mask is not allowed**

**Explanation:**  
You must specify a value in the Access Mask field.

**User response:**  
Type a valid value in the Access Mask field. You can specify a fully-qualified Access Mask, or you can include a wildcard in the Access Mask.

---

**BJTZ780**      **Changes saved. Layout has been inserted**

**Explanation:**  
The changes that you specified have been successfully saved and the object has been inserted.

**User response:**  
No response required.

---

**BJTZ781**      **Cut. Layout has been copied to the clipboard and cut from the list**

**Explanation:**  
The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

**User response:**  
No action is required.

---

**BJTZ782**      **Copied. Layout has been copied to the clipboard**

**Explanation:**  
Information for the object has been copied to the Clipboard and is available to paste to another location.

**User response:**  
No action is required.

---

**BJTZ783**      **Pasted. Layout has been pasted from the clipboard**

**Explanation:**  
The information for the object that was copied to the Clipboard has been pasted to the current location.

**User response:**  
No action is required.

---

**BJTZ784            Unable to delete this layout, one or more rules are connected to it**

---

**Explanation:**

You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

**User response:**

Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

---

**BJTZ785            Changes saved. Layout has been saved**

---

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ786            Layout has been deleted**

---

**Explanation:**

You successfully deleted an object.

**User response:**

No response required.

---

**BJTZ787            Changes saved. Layout has been updated**

---

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ788            This layout does not exist**

---

**Explanation:**

The layout specified does not exist.

**User response:**

No action is required.

---

**BJTZ789            Duplicate name. Layout name is not unique**

---

**Explanation:**

The specified layout name was not inserted into the Output Manager database because a layout name with that value already exists. Layout names must be unique.

**User response:**

Type a unique value in the layout name field.

---

**BJTZ790            Bundle definition must already be in database for this operation**

---

**Explanation:**

You attempted an operation that requires the bundle definition to already exist in the database, but it does not.

**User response:**

Add the bundle definition to the Output Manager database.

---

**BJTZ791            Bundle recipient must already be in database for this operation**

---

**Explanation:**

You attempted an operation that requires the bundle recipient to already exist in the database, but it does not.

**User response:**

Add the bundle recipient to the Output Manager database.

---

**BJTZ792            Distribution list must already be in database for this operation**

---

**Explanation:****User response:**

---

**BJTZ793            Invalid value. Only Yes, No, and Default allowed**

---

**Explanation:**

An invalid value was specified in a field that only accepts Yes, No, and Default as valid values.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Type a valid value in that field.

---

**BJTZ794            Bundle activation command is issued**

---

**Explanation:**

You successfully activated a bundle.

**User response:**

No response required.

---

**BJTZ795            Bundle deactivation command is issued**

---

**Explanation:**

You successfully deactivated a bundle.

**User response:**

No response required.

---

**BJTZ796            Deactivate all bundles command is issued**

---

**Explanation:**

You successfully deactivated all bundles.

**User response:**

No response required.

---

**BJTZ797            Invalid wildcard. Wildcards cannot be followed by**

---



**other characters. All bundles  
deactivation command is issued**

**Explanation:**

An invalid value was entered. The value specified contained a wildcard that was followed by another wildcard. Wildcards are supported, but cannot be followed by another wildcard.

**User response:**

No response is required. All bundles are deactivated.

---

**BJTZ798            Distribution list's child causes  
                         cycle**

**Explanation:**

The nested (child) distribution list contains the parent distribution list.

**User response:**

Prevent the distribution list loop by removing the parent distribution list from the child distribution list.

---

**BJTZ799            This command does not apply to  
                         distribution lists**

**Explanation:**

The command was not executed because it does not apply to the object type it was issued against.

**User response:**

Specify a valid command.

---

**BJTZ800            Archive is (data set name)**

**Explanation:**

This message identifies the archive data set name.

**User response:**

No action is required.

---

**BJTZ801            Multiple selection is not allowed**

**Explanation:**

You attempt to select more than one object at once, but multiple selection is not allowed.

**User response:**

Select one object at a time.

---

**BJTZ802            A bundle instance was not  
                         selected for the REPRINT  
                         operation**

**Explanation:**

The REPRINT command was specified on the Bundle History panel. However, no bundle instance or portion of a bundle instance was selected for reprinting.

**User response:**

Before specifying the REPRINT command, select a bundle instance or one or more recipients or reports in the same bundle instance by using the R (Reprint) line command.

---

**BJTZ803            Reprint request has been  
                         submitted**

**Explanation:**

The bundle print job has been successfully submitted for execution. The bundle instance will be reprinted in full or in part, depending on what you selected for reprinting.

**User response:**

No action is required.

---

**BJTZ804            Member not found**

**Explanation:**

The Output Manager started task was unable to locate the bundle instance for a print request.

**User response:**

Review the output from the Output Manager started task for any additional messages that might indicate why this error occurred.

---

**BJTZ805            Print options saved in local  
                         storage**

**Explanation:**

The print configuration was successfully saved in the local storage.

**User response:**

No response required.

---

**BJTZ806            Print request has been submitted**

**Explanation:**

The bundle print job has been successfully submitted for execution. The bundle instance will be printed in full or in part, depending on what you selected for printing.

**User response:**

No action is required.

---

**BJTZ807            Invalid SEARCH parameter. Valid  
                         parameters are ALL, SAVE or  
                         RESET**

**Explanation:**

The SEARCH primary command was specified with an invalid option.

**User response:**

At the command line, type the SEARCH command followed by one of these valid options: - ALL: To display an unfiltered list of objects - SAVE: To save the search criteria that are currently applied to the list - RESET: To re-apply the search criteria that were last saved

---

**BJTZ808            No distribution list assigned to this  
                         report, select a distribution list for  
                         printing**

**Explanation:**

No distribution list is linked to the report.

**User response:**

Select a distribution list to use for printing the report

<b>BJTZ809</b>	<b>Internal error. Error occurred when reading file</b>	The changes that you specified have been successfully saved.
<b>Explanation:</b>	An internal error occurred when attempting to read the file.	
<b>User response:</b>	Try again. If you cannot determine the cause of the error, contact Technical Support.	
<b>BJTZ830</b>	<b>Address inserted</b>	
<b>Explanation:</b>	The changes that you specified have been successfully saved and the object has been inserted.	
<b>User response:</b>	No response required.	
<b>BJTZ831</b>	<b>Address has been copied to the clipboard and cut from the list</b>	
<b>Explanation:</b>	The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.	
<b>User response:</b>	No action is required.	
<b>BJTZ832</b>	<b>Address has been copied to the clipboard</b>	
<b>Explanation:</b>	Information for the object has been copied to the Clipboard and is available to paste to another location.	
<b>User response:</b>	No action is required.	
<b>BJTZ833</b>	<b>Address has been pasted from the clipboard</b>	
<b>Explanation:</b>	The information for the object that was copied to the Clipboard has been pasted to the current location.	
<b>User response:</b>	No action is required.	
<b>BJTZ834</b>	<b>Unable to delete this address</b>	
<b>Explanation:</b>	You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.	
<b>User response:</b>	Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.	
<b>BJTZ835</b>	<b>Address saved</b>	
<b>Explanation:</b>		
<b>BJTZ836</b>	<b>Address has been deleted</b>	
<b>Explanation:</b>	You successfully deleted an object.	
<b>User response:</b>	No response required.	
<b>BJTZ837</b>	<b>Address updated</b>	
<b>Explanation:</b>	The changes that you specified have been successfully saved.	
<b>User response:</b>	No response required.	
<b>BJTZ838</b>	<b>This Address does not exist</b>	
<b>Explanation:</b>	The address that you specified does not exist.	
<b>User response:</b>	Specify an existing address.	
<b>BJTZ839</b>	<b>Address name is not unique</b>	
<b>Explanation:</b>	The specified address name was not inserted into the Output Manager database because an address with that name already exists. Address names must be unique.	
<b>User response:</b>	Type a unique value in the Address name field.	
<b>BJTZ840</b>	<b>This distribution list does not exist</b>	
<b>Explanation:</b>	The distribution list that you specified does not exist.	
<b>User response:</b>	Specify an existing distribution list.	
<b>BJTZ841</b>	<b>Distribution list name is required</b>	
<b>Explanation:</b>	An invalid value was specified in the distribution list name field	
<b>User response:</b>	Specify a name for the distribution list in the Distribution List Name field.	
<b>BJTZ842</b>	<b>Invalid input. The range must be in the format N or N:M, where N and M are integers and N is less than or equal to M. Only values from 1 to total pages are allowed. There is to be no space before or after the ":" (colon) sign, but there must</b>	

**be at least one space between two ranges.**

**Explanation:**

An invalid value was entered in the PAGES field. This field specifies which pages are to be printed for a recipient. Valid values include single pages with a space between each page number, and a range of pages with a colon (:) between the first page number in the range and the last page number in the range (which a space between multiple ranges). The second number in a range must be greater than the first number in the range. For example, to print pages 5 through 10, specify 5:10. To print pages 5 through 10 AND pages 12 through 15, but not pages 11 and 12, specify 5:10 12:15.

**User response:**

Specify a valid page number, or a valid range of page numbers in the PAGES field.

---

**BJTZ843**      **Invalid syntax. The JCL is missing a continuation character when one is expected.**

**Explanation:**

The JCL in the Job Details section continues on more than one line without a continuation character.

**User response:**

When the JCL continues to the next line, end the previous line with a comma.

---

**BJTZ844**      **Invalid syntax. A JCL continuation character is expected but is absent or is in an invalid position.**

**Explanation:**

The JCL in the Job Details section continues on more than line without a continuation character, or the continuation character is in the wrong position.

**User response:**

When the JCL continues to the next line, end the previous line with a comma.

---

**BJTZ845**      **Invalid syntax. The JCL contains a continuation character but the line is not continued.**

**Explanation:**

The JCL in the Job Details section ends with a continuation character but the JCL is not continued.

**User response:**

Continue the JCL on the next line, or remove the continuation character from the last line.

---

**BJTZ846**      **Only "J" or a blank is valid for the OPTCD field.**

**Explanation:**

An invalid value was specified in the OPTCD field. The only valid values for this field are blank and J.

**User response:**

Enter a valid value.

---

**BJTZ847**      **Invalid constant. Only No or Yes are allowed.**

**Explanation:**

An invalid value was specified in the field. The only valid entries are Yes and No.

**User response:**

Type either Yes or No in the field.

---

**BJTZ848**      **Invalid duplex. Only No, Normal, or Tumble are allowed**

**Explanation:**

An invalid value was specified in the Duplex field. This field indicates whether or not to print in duplex mode (double-sided). This message identifies the valid values.

**User response:**

In the Duplex field, type one of the following valid values: - No: Do not print the archive in duplex mode - Normal: Print the archive in duplex mode and bind the archive along the long edge of the paper. - Tumble: Print the archive in duplex mode and bind the archive along the short edge of the paper.

---

**BJTZ849**      **Invalid input. Normal disposition can only be Write, Hold, Keep, Leave, or Purge**

**Explanation:**

An invalid value was specified in the Norm Disp field. This field indicates the disposition of the SYSOUT data set when a job completes normally.

**User response:**

In the Norm Disp field, type one of the following valid options: Write, Hold, Keep, Leave, or Purge. For information about these options, see the associated Help panel.

---

**BJTZ850**      **Organization inserted**

**Explanation:**

The changes that you specified have been successfully saved and the object has been inserted.

**User response:**

No response required.

---

**BJTZ851**      **Organization has been copied to the clipboard and cut from the list**

**Explanation:**

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ852            Organization has been copied to the clipboard**

---

**Explanation:**

Information for the object has been copied to the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ853            Organization has been pasted from the clipboard**

---

**Explanation:**

The information for the object that was copied to the Clipboard has been pasted to the current location.

**User response:**

No action is required.

---

**BJTZ854            Unable to delete this organization**

---

**Explanation:**

You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

**User response:**

Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

---

**BJTZ855            Organization saved**

---

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ856            Organization has been deleted**

---

**Explanation:**

You successfully deleted an object.

**User response:**

No response required.

---

**BJTZ857            Organization updated**

---

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ858            This organization does not exist**

---

**Explanation:**

The organization that you specified does not exist.

**User response:**

Specify an existing organization.

---

**BJTZ859            Organization name is not unique**

---

**Explanation:**

The specified organization name was not inserted into the Output Manager database because an organization with that name already exists. Organization names must be unique.

**User response:**

Type a unique value in the organization name field.

---

**BJTZ870            TPL rule does not exist**

---

**Explanation:**

The TPL rule that you specified does not exist.

**User response:**

Specify an existing TPL rule.

---

**BJTZ870A          TPL Rule name required. Name required for TPL rule.**

---

**Explanation:**

An invalid value was specified in the TPL rule name field. The rule was not inserted into the Output Manager database.

**User response:**

Type a valid value in the TPL name field.

---

**BJTZ871            Changes saved. TPL rule saved.**

---

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ872            TPL rule has been deleted.**

---

**Explanation:**

You successfully deleted an object.

**User response:**

No response required.

---

**BJTZ873            Changes saved. TPL rule updated.**

---

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ874            Changes saved. TPL rule inserted.**

---

**Explanation:**

The changes that you specified have been successfully saved and the object has been inserted.

**User response:**

No response required.

---

**BJTZ875            Cut. TPL rule has been copied to the clipboard and cut from the list.**

---

**Explanation:**

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ876**            **Copied. TPL rule has been copied to the clipboard.**

**Explanation:**

Information for the object has been copied to the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ877**            **Pasted. TPL rule has been pasted from the clipboard.**

**Explanation:**

The information for the object that was copied to the Clipboard has been pasted to the current location.

**User response:**

No action is required.

---

**BJTZ878**            **Unable to delete this TPL rule, one or more objects are connected to it.**

**Explanation:**

You attempted to delete an object that is currently linked to one or more Output Manager objects. An object connected to other objects cannot be deleted.

**User response:**

Determine which objects are linked to this object, then unlink them. After you have unlinked all objects, this one can be deleted.

---

**BJTZ880**            **Invalid print model. Only Classic or Report are allowed.**

**Explanation:**

An invalid value was specified in the Print Model field. The only valid values are Classic and Report. This field determines which static, user-defined set of printer attributes (if any) to use for printing the report instances or the indexed report pages that are based on this report definition.

**User response:**

Type either Classic or Report in the Print Model field. Specify Classic to use the sets of printer attributes that are linked to the recipient IDs on the distribution list that is assigned to the report definition. Specify Report to use the set of printer attributes that is linked directly to the report definition. If you specify Report, you will be able to override any Class, Copies, and Dest information from the report's set of printer attributes for individual recipients on the distribution list. You do so from the Distribution List panel.

---

**BJTZ881**            **Invalid dyn print. Only No or Yes are allowed.**

**Explanation:**

An invalid value was specified in the Dynamic Print field. The only valid values are No and Yes. This field determines whether to use the "dynamic printing parameters" from the BJTDAT table for printing report instances or indexed report pages that are based on this report definition. For reports, Output Manager can capture certain key printing parameters from the SYSOUT and from the set of printer attributes that is linked to 1) the distribution list for the report or 2) the report definition. These "dynamic printing parameters" are stored in the BJTDAT table and merged at report print time.

**User response:**

Type either No or Yes in the Dynamic Print field. Specify No to obtain all printing parameters from the recipient IDs on the distribution list and the applicable user-defined set of printer attributes. (The Print Model field determines which set of printer attributes applies.) Specify Yes to obtain the set of "dynamic printing parameters" from the BJTDAT table. (Any other printing parameters that are specified in the applicable set of printer attributes will still be used.)

---

**BJTZ882**            **Invalid space units. Only Tracks, Cylinders, Blocks, Kilobytes, Megabytes, Bytes, or Records**

**Explanation:**

An invalid value was specified in the Space Units field. This field specifies the type of units in which the archive space is allocated.

**User response:**

In the Space Units field, type one of the following valid values: Blocks, Tracks, Cylinders, Kilobytes, Megabytes, Bytes, or Records.

---

**BJTZ883**            **Invalid record units. Byte modifier can only be Bytes, Mega, or Kilo**

**Explanation:**

An invalid value was specified in the Average Record Unit field. This field specifies the type of record units.

**User response:**

In the Average Record Unit field, type one of the following valid values: B (bytes), M (megabytes), or K (kilobytes).

---

**BJTZ885**            **Invalid disposition. Only Catalog or Delete are allowed.**

**Explanation:**

An invalid value was specified in the Abnormal Disposition field on the Archive Attributes Details panel. This field indicates what to do with an archive when a save-to-archive operation fails.

**User response:**

In the Abnormal Disposition field, type one of the following valid values: - Catalog or C - To make the archive accessible through a catalog - Delete or D - To delete the archive

---

**BJTZ886 Invalid space release. Only Yes or No are allowed.**

**Explanation:**

An invalid value was specified in the Release Unused Space field. This field indicates whether you want to release unused space.

**User response:**

In the Release Unused Space field, type either Yes or No.

---

**BJTZ887 Primary quantity can only be 0 if Auto Calculate is used.**

**Explanation:**

A non-zero value was specified in the Primary Quantity field, but Primary Quantity can only be 0 when Auto Calculate is used.

**User response:**

Either change the Primary Quantity field, or disable Auto Calculate.

---

**BJTZ888 Average block length can only be used when Space Units is set to Blocks**

**Explanation:**

A value was specified in the Average Block Length field, but Space Units must be set to Blocks in order for Average Block Length to be used.

**User response:**

Either change the Space Units value to Blocks, or remove the value from the Average Block Length field.

---

**BJTZ889 Invalid status value. Only Enabled or Disabled are allowed**

**Explanation:**

An invalid value was specified in the Status field. Only Enabled and Disabled are valid values.

**User response:**

In the Status field, type either Enabled (to make the rule active and available for processing) or Disabled (to make the rule unavailable).

---

**BJTZ901 Database reconnection failed**

**Explanation:**

Output Manager failed to reconnect to the Db2 database.

**User response:**

Review the messages that precede this one in the log to determine the reason for the connection failure.

---

**BJTZ902 Database reconnection successful**

**Explanation:**

Output Manager successfully established a connection to Db2.

**User response:**

No response is required.

---

**BJTZ904 Error connecting to Db2**

**Explanation:**

Output Manager failed to connect to the Db2 database.

**User response:**

Review the messages that precede this one in the log to determine the reason for the connection failure.

---

**BJTZ905 Error opening plan**

**Explanation:**

The utility failed to open its Db2 plan from the target Db2 subsystem.

**User response:**

Check whether the utility plan exists on the target Db2 subsystem. If this plan does not exist, you must bind the plan for the program packages.

---

**BJTZ908 Unable to open archive data set**

**Explanation:**

A problem that is associated with product initialization occurred.

**User response:**

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

---

**BJTZ910M Access ID required. Archive access ID is required.**

**Explanation:**

An archive access ID was not specified in the Access ID field.

**User response:**

Type a valid access ID in the Access ID field. An Access ID must be derived from the Access Mask.

---

**BJTZ910A Invalid view value. Initial view can only be Job, Step, Stats, or All.**

**Explanation:**

An invalid option was specified in the Initial View field on the Preferences panel.

**User response:**

In the Initial View field, specify one of the following valid options: Job, Step, Stats, or All.

---

**BJTZ910B Invalid exceptions. Yes, No, or blanks only.**

**Explanation:**

An invalid value was specified in the Exceptions field. The only valid values are Yes, No, and a blank.

**User response:**

In the Exceptions field, specify Yes (to search for archives with exceptions) or No (to search for archives without exceptions). Alternatively, leave the field blank to search for both archives that have exceptions and those that do not have exceptions

---

**BJTZ910C**      **Invalid date format. Relative date must be in the format of "T-nnnn", nnnn=days prior to today**

**Explanation:**

A relative date was specified in the incorrect format in either the Before date field or the After date field. Relative dates must have the format T-nnnn, where "T" represents today and nnnn is a number of days prior to today.

**User response:**

To specify a relative date, use the format T-nnnn. Alternatively, you can enter a specific date in the format YYYY/MM/DD, or type only T for today.

---

**BJTZ910D**      **Invalid date format. Date must be valid and in the format of YYYY/MM/DD**

**Explanation:**

An invalid date value was specified. Dates must be specified in the format YYYY/MM/DD.

**User response:**

Specify a date that is composed of valid values for the year, month, and day and that is in the format YYYY/MM/DD.

---

**BJTZ910E**      **Invalid time format. Time must be valid and in the format of HH:MM:SS**

**Explanation:**

An invalid time value was specified. Time must be specified in the format HH:MM:SS.

**User response:**

Specify a 24-hour time that is composed of valid hour, minute, and second values and that is in the format HH:MM:SS.

---

**BJTZ910F**      **Yes or No only. Only Yes and No are valid values for the Prompt on Entry field**

**Explanation:**

An invalid value was specified in the Prompt on Entry field. This field indicates whether or not Output Manager displays the search criteria panel before an object list panel.

**User response:**

In the Prompt on Entry field, type YES (to always display a search criteria prompt when you enter a list panel), or NO (do not display search criteria prompt).

---

**BJTZ910G**      **Yes or No only. Only Yes and No are valid values for the Save Criteria field**

**Explanation:**

An invalid value was specified in the Save Criteria field on the Search panel. Only Yes or No is valid.

**User response:**

Specify Yes or No in the Save Criteria field.

---

**BJTZ911**      **Selector TPL rule has been inserted to local storage**

**Explanation:**

The information that you specified for the selector TPL rule was saved.

**User response:**

No action is required.

---

**BJTZ912**      **TPL rule has been copied to the clipboard and cut from the local storage**

**Explanation:**

The specified object was deleted from the list by using the X (Cut) line command. Information for the object now resides on the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ913**      **Selector TPL rule has been copied to the clipboard**

**Explanation:**

Information for the object has been copied to the Clipboard and is available to paste to another location.

**User response:**

No action is required.

---

**BJTZ914**      **Selector TPL rule has been pasted from the clipboard**

**Explanation:**

The information for the object that was copied to the clipboard has been pasted to the current location.

**User response:**

No action is required.

---

**BJTZ915**      **Selector TPL rule has been saved to local storage**

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ916**      **Selector TPL rule has been deleted from local storage**

**Explanation:**

You successfully deleted an object.

**User response:**

No response required.

---

**BJTZ917**                    **Selector TPL rule has been updated in local storage**

**Explanation:**

The changes that you specified have been successfully saved.

**User response:**

No response required.

---

**BJTZ918**                    **This selector TPL rule does not exist**

**Explanation:**

The TPL rule specified does not exist.

**User response:**

No action is required.

---

**BJTZ919**                    **Retention period must be non-negative**

**Explanation:**

An invalid value was specified in the Retention Period field. This value must be a number from 0 through 9999.

**User response:**

In the Retention Period field, type a number from 1 through 9999 to indicate the number of days that you want to keep the archives defined by these archive attributes. Alternatively, accept the default value of 0 if you want to use the retention criteria in the management class defined for your system.

---

**BJTZ920A**                    **Invalid name. Archive attribute name cannot be blank.**

**Explanation:**

A blank was specified in a field that cannot be blank.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a valid value in that field.

---

**BJTZ920C**                    **Not numeric. Retention period must be a number.**

**Explanation:**

A non-numeric character was specified in a field that only supports numeric values.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Type a number in that field.

---

**BJTZ920D**                    **Invalid print model. Only Classic or Report are allowed.**

**Explanation:**

An invalid value was specified in the Print Model field. The only valid values are Classic and Report. This field determines which static, user-defined set of printer attributes (if any) to use for printing the report instances or the indexed report pages that are based on this report definition.

**User response:**

Type either Classic or Report in the Print Model field. Specify Classic to use the sets of printer attributes that are linked to the recipient IDs on the distribution list that is assigned to the report definition. Specify Report to use the set of printer attributes that is linked directly to the report definition. If you specify Report, you will be able to override any Class, Copies, and Dest information from the report's set of printer attributes for individual recipients on the distribution list. You do so from the Distribution List panel.

---

**BJTZ920E**                    **Invalid dyn print. Only No or Yes are allowed.**

**Explanation:**

An invalid value was specified in the Dynamic Print field. The only valid values are No and Yes. This field determines whether to use the "dynamic printing parameters" from the BJTDAT table for printing report instances or indexed report pages that are based on this report definition. For reports, Output Manager can capture certain key printing parameters from the SYSOUT and from the set of printer attributes that is linked to 1) the distribution list for the report or 2) the report definition. These "dynamic printing parameters" are stored in the BJTDAT table and merged at report print time.

**User response:**

Type either No or Yes in the Dynamic Print field. Specify No to obtain all printing parameters from the recipient IDs on the distribution list and the applicable user-defined set of printer attributes. (The Print Model field determines which set of printer attributes applies.) Specify Yes to obtain the set of "dynamic printing parameters" from the BJTDAT table. (Any other printing parameters that are specified in the applicable set of printer attributes will still be used.)

---

**BJTZ920F**                    **Invalid space units. Only Tracks, Cylinders, Blocks, Kilobytes, Megabytes, Bytes, or Records Invalid space units. Only Tracks, Cylinders, Blocks, Kilobytes, Megabytes, Bytes, or Records**

**Explanation:**

An invalid value was specified in the Space Units field. This field specifies the type of units in which the archive space is allocated.

**User response:**



In the Space Units field, type one of the following valid values: Blocks, Tracks, Cylinders, Kilobytes, Megabytes, Bytes, or Records.

---

**BJTZ920G**      **Invalid record units. Byte modifier can only be Bytes, Mega, or Kilo**

**Explanation:**

An invalid value was specified in the Average Record Unit field. This field specifies the type of record units.

**User response:**

In the Average Record Unit field, type one of the following valid values: B (bytes), M (megabytes), or K (kilobytes).

---

**BJTZ920H**      **Invalid autocalc value. Auto calculate must be either Yes or No**

**Explanation:**

An invalid value was specified in the Auto Calculate field. Only Yes or No is valid.

**User response:**

Specify Yes if you want to have the space that is required for allocating the archive file automatically calculated. Note that when you specify Yes, Output Manager ignores any values in the Primary Quantity, Average Record Unit, Space Units, and Block Size fields, provided that JES provides the data quantity information that is required for auto calculation.

---

**BJTZ920I**      **Invalid disposition. Only Catalog or Delete are allowed. Invalid disposition. Only Catalog or Delete are allowed.**

**Explanation:**

An invalid value was specified in the Abnormal Disposition field on the Archive Attributes Details panel. This field indicates what to do with an archive when a save-to-archive operation fails.

**User response:**

In the Abnormal Disposition field, type one of the following valid values: - Catalog or C - To make the archive accessible through a catalog - Delete or D - To delete the archive

---

**BJTZ920J**      **Invalid space release. Only Yes or No are allowed**

**Explanation:**

An invalid value was specified in the Release Unused Space field. This field indicates whether you want to release unused space.

**User response:**

In the Release Unused Space field, type either Yes or No.

---

**BJTZ920K**      **Invalid input. Value must be either Yes or No.**

**Explanation:**

An invalid value was specified in the Save Criteria field on the Search panel. Only Yes or No is valid.

**User response:**

Specify Yes or No in the Save Criteria field.

---

**BJTZ920L**      **Primary quantity can only be 0 if Auto Calculate is used**

**Explanation:**

A non-zero value was specified in the Primary Quantity field, but Primary Quantity can only be 0 when Auto Calculate is used.

**User response:**

Either change the Primary Quantity field, or disable Auto Calculate.

---

**BJTZ920M**      **Average block length can only be used when space units is blocks**

**Explanation:**

A value was specified in the Average Block Length field, but Space Units must be set to Blocks in order for Average Block Length to be used.

**User response:**

Either change the Space Units value to Blocks, or remove the value from the Average Block Length field.

---

**BJTZ920T**      **Banner name required. Name required for banner page entry.**

**Explanation:**

An invalid value was specified in the Banner name field. Your changes have not been saved.

**User response:**

Type a valid value in the Banner name field.

---

**BJTZ920U**      **Member name required. Member name required for banner page entry.**

**Explanation:**

An invalid value was specified in the member name field. Your changes have not been saved.

**User response:**

Type a valid value in the member name field.

---

**BJTZ920V**      **Data set name required. Data set name required for banner page entry.**

**Explanation:**

An invalid value was specified in the data set name field. Your changes have not been saved.

**User response:**

Type a the name of the data set that contains the banner page in the data set name field.

---

**BJTZ920X**      **Invalid type. Type can only be Both, Heading, or Trailing.**

**Explanation:**

An invalid value was specified in the Type field. This field indicates where the banner page information will be printed. Valid values are Both (before and after the report data), Heading (before the report data only), and Trailing (after the report data only).

**User response:**

Specify a valid value in the Type field.

---

**BJTZ920S**      **PRSET Member name required. Name required for PRSET member entry.**

**Explanation:**

An invalid value was specified in the PRSET Member name field. Your changes have not been saved.

**User response:**

Type a valid value in the PRSET Member name field.

---

**BJTZ920Y**      **Member name required. Member name required for PRSET member entry.**

**Explanation:**

An invalid value was specified in the Member name field. Your changes have not been saved.

**User response:**

Type a valid value in the Member name field.

---

**BJTZ920Z**      **Data set name required. Data set name required for PRSET member entry.**

**Explanation:**

An invalid value was specified in the data set name field. Your changes have not been saved.

**User response:**

Type a the name of the data set that contains the PRSET member in the data set name field.

---

**BJTZ921**      **Invalid mask. Archive attribute mask cannot be blank.**

**Explanation:**

A blank was specified in a field that cannot be blank.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify a valid value in that field.

---

**BJTZ929**      **Invalid retention period. Retention period must be zero when GDG or GDGnnn is specified.**

**Explanation:**

A non-zero value was specified in the retention period field, but retention period must be zero when GDG or GDGnnn is specified.

**User response:**

Either type 0 in the retention period field, or remove GDG or GDGnnn.

---

**BJTZ930D**      **Invalid name. A bundle name is required.**

**Explanation:**

An invalid value was specified in the bundle name field. The field was not inserted into the Output Manager database.

**User response:**

Type a valid value in the bundle name field.

---

**BJTZ930E**      **Invalid DD name mask. Only the characters A-Z, #, \$, @, and 0-9 are allowed. The first character must be alphabetic. There must be exactly three characters.**

**Explanation:**

An invalid value was specified in the DD name mask field on the Bundle Detail panel. This mask must be composed of three characters, beginning with a letter. Alphanumeric characters and national characters (#, \$, @) are allowed. A numeric value is allowed only in characters 2 and 3.

**User response:**

Type a valid mask in the DD name mask field. This value can be exactly three characters or blank.

---

**BJTZ930F**      **Invalid input. Only Yes or No are allowed.**

**Explanation:**

An value was specified in a field that can only have Yes or NO as valid values.

**User response:**

When you return to the panel, your cursor will be positioned in the field with the invalid value. Specify Yes or No in that field.

---

**BJTZ930G**      **Invalid status. Only Enabled or Disabled are allowed**

**Explanation:**

An invalid value was specified in the Status field. Only Enabled or Disabled is valid. You can also leave the field blank if you do not want to search for objects based on a status value.

**User response:**

Specify Enabled or Disabled in the Status field.

---

**BJTZ930I**      **Invalid input. Only Save, Prompt, or Nosave are allowed.**

**Explanation:**

An invalid value was specified in the Changes at exit field. Only the following values are valid: - Prompt: Displays a confirmation prompt when you attempt to exit after making changes. You must confirm the changes to save the changes to the Output Manager database. - Save: Automatically saves the changes without first displaying a confirmation prompt. -

Nosave: Automatically discards the changes without first displaying a confirmation prompt.

**User response:**

Type one of the following valid values in the Changes at exit field: Prompt, Save, or Nosave.

---

**BJTZ930J**      **Invalid input. Only Delete, Prompt, or Nodelete are allowed**

**Explanation:**

An invalid value was specified. This field specifies what should happen if an archive table entry points to a data set that is no longer cataloged.

**User response**

Only the following values are valid:

- - Delete: Deletes the archive table entry
- Nodelete: Retains the archive table entry
- Prompt: Displays a confirmation prompt asking whether or not to delete the entry.

---

**BJTZ930M**      **Invalid Status. Only Enabled, Disabled, or Skip are allowed.**

**Explanation:**

An invalid value was specified in the Status field for the rule. Only Enabled, Disabled, and Skip are valid values.

**User response:**

In the Status field, type either Enabled (to make the rule active and available for processing), Disabled (to make the rule unavailable), or Skip (to skip the rule and continue processing).

---

**BJTZ930N**      **Invalid match name. Only Yes or No are allowed.**

**Explanation:**

An invalid value was specified in the Match name field. This field indicates whether Output Manager should match both the Layout Name value and the Report Name value against the corresponding fields in report definitions when capturing basic reports based on SYSOUT from the named job. This field applies only when a layout name is specified.

**User response:**

Type Yes or No in the Match Name field.

---

**BJTZ930R**      **Jobname is required**

**Explanation:**

An invalid value was specified in the job name field. The field was not inserted into the Output Manager database.

**User response:**

Type a valid value in the job name field.

---

**BJTZ930S**      **The value is required. At least one of step name, procstep, or step number is required.**

**Explanation:**

A value is required in at least one of the specified fields for the rule.

**User response:**

Specify a valid value in at least one of the following fields: Step Name, Proc Step, and Step Number.

---

**BJTZ930T**      **The value is required. At least one of DD Name, Writer Name, or Form Name is required**

**Explanation:**

A non-blank, non-wildcard value is required in at least one of the specified fields for the rule.

**User response:**

Specify a valid non-wildcard value in the DD Name, Writer Name, or Form Name field.

---

**BJTZ931**      **Invalid mask. Symbol requires prefix.**

**Explanation:**

An invalid value was specified in the mask field. The symbol specified requires a prefix.

**User response:**

Type a prefix before the symbol.

---

**BJTZ932**      **Invalid mask. Symbol requires no prefix or postfix**

**Explanation:**

An invalid value was specified in the mask field. The symbol specified cannot have a prefix.

**User response:**

Remove the prefix before the symbol.

---

**BJTZ933**      **Invalid mask. Unexpected empty token**

**Explanation:**

A problem occurred during product startup.

**User response:**

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

---

**BJTZ934**      **Invalid mask. Token is too large**

**Explanation:**

A problem occurred during product startup.

**User response:**

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

---

**BJTZ935 Invalid mask. Token starts with invalid character**

---

**Explanation:**

A problem occurred during product startup.

**User response:**

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

---

**BJTZ936 Invalid mask. Token contains invalid character**

---

**Explanation:**

A problem occurred during product startup.

**User response:**

Notify your systems programmer about the problem. If the problem persists, gather all details and contact Technical Support for assistance.

---

**BJTZ939 Invalid copies. The Copies value must be a number between 0 and 255**

---

**Explanation:**

An invalid value was specified in the Copies field on the Recipient Details panel. This field specifies the number of report copies to print for the recipient.

**User response:**

Specify a number from 0 through 255 in the Copies field. If you accept the default value of zero, the report will be distributed online but will not be printed.

---

**BJTP901I Parm n=value**

---

**Explanation:**

This informational message displays the parameter number and value for a parameter specified in the BJT@BUNP job.

**User response:**

No response required.

---

**BJTP902I The parameters contain n errors. Only the first 10 errors will be displayed.**

---

**Explanation:**

The parameters specified in the BJT@BUNP job contain more errors than the errors currently displayed. Only the first 10 errors are displayed.

**User response:**

Resolve the displayed errors and then rerun the BJT@BUNP job.

---

**BJTP903I Duplicate parameters specified, only final value accepted.**

---

**Explanation:**

A parameter that can be specified only once was specified multiple times. The value specified in the

last instance of the parameter will be used. Previous instances will be ignored.

**User response:**

Review the BJT@BUNP job and remove duplicate parameters.

---

**BJTP904I Error in DB2CONNECTION. Value is set to CAF.**

---

**Explanation:**

The value specified for the DB2CONNECTION parameter in BJT@BUNP is invalid.

**User response:**

Contact Technical Support.

---

**BJTP905I Parm n exceeds the maximum acceptable length of maximum. The parameter is ignored.**

---

**Explanation:**

The specified parameter value is invalid.

**User response:**

Specify a valid value for the parameter. The message text displays the maximum length allowed for this parameter.

---

**BJTP906I Illegal parameter name, ignored.**

---

**Explanation:**

An invalid valid was specified for a parameter name. The parameter is ignored.

**User response:**

Review and modify the BJT@BUNP job to ensure that all parameter names are specified correctly.

---

**BJTP907I Illegal DD name, ignored.**

---

**Explanation:**

An invalid DD name was specified in the SYSPRINT parameter of BJT@BUNP. The DD name is ignored.

**User response:**

Contact Technical Support.

---

**BJTP908I Parm n is missing an ending quote.**

---

**Explanation:**

The specified parameter requires an end quote, but one was not included.

**User response:**

Review and modify the BJT@BUNP job to include an end quote in the specified parameter.

---

**BJTP921S Failed connection to Db2 for SSID = ssid and PLAN = plan**

---

**Explanation:**

BJTCBUNP failed to connect to the Db2 subsystem specified in the JCL job stream.

**User response:**

Ensure the DB2SSID and plan name values are correct and resubmit the BJT@BUNP job.

---

**BJTP922S**      **The UNIX system service returned a failure. It is most likely that the user does not have an OMVS segment. Errno: *n*, Errno2: *n***

**Explanation:**

The user ID does not have an OMVS segment defined. The user submitting the BJT@BUNP job must have an OMVS segment (RACF). Processing terminates.

**User response:**

If necessary, contact your report and/or security administrator to request an OMVS segment be added to your profile.

---

**BJTP923S**      **Failed to allocate common storage.**

**Explanation:**

BJTCBUNP was unable to allocate storage used by several internal functions. Processing terminates.

**User response:**

Increase the region size specified in the JCL and rerun the BJT@BUNP job.

---

**BJTP924S**      **Database error, SQLCODE=*code***

**Explanation:**

A database error occurred that requires investigation.

**User response:**

Contact the product administrator. Provide the full text of this message, including the SQL code. If further assistance is needed, contact Technical Support.

---

**BJTP925S**      **Required *parameter name* parameter missing.**

**Explanation:**

A required BJTCBUNP parameter was not specified.

**User response:**

Review and modify the BJT@BUNP job to include the indicated required parameter.

---

**BJTP927S**      **Error in parameter SYSPRINT=*value***

**Explanation:**

An error occurred when trying to open the DD name specified in the SYSPRINT parameter of BJT@BUNP, or the DD statement was not included in the JCL.

**User response:**

Contact Technical Support.

---

**BJTP928S**      **Invalid DB2OWNER in database.**

**Explanation:**

A Db2 error occurred. The DB2OWNER value could not be obtained from Db2.

**User response:**

Specify a valid Db2 subsystem ID in the DB2SSID parameter and a valid value in the DB2PLAN parameter, and resubmit the BJT@BUNP job.

---

**BJTP929S**      **Error tailoring bundle print job. PRINT\_PDS attribute is not configured. | Unable to open *dsn member*.**

**Explanation:**

An error occurred in the BJTCBUNP program. Either the PRINT\_PDS configuration parameter, which specifies the data set name of the library that contains the Output Manager JCL for printing, re-printing, and bundle printing, has not been specified, or the PRINT\_PDS data set cannot be opened.

**User response:**

If PRINT\_PDS has not been specified, specify it in the Policy Administration panels (Output Manager ISPF A.PA). If PRINT\_PDS has already been specified, ensure that the specified data set is available.

---

**BJTP930S**      **Dynamic allocation error.**

**Explanation:**

The BJTCBUNP program was unable to allocate INTRDR in order to submit a bundle print job.

**User response:**

Determine the cause of the dynamic allocation error. If you cannot correct the error, contact your report administrator or Technical Support.

---

**BJTP931S**      **User not authorized to *action bundles*.**

**Explanation:**

The user ID does not have the necessary security permissions to perform the specified action.

**User response:**

To list bundles, the user must have READ access to the BJT.*bjtowner*.ADM.BUN resource, where *bjtowner* is the name of the owner of the Output Manager Db2 tables. To activate, deactivate or reactivate bundles, the user must have CONTROL access.

---

**BJTP932S**      **BUNDLE\_INSTANCE line not found in *dsn member*.**

**Explanation:**

A line required by the BJTCBUNP program was missing in the indicated data set name.

**User response:**

Specify the BUNDLE\_INSTANCE line in the indicated data set name, and then resubmit BJT@BUNP.

---

**BJTP933S**      **Error writing *n* of *m* records to INTRDR.**

**Explanation:**

An error occurred while attempting to write records to INTRDR.

**User response:**

Resubmit the BJT@BUNP job. If the error occurs again, contact your system programmer.

---

**BJTP934S**      **Configuration error. SAF\_CLASS attribute is not configured.**

**Explanation:**

The SAF\_CLASS configuration parameter, which specifies the SAF class used by RACF (FACILITY or XFACILIT), is required but has not been specified.

**User response:**

Specify the SAF\_CLASS configuration attribute in the Policy Administration panels (Output Manager ISPF A.PA).

---

**BJTP932S**      **BUNDLE\_INSTANCE line not found in dsn member.**

**Explanation:**

A line required by the BJTCBUNP program was missing in the indicated data set name.

**User response:**

Specify the BUNDLE\_INSTANCE line in the indicated data set name, and then resubmit BJT@BUNP.

---

**BJTP932S**      **BUNDLE\_INSTANCE line not found in dsn member.**

**Explanation:**

A line required by the BJTCBUNP program was missing in the indicated data set name.

**User response:**

Specify the BUNDLE\_INSTANCE line in the indicated data set name, and then resubmit BJT@BUNP.

## Universal Batch Utility Messages

---

This appendix contains information about the messages that can be issued by the Output Manager Universal Batch Utility.

Each utility message has the following format:

```
BJTUnnns message_text
```

Where:

- *nnn* is a message number between 000 and 999
- *s* is a severity code

The following table describes the severity codes:

Table 24. Severity codes	
Return code	Description
I	Informational or debugging message. An informational message often provides information for completing a step in the program flow; it usually does not require a user response. A debug message provides specific diagnostic information that is related to an error condition. Debug messages are written to the log only if you specified the VERBOSE(YES) parameter in the SYSIN DD.
W	Warning. A minor error occurred. Processing usually continues, but results might not be as expected.
E	Error message. A significant error occurred. You might be able to correct the error; read the User Response to determine the appropriate course of action.
S	Severe error message. A severe internal or environmental error occurred, which might cause the program to terminate. Usually, you need to call Support for assistance in resolving these errors.

---

**BJTU001S**      **UNIVERSAL BATCH UTILITY ENDED, RC=16.**

**Explanation**

The utility terminated with a fatal error.

### System action

The program is ending.

### User response

Check the previous error messages in the log for more information.

---

**BJTU002S          CONNECTION TO DB2 FAILED.**

### Explanation

The utility failed to connect to the target DB2 subsystem.

### System action

The utility terminates.

### User response

Review the messages that precede this one in the log to determine the reason for the connection failure.

---

**BJTU003S          CAF ERROR CONNECTING TO DB2.**

### Explanation

The utility could not connect to the target Db2 subsystem that is specified by the DB2SSID parameter in the SYSIN data set.

### System action

The utility terminates.

### User response

You can perform the following actions to try to resolve this problem:

- Check the Db2 subsystem ID (SSID) that is specified by the DB2SSID parameter in the SYSIN data set to ensure that it is correct.
- Check the availability of the target Db2 subsystem.

---

**BJTU004S          CAF ERROR OPENING PLAN  
                         'plan\_name'**

### Explanation

The utility failed to open its Db2 plan ('plan\_name') from the target DB2 subsystem.

### System action

The utility terminates.

### User response

Check whether the utility plan exists on the target Db2 subsystem. If this plan does not exist, you must bind the plan for the program packages.

---

**BJTU005S          SQL CONNECT ERROR**

### Explanation

The utility failed to execute a SQL CONNECT command to connect to the target Db2 subsystem.

### System action

The utility terminates.

### User response

Check the Db2 subsystem ID (SSID) that is specified by the DB2SSID parameter in the SYSIN data set to ensure that it is correct. Check the availability of the target Db2 subsystem.

---

**BJTU006S          SQL ERROR: SET CURRENT SQLID  
                         COMMAND FAILED**

### Explanation

The utility failed to process the SET CURRENT SQLID command.

### System action

The utility disconnects from Db2 and terminates.

### User response

Check the user ID that is specified for the USER parameter in the SYSIN data set to ensure that the ID is correct and valid at the target Db2 subsystem.

---

**BJTU007S          SQL ERROR: NONE OF THE  
                         OUTPUT MANAGER TABLES WERE  
                         FOUND.**

### Explanation

None of the Output Manager Db2 tables were found in the DB2 SYSIBM.SYSTABLES table that has a CREATOR value equal to the OWNER value in the SYSIN data set.

### System action

The program disconnects from the Db2 subsystem and terminates.

## User response

You can perform the following actions to try to resolve the problem:

- Check the Db2 subsystem ID (SSID) that is specified by the 2SSID parameter in the SYSIN data set to ensure that it is correct.
- Check the value that is specified for the OWNER parameter in the SYSIN data set.
- Check whether the Output Manager Db2 tables exist under the specified OWNER.

---

**BJTU008S      SQL ERROR: ONE OR MORE OF THE OUTPUT MANAGER TABLES WERE NOT FOUND.**

## Explanation

Some of the Output Manager Db2 tables were not found in the SYSIBM.SYSTABLES table that has a CREATOR value equal to the OWNER value in the SYSIN data set.

## System action

The program disconnects from the Db2 subsystem and terminates.

## User response

You can perform the following actions to try to resolve the problem:

- Check the Db2 subsystem ID (SSID) that is specified by the DB2SSID parameter in the SYSIN data set to ensure that it is correct.
- Check the value that is specified for the OWNER parameter in the SYSIN data set.
- Check whether the Output Manager Db2 tables exist under the specified OWNER.

---

**BJTU009S      SQL DBRM OR PACKAGE NOT FOUND**

## Explanation

The Db2 DBRM or package for the utility was not found.

## System action

The utility terminates.

## User response

Rebind a plan for the utility. For more information, see the following messages, which occur after this one in log: BJTU605I, BJTU801I, and BJTU802I.

---

**BJTU010S      A DB2 CONNECTION ERROR OCCURRED**

## Explanation

An error occurred while the utility was establishing a connection to Db2. This message is issued for connection errors other than:

- CAF connection errors
- CAF errors that are related to opening the program plan
- SET CURRENT SQLID errors
- Errors due to the absence of some or all of the Output Manager tables
- Errors due to the absence of a DBRM or package for the batch delete utility

## System action

The utility terminates.

## User response

For detailed information about the error, see the messages that precede this one in the log.

---

**BJTU011S      CONNECTION TO DB2 DOES NOT EXIST**

## Explanation

A connection to the target Db2 subsystem was not established because of an internal error.

## System action

The utility terminates.

## User response

Contact Technical Support.

---

**BJTU012S      REQUIRED PARAMETER 'parm\_name' NOT FOUND IN DD:SYSIN.**

## Explanation

The specified parameter was not found in the SYSIN data set. UBU requires this parameter to operate.

## System action

The utility terminates.



## User response

Check whether the parameter is present and correctly defined in the SYSIN data set. If not, add the parameter to the data set using the correct syntax.

---

<b>BJTU013S</b>	<b>REQUIRED OPTION <i>parameter_name</i> HAS A VALUE THAT IS TOO LONG.</b>
-----------------	--

## Explanation

The specified option has a value that exceeds its maximum length limit. You must specify a valid value for this required option.

## System action

The utility terminates.

## User response

To determine the maximum allowable length for the specified option, refer to the message BJTU606I. Then correct the option value in the SYSIN data set to ensure that it does not exceed this length limit.

---

<b>BJTU014S</b>	<b>FAILED TO OPEN THE INPUT DATA SET 'dd_name'.</b>
-----------------	---

## Explanation

The utility could not open the SYSIN data set to read the program options.

## System action

The utility terminates.

## User response

Ensure that the utility will have Read access to the SYSIN data set when it starts.

---

<b>BJTU015S</b>	<b>FAILED TO OPEN THE OUTPUT DATA SET 'dd_name' TO APPEND DATA.</b>
-----------------	---

## Explanation

The utility could not open the BJTDATA data set to append extracted data.

## System action

The utility terminates.

## User response

Ensure that the data set exists and is accessible for writing.

---

<b>BJTU016S</b>	<b>FAILED TO WRITE RECORD TO THE OUTPUT DATA SET 'dd_name'.</b>
-----------------	---

## Explanation

The utility could not perform write operation on the BJTDATA data set.

## System action

The utility terminates.

## User response

Ensure that the data set has the correct record length (LRECL) to receive the extracted data. Check the volume for a white space to hold BJTDATA data set.

---

<b>BJTU017S</b>	<b>CANNOT RETRIEVE INFORMATION FOR THE DATA SET 'dd_name'.</b>
-----------------	--

## Explanation

The utility could not perform an operation on the BJTDATA data set to retrieve information about record length or format.

## System action

The utility terminates.

## User response

Ensure that the data set exists.

---

<b>BJTU018S</b>	<b>DATA SET 'dd_name' HAS UNSUPPORTED RECORD FORMAT. RECORD FORMAT MUST BE VB OR FB.</b>
-----------------	--

## Explanation

The BJTDATA data set has an unsupported record format type. Only VB or FB record formats are supported.

## System action

The utility terminates.

## User response

Re-allocate output file using VB or FB as the format of the data set.

---

**BJTU019S**      **FAILED TO READ RECORD FROM THE INPUT DATA SET 'dd\_name'.**

### Explanation

The utility could not read from the BJTDATA data set.

### System action

The utility terminates.

### User response

Check the required characteristics (organization, record format, and record length) for this data set.

---

**BJTU020S**      **SECTION FIELDS IN 'dd\_name' DATA SET IS EMPTY.**

### Explanation

The SYSIN data set has no fields in section FIELDS, or the FIELDS section is missing.

### System action

The utility terminates.

### User response

Add fields in this section or add keyword ALL for processing all table fields. For more information see specification.

---

**BJTU021S**      **THE EXCEPT KEYWORD WAS EXPECTED AFTER THE ALL KEYWORD IN THE FIELDS SECTION.**

### Explanation

Syntax error. The FIELDS section after the ALL keyword contains data, and the first word of this data is not EXCEPT. The EXCEPT keyword is expected.

### System action

The utility terminates.

### User response

Check and correct FIELDS section. Add the keyword EXCEPT after the keyword ALL, or delete data after the keyword ALL.

---

**BJTU022S**      **REQUIRED OPTION *option* HAS INVALID VALUE *value*.**

### Explanation

The specified SYSIN option has an invalid value. Because this option is required, the utility cannot continue run.

### System action

The utility terminates.

### User response

Correct the option value in the SYSIN data set. Ensure that the new value is valid for the option.

---

**BJTU023S**      **FAILED TO DETERMINE IDENTITY OF JUST INSERTED RECORD.**

### Explanation

The specified SYSIN option has an invalid value. Because this option is required, the utility cannot continue run.

### System action

The utility terminates.

### User response

For more information, see the two log messages that follow this one in log: BJTU605I and BJTU802I.

---

**BJTU024S**      **FAILED TO BACKUP RECORD FROM TABLE *table\_name* WITH ROWID=*rowid*.**

### Explanation

The utility failed to create backup record for entry from specified table and with specified identity.

### System action

The utility terminates.

### User response

For more information about reason of failure see previous messages in log.

---

**BJTU025S**      **FAILED TO RECOVER RECORDS FROM DD:*ddname* DATASET.**

### Explanation

The utility failed to recover data from backup image allocated in specified ddname.

## System action

The utility terminates.

## User response

For more information about reason of failure see previous messages in log. Check for other error messages detailing the reason of recovery failure and take the appropriate actions.

---

**BJTU027S**      **GENERATED SQL QUERY EXCEEDS MAXIMUM LENGTH OF *max\_count* BYTES. QUERY LENGTH IS *count* BYTES.**

## Explanation

The utility failed to generate extracting SQL query because it exceeds allowed maximum length.

## System action

The utility terminates.

## User response

Shorten WHERE clause from SELECT section on which utility fails and try to run utility again.

---

**BJTU028S**      **SORT FIELD '*fieldname*' OF SORT-BY SECTION HAS INVALID SYNTAX.**

## Explanation

The SORT-BY section has an invalid section in the specified sort field.

## System action

The utility terminates.

## User response

Modify the SORT-BY section using valid syntax.

---

**BJTU029S**      **ERROR ADDING|MODIFYING LAYOUT *layout name*, DUPLICATE FIELD NAME *field\_name* ENCOUNTERED.**

## Explanation

Fields with the same name were encountered during adding/modifying fields for the layout with the name indicated in the message.

## System action

The utility terminates.

## User response

Ensure that no two fields have the same name in the specified layout.

---

**BJTU030S**      **ROW #*row\_number* : *field\_name* HAS NON-UNIQUE VALUE. Details.**

## Explanation

The specified field contains a duplicate value. Another record has the same value specified for this field, and this field must be unique.

## System action

The utility terminates.

## User response

Ensure that the record *row\_number* has a unique value for the field *field\_name*.

---

**BJTU0201E**      **UNIVERSAL BATCH UTILITY ENDED, RC=12.**

## Explanation

The utility ended with errors.

## System action

The program is ending.

## User response

Check error log messages.

---

**BJTU0202E**      **THE COLUMNS IN THE TABLE *owner\_value.table\_name* NOT RECOGNIZED.**

## Explanation

The program could not obtain a description of the columns in the specified table from the Db2 catalog.

## System action

The program disconnects from the Db2 subsystem and terminates.

## User response

See the next message in the log to determine the reason for this error.

---

**BJTU203E      OUTPUT DATA SET NAME WAS NOT SPECIFIED.**

### Explanation

An internal error occurred.

### System action

The utility terminates with the return code RC=12.

### User response

Contact Technical Support.

---

**BJTU204E      UNSUPPORTED TYPE OF OBJECT: 'obj\_type'.**

### Explanation

The OBJTYPE option in SYSIN data set has an unrecognized value.

### System action

The utility terminates with the return code RC=12.

### User response

Check and correct the value of the OBJTYPE, it must be one of the following:

- ARCHIVE\_ATTRIBUTE
- REPORT\_LAYOUT
- BANNER\_PAGE
- PRINTER\_ATTRIBUTE
- RECIPIENT\_ID
- DISTRIBUTION\_LIST
- CUSTOM\_REPORT
- REPORT\_SELECTION\_RULE
- SELECTOR\_RULE
- BUNDLE\_DEFINITION
- BUNDLE\_RECIPIENT
- BUNDLE\_REPORT
- BUNDLE\_INSTRUCTION
- USER\_ARCHIVE\_MAPPING
- FORMATTED\_VIEW
- FILTER

---

**BJTU205E      NONE OF THE REQUIRED SECTIONS IN THE 'dd\_name' DATA SET WERE FOUND.**

### Explanation

Required sections are missing from the SYSIN data set.

### System action

The utility terminates with the return code RC=12.

### User response

Check and correct SYSIN data set. It can contain three sections: OPTIONS, SELECT, FIELDS.

---

**BJTU206E      SYNTAX ERROR: 'clause' NOT FOUND.**

### Explanation

SYSIN data set doesn't contain necessary keyword 'clause'.

### System action

The utility terminates with the return code RC=12.

### User response

Check and correct SYSIN data set.

---

**BJTU207E      INTERNAL ERROR: UNKNOWN TABLE NAME 'table\_name'.**

### Explanation

An internal error occurred.

### System action

The utility terminates with the return code RC=12.

### User response

Contact Technical Support.

---

**BJTU210E      Failed to PREPARE the SELECT statement**

### Explanation

The program could not prepare the SELECT statement for execution.

### System action

The program terminates after printing additional debug log messages.

## User response

For more information, see the two log messages that follow this one in log: BJTU605I, BJTU801I, and BJTU802I.

---

**BJTU211E**      **Failed to DECLARE the cursor for the SELECT statement**

## Explanation

The program could not declare a cursor for the SELECT statement.

## System action

The program terminates after printing additional debug log messages.

## User response

For more information, see the two messages that follow this one in the log: BJTU605I, BJTU801I, and BJTU802I.

---

**BJTU212E**      **Failed to OPEN cursor for the SELECT statement Ex**

## Explanation

The program could not open the cursor for the SELECT statement.

## System action

The program terminates after printing additional debug log messages.

## User response

For more information, see the two messages that follow this one in the log: BJTU605I, BJTU801I, and BJTU802I.

---

**BJTU213E**      **Failed to FETCH the cursor**

## Explanation

The program could not fetch the cursor for the SELECT statement.

## System action

The program terminates after printing additional debug log messages.

## User response

For more information, see the two messages that follow this one in the log: BJTU605I, BJTU801I, and BJTU802I.

---

**BJTU214E**      **THE NAME OF THE INPUT DATA SET WAS NOT SPECIFIED.**

## Explanation

An internal error occurred.

## System action

The utility terminates with the return code RC=12.

## User response

Contact Technical Support.

---

**BJTU215E**      **THE COUNT OF FIELDS IN THE INPUT DATA SET 'dd\_name' DOES NOT AGREE WITH THE COUNT OF FIELDS IN THE FIELDS SECTION OF SYSIN DATA SET.**

## Explanation

The count of fields in the FIELDS section of DD:SYSIN must be less than the or equal to the count of fields in DD:BJTDATA (note that fields H\_ACT\_REQ, H\_DD\_DEF, H\_ROWID will be added automatically), or the FIELDS section must be empty.

## System action

The utility terminates with the return code RC=12.

## User response

Check and correct FIELDS section or correct BJTDATA data set.

---

**BJTU216E**      **THE SIZE OF FIELDS IN INPUT DATA SET 'dd\_name' DOES NOT AGREE WITH THE SIZE OF FIELDS IN THE FIELDS SECTION OF SYSIN DATA SET.**

## Explanation

An internal error occurred.

## System action

The utility terminates with the return code RC=12.

## User response

Contact Technical Support.

---

**BJTU217E      REQUIRED FIELD NOT FOUND IN  
INPUT DATA SET 'dd\_name'.**

## Explanation

An internal error occurred.

## System action

The utility terminates with the return code RC=12.

## User response

Contact Technical Support.

---

**BJTU218E      FAILED TO EXECUTE SQL  
STATEMENT.**

## Explanation

The program could not execute SQL statement.

## System action

The program terminates after printing additional debug log messages.

## User response

For more information, see the two log messages that follow this one in log: BJTU605I, BJTU801I, and BJTU802I.

---

**BJTU219E      FAILED TO ALLOCATE MEMORY  
FOR VARIABLES OF SQLDA.**

## Explanation

An internal error occurred.

## System action

The utility terminates with the return code RC=12.

## User response

Contact Technical Support.

---

**BJTU220E      CAN NOT FIND RECORD IN TABLE  
'table\_name' WHERE 'clause\_type'.**

## Explanation

Record with specified WHERE clause was not found in table.

## System action

The utility terminates with the return code RC=12.

## User response

Modify the record in table '*table\_name*' or insert record with necessary clause into this table.

---

**BJTU221E      CAN NOT FIND RECORD IN  
TABLE 'table\_name' WHERE  
'clause\_type2'.**

## Explanation

Record with specified WHERE clause was not found in table.

## System action

The utility terminates with the return code RC=12.

## User response

Modify the record in table '*table\_name*' or insert record with necessary clause into this table.

---

**BJTU222E      FAILED TO GENERATE SQL  
STATEMENT(S).**

## Explanation

SQL statements such as SELECT, UPDATE or DELETE were not constructed.

## System action

The utility terminates with the return code RC=12.

## User response

See the previous messages in the log.

---

**BJTU223E      FAILED TO EXECUTE ACTION FOR  
CURRENT RECORD.**

## Explanation

SQL statements such as SELECT, UPDATE or DELETE was executed.

## System action

The utility terminates with the return code RC=12.

## User response

See the previous messages in the log.

---

**BJTU224E**      **BUN\_ID FIELD MISSING IN FIELDS SECTION.**

### Explanation

If the FIELDS section in SYSIN data set has the field BUN\_ID, then the field BUC\_ID must also be present for BUNDLE\_REPORT and BUNDLE\_INSTRUCTION object types.

### System action

The utility terminates with the return code RC=12.

### User response

Check and correct the FIELDS section in SYSIN data set and check BJTDATA for including these fields.

---

**BJTU225E**      **FAILED TO PREPARE CROSS-TABLE LINK BEFORE INSERT/UPDATE STATEMENT.**

### Explanation

A cross-table link failed because the utility could not find a record with the specified key field in the specified target table.

### System action

The utility terminates with the return code RC=12.

### User response

See the previous message, contact Technical Support for assistance.

---

**BJTU226E**      **The FIELD *field* IS REQUIRED WHEN ADDING OBJECT OF THIS TYPE. ACTION ADD FAILED.**

### Explanation

Action ADD failed because the specified required field was not defined in the extracted flat file.

### System action

The utility terminates with the return code RC=12. All previous actions will be discarded.

### User response

Re-extract data with BXU mode, including the specified field in the FIELDS section.

---

**BJTU227E**      **THE FIELD 'field\_name' IN THE TABLE 'table\_name' WHERE ROWID = 'id' IS BLANK.**

### Explanation

Database integrity violation. A field in the table row that must contain a value was empty, for example, GroupID.

### System action

The utility terminates with the return code RC=12.

### User response

Check specified row (ROWID = id) and insert correct value into the specified field.

---

**BJTU228E**      **UNDEFINED FIELD *column\_name* IN THE INPUT DATASET.**

### Explanation

Input dataset in header row contains specified field name which is invalid for current run. Possible reasons:

- User manually was editing the input dataset's header lines with the names of the fields and has modified some field name incorrectly
- Field were excluded from handling by being specified in EXCEPT list in SYSIN:FIELDS, but corresponding field is presented in the input dataset.
- Using the same input dataset for simultaneous extract/modify work with more than one ITOM Db2 instances, which have different table structure.

### System action

The utility terminates with the return code RC=12.

### User response

Check the header of the input dataset and correct field names if needed. Check SYSIN:FIELDS section for fields exclusion.

---

**BJTU229E**      **INPUT DATA HAS NO HEADER ROWS.**

### Explanation

The BJTDATA data set has no header rows.

### System action

The utility terminates with the return code RC=12.

## User response

Check correctness of BJTDATA dataset name. Check the data inside BJTDATA dataset and if header rows are missed then re-extract data or try to recover header rows manually.

---

**BJTU230E**      *fieldname* FIELD VALUE  
'*fieldvalue*' CONTAINS INVALID  
CHARACTERS.

## Explanation

Specified field value contains character(s) that is invalid to be used in values for specified field. Next BJTU614I log message contains the list of eligible characters for this field.

## System action

The utility terminates with the return code RC=12.

## User response

See at the next BJTU614I log message with list of valid characters and correct field value in BJTDATA file.

---

**BJTU231E**      *fieldname* FIELD HAS INVALID  
VALUE '*fieldvalue*'. ONLY  
INTEGERS ARE ALLOWED.

## Explanation

The specified field should have an integer value, but the value specified is a non-integer.

## System action

The utility terminates with the return code RC=12.

## User response

Correct the field value in BJTDATA file to be a valid integer value.

---

**BJTU232E**      CANNOT FIND PARENT  
SELECTOR RULE WITH NAME  
'*selectorrulename*'.

## Explanation

Utility fails to link Subselector Rule (SSR) to parent Selector Rule (PSR) because no selector rule with the specified name was found in the Output Manager database.

## System action:

The utility terminates with the return code RC=12.

## User response

Verify the accuracy of PSR name in SSR record in BJTDATA file. In the case when both PSR and child SSR are planned to be added during one utility run, verify that record of PSR is placed before record of child SSR in BJTDATA file.

---

**BJTU233E**      ROW NUMBER *rownum* FROM  
*inputfile* CONTAINS AN INVALID  
VALUE FOR THE FIELD *fieldname*.

## Explanation

The specified field from the specified row contains an invalid value.

## System action

The utility terminates with the return code RC=12.

## User response

Specify a valid value in the field and run the utility again.

---

**BJTU236E**      *field\_name*: FIELD VALUE IS  
EMPTY.

## Explanation

The specified field of the record contains an invalid blank value.

## System action

The row is not modified or inserted. The program ends with RC=12.

## User response

Specify a non-blank valid value for the specified field.

---

**BJTU237E**      ROW NUMBER *rownum*: ACCID  
VALUE *accid* DOES NOT MATCH  
THE ACCMASK *accmask*

## Explanation

The ACCID value of the specified row does not match the mask value of the specified row. ACCID must be a derivative of ACCMASK.

## System action

The utility terminates with the return code RC=12.



## User response

Change the ACCID and/or the ACCMASK values to make the ACCID value correspond with the mask value specified in ACCMASK field. For more information on Access IDs and Access Masks, see the Security chapter of either the *IBM Tivoli Output Manager for z/OS Installation and Customization Guide* or *IBM Tivoli Output Manager for z/OS Administrator's Guide*.

---

**BJTU238E**      **INVALID ACCMASK VALUE '%s' IS SPECIFIED. *error\_reason*.**

## Explanation

The ACCMASK field of the specified row contains an invalid value.

## System action

The utility terminates with the return code RC=12.

## User response

Specify a non-blank and valid value for ACCMASK field. A valid ACCMASK value contains no more than one trailing star character [\*]. Multiple star characters and/or non-trailing star character are treated as error. For more information on Access IDs and Access Masks, see the Security chapter of either the *IBM Tivoli Output Manager for z/OS Installation and Customization Guide* or *IBM Tivoli Output Manager for z/OS Administrator's Guide*.

---

**BJTU234E**      **ROW NUMBER *rownum*: *field\_name* FIELD HAS POSITIVE VALUE. ONLY NEGATIVE VALUES ARE ALLOWED DURING MOD ACTION.**

## Explanation

The specified field from the specified row contains an invalid value. A positive value was specified, and only negative values are valid during a MODIFY action.

## System action

The utility terminates with the return code RC=12.

## User response

Specify a valid value in the field and run the utility again. Check that the *row number* has an appropriate negative value for the field. Check that you're not trying to perform a MOD action on a record extracted with PREP4CLON(YES) option.

---

**BJTU235E**      **FAILED TO LOCK THE TABLE *owner.table\_name* IN SHARE MODE.**

## Explanation

The utility was unable to lock the table *owner.table\_name*. System action: The utility terminates.

## System action

The utility terminates.

## User response

Check for other error messages detailing the reason of table locking failure.

---

**BJTU239E**      **INVALID SELECTOR NAME FORMAT: '*selector name*'.**

## Explanation

TPX\_DDS\_ROWID column value should correspond the format: *selector name/subselector name*. Selector and subselector names should be 16 characters in length.

## System action

The row is not modified or inserted. The program ends with RC=12.

## User response

Modify the TPX\_DDS\_ROWID column value to comply with the format.

---

**BJTU245E**      ***row\_number*: VALIDATION FOR TPL RULE SPECIFIED IN TPL\_EXPRESSION FIELD FAILED**

## Explanation

An error happened while compiling the TPL rule specified in the TPL\_EXPRESSION field for the specified row number.

## System action

The utility terminates with the return code RC=12.

## User response

Refer to the next BJTU246E message in the log for detailed information about the error. If a syntax error occurred, correct the field value in BJTDATA file to be a valid TPL rule.

---

**BJTU246E** *tpl error details***Explanation**

This message contains details of the error that occurred during TPL rule compilation.

**System action**

The utility terminates with the return code RC=12.

**User response**

Refer to the previous BJTU245E message for the row number of the row on which this error occurred.

---

**BJTU247E** **ROW *row\_number*: THE GROUP'S HEADING RECORD WITH *field\_name=field\_value* WAS NOT HANDLED PROPERLY.****Explanation**

The specified row belongs to the group object (grouped by given field value), but the heading record is not specified in input dataset, was not marked for ADD operation, or is placed below in input dataset.

**System action**

The utility terminates with the return code RC=12.

**User response**

Check and correct the input dataset to meet following requirements:

- Mark the heading record of the group for ADD operation, and ensure it is the first record in the group
- Ensure that all the records of the group are placed in one non-blank row-frame in the input file.

---

**BJTU248E** **ROW *row\_number*: *field\_name* FIELD HAS NEGATIVE VALUE. ONLY POSITIVE VALUES ARE ALLOWED DURING ADD ACTION AGAINST GROUP'S HEADING RECORDS.****Explanation**

The specified field has an invalid value: negative values are not allowed during ADD action for heading records of the group objects.

**System action**

The utility terminates with the return code RC=12.

**User response**

Specify a positive value for all the records of the group, or use the PREP4CLON(YES) option during extraction to clone a group object.

---

**BJTU259E** **ROW *row\_number*: *field\_name* MAY ONLY BE '1'(DELETE), '2'(KEEP), '3'(HOLD), '4'(SYSHOLD) or '5'(RELEASE).****Explanation**

The value in the specified field must be '1', '2', '3', '4' or '5'.

**System action**

The row is not modified or inserted. The program ends with RC=12.

**User response**

Specify a new value in the specified field/row. The value must be '1', '2', '3', '4' or '5'.

---

**BJTU261E** **ROW *row\_number*: WRITER MUST NOT BE INTRDR, STDWTR AND NJERDR.****Explanation**

WRITER column can't be INTRDR, STDWTR and NJERDR.

**System action**

The row is not modified or inserted. The program ends with RC=12.

**User response**

Modify the WRITER column value to comply with the restriction.

---

**BJTU269E** **ROW *row\_number*: THE EXISTING CHILD SUBSECTOR RULE '*rule\_name*' IS INCONSISTENT WITH THE VALUES SPECIFIED FOR THE FIELDS: *field1*, *field2*, ..., *fieldN*.****Explanation**

This row is a parent selector rule, and the values specified in the indicated fields would result in an orphaned subselector rule. The selection criteria of subselector rules must be derivative of the selection criteria of their parent selector rules.

## System action

The row is not modified or inserted. The program ends with RC=12.

## User response

Refer to the BJTU619I message(s) to get detailed information on the inconsistency. Edit the values of the specified row to ensure that the selection values of existing child subselector rules is derivative of the selection values of this parent selector rule.

---

**BJTU277E**      **ROW *row\_number*: JOBCLASS MUST BE ALPHANUMERIC(A-Z,0-9) OR BLANK IF JOBTYP IS 'B'.**

## Explanation

JOBCLASS field of row *row\_number* contains symbols other than uppercase letters and digits.

## System action

The row is not modified or inserted. The program ends with RC=12.

## User response

Remove inappropriate characters from the JOBCLASS field.

---

**BJTU278E**      **ROW *row\_number*: JOBCLASS MUST BE 's' OR BLANK IF JOBTYP IS 'S'.**

## Explanation

The JOBCLASS field of row *row\_number* contains symbols other than 's' when JOBTYP field is 'S'(STC).

## System action

The row is not modified or inserted. The program ends with RC=12.

## User response

Change JOBCLASS value to 's'.

---

**BJTU279E**      **ROW *row\_number*: JOBCLASS MUST BE 't' OR BLANK IF JOBTYP IS 'T'.**

## Explanation

JOBCLASS must be T when JOBTYP is T (TSO), but the JOBCLASS field of row *row\_number* contains symbols other than 't' when JOBTYP field is 'T'(TSO).

## System action

The row is not modified or inserted. The program ends with RC=12.

## User response

Change JOBCLASS value to 't'.

---

**BJTU280E**      **ROW *row\_number*: JOBCLASS MUST BE ALPHANUMERIC(A-Z,0-9) OR BLANK IF JOBTYP IS 'H'.**

## Explanation

JOBCLASS must be alphanumeric or blank when JOBTYP is H, but the JOBCLASS field of row *row\_number* contains symbols other than uppercase letters and digits.

## System action

The row is not modified or inserted. The program ends with RC=12.

## User response

Remove invalid characters from JOBCLASS field.

---

**BJTU281E**      **ROW *row\_number*: JOBCLASS MUST ONLY CONTAIN 'A-Z0-9st' SYMBOLS OR BLANK WHEN JOBTYP IS 'A' OR EMPTY.**

## Explanation

JOBCLASS must only contain the characters 'A-Z0-9st' when JOBTYP is A or empty, but the JOBCLASS field of row *row\_number* contains inappropriate characters.

## System action

The row is not modified or inserted. The program ends with RC=12.

## User response

Remove invalid characters from JOBCLASS field.

---

**BJTU282E**      **ROW *row\_number*: FIELD *field\_name* MUST CONTAIN ONLY ALPHANUMERIC(A-Z,0-9),**

**NATIONAL(@,#,\$) ,AND PERIOD(.)  
SYMBOLS, OR BLANK.**

### Explanation

The *field\_name* field of row *row\_number* contains an invalid character; characters other than alphanumeric, national and '.' are not allowed.

### System action

The row is not modified or inserted. The program ends with RC=12.

### User response

Remove invalid characters from *field\_name* field.

---

**BJTU283E      ROW *row\_number* : FIELD  
MUST CONTAIN ONLY  
ALPHANUMERIC(A-Z,0-9) AND  
NATIONAL(@,#,\$) CHARACTERS.  
FIRST CHARACTER MUST BE NON-  
NUMERIC OR BLANK.**

### Explanation

The value of *field\_name* contains characters other than alphanumeric and national, or starts with a digit.

### System action

The row is not modified or inserted. The program ends with RC=12.

### User response

Remove invalid characters from the *field\_name* field.

---

**BJTU284E      ROW *row\_number*: FIELD  
*field\_name* MUST CONTAIN  
ONLY ALPHANUMERIC(A-Z,0-9),  
NATIONAL(@,#,\$) AND WILDCARD  
(?\*) SYMBOLS. FIRST SYMBOL  
MUST BE NON-NUMERIC OR  
BLANK.**

### Explanation

The specified *field\_name* field of the row *row\_number* contains characters other than alphanumeric, national and wildcard or the first character of the field is digit.

### System action

The row is not modified or inserted. The program ends with RC=12.

### User response

Remove invalid characters from the *field\_name* field and specify a value that does not start with a digit.

---

**BJTU287E      ROW *row\_number*: MASK CANNOT  
START WITH '&' SYMBOL.**

### Explanation

An invalid value was specified in the MASK field. MASK field value cannot start with '&'.

### System action

The row is not modified or inserted. The program ends with RC=12.

### User response

Specify a valid value in the MASK field.

---

**BJT286E      ROW *row\_number*: JOBNAME  
MUST BE NON-EMPTY AND NOT "**

### Explanation

Job name cannot be empty and cannot be just an asterisk ""

### System action

The row is not modified or inserted. The program ends with RC=12.

### User response

Specify a value other than '\*' in the JOBNAME field.

---

**BJTU314E      ROW *row\_number*: MASK MUST  
CONTAIN AT LEAST ONE PERIOD.**

### Explanation

The value of MASK field must contain at least one period.

### System action

The row is not modified or inserted. The program ends with RC=12.

### User response

Specify a value with at least one period in the MASK field for the specified row.

---

**BJTU315E:      ROW *row\_number*: FIELD  
*field\_name* MUST CONTAIN  
ONLY ALPHANUMERIC(A-Z,0-9)**

**AND NATIONAL(@,#,\$) SYMBOLS EXCEPT WORDS INTRDR, STDWTR, NJERDR.**

**Explanation**

The specified row contains an invalid value in the field indicated. Only alphanumeric and national symbols are expected in this field. Words INTRDR, STDWTR and NJERDR are not allowed.

**User response**

Specify a valid value in the indicated field.

---

**BJTU319E:      ROW *row\_number*: *fieldname* MUST BE TIME VALUE IN FORMAT HHHH:MM:SS.**

**Explanation**

The specified field must have time string value in format HHHH:MM:SS.

**System action:**

The row is not modified or inserted. The program ends with RC=12.

**User response**

Specify a valid value in the indicated field.

---

**BJTU320E      ROW *row\_number*: *fieldname* MUST BE EITHER TIME VALUE IN FORMAT HHHH:MM:SS OR FOREVER.**

**Explanation**

The specified field must have either time string value in format HHHH:MM:SS or have string value equal to FOREVER.

**System action:**

The row is not modified or inserted. The program ends with RC=12.

**User response**

Specify a valid value in the indicated field.

---

**BJTU321E      ROW *row\_number*: *fieldname* MUST BE IN FORMAT {NODE}.USERID, WHERE BOTH NODE AND USERID MUST BE A VALID NAME.**

**Explanation**

Field must be in format {NODE}.USERID, where both NODE and USERID must be a valid name: up to eight alphanumeric characters (A-Z, #, \$, @, 0-9). The first character must be alphabetic (A-Z, \$, @, or #) .

**System action:**

The row is not modified or inserted. The program ends with RC=12.

**User response**

Specify a valid value in the indicated field.

---

**BJTU323E      ROW *row\_number*: CANNOT ADD UAM RULE. ONLY 256 RULES ARE ALLOWED FOR THE SAME RECIPIENT.**

**Explanation**

You cannot have more than 256 UAM rules for one recipient.

**System action:**

The row is not modified or inserted. The program ends with RC=12.

**User response**

Ensure you are adding UAM rule to the correct recipient.

---

**BJTU333E      ROW *row\_number*: FIELD REFERENCED IN *field\_name* IS UNKNOWN**

**Explanation**

There is a field reference in the value of *field\_name*, but the field is absent from the linked layout.

**System action:**

The row is not modified or inserted. The program ends with RC=12.

**User response**

Update the field value to a value that is included in the linked layout.

---

**BJTU349E      ROW *row\_number*: RECORD WITH SPECIFIED *field\_list* WOULD NOT BE UNIQUE IN *object\_type*.**

**Explanation**

Record cannot be inserted to, or modified in, the object because it would not be unique by the specified list of fields.

**System action:**

The row is not modified or inserted. The program ends with RC=12.

**User response**

Modify the record to make it unique for the specified object by the specified list of fields.

---

**BJTU350E**      **ROW *row\_number*: RECORD WITH SPECIFIED *field\_list* WOULD NOT BE UNIQUE**

**Explanation**

Record with the same values in the specified fields already exists.

**System action:**

The row is not modified or inserted. The program ends with RC=12.

**User response**

Modify the record to make it unique by the specified list of fields.

---

**BJTU351E**      **ROW *row\_number*: SUBSTRING EXCEEDS VARIABLE LENGTH**

**Explanation**

A variable reference includes a substring specification that exceeds maximum length of the variable.

**System action:**

The row is not modified or inserted. The program ends with RC=12.

**User response**

Ensure that all of the substring specifications are valid.

---

**BJTU352E**      **ROW *row\_number*: THE SUBSTRING BOUNDARY IS DEFINED BY A NEGATIVE NUMBER OR ZERO, BUT ONLY POSITIVE NUMBERS ARE ALLOWED.**

**Explanation**

A variable reference includes a substring boundary specification with zero or negative numbers in it. Substring boundaries must be positive numbers.

**System action:**

The row is not modified or inserted. The program ends with RC=12.

**User response**

Ensure that all of the substring specifications are valid.

---

**BJTU355E**      **ROW *row\_number*: INTRDR, STDWTR, NJERDR ARE NOT ALLOWED FOR FIELD *field\_name*.**

**Explanation**

The values INTRDR, STDWTR, and NJERDR cannot be used as a value for the *field\_name* field.

**System action:**

Incorrect *field\_name* value. The program ends with RC=12.

**User response**

Specify valid value for the *field\_name* field.

---

**BJTU356E**      **ROW *row\_number*: RSID AND RID VALUES ARE ALREADY USED FOR IMPLICITLY CREATED DEFAULTS ROW.**

**Explanation**

UBU adds a row when a RTYPE=H record contains variable reference and a row if there is a field reference.

**System action:**

The row is not modified or inserted. The program ends with RC=8.

**User response**

Add 1 to RSID if there is a variable reference in the report name and add 1 to RID if there is a field reference in the report name or dynamic distribution list (RFVL5 field in the RTYPE=H record).

---

**BJTU358E**      **ROW *row\_number*: THE VALUE SPECIFIED FOR FIELD *field\_name* IS TOO LONG. THE MAXIMUM LENGTH FOR THIS FIELD IS *limit\_number* CHARACTERS.**

**Explanation**

The value specified for the field cannot be inserted into database because it exceeds the maximum length. The maximum length is displayed in the message text.

**System action:**

Incorrect *field\_name* value. The program ends with RC=12.

## User response

Specify a value that is no longer than the specified maximum.

---

**BJTU359E**      **ROW *row\_number*: ACTION IS NOT PERMITTED BY SAF. USER NEEDS *required\_authority* AUTHORITY TO *profile\_name* PROFILE, BUT HAS *actual\_authority* AUTHORITY.**

## Explanation

A user attempted to issue a command on the specified row number, but the command failed because the user that issued the command does not have the appropriate SAF authority. The required SAF access rights are specified in the message text.

### System action:

Program continues to process the next record, it will exit with RC=12.

## User response

Ensure that you have appropriate access rights and that you are trying to perform the operation that you intend to perform.

---

**BJTU359E**      **ROW *row\_number*: ACTION IS NOT PERMITTED BY SAF. USER NEEDS *required\_authority* AUTHORITY TO *profile\_name* PROFILE, BUT HAS *actual\_authority* AUTHORITY.**

## Explanation

A user attempted to issue a command on the specified row number, but the command failed because the user that issued the command does not have the appropriate SAF authority. The required SAF access rights are specified in the message text.

### System action:

Program continues to process the next record, it will exit with RC=12.

## User response

Ensure that you have appropriate access rights and that you are trying to perform the operation that you intend to perform.

---

**BJTU362E**      **ROW *row\_number*: INVALID RTYPE/BETYPE COMBINATION. THE FOLLOWING COMBINATIONS ARE ALLOWED: C/BLANK (CONDITION), N/BLANK (INCLUDE), L/BLANK (EXCLUDE), B/E (BEGIN EXCLUDE), B/O(BEGIN**

**ONE), B/I (BEGIN INCLUDE), E/E (END EXCLUDE), E/O (END ONE) OR E/I (END INCLUDE).**

## Explanation

A user attempted to ADD or MODify a record setting, but the combination of the RTYPE/BETYPE fields is incorrect.

### System action:

The row is not modified or inserted. The program ends with RC=12.

## User response

Change the value of the RTYPE and/or BETYPE field to reflect a valid combination as listed in the error message text.

---

**BJTU236E**      ***field\_name*: FIELD *field\_name* IS NOT USED IN THE TEMPLATE NAME OR DYNAMIC DISTRIBUTION LIST NAME.**

## Explanation

Report context field should be used in template report name or dynamic distribution list name.

## System action

The row is not modified or inserted. The program ends with RC=12.

## User response

Specify layout field that is used in template name or dynamic distribution list name of the template report.

---

**BJTU401W**      **UNIVERSAL BATCH UTILITY ENDED, RC=04.**

## Explanation

The utility completed processing with warnings.

## System action

The program is ending.

## User response

Check the log for additional warning messages.

---

**BJTU402W**      **SYSIN option '*option\_name*' is blank. This option will be ignored.**

## Explanation

No value was provided for the specified option in the SYSIN data set. As a result, this option will be ignored during extract processing.

## System action

The program continues running but ignores the specified option.

## User response

If you want to use this option for extract processing, specify a value for it in the SYSIN data set.

---

**BJTU403W**      **INVALID SYNTAX FOR THE SYSIN OPTION 'option\_name'. THIS OPTION WILL BE IGNORED.**

## Explanation

In the SYSIN data set, the specified option does not have a closing parenthesis after its value.

## System action

The program continues running but will ignore the specified option unless you correct the syntax error.

## User response

In the SYSIN data set, add a closing parenthesis after the option value. Use this syntax: option(value).

---

**BJTU404W**      **UNKNOWN OPTION 'option\_name' IN SYSIN. THIS OPTION WILL BE IGNORED.**

## Explanation

The utility does not recognize the specified option in the SYSIN data set.

## System action

The program ignores the specified option and continues running.

## User response

Check the option name and syntax in the SYSIN data set and make any necessary corrections.

---

**BJTU405W**      **SYSIN OPTION option\_name HAS A VALUE THAT IS TOO LONG. THIS OPTION IS IGNORED.**

## Explanation

The value of the specified SYSIN option exceeds the maximum allowable length. Because this option is optional, the utility can ignore it.

## System action

The utility ignores the specified option and continues running.

## User response

If you want the utility to use the specified option, correct the option value in the SYSIN data set. Ensure that the option value does not exceed the length limit.

---

**BJTU406W**      **SYSIN OPTION option\_name HAS AN INVALID VALUE option\_value. THIS OPTION IS IGNORED.**

## Explanation

The specified SYSIN option has an invalid value. Because this option is optional, the utility can ignore it.

## System action

The program ignores the specified option and continues running.

## User response

If you want the program to use the specified option, correct the option value in the SYSIN data set. Ensure that the new value is valid for the option.

---

**BJTU407W**      **'dd\_name' DATA SET IS EMPTY.**

## Explanation

The BJTDATA data set has no data.

## System action

The program continues running.

## User response

Check correctness of BJTDATA dataset name.

---

**BJTU409W**      **UNDEFINED ACTION: 'act\_name'. VALID ACTIONS INCLUDE: ADD, MOD, and DEL.**

## Explanation

The BJTDATA dataset has an unrecognized action value specified in the field H\_ACT\_REQ.



### System action

The program skips the row and continues running.

### User response

Correct values of field H\_ACT\_REQ in BJTDATA data set.

---

<b>BJTU410W</b>	<b>BUN_ID FIELD MUST BE INCLUDED IF BUC_ID IS INCLUDED IN THE FIELDS SECTION.</b>
-----------------	---

### Explanation

If the FIELDS section in SYSIN data set includes the BUN\_ID field, then the field BUC\_ID must be present for BUNDLE\_REPORT and BUNDLE\_INSTRUCTION object types.

### System action

The program continues running.

### User response

Check and correct the FIELDS section of the SYSIN data set.

---

<b>BJTU411W</b>	<b>FIELD field IS REQUIRED DURING ADD ACTION FOR OBJECTS OF THIS TYPE.</b>
-----------------	--

### Explanation

The specified field will be not extracted, but if you plan to use the extraction results for a future ADD, then this extract will be invalid and cause a program error.

### System action

The program continues running.

### User response

If you plan to use the extraction results only for Modification and Deletion actions, no action is required. But if you plan to use the extraction results for an ADD, then you must re-extract data with BXU mode, including specified field in FIELDS section. Otherwise, the ADD action will cause a critical program error BJTU226E.

---

<b>BJTU412W</b>	<b>FIELD 'field_name' IS NOT DEFINED FOR OBJECTS OF THIS TYPE.</b>
-----------------	--

### Explanation

The section FIELDS in the SYSIN data set has a field that is not defined for the specified object type.

### System action

This field will be ignored.

### User response

Check and correct section FIELDS in SYSIN data set. Delete this field or correct its name.

---

<b>BJTU413W</b>	<b>RECORD IN THE TABLE 'table_name' WHERE ROWID = 'id' IS ABSENT.</b>
-----------------	---

### Explanation

No record exists in the table 'table\_name' for ROWID=id.

### System action

Action will be ignored.

### User response

Re-extract data or correct H\_ROWID.

---

<b>BJTU416W</b>	<b>SORT FIELD 'fieldname' HAS INVALID ORDER VALUE. THIS ORDER VALUE WILL BE IGNORED.</b>
-----------------	--

### Explanation

Specified sort field from SORT-BY section has invalid value for sort order.

### System action

Program sets default sort order and continues to run.

### User response

Change sort order for specified sort field and run utility again.

---

<b>BJTU417W</b>	<b>SORT FIELD 'fieldname' NOT DEFINED FOR OBJECTS OF THIS TYPE.</b>
-----------------	---

### Explanation

SORT-BY section contains field that is not defined for objects of target type.

### System action

Program ignores this field and continues to run.

### User response

Change/remove specified field from SORT-BY section.

---

**BJTU418W**      **ROW #row\_number: THIS SELECTOR/SUBSELECTOR RULE CANNOT BE ENABLED; SETTING STATUS TO DISABLED.**

### Explanation

During handling of the selector/subselector's input record from specified row, the program found that field STATUS has value 'E' (Enabled), although selector/subselector object has no linked Archive Attribute (has an empty ATTRIBUTE\_ID field).

### System action

Program sets STATUS field equal to 'D' (Disabled) value and continues to run.

### User response

If selector/subselector object should be enabled, specify the linked Archive Attribute object and set the STATUS to 'E' (Enabled) using either with ISPF or UBU.

---

**BJTU423W**      **ROW #row\_number: NEW FAMILY OF REPORTS WILL BE CREATED DUE TO YOUR CHANGES.**

### Explanation

The changes that you have made to the template report will result in a new family of derived reports.

### System action

The row is modified or inserted. The program ends with RC=4.

### User response

No response is required.

---

**BJTU428W**      **ROW #row\_number: BECAUSE THE *field\_name* FIELD VALUE IS BLANK, THE DEFAULT VALUE, *default\_value*, WILL BE USED.**

### Explanation

The specified field contained a blank value, so the default value was used.

### System action

The row is modified or inserted. The program ends with RC=4.

### User response

No action is required. If the default value is not desired, change the value of *field\_name* to the appropriate value.

---

**BJTU429W**      **SORT-BY SECTION OVERRIDES THE NATIVE ORDER OF *object type*. IT IS NOT RECOMMENDED TO USE THIS EXTRACT FOR FURTHER CLONE OPERATION.**

### Explanation

The objects have been extracted in an order that may result in an unexpected reordering if the output of this extract is later used as input for an insert.

### System action

The rows are extracted. The program ends with RC=4.

### User response

If the extract is to be used for an ADD operation, consider using the native sort of the object type.

---

**BJTU601I**      **UNIVERSAL BATCH UTILITY STARTED. LEVEL: *code\_level*. COMPILED: *compilation\_date\_time***

### Explanation

The extract program has started.

### System action

The program is running.

### User response

None.

---

**BJTU602I**      **UNIVERSAL BATCH UTILITY ENDED, RC=00.**

### Explanation

The utility successfully completed processing.

### System action

The program is ending.

## User response

None.

---

**BJTU603I**      **CONNECTION TO DB2  
ESTABLISHED.**

## Explanation

The utility successfully established a connection to Db2.

## System action

The utility continues running.

## User response

None.

---

**BJTU604I**      **DISCONNECTED FROM DB2**

## Explanation

The utility successfully disconnected from Db2.

## System action

The program is ending.

## User response

None.

---

**BJTU605I**      **SQL ERROR: SQLCODE=sql\_code,  
SQLSTATE=sql\_state**

## Explanation

An SQL error occurred when the batch delete utility ran the last SQL statement.

## System action

The program terminates.

## User response

To determine the reason for the SQL error, look up the reported SQLCODE and SQLSTATE values in the IBM Db2 Universal Database for z/OS SQL Reference. Also review the BJTU802I message for more information about the SQL error.

---

**BJTU606I**      **MAXIMUM LENGTH FOR THE  
OPTION 'option\_name' IS  
number\_of\_characters**

## Explanation

This message identifies the maximum number of characters that you can specify as the value for the named option.

## System action

The program continues running.

## User response

Ensure that the value for the specified option does not exceed this maximum length.

---

**BJTU607I**      **number OBJECTS EXTRACTED  
FROM THE TABLE 'table\_name'.**

## Explanation

This message reports the number of extracted records from the table 'table\_name'.

## System action

The program continues running.

## User response

None.

---

**BJTU608I**      **VALUE MUST BE 'value1' OR  
'value2'.**

## Explanation

This message identifies the valid values for the option that is specified in the message BJTU406W, which occurs prior to this one in the log.

## System action

The program continues running.

## User response

Specify one of these valid values for the option that is specified in message BJTU406W.

---

**BJTU609I**      **UTILITY EXTRACTION MODE  
ACTIVATED.**

## Explanation

This message shows that the utility is running in extraction mode.

## System action

The program continues running.

## User response

None.

---

**BJTU610I**      **UTILITY MODIFICATION MODE  
ACTIVATED.**

## Explanation

This message shows that the utility is running in modification mode.

## System action

The program continues running.

## User response

None.

---

**BJTU611I**      **PROCESSED *nn* ROW(S) FROM  
'dd\_name'.**

## Explanation

This message shows the count of records from the BJTDATA data set that were processed for ADD, MOD, and DEL.

## System action

The program continues running.

## User response

None.

---

**BJTU612I**      **ROW NUMBER *row\_num* FROM  
BJTDATA HAS BEEN HANDLED.  
ACTION *action* WAS ISSUED.**

## Explanation

This message shows that program just finished the specified action with the specified row from the flat file.

## System action

The program continues running.

## User response

None.

---

**BJTU619I**      **THE EXISTING CHILD  
SUBSECTOR RULE '*rule\_name*'  
HAS *fieldN*='*valueN*'.**

## Explanation

This message provides more information for the BJTU269E error message. This message indicates the field values of the child subselector rule that are inconsistent with the selection criteria of the parent selector rule.

## System action

The row is not modified or inserted. The program ends with RC=12.

## User response

Refer to the BJTU619I message(s) to get detailed information on the inconsistency. Edit the values of the specified row to ensure that the selection values of existing child subselector rules is derivative of the selection values of this parent selector rule.

---

**BJTU801I**      **Statement: *SQL\_statement***

## Explanation

This message identifies the SQL statement that was just executed by the program.

## System action

The program continues running.

## User response

None.

---

**BJTU802I**      **SQL error debug information:  
*debug\_info***

## Explanation

An SQL error occurred when the utility ran the last SQL statement. This message provides information for diagnosing the error.

## System action

The program terminates.

## User response

To determine the reason for the SQL error, look up the reported SQLCODE and SQLSTATE values in the IBM Db2 Universal Database for z/OS SQL Reference.

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