IBM

Program Directory for

IBM Tivoli Management Services on z/OS

IBM Z Service Management Explorer

6.3.2

Program Number 5698-A79

HIUW631

for Use with
z/OS

Service Updated 22 June 2022

Document Date: March 2023

GI13-5219-02

> **Note**
>
> Before using this information and the product it supports, be sure to read the general information under 7.0, "Notices" on page 26.

Contents

Figures

1.0 Introduction

This program directory is intended for system programmers who are responsible for program installation and maintenance. It contains information about the material and procedures associated with the installation of IBM Z Service Management Explorer. This publication refers to IBM Z Service Management Explorer as Z Service Management Explorer.

The Program Directory contains the following sections:

- 2.0, "Program Materials" on page 4 identifies the basic program materials and documentation for Z Service Management Explorer.

- 3.0, "Program Support" on page 6 describes the IBM support available for Z Service Management Explorer.

- 4.0, "Program and Service Level Information" on page 8 lists the APARs (program level) and PTFs (service level) that have been incorporated into Z Service Management Explorer.

- 5.0, "Installation Requirements and Considerations" on page 9 identifies the resources and considerations that are required for installing and using Z Service Management Explorer.

- 6.0, "Installation Instructions" on page 17 provides detailed installation instructions for Z Service Management Explorer. It also describes the procedures for activating the functions of Z Service Management Explorer, or refers to appropriate publications.

Before installing Z Service Management Explorer, read the *CBPDO Memo To Users* and the *CBPDO Memo To Users Extension* that are supplied with this program in softcopy format and this program directory; after which, keep the documents for your reference. Section 3.2, "Preventive Service Planning" on page 6 tells you how to find any updates to the information and procedures in this program directory.

Z Service Management Explorer is supplied in a Custom-Built Product Delivery Offering (CBPDO, 5751-CS3). The program directory that is provided in softcopy format on the CBPDO is identical to the hardcopy format if one was included with your order. All service and HOLDDATA for Z Service Management Explorer are included on the CBPDO.

Do not use this program directory if you install Z Service Management Explorer with a ServerPac. When you use one of those offerings, use the jobs and documentation supplied with the offering. The offering will point you to specific sections of this program directory as needed.

1

1.1 IBM Z Service Management Explorer Description

IBM Tivoli Management Services for z/OS, V6.3.2 extends the use of Zowe technology to further modernize the user experience for operations personnel and subject matter experts who use IBM monitoring offerings. IBM Z Service Management Explorer (IZSME), a Zowe-based web user experience, provides access to the critical graphical and tabular monitoring information that has traditionally been available through the Tivoli Enterprise Portal user interface.

IZSME installs in minutes as a server in a Zowe environment and is instantly available to TEP users via a web browser interface. No changes to PARMGEN parameters are necessary, and no migration of existing workspaces, navigators, or situations is required, as IZSME automatically inherits them. Any new changes made with the administration features of TEP are immediately available to IZSME users.

Users familiar with TEP will instantly be able to navigate and use IZSME, with its familiar format, navigation, and operation. IZSME improves and modernizes the look and feel of artifacts like graphs, tables, and navigators while protecting the historical investment in training and customization. IZSME does not require users to install any software or to have Java installed on their workstations, reducing the effort required to distribute and maintain access to critical monitoring data.

In addition to modernizing the look and feel of monitoring data and reducing the need for user Java usage, IZSME improves the ability to view and manipulate the data displayed, as compared to what is available in TEP. In TEP, users can sort and filter only rows of data that are currently displayed on the screen; IZSME sorting and filtering operates on all of the data returned from queries, making it quicker and easier to get to the data that is actually needed, with fewer custom reports needed.

The IBM Z Service Management Explorer (IZSME)

- Provides a familiar user experience that is similar to TEP in navigation, layout, operation, and actions

- Requires no Java user workstations to view and navigate workspaces, or execute previously defined Take-Actions

- Typically installs in minutes as a Zowe plug-in with simple configuration requiring no changes to PARMGEN

- Requires no changes to Tivoli Enterprise Portal Server (TEPS) or Tivoli Enterprise Monitoring Server (TEMS) server infrastructure

- Automatically uses any TEP workspaces, navigators, situations, and Take-Actions without migration or new customization, including distributed platform agents

  - All existing and future customizations are automatically inherited.

  - TEP Java Extensions are not supported at this time.

- Is fully compatible with and coexists with existing TEP clients and TEPS and TEMS servers

- Leverages the Zowe environment, including Zowe Desktop and Web UI

- Is invoked from Zowe Desktop or Web UI

- Does not support administrative functions such as creating or editing workspaces, custom navigators or situations, or user administration

1.2 Z Service Management Explorer FMIDs

Z Service Management Explorer consists of the following FMIDs:

HIUW631

2.0 Program Materials

An IBM program is identified by a program number. The program number for Z Service Management Explorer is 5698-A79.

Basic Machine-Readable Materials are materials that are supplied under the base license and are required for the use of the product.

The program announcement material describes the features supported by Z Service Management Explorer. Ask your IBM representative for this information if you have not already received a copy.

2.1 Basic Machine-Readable Material

The distribution medium for this program is physical media or downloadable files. This program is in SMP/E RELFILE format and is installed by using SMP/E. See 6.0, "Installation Instructions" on page 17 for more information about how to install the program.

You can find information about the physical media for the basic machine-readable materials for Z Service Management Explorer in the *CBPDO Memo To Users Extension*.

2.2 Program Publications

The following sections identify the basic publications for Z Service Management Explorer.

Figure 1 identifies the basic unlicensed publications for Z Service Management Explorer.

The unlicensed documentation for Z Service Management Explorer can be found in the IBM Documentation at:
https://www.ibm.com/docs/en/om-shared

Figure 1. Basic Material: Unlicensed Publications
Publication Title
IBM Z Service Management Explorer User Guide

The Z Service Management Explorer product documentation and other IBM product documentation can be found on the IBM Documentation website at:

https://www.ibm.com/docs/en/om-shared?
topic=interfaces-z-service-management-explorer

2.3 Program Source Materials

No program source materials or viewable program listings are provided for Z Service Management Explorer.

2.4 Publications Useful During Installation

You might want to use the publications listed in Figure 2 during the installation of Z Service Management Explorer.

Figure 2. Publications Useful During Installation	
Publication Title	**Form Number**
IBM SMP/E for z/OS User's Guide	SA23-2277
IBM SMP/E for z/OS Commands	SA23-2275
IBM SMP/E for z/OS Reference	SA23-2276
IBM SMP/E for z/OS Messages, Codes, and Diagnosis	GA32-0883

Note: These publications can be found in IBM Documentation. Use a web browser with internet access to refer to: **https://www.ibm.com/docs/en/zos/2.5.0?topic=zos-smpe**

3.0 Program Support

This section describes the IBM support available for Z Service Management Explorer.

3.1 Program Services

Contact your IBM representative for specific information about available program services.

3.2 Preventive Service Planning

Before you install Z Service Management Explorer, make sure that you have reviewed the current Preventive Service Planning (PSP) information. Review the PSP Bucket for General Information, Installation Documentation, and the Cross Product Dependencies sections. For the Recommended Service section, instead of reviewing the PSP Bucket, it is recommended you use the IBM.PRODUCTINSTALL-REQUIREDSERVICE fix category in SMP/E to ensure you have all the recommended service installed. Use the **FIXCAT(IBM.PRODUCTINSTALL-REQUIREDSERVICE)** operand on the **APPLY CHECK** command. See 6.1.10, "Perform SMP/E APPLY" on page 21 for a sample APPLY command.

If you obtained Z Service Management Explorer as part of a CBPDO, HOLDDATA is included.

If the CBPDO for Z Service Management Explorer is older than two weeks by the time you install the product materials, you can obtain the latest PSP Bucket information by going to the following website:

https://esupport.ibm.com/customercare/psearch/search?domain=psp

You can also use S/390 SoftwareXcel or contact the IBM Support Center to obtain the latest PSP Bucket information.

For program support, access the Software Support Website at **https://www.ibm.com/mysupport/**.

PSP Buckets are identified by UPGRADEs, which specify product levels; and SUBSETs, which specify the FMIDs for a product level. The UPGRADE and SUBSET values for Z Service Management Explorer are included in Figure 3.

Figure 3. PSP Upgrade and Subset ID		
UPGRADE	**SUBSET**	**Description**
5698A79	HIUW631	Z Service Management Explorer

3.3 Statement of Support Procedures

Report any problems which you feel might be an error in the product materials to your IBM Support Center. You may be asked to gather and submit additional diagnostics to assist the IBM Support Center in their analysis.

Figure 4 on page 7 identifies the component IDs (COMPID) for Z Service Management Explorer.

Figure 4. Component IDs			
FMID	**COMPID**	**Component Name**	**RETAIN Release**
HIUW631	5698A7900	Z Service Management Explorer	631

4.0 Program and Service Level Information

This section identifies the program and relevant service levels of Z Service Management Explorer. The program level refers to the APAR fixes that have been incorporated into the program. The service level refers to the PTFs that have been incorporated into the program.

4.1 Program Level Information

The following APAR fixes against previous releases of components included with Z Service Management Explorer have been incorporated into this release. They are listed by FMID.

- FMID HIUW631

  ```
  OA59394 OA59586 OA59691 OA60211 OA60520 OA60796 OA61152 OA61707
  OA62197 OA62198 OA63186
  ```

4.2 Service Level Information

PTFs containing APAR fixes against this release of Z Service Management Explorer have been incorporated into this product package. For a list of included PTFs, examine the ++VER statement in the product's SMPMCS.

Frequently check the Z Service Management Explorer PSP Bucket for HIPER and SPECIAL attention PTFs against all FMIDs that you must install. You can also receive the latest HOLDDATA, then add the **FIXCAT(IBM.PRODUCTINSTALL-REQUIREDSERVICE)** operand on your **APPLY CHECK** command. This will allow you to review the recommended and critical service that should be installed with your FMIDs.

5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing and activating Z Service Management Explorer. The following terminology is used:

- *Driving system*: the system on which SMP/E is executed to install the program.

  The program might have specific operating system or product level requirements for using processes, such as binder or assembly utilities during the installation.

- *Target system*: the system on which the program is configured and run.

  The program might have specific product level requirements, such as needing access to the library of another product for link-edits. These requirements, either mandatory or optional, might directly affect the element during the installation or in its basic or enhanced operation.

In many cases, you can use a system as both a driving system and a target system. However, you can make a separate IPL-able clone of the running system to use as a target system. The clone must include copies of all system libraries that SMP/E updates, copies of the SMP/E CSI data sets that describe the system libraries, and your PARMLIB and PROCLIB.

Use separate driving and target systems in the following situations:

- When you install a new level of a product that is already installed, the new level of the product will replace the old one. By installing the new level onto a separate target system, you can test the new level and keep the old one in production at the same time.

- When you install a product that shares libraries or load modules with other products, the installation can disrupt the other products. By installing the product onto a separate target system, you can assess these impacts without disrupting your production system.

5.1 Driving System Requirements

This section describes the environment of the driving system required to install Z Service Management Explorer.

5.1.1 Machine Requirements

The driving system can run in any hardware environment that supports the required software.

5.1.2 Programming Requirements

Figure 5. Driving System Software Requirements				
Program Number	Product Name	Minimum VRM	Minimum Service Level will satisfy these APARs	Included in the shipped product?
5650-ZOS	z/OS	2.4 or higher	N/A	No

Note: SMP/E is a requirement for Installation and is an element of z/OS.

Note: Installation might require migration to new z/OS releases to be service supported. See **https://www.ibm.com/support/lifecycle/**.

Z Service Management Explorer is installed into a file system.

Before installing Z Service Management Explorer, you must ensure that the target system file system data sets are available for processing on the driving system. OMVS must be active on the driving system and the target system file data sets must be mounted on the driving system.

If you plan to install Z Service Management Explorer in a zFS file system, this requires that zFS be active on the driving system. Information on activating and using zFS can be found in z/OS Distributed File Service zSeries File System Administration, SC24-5989.

5.2 Target System Requirements

This section describes the environment of the target system required to install and use Z Service Management Explorer.

Z Service Management Explorer installs in the z/OS (Z038) SREL.

5.2.1 Machine Requirements

The target system can run in any hardware environment that supports the required software.

5.2.2 Programming Requirements

5.2.2.1 Installation Requisites

Installation requisites identify products that are required and *must* be present on the system or products that are not required but *should* be present on the system for the successful installation of this product.

Mandatory installation requisites identify products that are required on the system for the successful installation of this product. These products are specified as PREs or REQs.

Figure 6. Target System Mandatory Installation Requisites				
Program Number	Product Name	Minimum VRM	Minimum Service Level will satisfy these APARs	Included in the shipped product?
5650-ZOS	z/OS	2.4 or higher	N/A	No

Note: Installation might require migration to new releases to obtain support. See
https://www.ibm.com/support/lifecycle/

Conditional installation requisites identify products that are *not* required for successful installation of this product but can resolve such things as certain warning messages at installation time. These products are specified as IF REQs.

Z Service Management Explorer has no conditional installation requisites.

5.2.2.2 Operational Requisites

Operational requisites are products that are required and *must* be present on the system or products that are not required but *should* be present on the system for this product to operate all or part of its functions.

Mandatory operational requisites identify products that are required for this product to operate its basic functions.

Figure 7. Target System Mandatory Operational Requisites	
Program Number	Product Name and Minimum VRM/Service Level
5650-ZOS	z/OS 2.4 or higher
5698-ZWE	IBM Z Distribution for Zowe V01.00.00 with ptfs UO01939, UO01940

Note: Installation might require migration to new releases to obtain support. See
https://www.ibm.com/support/lifecycle/

Conditional operational requisites identify products that are *not* required for this product to operate its basic functions but are required at run time for this product to operate specific functions. These products are specified as IF REQs.

Z Service Management Explorer has no conditional operational requisites.

5.2.2.3 Toleration/Coexistence Requisites

Toleration/coexistence requisites identify products that must be present on sharing systems. These systems can be other systems in a multisystem environment (not necessarily sysplex), a shared DASD environment (such as test and production), or systems that reuse the same DASD environment at different time intervals.

Z Service Management Explorer has no toleration/coexistence requisites.

5.2.2.4 Incompatibility (Negative) Requisites

Negative requisites identify products that must *not* be installed on the same system as this product.

Z Service Management Explorer has no negative requisites.

5.2.3 DASD Storage Requirements

Z Service Management Explorer libraries can reside on all supported DASD types.

Figure 8 lists the total space that is required for each type of library.

Figure 8. Total DASD Space Required by Z Service Management Explorer	
Library Type	**Total Space Required in 3390 Trks**
Target	12379
Distribution	12381
File System(s)	3480

Notes:

1. If you are installing into an existing environment that has the data sets in Figure 11 on page 15 and Figure 13 on page 15 already allocated, ensure sufficient disk space and directory blocks are available to support the requirement listed. This might require you to reallocate some data sets to avoid x37 abends.

2. For non-RECFM U data sets, IBM recommends using system-determined block sizes for efficient DASD utilization. For RECFM U data sets, IBM recommends using a block size of 32760, which is most efficient from the performance and DASD utilization perspective.

3. Abbreviations used for data set types are shown as follows.

U   Unique data set, allocated by this product and used by only this product. This table provides all the required information to determine the correct storage for this data set. You do not need to refer to other tables or program directories for the data set size.

S   Shared data set, allocated by this product and used by this product and other products. To determine the correct storage needed for this data set, add the storage size given in this table to those given in other tables (perhaps in other program directories). If the data set already exists, it must have enough free space to accommodate the storage size given in this table.

E   Existing shared data set, used by this product and other products. This data set is *not* allocated by this product. To determine the correct storage for this data set, add the storage size given in this table to those given in other tables (perhaps in other program directories). If the data set already exists, it must have enough free space to accommodate the storage size given in this table.

If you currently have a previous release of this product installed in these libraries, the installation of this release will delete the old release and reclaim the space that was used by the old release and any service that had been installed. You can determine whether these libraries have enough space by deleting the old release with a dummy function, compressing the libraries, and comparing the space requirements with the free space in the libraries.

For more information about the names and sizes of the required data sets, see 6.1.5, "Allocate SMP/E Target and Distribution Libraries" on page 19.

4. Abbreviations used for the file system path type are as follows.

N   New path, created by this product.
X   Path created by this product, but might already exist from a previous release.
P   Previously existing path, created by another product.

5. All target and distribution libraries listed have the following attributes:

   - The default name of the data set can not be changed.
   - The default block size of the data set can be changed.
   - The data set can not be merged with another data set that has equivalent characteristics.
   - The data set can be either a PDS or a PDSE, with some exceptions. If the value in the "ORG" column specifies "PDS", the data set must be a PDS. If the value in "DIR Blks" column specifies "N/A", the data set must be a PDSE.

6. All target libraries listed have the following attributes:

   - These data sets can be SMS-managed, but they are not required to be SMS-managed.
   - These data sets are not required to reside on the IPL volume.
   - The values in the "Member Type" column are not necessarily the actual SMP/E element types that are identified in the SMPMCS.

7. All target libraries that are listed and contain load modules have the following attributes:

   - These data sets can not be in the LPA, with some exceptions. If the data set should be placed in the LPA, see the Special Considerations section below.
   - These data sets can be in the LNKLST except for TKANMODR and TKANMODS.

- These data sets are not required to be APF-authorized, with some exceptions. If the data set must be APF-authorized, see the Special Considerations section below.

If you are installing into an existing environment, ensure the values used for the SMP/E work data sets reflect the minimum values shown in Figure 9. Check the corresponding DDDEF entries in all zones because use of values lower than these can result in failures in the installation process. Refer to the SMP/E manuals for instructions on updating DDDEF entries.

Library DDNAME	TYPE	ORG	RECFM	LRECL	Prim No. of 3390 Trks	Sec No. of 3390 Trks	No. of DIR Blks
Figure 9. Storage Requirements for SMP/E Work Data Sets							
SMPWRK1	S	PDS	FB	80	150	150	220
SMPWRK2	S	PDS	FB	80	150	150	220
SMPWRK3	S	PDS	FB	80	300	600	1320
SMPWRK4	S	PDS	FB	80	150	150	220
SMPWRK6	S	PDS	FB	80	300	1500	660
SYSUT1	S	SEQ	--	--	75	75	0
SYSUT2	S	SEQ	--	--	75	75	0
SYSUT3	S	SEQ	--	--	75	75	0
SYSUT4	S	SEQ	--	--	75	75	0

If you are installing into an existing environment, ensure the current SMP/E support dataset allocations reflect the minimum values shown in Figure 10. Check the space and directory block allocation and reallocate the data sets, if necessary.

Library DDNAME	TYPE	ORG	RECFM	LRECL	Prim No. of 3390 Trks	Sec No. of 3390 Trks	No. of DIR Blks
Figure 10. Storage Requirements for SMP/E Data Sets							
SMPLTS	S	PDSE	U	0	15	150	N/A
SMPMTS	S	PDS	FB	80	15	150	220
SMPPTS	S	PDSE	FB	80	300	1500	N/A
SMPSCDS	S	PDS	FB	80	15	150	220
SMPSTS	S	PDS	FB	80	15	150	220

Figure 11 on page 15 and Figure 13 on page 15 describe the target and distribution libraries and file system paths that will be allocated by this product's install jobs or that will be required for installation. The space requirements reflect what is specified in the allocation job or the space that this product will require in existing libraries.

The storage requirements of Z Service Management Explorer must be added to the storage required by other programs having data in the same library or path.

Figure 11. Storage Requirements for Z Service Management Explorer Target Libraries								
Library DDNAME	Member Type	Target Volume	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
SIUWINST	SAMP	Any	U	PDS	FB	80	2	44
SIUWPAX	SAMP	Any	U	PDS	VB	256	12375	44
SIUWSAMP	SAMP	Any	U	PDS	FB	80	2	44

Figure 12. Z Service Management Explorer File System Paths		
DDNAME	T Y P E	Path Name
SIUWBIN	N	/usr/lpp/IBM/iuw/bin/IBM

Figure 13. Storage Requirements for Z Service Management Explorer Distribution Libraries							
Library DDNAME	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
AIUWBIN	U	PDS	VB	256	2	44
AIUWINST	U	PDS	FB	80	2	44
AIUWPAX	U	PDS	VB	256	12375	44
AIUWSAMP	U	PDS	FB	80	2	44

5.3 FMIDs Deleted

Installing Z Service Management Explorer might result in the deletion of other FMIDs. To see which FMIDs will be deleted, examine the ++VER statement in the SMPMCS of the product.

If you do not want to delete these FMIDs at this time, install Z Service Management Explorer into separate SMP/E target and distribution zones.

Note: These FMIDs are not automatically deleted from the Global Zone. If you want to delete these FMIDs from the Global Zone, use the SMP/E REJECT NOFMID DELETEFMID command. See the SMP/E Commands documentation for details.

5.4 Special Considerations

Z Service Management Explorer has no special considerations for the target system.

6.0 Installation Instructions

This chapter describes the installation method and the step-by-step procedures to install and to activate the functions of Z Service Management Explorer.

Please note the following points:

- If you want to install Z Service Management Explorer into its own SMP/E environment, consult the SMP/E manuals for instructions on creating and initializing the SMPCSI and the SMP/E control data sets.

- You can use the sample jobs that are provided to perform part or all of the installation tasks. The SMP/E jobs assume that all DDDEF entries that are required for SMP/E execution have been defined in appropriate zones.

6.1 Installing Z Service Management Explorer

6.1.1 SMP/E Considerations for Installing Z Service Management Explorer

Use the SMP/E RECEIVE, APPLY, and ACCEPT commands to install this release of Z Service Management Explorer.

6.1.2 SMP/E Options Subentry Values

The recommended values for certain SMP/E CSI subentries are shown in Figure 14. Using values lower than the recommended values can result in failures in the installation. DSSPACE is a subentry in the GLOBAL options entry. PEMAX is a subentry of the GENERAL entry in the GLOBAL options entry. See the SMP/E manuals for instructions on updating the global zone.

Subentry	Value	Comment
Figure 14. SMP/E Options Subentry Values		
Subentry	**Value**	**Comment**
DSSPACE	300,1200,1200	Use 1200 directory blocks
PEMAX	SMP/E Default	IBM recommends using the SMP/E default for PEMAX.

6.1.3 SMP/E CALLLIBS Processing

Z Service Management Explorer does not use the CALLLIBS function.

6.1.4 Sample Jobs

The sample jobs provided expect a CSI to exist already.

The sample installation jobs in Figure 15 on page 18 are provided as part of the product to help you install Z Service Management Explorer.

Figure 15. Sample Installation Jobs

Job Name	Job Type	Description	SMPTLIB Data Set
IUWJ3ALO	ALLOCATE	Sample job to allocate target and distribution libraries	IBM.HIUW631.F2
IUWJ4DDF	DDDEF	Sample job to define SMP/E DDDEFs	IBM.HIUW631.F2
IUWJ5REC	RECEIVE	Sample RECEIVE job	IBM.HIUW631.F2
IUWJ6BDI	MKDIR	Sample job to invoke the supplied IUWMKDIR EXEC to allocate file system paths	IBM.HIUW631.F2
IUWJ7APP	APPLY	Sample APPLY job	IBM.HIUW631.F2
IUWJ8ACC	ACCEPT	Sample ACCEPT job	IBM.HIUW631.F2

You can access the sample installation jobs by performing an SMP/E RECEIVE (refer to 6.1.7, "Perform SMP/E RECEIVE" on page 19) then copy the jobs from the SMPTLIB data sets to a work data for editing and submission.

You can also copy the sample installation jobs from the product files by submitting the following job. Before you submit the job, add a job card and change the lowercase parameters to uppercase values to meet the requirements of your site.

```
//STEP1    EXEC PGM=IEBCOPY,REGION=4M
//SYSPRINT DD SYSOUT=*
//IN       DD DSN=IBM.HIUW631.F2,UNIT=SYSALLDA,DISP=SHR,
//         VOL=SER=filevol
//OUT      DD DSNAME=jcl-library-name,
//         DISP=(NEW,CATLG,DELETE),
//         VOL=SER=dasdvol,UNIT=SYSALLDA,
//         SPACE=(TRK,(10,2,5))
//SYSUT3   DD UNIT=SYSALLDA,SPACE=(CYL,(1,1))
//SYSIN    DD *
    COPY INDD=IN,OUTDD=OUT
    SELECT MEMBER=(IUWJ3ALO,IUWJ4DDF,IUWJ5REC,IUWJ6BDI,IUWJ7APP)
    SELECT MEMBER=(IUWJ8ACC)
/*
```

See the following information to update the statements in the previous sample:

> IN:
> > **filevol** is the volume serial of the DASD device where the downloaded files reside.
> OUT:

jcl-library-name is the name of the output data set where the sample jobs are stored.
dasdvol is the volume serial of the DASD device where the output data set resides.

6.1.5 Allocate SMP/E Target and Distribution Libraries

If you are installing into an existing environment, you might have to remove lines for data sets that already exist.

Edit and submit sample job IUWJ3ALO to allocate the SMP/E target and distribution libraries for Z Service Management Explorer. Consult the instructions in the sample job for more information.

If you are installing into an existing environment that has the data sets already allocated, ensure sufficient space and directory blocks are available to support the requirement listed in the DASD tables. This might require you to reallocate some data sets to avoid x37 abends.

Expected Return Codes and Messages: 0

6.1.6 Create DDDEF Entries

If you are installing into an existing environment, you might have to remove lines for data sets that already exist.

Edit and submit sample job IUWJ4DDF to create DDDEF entries for the SMP/E target and distribution libraries for Z Service Management Explorer. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages: 0

6.1.7 Perform SMP/E RECEIVE

If you have obtained Z Service Management Explorer as part of a CBPDO, use the RCVPDO job in the CBPDO RIMLIB data set to receive the Z Service Management Explorer FMIDs, service, and HOLDDATA that are included on the CBPDO package. For more information, see the documentation that is included in the CBPDO.

You can also choose to edit and submit sample job IUWJ5REC to perform the SMP/E RECEIVE for Z Service Management Explorer. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages: 0

6.1.8 Allocate, create and mount ZFS Files (Optional)

This job allocates, creates a mountpoint, and mounts zFS data sets.

You can choose to create a new file system for this product installation by copying, editing, and submitting the JCL below. Add a job card and change all occurrences of the following lowercase variables to values suitable for your installation before submitting.

```
#zfsdsn - The dsname of your zFS directory.
#volser - The volume serial number for the DASD that will contain
          the new file system.
#zfsdir - The zFS directory where this product will be installed.
       The recommended mountpoint is /-PathPrefix-/usr/lpp/kan.
          The zFS directory tree is case sensitive. Ensure #zfsdir
          is an absolute path name and begins with a slash (/).
//****************************************************************
//* ALLOCZ This step allocates your zFS data set.              *
//****************************************************************
//ALLOCZ   EXEC PGM=IDCAMS
//SYSPRINT DD SYSOUT=*
//SYSIN    DD *
   DEFINE CLUSTER(NAME(#zfsdsn) -
   LINEAR CYLINDERS(15 5) SHAREOPTIONS(3) VOLUMES(#volser))
/*
//****************************************************************
//* FORMAT This step formats your newly created zFS data set.  *
//*    When executing the IOEAGFMT program you must have        *
//*    superuser authority (UID 0) or READ authority to the     *
//*    SUPERUSER.FILESYS.PFSCTL profile in the UNIXPRIV class.  *
//****************************************************************
//FORMAT EXEC PGM=IOEAGFMT,REGION=0M,
//        PARM=('-aggregate #zfsdsn -compat')
//STEPLIB  DD DSN=IOE.SIOELMOD,DISP=SHR
//SYSPRINT DD SYSOUT=*
//****************************************************************
//* MAKEDIR This step creates the directory path for your      *
//* Mount Point                                                 *
//****************************************************************
//MAKEDIR  EXEC PGM=IKJEFT01
//SYSTSPRT DD SYSOUT=*
//SYSTSIN  DD *
  PROFILE WTPMSG MSGID
  MKDIR '#zfsdir' MODE(7,5,5)
  PROFILE
/*
//****************************************************************
//*  MOUNT This step MOUNTS your newly created zFS File System *
//*  using the AGGRGROW parameter.                             *
```

```
//*************************************************************
//MOUNT    EXEC PGM=IKJEFT01
//SYSTSPRT DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//SYSTSIN  DD *
  MOUNT FILESYSTEM('#zfsdsn') +
     TYPE(ZFS) MODE(RDWR) PARM('AGGRGROW') +
     MOUNTPOINT('#zfsdir')
/*
```

Expected Return Codes and Messages: 0

6.1.9 Allocate File System Paths

Edit and submit the sample job IUWJ6BDI to define the file system paths. Consult the instructions in the sample job for more information. Consider the following items before submitting the job.

Important Notes:

1. The Relfile containing the IUWMKDIR exec must be available prior to running this job. The Relfile needed is HIUW631.F2 and should be available after running the Receive job.

2. This job must be run before the Apply job.

3. This job must be run by a user ID that has superuser authority (UID=0) or read access to resource BPX.SUPERUSER under the FACILITY profile and superuser authority must be activated.

4. The user ID must have read access to the BPX.FILEATTR.APF and BPX.FILEATTR.PROGCTL resource profiles in the RACF FACILITY class.

5. If you plan to create a new file system for this product, ensure it is created before submitting this job to define file system paths.

6. The file system must be in read/write mode before this job is run.

7. If you create a new file system for Z Service Management Explorer, consider updating the BPXPRMxx PARMLIB member to mount the new file system at IPL time. This action can be helpful if an IPL occurs before the installation is completed.

Expected Return Codes and Messages: 0

6.1.10 Perform SMP/E APPLY

Ensure that you have the latest HOLDDATA, then edit and submit the sample job IUWJ7APP to perform an SMP/E APPLY CHECK for Z Service Management Explorer. Consult the instructions in the sample job for more information.

Important Notes:

1. The APPLY job must be run by a user ID that has superuser authority (UID=0) or read access to resource BPX.SUPERUSER under the FACILITY profile and superuser authority must be activated.

2. The user ID must also have read access to the BPX.FILEATTR.APF and BPX.FILEATTR.PROGCTL resource profiles in the RACF FACILITY class. This is required for the script to execute successfully and maintain the APF-authorized attributes for all executables and DLLs during unpax.

3. The file system must be in read/write mode before this job is run.

The latest HOLDDATA is available through several different portals, including http://service.software.ibm.com/holdata/390holddata.html. The latest HOLDDATA may identify HIPER and FIXCAT APARs for the FMIDs you will be installing. An APPLY CHECK will help you determine if any HIPER or FIXCAT APARs are applicable to the FMIDs you are installing. If there are any applicable HIPER or FIXCAT APARs, the APPLY CHECK will also identify fixing PTFs that will resolve the APARs, if a fixing PTF is available.

You should install the FMIDs regardless of the status of unresolved HIPER or FIXCAT APARs. However, do not deploy the software until the unresolved HIPER and FIXCAT APARs have been analyzed to determine their applicability. That is, before deploying the software either ensure fixing PTFs are applied to resolve all HIPER or FIXCAT APARs, or ensure the problems reported by all HIPER or FIXCAT APARs are not applicable to your environment.

To receive the full benefit of the SMP/E Causer SYSMOD Summary Report, do *not* bypass the PRE, ID, REQ, and IFREQ on the APPLY CHECK. The SMP/E root cause analysis identifies the cause only of *errors* and not of *warnings* (SMP/E treats bypassed PRE, ID, REQ, and IFREQ conditions as warnings, instead of errors).

Here are sample APPLY commands:

1. To ensure that all recommended and critical service is installed with the FMIDs, receive the latest HOLDDATA and use the APPLY CHECK command as follows

   ```
   APPLY S(fmid,fmid,...) CHECK
   FORFMID(fmid,fmid,...)
   SOURCEID(RSU*)
   FIXCAT(IBM.ProductInstall-RequiredService)
   GROUPEXTEND .
   ```

   Some HIPER APARs might not have fixing PTFs available yet. You should analyze the symptom flags for the unresolved HIPER APARs to determine if the reported problem is applicable to your environment and if you should bypass the specific ERROR HOLDs in order to continue the installation of the FMIDs.

   This method requires more initial research, but can provide resolution for all HIPERs that have fixing PTFs available and are not in a PE chain. Unresolved PEs or HIPERs might still exist and require the use of BYPASS.

2. To install the FMIDs without regard for unresolved HIPER APARs, you can add the BYPASS(HOLDCLASS(HIPER)) operand to the APPLY CHECK command. This will allow you to install FMIDs even though one or more unresolved HIPER APARs exist. After the FMIDs are installed, use the SMP/E REPORT ERRSYSMODS command to identify unresolved HIPER APARs and any fixing PTFs.

```
APPLY S(fmid,fmid,...) CHECK
FORFMID(fmid,fmid,...)
SOURCEID(RSU*)
FIXCAT(IBM.ProductInstall-RequiredService)
GROUPEXTEND
BYPASS(HOLDCLASS(HIPER)) .
 ..any other parameters documented in the program directory
```

This method is quicker, but requires subsequent review of the Exception SYSMOD report produced by the REPORT ERRSYSMODS command to investigate any unresolved HIPERs. If you have received the latest HOLDDATA, you can also choose to use the REPORT MISSINGFIX command and specify Fix Category IBM.PRODUCTINSTALL-REQUIREDSERVICE to investigate missing recommended service.

If you bypass HOLDs during the installation of the FMIDs because fixing PTFs are not yet available, you can be notified when the fixing PTFs are available by using the APAR Status Tracking (AST) function of ServiceLink or the APAR Tracking function of ResourceLink.

Expected Return Codes and Messages from APPLY CHECK: 0

After you take actions that are indicated by the APPLY CHECK, remove the CHECK operand and run the job again to perform the APPLY.

Note: The GROUPEXTEND operand indicates that SMP/E applies all requisite SYSMODs. The requisite SYSMODS might be applicable to other functions.

Expected Return Codes and Messages from APPLY: 0

After installing new function, you should perform two operations:

1. Create a backup of the updated data sets, including any SMP/E data sets affected, in case something happens to the data sets during the next phase.

2. Do some testing before putting the new function into production.

After you are satisfied that an applied SYSMOD has performed reliably in your target system, you can install it in your distribution libraries using the ACCEPT process.

Another good practice is to accept most SYSMODs, particularly FMIDs, before performing another APPLY process. This provides you the ability to use the RESTORE process of SMP/E and to support the scenario where SMP/E needs to create a new load module from the distribution libraries during the APPLY process.

6.1.11 Perform SMP/E ACCEPT

Edit and submit the sample joB IUWJ8ACC to perform an SMP/E ACCEPT CHECK for Z Service Management Explorer. Consult the instructions in the sample job for more information.

To receive the full benefit of the SMP/E Causer SYSMOD Summary Report, do *not* bypass the PRE, ID, REQ, and IFREQ on the ACCEPT CHECK. The SMP/E root cause analysis identifies the cause of *errors* but not *warnings* (SMP/E treats bypassed PRE, ID, REQ, and IFREQ conditions as warnings rather than errors).

Before you use SMP/E to load new distribution libraries, it is recommended that you set the ACCJCLIN indicator in the distribution zone. In this way, you can save the entries that are produced from JCLIN in the distribution zone whenever a SYSMOD that contains inline JCLIN is accepted. For more information about the ACCJCLIN indicator, see the description of inline JCLIN in the SMP/E Commands documentation for details.

Expected Return Codes and Messages from ACCEPT CHECK: 0

After you take actions that are indicated by the ACCEPT CHECK, remove the CHECK operand and run the job again to perform the ACCEPT.

Note: The GROUPEXTEND operand indicates that SMP/E accepts all requisite SYSMODs. The requisite SYSMODS might be applicable to other functions.

If PTFs that contain replacement modules are accepted, SMP/E ACCEPT processing will link-edit or bind the modules into the distribution libraries. During this processing, the Linkage Editor or Binder might issue messages that indicate unresolved external references, which will result in a return code of 4 during the ACCEPT phase. You can ignore these messages, because the distribution libraries are not executable and the unresolved external references do not affect the executable system libraries.

Expected Return Codes and Messages from ACCEPT: 0

6.2 Activating Z Service Management Explorer

The Installation chapter of the *IBM Z Service Management Explorer User Guide* documentation contains the step-by-step procedures to activate the functions of Z Service Management Explorer.

This documentation can be found online at:

https://www.ibm.com/docs/en/om-shared

6.2.1 File System Execution

If you mount the file system in which you have installed Z Service Management Explorer in read-only mode during execution, then you do not have to take further actions.

The Installation chapter of the *IBM Z Service Management Explorer User Guide* contains the necessary information to customize and use Z Service Management Explorer.

7.0 Notices

This information was developed for products and services offered in the U.S.A. IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

APAR numbers are provided in this document to assist in locating PTFs that may be required. Ongoing problem reporting may result in additional APARs being created. Therefore, the APAR lists in this document may not be complete. To obtain current service recommendations and to identify current product service requirements, always contact the IBM Customer Support Center or use S/390 SoftwareXcel to obtain the current "PSP Bucket".

IBM may have patents or pending patent applications covering subject matter in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to the

IBM Director of Licensing
IBM Corporation
North Castle Drive
Armonk, New York 10504-1785
USA

For license inquiries regarding double-byte (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

Intellectual Property Licensing
Legal and Intellectual Property Law
IBM Japan, Ltd.
19-21, Nihonbashi-Hakozakicho, Chuo-ku
Tokyo 103-8510, Japan

7.1 Trademarks

IBM, the IBM logo, and other IBM trademark listed on the IBM Trademarks List are trademarks or registered trademarks of International Business Machines Corporation, in the United States and/or other countries. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on ibm.com/trademark.

Contacting IBM Software Support

For support for this or any IBM product, you can contact IBM Software Support in one of the following ways:

Submit a problem management record (PMR) electronically at **IBMSERV/IBMLINK**.

Submit a problem management record (PMR) electronically from the support Web site at:

https://www.ibm.com/software/sysmgmt/products/support/

You can also review the *IBM Software Support Handbook*, which is available on the Web site listed above. An *End of Support Matrix* is provided that tells you when products you are using are nearing the end of support date for a particular version or release.

When you contact IBM Software Support, be prepared to provide identification information for your company so that support personnel can readily assist you. Company identification information might also be needed to access various online services available on the Web site.

The support Web site offers extensive information, including a guide to support services (the *IBM Software Support Handbook*); frequently asked questions (FAQs); and documentation for all products, including Release Notes, Redbooks, and Whitepapers. The documentation for some product releases is available in both PDF and HTML formats. Translated documents are also available for some product releases.

IBM

Printed in USA