



# **Program Directory for IBM Security zSecure Command Verifier**

V2.4.0

Program Number 5655-N19

FMIDs HC4R240, JC4R240

for Use with  
z/OS

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**Note**

Before using this information and the product it supports, be sure to read the general information under 7.0, "Notices" on page 21.

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# Contents

<b>Release information</b> . . . . .	iv
<b>1.0 Introduction</b> . . . . .	1
1.1 zSecure Command Verifier Description . . . . .	1
1.2 zSecure Command Verifier FMIDs . . . . .	2
<b>2.0 Program Materials</b> . . . . .	3
2.1 Basic Machine-Readable Material . . . . .	3
2.2 Program Publications . . . . .	3
2.3 Program Source Materials . . . . .	4
2.4 Publications Useful During Installation . . . . .	4
<b>3.0 Program Support</b> . . . . .	5
3.1 Program Services . . . . .	5
3.2 Preventive Service Planning . . . . .	5
3.3 Statement of Support Procedures . . . . .	6
<b>4.0 Program and Service Level Information</b> . . . . .	7
4.1 Program Level Information . . . . .	7
4.2 Service Level Information . . . . .	7
<b>5.0 Installation Requirements and Considerations</b> . . . . .	8
5.1 Driving System Requirements . . . . .	8
5.1.1 Machine Requirements . . . . .	8
5.1.2 Programming Requirements . . . . .	8
5.2 Target System Requirements . . . . .	9
5.2.1 Machine Requirements . . . . .	9
5.2.2 Programming Requirements . . . . .	9
5.2.2.1 Installation Requisites . . . . .	9
5.2.2.2 Operational Requisites . . . . .	10
5.2.2.3 Toleration/Coexistence Requisites . . . . .	11
5.2.2.4 Incompatibility (Negative) Requisites . . . . .	11
5.2.3 DASD Storage Requirements . . . . .	11
5.3 FMIDs Deleted . . . . .	13
5.4 Special Considerations . . . . .	13
<b>6.0 Installation Instructions</b> . . . . .	14
6.1 Installing zSecure Command Verifier . . . . .	14
6.1.1 SMP/E Considerations for Installing zSecure Command Verifier . . . . .	14
6.1.2 SMP/E Options Subentry Values . . . . .	14
6.1.3 Sample Jobs . . . . .	15
6.1.3.1 Allocate SMP/E GLOBAL CSI (Optional) . . . . .	16

6.1.3.2 Allocate SMP/E Target/DLIB CSI (Optional)	16
6.1.3.3 Define OPTIONS entry to GLOBAL/TARGET/DLIB zones (Optional)	17
6.1.4 Perform SMP/E RECEIVE	17
6.1.5 Allocate SMP/E Target and Distribution Libraries	17
6.1.6 Create DDDEF Entries	17
6.1.7 Perform SMP/E APPLY	17
6.1.8 Perform SMP/E ACCEPT	19
6.1.9 Run REPORT CROSSZONE	20
6.2 Activating zSecure Command Verifier	20
<b>7.0 Notices</b>	<b>21</b>
7.1 Trademarks	21
<b>Reader's Comments</b>	<b>22</b>

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## Figures

1. Basic Material: Unlicensed Publications	3
2. Publications Useful During Installation	4
3. PSP Upgrade and Subset ID	5
4. Component IDs	6
5. Driving System Software Requirements	9
6. Target System Mandatory Installation Requisites	9
7. Target System Mandatory Operational Requisites	10
8. Total DASD Space Required by zSecure Command Verifier	11
9. Storage Requirements for zSecure Command Verifier Target Libraries	13
10. Storage Requirements for zSecure Command Verifier Distribution Libraries	13
11. SMP/E Options Subentry Values	14
12. Sample Installation Jobs	15

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## Release information

The Security zSecure Release Information topics include details on new features and enhancements, incompatibility warnings, and documentation update information for your Security zSecure product. You can review the most current version of the release information from the following links:

- What's new: New feature and enhancements in zSecure 2.4.0.  
[http://www.ibm.com/support/knowledgecenter/SS2RWS\\_2.4.0/com.ibm.zsecure.doc\\_2.4.0/about\\_this\\_release/about\\_rel\\_whats\\_new.html](http://www.ibm.com/support/knowledgecenter/SS2RWS_2.4.0/com.ibm.zsecure.doc_2.4.0/about_this_release/about_rel_whats_new.html)
- Release notes: Information you need before installing zSecure 2.4.0, such as system requirements, incompatibility warnings, and known problems.  
[http://www.ibm.com/support/knowledgecenter/SS2RWS\\_2.4.0/com.ibm.zsecure.doc\\_2.4.0/about\\_this\\_release/releaseinfo\\_relnotes.html](http://www.ibm.com/support/knowledgecenter/SS2RWS_2.4.0/com.ibm.zsecure.doc_2.4.0/about_this_release/releaseinfo_relnotes.html)



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## 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 Security zSecure Command Verifier. This publication refers to IBM Security zSecure Command Verifier as zSecure Command Verifier.

The Program Directory contains the following sections:

- 2.0, “Program Materials” on page 3 identifies the basic program materials and documentation for zSecure Command Verifier.
- 3.0, “Program Support” on page 5 describes the IBM support available for zSecure Command Verifier.
- 4.0, “Program and Service Level Information” on page 7 lists the APARs (program level) and PTFs (service level) that have been incorporated into zSecure Command Verifier.
- 5.0, “Installation Requirements and Considerations” on page 8 identifies the resources and considerations that are required for installing and using zSecure Command Verifier.
- 6.0, “Installation Instructions” on page 14 provides detailed installation instructions for zSecure Command Verifier. It also describes the procedures for activating the functions of zSecure Command Verifier, or refers to appropriate publications.

Before installing zSecure Command Verifier, 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 5 tells you how to find any updates to the information and procedures in this program directory.

zSecure Command Verifier is supplied in a Custom-Built Product Delivery Offering (CBPDO, 5751-CS3). All service and HOLDDATA for zSecure Command Verifier are included on the CBPDO.

Do not use this program directory if you install zSecure Command Verifier with a SystemPac or 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.

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### 1.1 zSecure Command Verifier Description

The IBM Security zSecure Command Verifier allows an installation to implement additional controls on the RACF commands as entered by normal users, group administrators and system administrators. All RACF commands are verified against a set of defined installation security policies. If a command violates the policy, the installation may decide to allow the command anyway, to modify the command such that it fits the policies, or to reject the execution of the command. The installation security policies are implemented via RACF profiles. The policies also allow setting reasonable defaults for several fields that otherwise do not have adequate defaults (like passwords, owners and the user's default group (dfitgrp)).

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## 1.2 zSecure Command Verifier FMIDs

zSecure Command Verifier consists of the following FMIDs:

HC4R240  
JC4R240



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## 2.0 Program Materials

An IBM program is identified by a program number. The program number for zSecure Command Verifier is 5655-N19.

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 zSecure Command Verifier. Ask your IBM representative for this information if you have not already received a copy.

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### 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 14 for more information about how to install the program.

You can find information about the physical media for the basic machine-readable materials for zSecure Command Verifier in the *CBPDO Memo To Users Extension*.

---

### 2.2 Program Publications

The following sections identify the basic publications for zSecure Command Verifier 2.4.0.

Figure 1 identifies the basic unlicensed publications for zSecure Command Verifier 2.4.0.

Publication Title	Form Number
IBM Security zSecure Command Verifier User Guide	SC27-5648
IBM Security zSecure Messages Guide	SC27-5643

These publications are available at the IBM Knowledge Center at [https://www.ibm.com/support/knowledgecenter/SS2RWS\\_2.4.0/com.ibm.zsecure.doc\\_2.4.0/welcome.html?pos=2](https://www.ibm.com/support/knowledgecenter/SS2RWS_2.4.0/com.ibm.zsecure.doc_2.4.0/welcome.html?pos=2)

This information includes a list of all the unlicensed and licensed documentation; see About This Release, topic "zSecure Documentation".

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## 2.3 Program Source Materials

No program source materials or viewable program listings are provided for zSecure Command Verifier.

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## 2.4 Publications Useful During Installation

You might want to use the publications listed in Figure 2 during the installation of zSecure Command Verifier.

<i>Figure 2. Publications Useful During Installation</i>	
<b>Publication Title</b>	<b>Form Number</b>
<i>IBM SMP/E for z/OS User's Guide</i>	SA23-2277
<i>IBM SMP/E for z/OS Commands</i>	SA23-2275
<i>IBM SMP/E for z/OS Reference</i>	SA23-2276
<i>IBM SMP/E for z/OS Messages, Codes, and Diagnosis</i>	GA32-0883
<i>Security Server RACF Security Administrator's Guide</i>	SA23-2289
<i>Security Server RACF Command Language Reference</i>	SA23-2292

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## 3.0 Program Support

This section describes the IBM support available for zSecure Command Verifier.

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### 3.1 Program Services

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

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### 3.2 Preventive Service Planning

Before you install zSecure Command Verifier, 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-REQUIRESERVICE` fix category in SMP/E to ensure you have all the recommended service installed. Use the **FIXCAT(IBM.PRODUCTINSTALL-REQUIRESERVICE)** operand on the **APPLY CHECK** command. See 6.1.7, “Perform SMP/E APPLY” on page 17 for a sample APPLY command.

If you obtained zSecure Command Verifier as part of a CBPDO, HOLDDATA is included.

If the CBPDO for zSecure Command Verifier 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:

<http://www14.software.ibm.com/webapp/set2/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 <http://www.ibm.com/support/>.

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 zSecure Command Verifier are included in Figure 3.

UPGRADE	SUBSET	Description
SECZSCCMD240	HC4R240	Security zSecure Command Verifier Base
SECZSCCMD240	JC4R240	Security zSecure Command Verifier Policy

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### 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 6 identifies the component IDs (COMPID) for zSecure Command Verifier.

<i>Figure 4. Component IDs</i>			
<b>FMID</b>	<b>COMPID</b>	<b>Component Name</b>	<b>RETAIN Release</b>
HC4R240	5655T0700	Security zSecure Command Verifier Base	240
JC4R240	5655T07CV	Security zSecure Command Verifier Policy	240

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## 4.0 Program and Service Level Information

This section identifies the program and relevant service levels of zSecure Command Verifier. 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.

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### 4.1 Program Level Information

No APARs have been incorporated into zSecure Command Verifier.

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### 4.2 Service Level Information

No PTFs against this release of zSecure Command Verifier have been incorporated into the product package.

Frequently check the zSecure Command Verifier 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-REQUIRESERVICE)** operand on your **APPLY CHECK** command. This will allow you to review the recommended and critical service that should be installed with your FMIDs.

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## 5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing and activating zSecure Command Verifier. 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.

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### 5.1 Driving System Requirements

This section describes the environment of the driving system required to install zSecure Command Verifier.

#### 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	V02.02.00 or higher	N/A	No

**Note:** SMP/E is a requirement for Installation and is an element of z/OS but can also be ordered as a separate product, 5655-G44, minimally V03.06.00.

**Note:** Installation might require migration to new z/OS releases to be service supported. See [https://www-01.ibm.com/software/support/lifecycle/index\\_z.html](https://www-01.ibm.com/software/support/lifecycle/index_z.html).

## 5.2 Target System Requirements

This section describes the environment of the target system required to install and use zSecure Command Verifier.

zSecure Command Verifier 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 (Page 1 of 2). 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	02.02.00 or higher	N/A	No

Figure 6 (Page 2 of 2). 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 Security Server	02.02.00 or higher	N/A	No

**Note:** Installation might require migration to new z/OS releases to be service supported. See [http://www-03.ibm.com/systems/z/os/zos/support/zos\\_eos\\_dates.html](http://www-03.ibm.com/systems/z/os/zos/support/zos_eos_dates.html).

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.

zSecure Command Verifier 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 Version 02.02.00 or higher
5650-ZOS	z/OS Security Server Version 02.02.00 or higher

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.

zSecure Command Verifier 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.

zSecure Command Verifier 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.

zSecure Command Verifier has no negative requisites.

## 5.2.3 DASD Storage Requirements

zSecure Command Verifier libraries can reside on all supported DASD types.

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

<i>Figure 8. Total DASD Space Required by zSecure Command Verifier</i>	
<b>Library Type</b>	<b>Total Space Required in 3390 Trks</b>
Target	25
Distribution	35

#### Notes:

1. 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.

2. 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 17.

3. 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.

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

- The default name of the data set can be changed.
- The default block size of the data set can be changed.
- The data set can 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.

5. 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.

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

- These data sets can be in the LPALIST, but they are not required to be in the LPALIST.
- These data sets can be in the LNKLIST.
- These data sets must be APF-authorized.

The following figures describe the target and distribution libraries and file system paths required to install zSecure Command Verifier. The storage requirements of zSecure Command Verifier must be added to the storage required by other programs that have data in the same library or path.

**Note:** Use the data in these tables to determine which libraries can be merged into common data sets. In addition, since some ALIAS names may not be unique, ensure that no naming conflicts will be introduced before merging libraries.

Figure 9. Storage Requirements for zSecure Command Verifier 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
SC4RINST	Sample	ANY	U	PDS	FB	80	3	2
SC4RSMP	Sample	ANY	U	PDS	FB	80	2	2
SC4RLNK	LMOD	ANY	U	PDS	U	0	20	2

Figure 10. Storage Requirements for zSecure Command Verifier 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
AC4RINST	U	PDS	FB	80	3	2
AC4RSMP	U	PDS	FB	80	2	2
AC4RLNK	U	PDS	U	0	30	26

### 5.3 FMIDs Deleted

Installing zSecure Command Verifier 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 zSecure Command Verifier 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 book for details.

### 5.4 Special Considerations

zSecure Command Verifier has no special considerations for the target system.

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## 6.0 Installation Instructions

This chapter describes the installation method and the step-by-step procedures to install and to activate the functions of zSecure Command Verifier.

Please note the following points:

- If you want to install zSecure Command Verifier 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. Additionally, to assist you in doing this, IBM has provided samples to help you create an SMP/E environment at the following url:  
<http://www.ibm.com/support/docview.wss?uid=swg21066230>
- 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.
- The SMP/E dialogs may be used instead of the sample jobs to accomplish the SMP/E installation steps.

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### 6.1 Installing zSecure Command Verifier

#### 6.1.1 SMP/E Considerations for Installing zSecure Command Verifier

Use the SMP/E RECEIVE, APPLY, and ACCEPT commands to install this release of zSecure Command Verifier.

#### 6.1.2 SMP/E Options Subentry Values

The recommended values for certain SMP/E CSI subentries are shown in Figure 11. 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
DSSPACE	20,5,20	This is the minimum. Any larger value is acceptable.
PEMAX	SMP/E Default	IBM recommends using the SMP/E default for PEMAX.

### 6.1.3 Sample Jobs

The following sample installation jobs are provided as part of the product to help you install zSecure Command Verifier:

*Figure 12. Sample Installation Jobs*

<b>Job Name</b>	<b>Job Type</b>	<b>Description</b>	<b>RELFILE</b>
C4RJSMPA	DEFINE	Sample job to create a Global CSI	IBM.JC4R240.F3
C4RJSMPB	DEFINE	Sample job to create a Target/Dlib CSI	IBM.JC4R240.F3
C4RJSMPC	DEFINE	Sample job to define an SMP/E OPTIONS entry	IBM.JC4R240.F3
C4RJALL	ALLOCATE	Sample job to allocate target and distribution libraries	IBM.JC4R240.F3
C4RJDDD	DDDEF	Sample job to define SMP/E DDDEFs	IBM.JC4R240.F3
C4RJREC	RECEIVE	Sample RECEIVE job	IBM.JC4R240.F3
C4RJAPP	APPLY	Sample APPLY job	IBM.JC4R240.F3
C4RJACC	ACCEPT	Sample ACCEPT job	IBM.JC4R240.F3

You can access the sample installation jobs by performing an SMP/E RECEIVE (refer to 6.1.4, “Perform SMP/E RECEIVE” on page 17) then copy the jobs from the RELFILEs to a work data set for editing and submission. See Figure 12 to find the appropriate RELFILE data set.

You can also copy the sample installation jobs from the directory where your Shopz order is stored by submitting the following job.

```

//STEP1 EXEC PGM=GIMUNZIP,REGION=0M,PARM='HASH=NO'
//SYSUT3 DD UNIT=SYSALLDA,SPACE=(CYL,(10,10))
//SYSUT4 DD UNIT=SYSALLDA,SPACE=(CYL,(15,5))
//SMPJHOME DD PATH='/usr/lpp/java/J7.0/' <===NOTE 1
//SMPCPATH DD PATH='/usr/lpp/smp/classes/' <===NOTE 1
//SMPOUT DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//SMPDIR DD PATHDISP=KEEP,
// PATH='/<ntmdir>/<orderid>/SMPRELF/' <===NOTE 2
//SYSIN DD *
<GIMUNZIP>
<ARCHDEF
name="CBCACHE.IBM.JC4R240.F3.pax.Z"
volume="<volser>" <===NOTE 3
newname="<your-prefix>.C4RINST"> <===NOTE 4
</ARCHDEF>
</GIMUNZIP>
/*

```

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

Add a job card that is specific to your installation requirements.

Note 1: Change these directories to your installations java and smp classes directories.

Note 2: Change ntsdir to the directory that holds your Shopz orders. Change orderid to your order ID, for example 2008567304\_000010\_PROD.

Note 3: Change volser to a volser that you want the output dataset to reside on.

Note 4: Change your-prefix to the high-level qualifier(s) for the output dataset.

Refer to *CBPDO Internet Delivery User's Guide*.

### 6.1.3.1 Allocate SMP/E GLOBAL CSI (Optional)

If you choose to install this product into its own SMP/E environment, edit and submit sample job C4RJSMPA to allocate a new SMP/E GLOBAL CSI.

**Expected Return Codes and Messages:** You will receive a return code of 0 if this job is successful.

### 6.1.3.2 Allocate SMP/E Target/DLIB CSI (Optional)

If you choose to install this product into its own SMP/E environment, edit and submit sample job C4RJSMPB to allocate a new SMP/E TARGET/DLIB CSI.

**Expected Return Codes and Messages:** You will receive a return code of 0 if this job is successful.

### 6.1.3.3 Define OPTIONS entry to GLOBAL/TARGET/DLIB zones (Optional)

If you choose to install this product into its own SMP/E environment, edit and submit sample job C4RJSMPC to create and specify an OPTIONS entry for use during installation of zSecure Command Verifier.

**Expected Return Codes and Messages:** You will receive a return code of 0 if this job is successful.

### 6.1.4 Perform SMP/E RECEIVE

If you install zSecure Command Verifier as a Web download package, the SMP/E RECEIVE is performed during the execution of the README file. In this case, you can skip this section and continue with the next section of the program directory.

If you have obtained zSecure Command Verifier as part of a CBPDO, use the RCVPDO job in the CBPDO RIMLIB data set to receive the zSecure Command Verifier 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 C4RJREC to perform the SMP/E RECEIVE for zSecure Command Verifier. Consult the instructions in the sample job for more information.

**Expected Return Codes and Messages:** You will receive a return code of 0 if this job runs correctly.

### 6.1.5 Allocate SMP/E Target and Distribution Libraries

Edit and submit sample job C4RJALL to allocate the SMP/E target and distribution libraries for zSecure Command Verifier. Consult the instructions in the sample job for more information.

**Expected Return Codes and Messages:** You will receive a return code of 0 if this job runs correctly.

### 6.1.6 Create DDDEF Entries

Edit and submit sample job C4RJDDD to create DDDEF entries for the SMP/E target and distribution libraries for zSecure Command Verifier. Consult the instructions in the sample job for more information.

**Expected Return Codes and Messages:** You will receive a return code of 0 if this job runs correctly.

### 6.1.7 Perform SMP/E APPLY

1. Ensure that you have the latest HOLDDATA; then edit and submit sample job C4RJAPP to perform an SMP/E APPLY CHECK for zSecure Command Verifier. Consult the instructions in the sample job for more information.

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:

- a. 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.

- b. 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-REQUIRESERVICE to investigate missing recommended service.

If you bypass HOLDDs 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.

2. 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 CHECK:** You will receive a return code of 0 if this job runs correctly.

**Expected Return Codes and Messages from APPLY:** You will receive a return code of 0 if this job runs correctly.

After installing new functions, 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.

## 6.1.8 Perform SMP/E ACCEPT

Edit and submit sample job C4RJACC to perform an SMP/E ACCEPT CHECK for zSecure Command Verifier. 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 book for details.

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.

**Expected Return Codes and Messages from ACCEPT CHECK:** You will receive a return code of 0 if this job runs correctly.

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:** You will receive a return code of 0 if this job runs correctly.

## 6.1.9 Run REPORT CROSSZONE

The SMP/E REPORT CROSSZONE command identifies requisites for products that are installed in separate zones. This command also creates APPLY and ACCEPT commands in the SMPPUNCH data set. You can use the APPLY and ACCEPT commands to install those cross-zone requisites that the SMP/E REPORT CROSSZONE command identifies.

After you install zSecure Command Verifier, it is recommended that you run REPORT CROSSZONE against the new or updated target and distribution zones. REPORT CROSSZONE requires a global zone with ZONEINDEX entries that describe all the target and distribution libraries to be reported on.

For more information about REPORT CROSSZONE, see the SMP/E manuals.

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## 6.2 Activating zSecure Command Verifier

zSecure Command Verifier is not fully operational after the SMP/E installation is completed. You have to do further customization to activate this function.

The publication *IBM Security zSecure Command Verifier User Guide 2.4.0, SC27-5648* contains the step-by-step procedures to fully activate the functions of zSecure Command Verifier. These steps include

- Define SC4RLNK as APF Authorized
- Update the TSO authorized command table
- Optionally change the resource class used for the installation policy profiles.
- Define security policy profiles reflecting the desired installation policies.

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## 7.0 Notices

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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".

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## Reader's Comments

**Program Directory for IBM Security zSecure Command Verifier, September 2019** We appreciate your input on this publication. Feel free to comment on the clarity, accuracy, and completeness of the information or give us any other feedback that you might have.

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