IBM

Program Directory for

IBM InfoSphere Classic Change Data Capture

for z/OS

V11.03.00

Program Number 5655-IM5

FMIDs HABIB30, JABIB3H, JABIB3I, JABIB3K

for Use with
z/OS

Document Date: March 2015

GI10-8986-01

> **Note**
>
> Before using this information and the product it supports, be sure to read the general information under 7.0, "Notices" on page 25.

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 InfoSphere Classic Change Data Capture for z/OS. This publication refers to IBM InfoSphere Classic Change Data Capture for z/OS as Classic CDC for zOS.

The Program Directory contains the following sections:

- 2.0, "Program Materials" on page 3 identifies the basic program materials and documentation for Classic CDC for zOS.

- 3.0, "Program Support" on page 7 describes the IBM support available for Classic CDC for zOS.

- 4.0, "Program and Service Level Information" on page 9 lists the APARs (program level) and PTFs (service level) that have been incorporated into Classic CDC for zOS.

- 5.0, "Installation Requirements and Considerations" on page 10 identifies the resources and considerations that are required for installing and using Classic CDC for zOS.

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

Before installing Classic CDC for zOS, 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; then keep them for future reference. Section 3.2, "Preventive Service Planning" on page 7 tells you how to find any updates to the information and procedures in this program directory.

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

Do not use this program directory if you install Classic CDC for zOS 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.

1.1 Classic CDC for zOS Description

IBM InfoSphere Classic Change Data Capture for z/OS supports IMS Databases and VSAM files as a data source when used with InfoSphere Change Data Capture, targeting both z/OS and distributed platforms. This combination of products enables unidirectional movement of IMS and VSAM data to:

- Local or remote relational database management systems

- Message queues

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- Flat files
- Transformation engines such as InfoSphere DataStage
- Database appliances such as IBM's PureData System for Analytics, powered by Netezza technology

The result is fast and consistent delivery of business-critical IMS and VSAM data changes to drive:

- Dynamic data warehousing
- Service-oriented architecture (SOA) initiatives
- Live reporting
- Data consolidation and migration projects
- Master data management initiatives

1.2 Classic CDC for zOS FMIDs

Classic CDC for zOS consists of the following FMIDs:

    HABIB30
    JABIB3H
    JABIB3I
    JABIB3K

The InfoSphere Classic Change Data Capture for IMS feature consists of the following FMIDs:

    HABIB30
    JABIB3H
    JABIB3I

The InfoSphere Classic Change Data Capture for VSAM feature consists of the following FMIDs:

    HABIB30
    JABIB3H
    JABIB3K

2.0 Program Materials

An IBM program is identified by a program number. The program number for Classic CDC for zOS is 5655-IM5.

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 Classic CDC for zOS. 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 Classic CDC for zOS in the *CBPDO Memo To Users Extension*.

Figure 1 describes the program file content for Classic CDC for zOS. You can refer to the *CBPDO Memo To Users Extension* to see where the files reside on the tape.

Notes:

1. The data set attributes in this table must be used in the JCL of jobs that read the data sets. However, because the data sets are in IEBCOPY unloaded format, their actual attributes might be different.

2. If any RELFILEs are identified as PDSEs, ensure that SMPTLIB data sets are allocated as PDSEs.

Figure 1 (Page 1 of 2). Program File Content of HABIB30				
Name	ORG	RECFM	LRECL	BLK SIZE
SMPMCS	SEQ	FB	80	6400
IBM.HABIB30.F1	PDS	FB	80	8800
IBM.HABIB30.F2	PDS	FB	80	8800
IBM.HABIB30.F3	PDS	FB	80	8800
IBM.HABIB30.F4	PDSE	U	0	6144
IBM.HABIB30.F5	PDS	FB	80	8800

Figure 1 (Page 2 of 2). Program File Content of HABIB30				
Name	**O R G**	**R E C F M**	**L R E C L**	**BLK SIZE**
IBM.HABIB30.F6	PDS	FB	80	8800
IBM.HABIB30.F7	PDS	FB	80	8800
IBM.HABIB30.F8	PDS	FB	80	8800
IBM.HABIB30.F9	PDS	FB	80	8800

Figure 2. Program File Content of JABIB3H				
Name	**O R G**	**R E C F M**	**L R E C L**	**BLK SIZE**
SMPMCS	SEQ	FB	80	6400
IBM.JABIB3H.F1	PDS	FB	80	8800
IBM.JABIB3H.F2	PDS	FB	80	8800
IBM.JABIB3H.F3	PDSE	U	0	6144
IBM.JABIB3H.F4	PDS	FB	80	8800
IBM.JABIB3H.F5	PDS	FB	80	8800
IBM.JABIB3H.F6	PDS	FB	80	8800

Figure 3. Program File Content of JABIB3I				
Name	**O R G**	**R E C F M**	**L R E C L**	**BLK SIZE**
SMPMCS	SEQ	FB	80	6400
IBM.JABIB3I.F1	PDS	FB	80	8800

Figure 4. Program File Content of JABIB3K				
Name	**O R G**	**R E C F M**	**L R E C L**	**BLK SIZE**
SMPMCS	SEQ	FB	80	6400
IBM.JABIB3K.F1	PDS	FB	80	8800

2.2 Optional Machine-Readable Material

No optional machine-readable materials are provided for Classic CDC for zOS.

2.3 Program Publications

The following sections identify the basic publications for Classic CDC for zOS.

Figure 5 identifies the basic unlicensed publications for Classic CDC for zOS. Those that are in softcopy format publications can be obtained from the IBM Publications Center website at:
http://www.ibm.com/shop/publications/order/

Figure 5. Basic Material: Unlicensed		
Publication Title	**Form Number**	**Media Format**
IBM InfoSphere Classic Change Data Capture for z/OS License Information	GC19-4187	http://www.ibm.com/software/sla/sladb.nsf
IBM InfoSphere Classic Change Data Capture for z/OS End User Documentation	GC19-4172	http://www.ibm.com/support/docview.wss?uid=swg27039728

2.3.1 Optional Program Publications

No optional publications are provided for Classic CDC for zOS.

2.4 Program Source Materials

No program source materials or viewable program listings are provided for Classic CDC for zOS.

2.5 Publications Useful During Installation

You might want to use the publications listed in Figure 6 on page 6 during the installation of Classic CDC for zOS.

Figure 6. Publications Useful During Installation		
Publication Title	**Form Number**	**Media Format**
IBM SMP/E for z/OS User's Guide	SA23-2277	http://www.ibm.com/shop/publications/order/
IBM SMP/E for z/OS Commands	SA23-2275	http://www.ibm.com/shop/publications/order/
IBM SMP/E for z/OS Reference	SA23-2276	http://www.ibm.com/shop/publications/order/
IBM SMP/E for z/OS Messages, Codes, and Diagnosis	GA32-0883	http://www.ibm.com/shop/publications/order/

3.0 Program Support

This section describes the IBM support available for Classic CDC for zOS.

3.1 Program Services

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

3.2 Preventive Service Planning

Before you install Classic CDC for zOS, 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 Classic CDC for zOS as part of a CBPDO, HOLDDATA is included.

If the CBPDO for Classic CDC for zOS 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-01.ibm.com/software/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 Classic CDC for zOS are included in Figure 7.

Figure 7. PSP Upgrade and Subset ID		
UPGRADE	**SUBSET**	**Description**
5655IM4	HABIB30	Classic Fed/Rep/EP Core (Base)
5655IM5	JABIB3H	Classic CDC Unique
5655IM5	JABIB3I	Classic CDC IMS
5655IM5	JABIB3K	Classic CDC VSAM

For additional Service related information, visit
http://www.ibm.com/software/data/db2imstools/support.html

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 8 identifies the component IDs (COMPID) for Classic CDC for zOS.

Figure 8. Component IDs			
FMID	**COMPID**	**Component Name**	**RETAIN Release**
HABIB30	5697I8200	Classic Fed/Rep/EP Core (Base)	B30
JABIB3H	5697I8200	Classic CDC Unique	B3H
JABIB3I	5697I8200	Classic CDC IMS	B3I
JABIB3K	5697I8200	Classic CDC VSAM	B3K

4.0 Program and Service Level Information

This section identifies the program and relevant service levels of Classic CDC for zOS. 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 Classic CDC for zOS have been incorporated into this release. They are listed by FMID.

- FMID HABIB10

PI23983	PI13300	PI22986
PI09441	PI13515	PI23077
PI10137	PI15367	PI24859
PI10636	PI16844	PI25693
PI07428	PI17053	PI25902
PI07982	PI18811	PI26500
PI07682	PI21271	PI27178
PI08232	PI21561	PI27271
PI08967	PI22088	PI06408
PI11012	PI22731	PI21564
PI12186	PI23010	PI23066

- FMID JABIB1H

PI05904	PI13221	PI27733
PI07900	PI21141	PI28197
PI08987	PI25633	

4.2 Service Level Information

No PTFs against this release of Classic CDC for zOS have been incorporated into the product package.

Frequently check the Classic CDC for zOS 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 Classic CDC for zOS. 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 Classic CDC for zOS.

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 9. Driving System Software Requirements				
Program Number	Product Name	Minimum VRM	Minimum Service Level will satisfy these APARs	Included in the shipped product?
Any **one** of the following:				
5694-A01	z/OS	V01.13.00	N/A	No
5650-ZOS	z/OS	V02.01.00	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 http://www-03.ibm.com/systems/z/os/zos/support/zos_eos_dates.html.

5.2 Target System Requirements

This section describes the environment of the target system required to install and use Classic CDC for zOS.

Classic CDC for zOS 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.

Figure 10. Target System Mandatory Installation Requisites				
Program Number	Product Name	Minimum VRM	Minimum Service Level will satisfy these APARs	Included in the shipped product?
Any **one** of the following:				
5694-A01	z/OS	01.13.00	N/A	No
5650-ZOS	z/OS	02.01.00 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.

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.

Classic CDC for zOS 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 11. Target System Mandatory Operational Requisites	
Program Number	Product Name and Minimum VRM/Service Level
Any **one** of the following:	
5694-A01	z/OS V01.13.00
5650-ZOS	z/OS V02.01.00

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.

Figure 12. Target System Conditional Operational Requisites		
Program Number	**Product Name and Minimum VRM/Service Level**	**Function**
Any **one** of the following:		
5635-A03	IMS V12.01.00	Support for IMS resource access
5655-DSQ	IMS Database Value Unit Edition V12.01.00	Support for IMS resource access
5635-A04	IMS V13.01.00	Support for IMS resource access
5655-DSM	IMS Database Value Unit Edition V13.01.00	Support for IMS resource access
Any **one** of the following:		
5655-Y04	CICS Transaction Server for z/OS V05.01.00 or higher	Support for VSAM CICS access :rowsplit=no.
5655-Y24	CICS VSAM Recovery for z/OS V05.01.00 or higher	

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.

Classic CDC for zOS 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.

Classic CDC for zOS has no negative requisites.

5.2.3 DASD Storage Requirements

Classic CDC for zOS libraries can reside on all supported DASD types.

Figure 13 lists the total space that is required for each type of library.

Figure 13. Total DASD Space Required by Classic CDC for zOS	
Library Type	**Total Space Required in 3390 Trks**
Target	1196 tracks
Distribution	1211 tracks

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

3. 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, except for SCACLOAD and ACACLOAD, which have to be PDSEs.

4. 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.

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

    - These data sets can be in the LPA, but they are not required to be in the LPA.
    - These data sets can be in the LNKLST.
    - It is required for SCACLOAD to be APF-authorized.
    - Classic CDC for zOS requires that the SMPLTS data set must be a PDSE. If your existing SMPLTS is a PDS, you will need to allocate a new PDSE and copy your existing SMPLTS into it and then change the SMPLTS DDDEF entry to indicate the new PDSE data set.

The following figures describe the target and distribution libraries required to install Classic CDC for zOS. The storage requirements of Classic CDC for zOS must be added to the storage required by other programs that have data in the same library.

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 14. Storage Requirements for Classic CDC for zOS Target Libraries

Library DDNAME	Member Type	Target Volume	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
SCACBASE	Sample	any	S	PDS	FB	80	10	6
SCACCONF	Sample	any	S	PDS	FB	80	6	6
SCACLOAD	LMOD	any	S	PDSE	U	0	900	n/a
SCACMAC	Macro	any	S	PDS	FB	80	10	6
SCACMSGS	MSGS	any	S	PDS	FB	80	60	6
SCACSAMP	Sample	any	S	PDS	FB	80	105	20
SCACSIDE	LMOD	any	S	PDS	FB	80	45	10
SCACSKEL	SKEL	any	S	PDS	FB	80	60	10

Figure 15. Storage Requirements for Classic CDC for zOS Distribution Libraries

Library DDNAME	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
ACACBASE	S	PDS	FB	80	10	6
ACACCONF	S	PDS	FB	80	6	6
ACACHFS	S	PDS	FB	80	15	5
ACACLOAD	S	PDSE	U	0	900	n/a
ACACMAC	S	PDS	FB	80	10	6
ACACMSGS	S	PDS	FB	80	60	6
ACACSAMP	S	PDS	FB	80	105	20
ACACSIDE	S	PDS	FB	80	45	10
ACACSKEL	S	PDS	FB	80	60	10

5.3 FMIDs Deleted

Installing Classic CDC for zOS 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 Classic CDC for zOS 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

PDSE Considerations:

Classic CDC for zOS uses the "partitioned data set extended" or PDSE format for the SCACLOAD target library. There are some operational differences between PDS and PDSE data sets. The PDS format may be shared by more than one z/OS system and no special precautions are necessary. However the PDSE format may only be shared by z/OS systems which are part of a sysplex or which are connected using Global Resource Serialization (are in a GRS complex). If z/OS systems share use of a PDSE data set outside of a sysplex or GRS environment, you may experience severe problems when the data set is updated. This is due to the fact that PDSE directory information is cached in storage, and when the data set is updated from one system the other system(s) have no knowledge of the update, and their cached directory information will be incorrect.

You must take care not to share the SCACLOAD data set between z/OS systems unless they are in a sysplex or are connected in a GRS complex. If you need to share the content of the SCACLOAD data set, a separate copy must be created for each z/OS 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 Classic CDC for zOS.

Please note the following points:

- If you want to install Classic CDC for zOS 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.

- You can use the SMP/E dialogs instead of the sample jobs to accomplish the SMP/E installation steps.

6.1 Installing Classic CDC for zOS

6.1.1 SMP/E Considerations for Installing Classic CDC for zOS

Use the SMP/E RECEIVE, APPLY, and ACCEPT commands to install this release of Classic CDC for zOS.

6.1.2 SMP/E Options Subentry Values

The recommended values for certain SMP/E CSI subentries are shown in Figure 16. 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.

Figure 16. SMP/E Options Subentry Values		
Subentry	**Value**	**Comment**
DSSPACE	(900,900,900)	3390 DASD tracks
PEMAX	SMP/E Default	IBM recommends using the SMP/E default for PEMAX.

6.1.3 SMP/E CALLLIBS and SIDE DECK PROCESSING

Classic CDC for zOS uses the CALLLIBS function provided in SMP/E to resolve external references during installation. When Classic CDC for zOS is installed, ensure that DDDEFs exist for the following libraries:

- CSSLIB
- LINKLIB
- SCEECPP
- SCEELKED
- SCEELKEX
- SEZACMTX
- SEZARNT1

Classic CDC for zOS also uses Side Deck processing during link-edits. When Classic CDC for zOS is installed, ensure that the DDDEFs exist for the following libraries:

- CSSLIB
- LINKLIB
- SCEECPP
- SCEELKED
- SCEELKEX
- SEZACMTX
- SEZARNT1

Note: The preceding DDDEFs are used only to resolve the link-edit for Classic CDC for zOS using CALLLIBS and SIDE DECK processing. These data sets are not updated during the installation of Classic CDC for zOS.

6.1.4 Sample Jobs

The following sample installation jobs are provided as part of the product to help you install Classic CDC for zOS:

Figure 17 (Page 1 of 2). Sample Installation Jobs			
Job Name	**Job Type**	**Description**	**RELFILE**
CACALA	SMP/E	Sample job to allocate and initialize a new SMP/E CSI data set **(Optional)**	IBM.HABIB30.F2
CACALB	SMP/E	Sample job to allocate SMP/E data sets **(Optional)**	IBM.HABIB30.F2
CACRECV0	RECEIVE	Sample RECEIVE job for HABIB30	IBM.HABIB30.F2
CACRECVH	RECEIVE	Sample RECEIVE job for JABIB3H	IBM.HABIB30.F2
CACRECVI	RECEIVE	Sample RECEIVE job for JABIB3I	IBM.HABIB30.F2
CACRECVK	RECEIVE	Sample RECEIVE job for JABIB3K	IBM.HABIB30.F2

Job Name	Job Type	Description	RELFILE
Figure 17 (Page 2 of 2). Sample Installation Jobs			
CACALLOC	ALLOCATE	Sample job to allocate target and distribution libraries	IBM.HABIB30.F2
CACDDDEF	DDDEF	Sample job to define SMP/E DDDEFs	IBM.HABIB30.F2
CACAPPLY	APPLY	Sample APPLY job	IBM.HABIB30.F2
CACACCEP	ACCEPT	Sample ACCEPT job	IBM.HABIB30.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 20) then copy the jobs from the RELFILES to a work data set for editing and submission. See Figure 17 on page 18 to find the appropriate relfile data set.

You can also copy the sample installation jobs from the tape or product files by submitting the following job. Depending on your distribution medium, use either the //TAPEIN or the //FILEIN DD statement and comment out or delete the other statement. 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
//SYSPRINT DD SYSOUT=*
//*************************************************************
//* Make the //TAPEIN DD statement below active if you install*
//* from a CBPDO tape by uncommenting the DD statement below. *
//*************************************************************
//*TAPEIN   DD DSN=IBM.HABIB30.F2,UNIT=tunit,
//*         VOL=SER=volser,LABEL=(x,SL),
//*         DISP=(OLD,KEEP)
//*************************************************************
//* Make the //TAPEIN DD statement below active if you install*
//* from a product tape received outside the CBPDO process   *
//* (using the optional SMP/E RECEIVE job) by uncommenting    *
//* the DD statement below.                                   *
//*************************************************************
//*TAPEIN   DD DSN=IBM.HABIB30.F2,UNIT=tunit,
//*         VOL=SER=ABIB30,LABEL=(3,SL),
//*         DISP=(OLD,KEEP)
//*************************************************************
//* Make the //FILEIN DD statement below active for          *
//* downloaded DASD files.                                   *
//*************************************************************
//*FILEIN   DD DSN=IBM.HABIB30.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,(20,10,5))
```

```
//SYSUT3   DD UNIT=SYSALLDA,SPACE=(CYL,(1,1))
//SYSIN    DD *
    COPY INDD=xxxxIN,OUTDD=OUT
/*
```

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

> TAPEIN:
>> **tunit** is the unit value that matches the product package.
>> **volser** is the volume serial that matches the product package.
>> **x** is the tape file number that indicates the location of the data set name on the tape.
>> See the documentation that is provided by CBPDO for the location of IBM.HABIB30.F2 on the tape.
> FILEIN:
>> **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.
> SYSIN:
>> **xxxxIN** is either TAPEIN or FILEIN depending on your input DD statement.

6.1.5 Allocate SMP/E CSI (Optional)

If you are using an existing CSI, do not execute this job.

If you are allocating a new SMP/E data set for this install, edit and submit sample job CACALA to allocate the SMP/E data set for Classic CDC for zOS. 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 Initialize CSI zones (Optional)

If you are using an existing CSI, do not execute this job.

Edit and submit sample job CACALB to initialize SMP/E zones for Classic CDC for zOS. 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 RECEIVE

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

If you are installing the InfoSphere Classic Change Data Capture for IMS, you can choose to edit and

submit sample jobs CACRECV0, CACRECVH, and CACRECVI to perform the SMP/E RECEIVE. Consult the instructions in the sample jobs for more information.

Expected Return Codes and Messages: You will receive a return code of 0 if these jobs run correctly.

If you are installing the InfoSphere Classic Change Data Capture for VSAM, you can choose to edit and submit sample jobs CACRECV0, CACRECVH, and CACRECVK to perform the SMP/E RECEIVE. Consult the instructions in the sample jobs for more information.

Expected Return Codes and Messages: You will receive a return code of 0 if these jobs run correctly.

6.1.8 Allocate SMP/E Target and Distribution Libraries

Edit and submit sample job CACALLOC to allocate the SMP/E target and distribution libraries for Classic CDC for zOS. Consult the instructions in the sample job for more information.

Note: If you have previously installed the base FMID, HABIB30, there is no need to run this sample job.

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

6.1.9 Create DDDEF Entries

Edit and submit sample job CACDDDEF to create DDDEF entries for the SMP/E target and distribution libraries for Classic CDC for zOS. Consult the instructions in the sample job for more information.

Note: If you have previously installed the base FMID, HABIB30, there is no need to run this sample job.

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

6.1.10 Perform SMP/E APPLY

 1. Ensure that you have the latest HOLDDATA; then edit and submit sample job CACAPPLY to perform an SMP/E APPLY CHECK for Classic CDC for zOS. 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),HOLDFIXCAT) .
  ..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.

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.

6.1.11 Perform SMP/E ACCEPT

Edit and submit sample job CACACCEP to perform an SMP/E ACCEPT CHECK for Classic CDC for zOS. 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.

6.1.12 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 Classic CDC for zOS, 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.

6.2 Activating Classic CDC for zOS

6.2.1 Product Customization

The publication *IBM InfoSphere Classic Change Data Capture for z/OS End User Documentation* (GC19-4172) contains the step-by-step procedures to activate the functions of InfoSphere Classic Change Data Capture.

The documentation is located at
http://www.ibm.com/support/docview.wss?uid=swg27039728

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Program Directory for IBM InfoSphere Classic Change Data Capture for z/OS, March 2015

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