



Program Directory for IBM Z Compliance and Auditing

3.1.0

Program Number 5655-ABK

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 26.

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Release information

IBM Z Compliance and Auditing is functionally equivalent to the following IBM Security products:

- IBM Z Security and Compliance Center
- IBM Security zSecure Alert for ACF2
- IBM Security zSecure Alert for RACF
- Security zSecure Command Verifier

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

- What's new: New feature and enhancements in IBM Z Compliance and Auditing 3.1.0, <https://www.ibm.com/docs/en/szs /3.1.0?topic=release-whats-new-zsecure-310>
- Release notes: Information you need before installing IBM Z Compliance and Auditing 3.1.0, such as system requirements, incompatibility warnings, and known problems. <https://www.ibm.com/docs/en/szs /3.1.0?topic=release-notes-zsecure-310>
- News on IBM Z Security and Compliance Center (1.2.0): <https://www.ibm.com/docs/en/zscc /1.2.0?topic=center-summary-changes>

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 Compliance and Auditing.

The Program Directory contains the following sections:

- 2.0, "Program Materials" on page 3 identifies the basic program materials and documentation for IBM Z Compliance and Auditing.
- 3.0, "Program Support" on page 6 describes the IBM support available for IBM Z Compliance and Auditing.
- 4.0, "Program and Service Level Information" on page 8 lists the APARs (program level) and PTFs (service level) that have been incorporated into IBM Z Compliance and Auditing.
- 5.0, "Installation Requirements and Considerations" on page 9 identifies the resources and considerations that are required for installing and using IBM Z Compliance and Auditing.
- 6.0, "Installation Instructions" on page 17 provides detailed installation instructions for IBM Z Compliance and Auditing. It also describes the procedures for activating the functions of IBM Z Compliance and Auditing, or refers to appropriate publications.

Before installing IBM Z Compliance and Auditing, 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.

IBM Z Compliance and Auditing is supplied in a Custom-Built Product Delivery Offering (CBPDO, 5751-CS3). All service and HOLDDATA for IBM Z Compliance and Auditing are included on the CBPDO.

Do not use this program directory if you install IBM Z Compliance and Auditing 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 IBM Z Compliance and Auditing Description

IBM Security zSecure Command Verifier compares RACF commands entered by any means against defined security policy and adapts or blocks noncompliant ones. More detailed information and installation instructions for the Command Verifier component are available in publication number GI13-2284 "Program Directory for IBM Security zSecure Command Verifier" which is distributed with the IBM Z Compliance and Auditing materials.

IBM Z Security and Compliance Center is a modern, browser-based application to help your organization with their compliance capability mapping, fact collection, and validations. Designed for use with minimal

technical skills, this solution can automate evidence collection of your compliance-related facts from IBM Z platforms.

The IBM Z Security and Compliance Center has several components:

- The dashboard/microservices component, which is distributed via container images for deployment on the Red Hat OpenShift Container;
- The z/OS Compliance Integration Manager component (FMIDs JCKC310 and JCKC31X), providing compliance evidence data. It is installed on a z/OS system for writing SMF 1154 records, which are picked up by the IBM Z Common Data Provider and fed into the IBM Z Security and Compliance Center dashboard.

IBM Security zSecure Alert is a real-time monitor for z/OS systems protected with RACF or ACF2 that issues alerts for important events relevant for the security of the system at the time they occur.

1.2 IBM Z Compliance and Auditing FMIDs

IBM Z Compliance and Auditing consists of the following FMIDs:

Product/Feature	FMID(s)
IBM Z Security and Compliance Center	HCKR310, HC4R310, JC2A310, JCKC310, JCKC31X, <i>HHBO510</i> *
zSecure Alert for RACF	HCKR310, HC4R310, JC2P31R
zSecure Alert for ACF2	HCKR310, HC4R310, JC2A310, JC2P31A
zSecure Command Verifier	JC4R310, HC4R310

Note!

* For HHBO510 installation, 'Program Directory for IBM Z Common Data Provider', GI13-5932 is to be used.

2.0 Program Materials

An IBM program is identified by a program number. The program number for IBM Z Compliance and Auditing is 5655-ABK.

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 IBM Z Compliance and Auditing. 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.

Program Number	Product	Feature Number	Type	Volume
5655-ABK	IBM Z Compliance and Auditing	N/A	CBPDO	N/A

5655-ABK is functionally equivalent to 5655-CC1 (IBM Z Security and Compliance Center), 5655-ABE (IBM Security zSecure Command Verifier), and 5655-ABG (IBM Security zSecure Alert).

It is installed using SMP/E, and is in SMP/E RELFILE format. See 6.0, "Installation Instructions" on page 17 for more information about how to install the program.

2.2 Program Publications

The following sections identify the basic publications for IBM Z Compliance and Auditing 3.1.0.

Figure 1 identifies the basic licensed program publications for IBM Z Compliance and Auditing 3.1.0, which are available to licensed clients only.

Publication Title	Form Number
IBM Security zSecure Admin and Audit for RACF User Reference Manual	LC27-5639
IBM Security zSecure Audit for ACF2 User Reference Manual	LC27-5640
IBM Security zSecure Audit for Top Secret User Reference Manual Version	LC27-5641
IBM Security zSecure CARLa Command Reference	LC27-6533

Figure 2 on page 4 identifies the basic unlicensed publications for IBM Z Compliance and Auditing 3.1.0. Those that are in softcopy format can be obtained from the IBM Publications Center website at <https://www.ibm.com/resources/publications>

<i>Figure 2. Basic Material: Unlicensed Publications</i>	
Publication Title	Form Number
IBM Security zSecure Suite: CARLa driven components, Installation and Deployment Guide	SC27-5638
IBM Security zSecure Alert User Reference Manual	SC27-5642
IBM Security zSecure Audit for ACF2 Getting Started Guide	GI13-2325
IBM Security zSecure Suite: Admin and Audit for RACF Getting Started Guide	GI13-2324
IBM Security zSecure Admin and Audit for RACF line commands and Primary Commands Summary	SC27-6581
IBM Security zSecure Command Verifier User Guide	SC27-5648
IBM Security zSecure Suite: Messages Guide	SC27-5643
IBM Z Security and Compliance Center Guide	SC31-5705

zSecure publications are available at the IBM Documentation at <https://www.ibm.com/docs/en/szs/3.1.0>

IBM Z Security and Compliance Center Guide is available at: https://www.ibm.com/docs/en/SSO5Y9T_1.2.0/abstract.htm

No optional publications are provided for IBM Z Compliance and Auditing.

2.3 Program Source Materials

No program source materials or viewable program listings are provided for IBM Z Compliance and Auditing.

2.4 Publications Useful During Installation

You might want to use the publications listed in Figure 3 during the installation of IBM Z Compliance and Auditing.

<i>Figure 3 (Page 1 of 2). Publications Useful During Installation</i>	
Publication Title	Form Number
<i>IBM SMP/E for z/OS User's Guide</i>	SA23-2277

Figure 3 (Page 2 of 2). Publications Useful During Installation

Publication Title	Form Number
<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

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 IBM Z Compliance and Auditing.

3.1 Program Services

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

3.2 Preventive Service Planning

Before you install IBM Z Compliance and Auditing, make sure that you have reviewed the current Preventive Service Planning (PSP) information. Review the PSP Bucket for General Information, Installation Documentation, the Cross Product Dependencies sections and Recommended Service section. We also recommend you use the IBM.PRODUCTINSTALL-REQUIRESERVICE fix category in SMP/E to ensure you have required service installed. Use the **FIXCAT(IBM.PRODUCTINSTALL-REQUIRESERVICE)** operand on the **APPLY CHECK** command. See 6.1.1.9, “Perform SMP/E APPLY” on page 21 for a sample APPLY command.

If you obtained IBM Z Compliance and Auditing as part of a CBPDO, HOLDDATA is included.

If the CBPDO for IBM Z Compliance and Auditing 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 IBM Z Compliance and Auditing are included in Figure 4.

UPGRADE	SUBSET	Description
SECZSCADM310	HCKR310	Security zSecure Base
SECZSCCMD310	HC4R310	Security zSecure Command Verifier base
SECZSCAUD310	JC2A310	Security zSecure Audit for ACF2 Base
SECZSCALT310	JC2P31A	Security zSecure Alert for ACF2

Figure 4 (Page 2 of 2). PSP Upgrade and Subset ID

UPGRADE	SUBSET	Description
SECZSCALT310	JC2P31R	Security zSecure Alert for RACF
SECZSCCMD310	JC4R310	Security zSecure Command Verifier Policy
SECZSCCIM110	JCKC310	Security Compliance Integration Manager Base
SECZSCCIM110	JCKC31X	Security Compliance Integration Manager

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 5 identifies the component IDs (COMPID) for IBM Z Compliance and Auditing.

Figure 5. Component IDs

FMID	COMPID	Component Name	RETAIN Release
HCKR310	5655T0100	IBM Security zSecure Base	310
HC4R310	5655T0700	IBM Security zSecure Command Verifier base	310
JC2A310	5655T0200	IBM Security zSecure Audit for ACF2 Base	310
JC2P31A	5655T1100	IBM Security zSecure Alert for ACF2	31A
JC2P31R	5655T1100	IBM Security zSecure Alert for RACF	31R
JC4R310	5655T07CV	IBM Security zSecure Command Verifier Policy	310
JCKC310	5655CC100	IBM Compliance Integration Manager Base	310
JCKC31X	5655CC100	IBM Compliance Integration Manager	31X
HHBO510	5698ABJ00	IBM Z Common Data Provider	510

4.0 Program and Service Level Information

This section identifies the program and relevant service levels of IBM Z Compliance and Auditing. 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

No APARs have been incorporated into IBM Z Compliance and Auditing.

4.2 Service Level Information

Frequently check the IBM Z Compliance and Auditing 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.

5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing and activating IBM Z Compliance and Auditing. 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 IBM Z Compliance and Auditing.

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 6. 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	V02.04.00	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/>

5.2 Target System Requirements

This section describes the environment of the target system required to install and use IBM Z Compliance and Auditing.

IBM Z Compliance and Auditing installs in the z/OS (Z038) SREL.

5.2.1 Machine Requirements

Target system minimum hardware level is Z196 for 31 bit version (CKR4Z196) and Z12 for 64 bit version (CKR8Z12)

*** Important *** For IBM Z Security and Compliance Center, IBM z15 or z16 processor is required.

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.

<i>Figure 7. Target System Mandatory Installation Requisites</i>				
Program Number	Product Name	Minimum VRM	Minimum Service Level will satisfy these APARs	Included in the shipped product?
5650-ZOS	z/OS	V02.04.00	N/A	No

Note: Installation might require migration to new releases to be service supported. 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.

IBM Z Compliance and Auditing 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.

<i>Figure 8. Target System Mandatory Operational Requisites</i>	
Program Number	Product Name and Minimum VRM/Service Level
5650-ZOS	z/OS Version 02.04.00 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.

IBM Z Compliance and Auditing 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.

IBM Z Compliance and Auditing 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.

IBM Z Compliance and Auditing has no negative requisites.

5.2.3 DASD Storage Requirements

IBM Z Compliance and Auditing libraries can reside on all supported DASD types.

Figure 9 lists the total space that is required for each type of library.

Library Type	Total Space Required in 3390 Trks
Target	5200
Distribution	5400

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 6.1.7, "Allocate SMP/E Target and Distribution Libraries" on page 21.

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.
- Loadmodules from these data sets cannot be added to the active LPA using Dynamic LPA Services (CSVDYLPA or SETPROG LPA).
- These data sets can be in the LNKLIST.
- These data sets must be APF-authorized.

The following figures describe the target and distribution libraries required to install IBM Z Compliance and Auditing. The storage requirements of IBM Z Compliance and Auditing 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.

<i>Figure 10 (Page 1 of 2). Storage Requirements for IBM Z Compliance and Auditing Target Libraries</i>								
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
SCKRCARL		ANY	U	PDS	FB	80	701	200
SCKRCLIB	EXEC	ANY	U	PDS	FB	80	62	7
SCKRLOAD	LMOD	ANY	U	PDSE	U	0	1200	n/a
SCKRMLIB	MSG	ANY	U	PDS	FB	80	18	10

Figure 10 (Page 2 of 2). Storage Requirements for IBM Z Compliance and Auditing 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
SCKRPAX		ANY	U	PDS	FB	80	236	2
SCKRPLIB	PNL	ANY	U	PDSE	FB	80	2400	n/a
SCKRPROC	PROC	ANY	U	PDS	FB	80	5	5
SCKRSAMP	SAMP	ANY	U	PDS	FB	80	45	10
SCKRSLIB	SKEL	ANY	U	PDS	FB	80	38	12
SCKRTLIB	Table	ANY	U	PDS	FB	80	80	2
SCKRCJPN	EXEC	ANY	U	PDS	FB	80	350	5
SCKRMJPN	MSG	ANY	U	PDS	FB	80	18	10
SCKACUST		ANY	U	PDSE	FB	80	48	n/a
SCKACUSV		ANY	U	PDSE	VB	32740	48	n/a
SCKCJSON		ANY	U	PDSE	VB	32740	21	n/a
SCKCMAC		ANY	U	PDSE	FB	80	14	n/a

Figure 11 (Page 1 of 2). Storage Requirements for IBM Z Compliance and Auditing 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
ACKRCARL	U	PDS	FB	80	705	200
ACKRCLIB	U	PDS	FB	80	62	7
ACKRLOAD	U	PDSE	U	0	1400	n/a
ACKRMLIB	U	PDS	FB	80	18	10
ACKRPAX	U	PDS	FB	80	236	2
ACKRPLIB	U	PDSE	FB	80	2400	n/a
ACKRPROC	U	PDS	FB	80	5	5
ACKRSAMP	U	PDS	FB	80	45	10
ACKRSLIB	U	PDS	FB	80	38	12
ACKRTLIB	U	PDS	FB	80	80	2
ACKRCJPN	U	PDS	FB	80	350	5
ACKRMJPN	U	PDS	FB	80	18	10

Figure 11 (Page 2 of 2). Storage Requirements for IBM Z Compliance and Auditing 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
AC4RLNK	S	PDSE	U	0	11	n/a
ACKACUST	U	PDSE	FB	80	48	n/a
ACKACUSV	U	PDSE	VB	32740	48	n/a
ACKCJSON	U	PDSE	VB	32740	21	n/a
ACKCMAC	U	PDSE	FB	80	14	n/a

The following figures list data sets that are not used by SMP/E, but are required for IBM Z Compliance and Auditing to run.

Figure 12. Storage Requirements for IBM Z Compliance and Auditing Non-SMP/E Data Sets

Data Set Name	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
your.hlq.CKRJOBS	U	PDS	FB	80	15	10
your.hlq.CKRPARM	U	PDS	FB	80	15	10
your.hlq.CKRPROF	U	PDS	FB	80	15	10
your.hlq.CKACUST	U	PDSE	FB	80	48	n/a
your.hlq.CKACUSV	U	PDSE	VB	32740	48	n/a

5.3 FMIDs Deleted

Installing IBM Z Compliance and Auditing 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 IBM Z Compliance and Auditing 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

IBM Z Compliance and Auditing 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 IBM Z Compliance and Auditing.

Please note the following points:

- If you want to install IBM Z Compliance and Auditing 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>
Alternatively, you may want to use the Fast install process, as described in the Installation and Deployment Guide. Fast install will create its own SMP/E environment.
- Sample jobs have been provided to help perform some or all of the installation tasks. The SMP/E jobs assume that all DDDEF entries required for SMP/E execution have been defined in the appropriate zones.
- The SMP/E dialogs may be used instead of the sample jobs to accomplish the SMP/E installation steps.

6.1 Installing IBM Z Compliance and Auditing

6.1.1 SMP/E Considerations for Installing IBM Z Compliance and Auditing

Use the SMP/E RECEIVE, APPLY, and ACCEPT commands to install this release of IBM Z Compliance and Auditing.

6.1.2 SMP/E Options Subentry Values

The recommended values for certain SMP/E CSI subentries are shown in Figure 13. 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	(30,135,810)	Space Allocation for SMPTLIB data sets
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 IBM Z Compliance and Auditing:

Figure 14. Sample Installation Jobs

Job Name	Job Type	Description	RELFILE
CKRZUPDZ	UPDATE	Sample job to update installation library	IBM.HCKR310.F1
CKRZUPDI	-	Input data for job CKRZUPDZ. It is also used during post-install job CKRZPOST.	IBM.HCKR310.F1
C2RIISPF	-	JCL-include for job CKRZUPDZ. It is also used during post-install job CKRZPOST, and as part of the installed product.	IBM.HCKR310.F1
CKCZSMPA	DEFINE	Sample job to create a Global CSI	IBM.JCKC310.F2
CKCZSMPB	DEFINE	Sample job to create a Target/Dlib CSI	IBM.JCKC310.F2
CKCZSMPC	DEFINE	Sample job to define an SMP/E OPTIONS entry	IBM.JCKC310.F2
CKCZREC	RECEIVE	Sample RECEIVE job	IBM.JCKC310.F2
CKCZALL	ALLOCATE	Sample job to allocate target and distribution libraries	IBM.JCKC310.F2
CKCZDDD	DDDEF	Sample job to define SMP/E DDDEFs	IBM.JCKC310.F2
CKCZAPP	APPLY	Sample APPLY job	IBM.JCKC310.F2
CKCZACC	ACCEPT	Sample ACCEPT job	IBM.JCKC310.F2
CKCZINST	FASTINST	Sample Fast Installation job	IBM.JCKC310.F2
CKCZPTF0	RECEIVE	Sample PTF RECEIVE job	IBM.JCKC310.F2
CKCZPTF1	APPLY	Sample PTF APPLY job	IBM.JCKC310.F2
CKCZPTF2	ACCEPT	Sample PTF Accept job	IBM.JCKC310.F2

You can access the sample installation jobs by performing an SMP/E RECEIVE (refer to 6.1.6, “Perform SMP/E RECEIVE” on page 20) then copy the jobs from the RELFILEs to a work data set for editing and submission. See Figure 14 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.HCKR310.F1.pax.Z"
volume="<volser>" <===NOTE 3
newname="<your-prefix>.CKRINST" <===NOTE 4
</ARCHDEF>
<ARCHDEF
name="CBCACHE.IBM.JCKC310.F2.pax.Z"
volume="<volser>" <===NOTE 3
newname="<your-prefix>.CKRINST" <===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*.

6.1.4 Batch-mode Updating the jobs (optional)

In order to apply your naming convention, you can manually edit the install jobs. All zSecure-supplied jobs contain instructions on changing jobcards, data set names, high level qualifiers, etc.

A more convenient way to apply your naming convention is using update parameter member CKRZUPDI, JCL-include C2RIISPF, and global update job CKRZUPDZ. These are described in the Installation and Deployment Guide. In addition, job CKRZUPDZ uncomments the required FMIDs, according to the products you selected, in the RECEIVE, APPLY and ACCEPT jobs. Updating CKRZUPDI and C2RIISPF is optional for the Formal install process. However, we recommend that you do these updates, not only for convenience, but also because post-install job CKRZPOST makes use of these members. Member C2RIISPF, in its customized form, may also be used in the installed product.

6.1.5 Setup SMP/E CSI and Zones (optional)

For setting up the SMP/E environment, see the notes at the beginning of this chapter, or use the sample jobs mentioned above.

6.1.5.1 Allocate SMP/E GLOBAL CSI (Optional)

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

Expected Return Code and Messages: This job should end with a return code 0.

6.1.5.2 Allocate SMP/E Target/DLIB CSI (Optional)

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

Expected Return Code and Messages: This job should end with a return code 0.

6.1.5.3 Define OPTIONS entry to SMP/E GLOBAL/Target/DLIB CSI (Optional)

If you choose to install this product in its own SMP/E environment, edit and submit sample job CKCZSMPD to create and specify an OPTIONS entry for use during installation of the product.

Expected Return Code and Messages: This job should end with a return code 0.

6.1.6 Perform SMP/E RECEIVE

If you have obtained IBM Z Compliance and Auditing as part of a CBPDO, use the RCVPDO job in the CBPDO RIMLIB data set to receive the IBM Z Compliance and Auditing 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 (if you did not use CKRZUPDZ) and submit sample job CKCZREC to perform the SMP/E RECEIVE for IBM Z Compliance and Auditing. Consult the instructions in the sample job for more information.

You should always RECEIVE FMIDs HCKR310 and HC4R310, and other FMIDs, according to table 1.2, "IBM Z Compliance and Auditing FMIDs" on page 2, except for HHBO510, or according to your choices in member CKRZUPDI. If you run job CKRZUPDZ, as described in section 6.1.4, "Batch-mode Updating the jobs (optional)" on page 19, the FMIDs that you need will already be uncommented. If you did not run CKRZUPDI, you need to uncomment the FMIDs yourself.

Expected Return Codes and Messages:

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

6.1.7 Allocate SMP/E Target and Distribution Libraries

Edit (if you did not use CKRZUPDZ) and submit sample job CKCZALL to allocate the SMP/E target and distribution libraries for IBM Z Compliance and Auditing. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages: This job will complete with a return code 4 if the AC4RLNK does not exist or return code 0 if it does. You must check allocation messages to verify the data sets are allocated and cataloged as expected.

6.1.8 Create DDDEF Entries

Edit (if you did not use CKRZUPDZ) and submit sample job CKCZDDD to create DDDEF entries for the SMP/E target and distribution libraries for IBM Z Compliance and Auditing. 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.

6.1.9 Perform SMP/E APPLY

1. Ensure you have the latest Enhanced HOLDDATA, then edit (if you did not use CKRZUPDZ) and submit sample job CKCZAPP to perform an SMP/E APPLY CHECK for IBM Z Compliance and Auditing. 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/holddata/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 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.

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.

You should always APPLY FMIDs HCKR310 and HC4R310, and other FMIDs, according to table 1.2, “IBM Z Compliance and Auditing FMIDs” on page 2, except for HHBO510, or according to your choices in member CKRZUPDI. If you run job CKRZUPDZ, as described in section 6.1.4, “Batch-mode Updating the jobs (optional)” on page 19, the FMIDs that you need will already be uncommented. If you did not run CKRZUPDI, you need to uncomment the FMIDs yourself.

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.

Note!

Using GROUPEXTEND in APPLY with maintenance with HOLDDATA may cause a return code other than 0.

6.1.9.1 Install required maintenance

6.1.10 Perform SMP/E ACCEPT

Edit (if you did not use CKRZUPDZ) and submit sample job CKCZACC to perform an SMP/E ACCEPT CHECK for IBM Z Compliance and Auditing. Consult the instructions in the sample job for more information.

You should always ACCEPT FMIDs HCKR310 and HC4R310, and other FMIDs, according to table 1.2, “IBM Z Compliance and Auditing FMIDs” on page 2, except for HHBO510, or according to your choices in member CKRZUPDI. If you run job CKRZUPDZ, as described in section 6.1.4, “Batch-mode Updating the jobs (optional)” on page 19, the FMIDs that you need will already be uncommented. If you did not run CKRZUPDI, you need to uncomment the FMIDs yourself.

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.

6.1.11 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 IBM Z Compliance and Auditing, 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 on REPORT CROSSZONE, see the SMP/E manuals.

6.2 Activating IBM Z Compliance and Auditing

6.2.1 Post install

The publications

IBM Security zSecure Suite: CARLa driven components, Installation and Deployment Guide Version 3.1.0, SC27-5638 and

IBM Z Security and Compliance Center Guide, SC31-5705

contain the step-by-step procedures to fully activate the functions of IBM Z Compliance and Auditing. These steps include

- Copying to or connecting from your images
- Making the software APF authorized
- Check product enablement via IFAPRDxx in PARMLIB
- Making the software available to TSO/ISPF users
- Making the software available for batch processes
- Making configurations available
- Configuration
- Configuration and customisation of CKCS1154 started task
- Copy ZSCC configuration files for Z Common Data Provider (zCDP)
- Installation verification

Note: Refer 'Configure IBM Z Common Data Provider for z/OS' section of 'IBM Z Security and Compliance Center Guide' (SC31-5705) for zCDP configuration (FMID HHBO510).

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