



Program Directory for CICS Transaction Server for z/OS

V4.2.0

Program Number 5655-S97
FMID HCI6700

for Use with
z/OS

Document Date: June 2011

GI13-0565-00

Note

Before using this information and the product it supports, be sure to read the general information under 7.0, "Notices" on page 37.

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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 CICS Transaction Server for z/OS. This publication refers to CICS Transaction Server for z/OS as CICS Transaction Server.

The Program Directory contains the following sections:

- 2.0, “Program Materials” on page 3 identifies the basic and optional program materials and documentation for CICS Transaction Server.
- 3.0, “Program Support” on page 9 describes the IBM support available for CICS Transaction Server.
- 4.0, “Program and Service Level Information” on page 11 lists the APARs (program level) and PTFs (service level) that have been incorporated into CICS Transaction Server.
- 5.0, “Installation Requirements and Considerations” on page 13 identifies the resources and considerations that are required for installing and using CICS Transaction Server.
- 6.0, “Installation Instructions” on page 25 provides detailed installation instructions for CICS Transaction Server. It also describes the procedures for activating the functions of CICS Transaction Server, or refers to appropriate publications.

Before installing CICS Transaction Server, 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 9 tells you how to find any updates to the information and procedures in this Program Directory.

CICS Transaction Server is supplied in a Custom-Built Product Delivery Offering (CBPDO, 5751-CS3). All service and HOLDDATA for CICS Transaction Server are included on the CBPDO tape.

Do not use this program directory if you install CICS Transaction Server with a SystemPac or ServerPac. When you use these offerings, use the jobs and documentation supplied with the offering. This program directory can point you to specific sections of it as required.

1.1 CICS Transaction Server Description

CICS Transaction Server is IBM's leading product for transaction processing on the mainframe, and is used by a high proportion of the world's largest companies for their critical business processes. It is designed to execute mixed language application workloads, supporting both modern and traditional programming languages and models. Its extensive data communication services, and its foundations in service-oriented architecture (SOA), provide unparalleled connectivity and scalability. As a result, CICS Transaction Server fits naturally into a smart infrastructure of the kind needed for a flexible, global enterprise.

1.2 CICS Transaction Server FMIDs

CICS Transaction Server consists of the following FMIDs:

HCI6700
JCI6701
JCI6702
JCI6703
JCI670D
JCI670M
H0B5110
H0B7110
H0Z2110
JCI670W
HCIZ300

2.0 Program Materials

An IBM program is identified by a program number. The program number for CICS Transaction Server is 5655-S97.

Basic Machine-Readable Materials are materials that are supplied under the base license and feature numbers, and are required for the use of the product. Optional Machine-Readable Materials are orderable under separate feature numbers, and are not required for the product to function.

The program announcement material describes the features supported by CICS Transaction Server, available at http://www.ibm.com/common/ssi/rep_ca/0/897/ENUS211-080/ENUS211-080.PDF

2.1 Basic Machine-Readable Material

The distribution medium for this program is magnetic tape 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 25 for more information about how to install the program.

You can find information about the physical tape for the basic machine-readable materials for CICS Transaction Server in the *CBPDO Memo To Users Extension*.

2.2 Optional Machine-Readable Material

No optional machine-readable materials are provided for CICS Transaction Server.

2.3 Program Publications

The following sections identify the basic and optional publications for CICS Transaction Server.

2.3.1 Basic Program Publications

Figure 1 identifies the basic unlicensed program publications for CICS Transaction Server. One copy of each of these publications is included when you order the basic materials for CICS Transaction Server. For additional copies, contact your IBM representative.

Publication Title	Form Number
CICS Transaction Server for z/OS Memo to Licensees	GI13-0569
CICS Transaction Server for z/OS v4.2: Licensed Program Specifications	GC34-7212

Figure 1 (Page 2 of 2). Basic Material: Unlicensed Publications

Publication Title	Form Number
CICS Deployment Assistant flyer	GI13-0557
CICS Technical Services Flyer	GI13-0546
CICS Information Centers Flyer	GI13-0570
Rational Developer for System z Promotional Flyer	GI13-0556

Note: Please refer to the Publications Center and Information Center to ensure that this document GI13-0565 is at the latest suffixed level. The Information Center can be found at the following URL :-

<http://www.ibm.com/software/htp/cics/library/indexes/infocenters.html>

The Publications Center can be found at the following URL :-

<http://www.ibm.com/shop/publications/order>

Figure 2 identifies the basic unlicensed or licensed publications that are not available in hardcopy format, but are available through the internet or other media for CICS Transaction Server.

Figure 2 (Page 1 of 4). Basic Material: Other Unlicensed or Licensed Publications

Publication Title	Form Number	How Available
CICS Transaction Server for z/OS V4.2: Application Programming Guide	SC34-7158-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: Application Programming Reference	SC34-7159-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: Business Transaction Services	SC34-7160-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: CICS DB2 Guide	SC34-7164-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: CICS IMS Database Control Guide	SC34-7170-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: CICS Intercommunication Guide	SC34-7172-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: CICS Problem Determination Guide	GC34-7178-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: CICS Shared Data Tables Guide	SC34-7182-00	Infocenter and Publications Center

Figure 2 (Page 2 of 4). Basic Material: Other Unlicensed or Licensed Publications

Publication Title	Form Number	How Available
CICS Transaction Server for z/OS V4.2: Customization Guide	SC34-7161-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: C++ OO Class Libraries	SC34-7162-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: Data Areas	GC34-7163-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: Debugging Tools Interfaces Reference	GC34-7165-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: Diagnosis Reference	GC34-7166-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: Distributed Transaction Programming Guide	SC34-7167-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: External Interfaces Guide	SC34-7168-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: Front End Programming Interface Guide	SC34-7169-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: Installation Guide	GC34-7171-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: Internet Guide	SC34-7173-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: Java Applications in CICS	SC34-7174-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: Messages and Codes Vol 1	GC34-7175-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: Messages and Codes Vol 2	GC34-7176-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: Operations and Utilities Guide	SC34-7213-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: Performance Guide	SC34-7177-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: Program Directory	GI13-0565-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: CICSplex SM Administration	SC34-7193-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: CICSplex SM Application Programming Guide	SC34-7194-00	Infocenter and Publications Center

Figure 2 (Page 3 of 4). Basic Material: Other Unlicensed or Licensed Publications

Publication Title	Form Number	How Available
CICS Transaction Server for z/OS V4.2: CICSplex SM Application Programming Reference	SC34-7195-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: CICSplex SM Concepts and Planning	SC34-7196-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: CICSplex SM Managing Business Applications	SC34-7197-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: CICSplex SM Managing Resource Usage	SC34-7198-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: CICSplex SM Managing Workloads	SC34-7199-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: CICSplex SM Messages and Codes	GC34-7201-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: CICSplex SM Monitor Views Reference	SC34-7200-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: CICSplex SM Operations Views Reference	SC34-7202-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: CICSplex SM Problem Determination Guide	GC34-7203-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: CICSplex SM Resource Tables Reference Vol 1	SC34-7204-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: CICSplex SM Resource Tables Reference Vol 2	SC34-7205-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: CICSplex SM Web User Interface Guide	SC34-7214-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: RACF Security Guide	SC34-7179-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: Recovery and Restart Guide	SC34-7180-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: Resource Definition Guide	SC34-7181-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: Supplied Transactions	SC34-7184-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: System Definition Guide	SC34-7185-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: System Programming Reference	SC34-7186-00	Infocenter and Publications Center

Figure 2 (Page 4 of 4). Basic Material: Other Unlicensed or Licensed Publications

Publication Title	Form Number	How Available
CICS Transaction Server for z/OS V4.2: Trace Entries	SC34-7187-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: Upgrading from Version 3.1	GC34-7188-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: Upgrading from Version 3.2	GC34-7189-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: Upgrading from Version 4.1	GC34-7190-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: Web Services Guide	SC34-7191-00	Infocenter and Publications Center
CICS Transaction Server for z/OS V4.2: What's new	GC34-7192-00	Infocenter and Publications Center

2.4 Program Source Materials

Customers with access to View Program Listings (VPL), such as through S/390 SoftwareXcel, can use the VPL facility for online viewing of available program listings. Customers without access to VPL can contact their IBM representative for available program listings.

2.5 Publications Useful During Installation

You might want to use the publications listed in Figure 3 during the installation of CICS Transaction Server. To order copies, contact your IBM representative or visit the IBM Publications Center at <http://www.ibm.com/shop/publications/order>

Figure 3 (Page 1 of 2). Publications Useful During Installation

Publication Title	Form Number
<i>IBM SMP/E for z/OS User's Guide</i>	SA22-7773
<i>IBM SMP/E for z/OS Commands</i>	SA22-7771
<i>IBM SMP/E for z/OS Reference</i>	SA22-7772
<i>IBM SMP/E for z/OS Messages, Codes, and Diagnosis</i>	GA22-7770
<i>z/OS UNIX System Services User's Guide</i>	SA22-7801
CICS Transaction Server for z/OS V4.2 Installation Guide	GC34-7171
CICS Transaction Server for z/OS V4.2 Information Center for Microsoft Windows	SK4T-2666

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

Publication Title	Form Number
CICS Transaction Server for z/OS V4.2 Information Center for AIX	SK4T-2664
CICS Transaction Server for z/OS V4.2 Information Center for Linux Intel	SK4T-2665
CICS Transaction Server for z/OS V4.2 Information Center for z/OS	SK4T-2667

3.0 Program Support

This section describes the IBM support available for CICS Transaction Server.

3.1 Program Services

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

3.2 Preventive Service Planning

Before you install CICS Transaction Server, make sure that you have reviewed the current Preventive Service Planning (PSP) information. The PSP Buckets maintain current lists (which have been identified since the package was created) of any recommended or required service for the installation of this package. This service includes software PSP information (identify specific bucket name for this package here) that contains HIPER and required PTFs against the base release.

If you obtained CICS Transaction Server as part of a CBPDO, HOLDDATA is included.

If the CBPDO for CICS Transaction Server is older than two weeks by the time you install the product, you should contact the IBM Support Center, use S/390 SoftwareXcel to obtain the current "PSP Bucket" or obtain the current PSP from the web at

<http://www14.software.ibm.com/webapp/set2/psearch/search?domain=psp>

For program support, access the Software Support Web site at **<http://www.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 CICS Transaction Server are shown as follows:

Figure 4 (Page 1 of 2). PSP Upgrade and Subset ID

UPGRADE	SUBSET	Description
CICSTS42	HCI6700	CICS TS Base
	JCI6701	COBOL Language Parts
	JCI6702	PL/I Language Parts
	JCI6703	C Language Parts and XPLINK
	JCI670D	IIOP/JAVA
	JCI670M	CICSplex System Manager
	JCI670W	WS-Security
	H0B5110	CICS REXX Runtime Facility

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

UPGRADE	SUBSET	Description
	H0B7110	CICS REXX Development System
	H0Z2110	CICS REXX Common for CICS/ESA
	HCIZ300	CICS Service Flow Runtime
	N/A	CICS Explorer Feature

3.3 Statement of Support Procedures

Report any problems which you feel might be an error in the product materials.

Figure 5 identifies the component IDs (COMPID) for CICS Transaction Server.

Figure 5. Component IDs

FMID	COMPID	Component Name	RETAIN Release
HCI6700	5655S9700	CICS TS Base	700
JCI6701	5655S9700	COBOL Language Parts	701
JCI6702	5655S9700	PL/I Language Parts	702
JCI6703	5655S9700	C Language Parts	703
JCI670D	5655S9700	IIO/JAVA	70D
JCI670M	5655S9700	CICSplex System Manager	70M
JCI670W	5655S9700	WS-Security	70W
H0B5110	565508700	CICS REXX Runtime Facility	110
H0B7110	565508600	CICS REXX Development System	110
H0Z2110	565511200	CICS REXX Common for CICS/ESA	110
HCIZ300	5655M1500	Service Flow Runtime	300
	5655S9701	CICS Explorer Feature	100

4.0 Program and Service Level Information

This section identifies the program and relevant service levels of CICS Transaction Server. 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

You can find the APARs against previous releases that have been incorporated into this release by going to: <http://www.ibm.com/support/docview.wss?uid=swg21495791>

4.2 Service Level Information

No PTFs against this release of CICS Transaction Server have been incorporated into the product tape.

It is highly recommended that you frequently check the CICS Transaction Server PSP Bucket for HIPER and SPECIAL Attention PTFs against all FMIDs that you must install.

5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing and activating CICS Transaction Server. The following terminology is used:

- *Driving system*: the system used to install the program; where SMP/E executes.
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 that is required to install CICS Transaction Server.

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 this product's shipment?
5694-A01	z/OS	V01.11 and above	OA32271 OA32611	No
5694-A01	z/OS	V01.12	OA34311	No

Note: Installation may require upgrading to new z/OS releases to be service supported.

5.2 Target System Requirements

This section describes the environment of the target system that is required to install and use CICS Transaction Server.

CICS Transaction Server installs in the CICS (C150) 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 by and *must* be present on the system or products that are not required by 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 7. Target System Mandatory Installation Requisites

Program Number	Product Name	Minimum VRM	Minimum Service Level will satisfy these APARs	Included in this product's shipment?
5694-A01	z/OS	V01.11 and above	N/A	No

Note: Installation may require upgrading to new z/OS releases to be service supported.

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.

CICS Transaction Server has no conditional installation requisites.

5.2.2.2 Operational Requisites: Operational requisites are products that are required by and *must* be present on the system or products that are not required by 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. These products are specified as PREs or REQs.

<i>Figure 8. Target System Mandatory Operational Requisites</i>	
Program Number	Product Name and Minimum VRM/Service Level
5694-A01	V01.11 and above

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.

The table below highlights the conditional operational requisites at the time of publishing. Please refer to the following web page for the latest prerequisite product information including APARs which need to be applied to these products: <http://www.ibm.com/support/docview.wss?uid=swg27020857>

<i>Figure 9 (Page 1 of 3). Target System Conditional Operational Requisites</i>		
Program Number	Product Name and Minimum VRM/Service Level	Function
5724-J08	WebSphere Application Server for z/OS 6.1 and future releases, mod levels and fix packs	Application Servers
5724-J08	WebSphere Application Server for z/OS 7.0 and future releases, mod levels and fix packs	Application Servers
5698-B06	Tivoli Decision Support for z/OS 1.8 and future releases, mod levels and fix packs	Case Resolution
5655-L82	WebSphere MQ for z/OS 6.0 and future releases, mod levels and fix packs	Collaborative
5655-R36	WebSphere MQ for z/OS 7.0 and future releases, mod levels and fix packs	Collaborative
5655-I05	CICS Online Transmission Time Optimizer 1.2 and future releases, mod levels and fix packs	Connectors

Figure 9 (Page 2 of 3). Target System Conditional Operational Requisites

Program Number	Product Name and Minimum VRM/Service Level	Function
5725-B65	CICS Transaction Gateway Desktop Edition 8.0 and future releases, mod levels and fix packs	Connectors
5724-I81	CICS Transaction Gateway for Multiplatforms 7.1 and future releases, mod levels and fix packs	Connectors
5655-W10	CICS Transaction Gateway for Multiplatforms 8.0 and future releases, mod levels and fix packs	Connectors
5655-R25	CICS Transaction Gateway for z/OS 7.1 and future releases, mod levels and fix packs	Connectors
5655-W10	CICS Transaction Gateway for z/OS 8.0 and future releases, mod levels and fix packs	Connectors
5724-J09	CICS Universal Client 7.1 and future releases, mod levels and fix packs	Connectors
5655-W47	File Manager for z/OS 11.1 and future releases, mod levels and fix packs	Database Administration
5679-I94	CICS Batch Application Control for z/OS V1.1.1 and future fix packs, mod levels and fix packs	Databases
5655-P30	CICS VSAM Recovery 4.3 and future fix packs All Applicable OS	Databases
5697-I76	CICS VSAM Transparency for z/OS 1.2 and future releases, mod levels and fix packs	Databases
5635-DB2	DB2 for z/OS 9.1 and future releases, mod levels and fix packs	Databases
5625-DB2	DB2 Universal Database for z/OS 8.1 and future releases, mod levels and fix packs	Databases
5605-DB2	DB2 for z/OS 10.1 and future releases, mod levels and fix packs	Databases
5635-A01	IMS 10 and future releases, mod levels and fix packs	Databases
5635-A02	IMS 11 and future releases, mod levels and fix packs	Databases
5697-Q03	Application Performance Analyzer for z/OS 11.1 and future releases, mod levels and fix packs	Development Tools
5697-P09	CICS Configuration Manager for z/OS 2.1 and future releases, mod levels and fix packs	Development Tools
5655-W48	CICS Deployment Assistant for z/OS 1.1 and future releases, mod levels and fix packs	Development Tools
5655-U86	CICS Interdependency Analyzer for z/OS 3.1 and future releases, mod levels and fix packs	Development Tools

Figure 9 (Page 3 of 3). Target System Conditional Operational Requisites

Program Number	Product Name and Minimum VRM/Service Level	Function
5655-U87	CICS Performance Analyzer for z/OS 3.2 and future fix packs	Development Tools
5655-W45	Debug Tool for z/OS 11.1 and future releases, mod levels and fix packs	Development Tools
5724-T07	Rational Developer for System z 7.5 and future releases, mod levels and fix packs	Development Tools
5724-T07	Rational Developer for System z 8.0.1 and future releases, mod levels and fix packs	Development Tools
5724-N72	WebSphere Service Registry and Repository v6.2 and future releases, mod levels and fix packs	Development Tools
5724-N72	WebSphere Service Registry and Repository v7.0 and future releases, mod levels and fix packs	Development Tools
5724-U90	WebSphere Business Events 6.1 and future releases, mod levels and fix packs	Event Management
5724-U90	WebSphere Business Events 7.0 and future releases, mod levels and fix packs	Event Management
5724-M24	WebSphere Business Monitor 6.1 and future releases, mod levels and fix packs	Event Management
5724-M24	WebSphere Business Monitor 7.0 and future releases, mod levels and fix packs	Event Management
5655-R32	IBM 64-bit SDK for z/OS, Java Technology Edition V6 Release 0 Modification 1	Java SDK
5655-G53	Enterprise COBOL for z/OS 3.4 and future releases, mod levels and fix packs	Programming Language
5655-S71	Enterprise COBOL for z/OS V4.1 and future releases, mod levels and fix packs	Programming Language
5655-H31	Enterprise PL/I for z/OS 3.7 and future releases, mod levels and fix packs	Programming Language
5655-W67	Enterprise PL/I for z/OS 4.1 and future releases, mod levels and fix packs	Programming Language
5696-234	IBM High Level Assembler for MVS, VM and VSE 1.6 w/HLASM for Linux for System z Feature 1.6 and future releases, mod levels and fix packs	Programming Language
5694-A01	z/OS XL C/C++ V1.11 and future releases, mod levels and fix packs	Programming Language
5655-J51	XML Toolkit for z/OS V1R10 and future releases, mod levels and fix packs	XML Toolkit

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.

CICS Transaction Server 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.

CICS Transaction Server has no negative requisites.

5.2.3 DASD Storage Requirements

CICS Transaction Server libraries can reside on all supported DASD types.

Figure 10 lists the total space that is required for each type of library.

<i>Figure 10. Total DASD Space Required by CICS Transaction Server</i>	
Library Type	Total Space Required in 3390 Trks
Target	17783
Distribution	7803
zFS	600

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.

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 may 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 may be changed.
- The default block size of the data set may be changed.
- The data set may be merged with another data set that has equivalent characteristics.
- The data set may be either a PDS or a PDSE.

5. All target libraries listed have the following attributes:

- These data sets can be SMS-managed, but 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 LPA, but they are not required to be in LPA.
- These data sets can be in the LNKLIST.
- These data sets are not required to be APF-authorized.

The following figures describe the target and distribution libraries and file system paths required to install CICS Transaction Server. The storage requirements of CICS Transaction Server must be added to the storage required by other programs having data in the same library or path.

Note: The data in these tables should be used when determining 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 11 (Page 1 of 3). Storage Requirements for CICS Transaction Server 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
SDFHINST	SAMP	ANY	U	PDS	FB	80	60	6
SDFHAPD1	SAMP	ANY	U	PDS	FB	38	15	1
SDFHAPD2	SAMP	ANY	U	PDS	FB	227	15	1

Figure 11 (Page 2 of 3). Storage Requirements for CICS Transaction Server 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
SDFHCLIB	SAMP	ANY	U	PDS	FB	80	15	1
SDFHENV	SAMP	ANY	U	PDS	V	30000	15	1
SDFHLANG	SAMP	ANY	U	PDS	FB	80	15	1
SDFHMAC	SAMP	ANY	U	PDS	FB	80	390	31
SDFHMLIB	SAMP	ANY	U	PDS	FB	80	15	2
SDFHMSG	SAMP	ANY	U	PDS	V	30646	345	1
SDFHMSRC	SAMP	ANY	U	PDS	FB	80	660	23
SDFHPARM	SAMP	ANY	U	PDS	FB	80	15	1
SDFHPLIB	SAMP	ANY	U	PDS	FB	80	15	2
SDFHPROC	SAMP	ANY	U	PDS	FB	80	30	3
SDFHSAMP	SAMP	ANY	U	PDS	FB	80	495	43
SDFHLINK	LMOD	ANY	U	PDS	U	0	900	6
SDFHLOAD	LMOD	ANY	U	PDS	U	0	1065	173
SDFHEXCI	LMOD	ANY	U	PDS	U	0	15	4
SDFHAUTH	LMOD	ANY	U	PDS	U	0	135	15
SDFHLPA	LMOD	ANY	U	PDS	U	0	5565	2
SDFHLLIB	LMOD	ANY	U	PDS	U	0	15	2
SDFHCOB	SAMP	ANY	U	PDS	FB	80	120	11
SDFHPL1	SAMP	ANY	U	PDS	FB	80	105	9
SDFHC370	SAMP	ANY	U	PDS	FB	80	135	12
SDFHSDCK	SAMP	ANY	U	PDS	FB	80	30	1
SDFJAUTH	LMOD	ANY	U	PDS/E	U	0	30	NA
SDFHDLL1	LMOD	ANY	U	PDS	U	0	15	1
SDFHWSLD	LMOD	ANY	U	PDS/E	U	0	135	NA
SDFHWSSX	SAMP	ANY	U	PDS	FB	80	15	1
SEYUVIEW	SAMP	ANY	U	PDS/E	VB	32000	375	NA
SEYUCLIB	SAMP	ANY	U	PDS	FB	80	15	1
SEYUCOB	SAMP	ANY	U	PDS	FB	80	285	58
SEYUC370	SAMP	ANY	U	PDS	FB	80	240	58

Figure 11 (Page 3 of 3). Storage Requirements for CICS Transaction Server 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
SEYUDEF	SAMP	ANY	U	PDS	FB	80	15	1
SEYUMAC	SAMP	ANY	U	PDS	FB	80	225	58
SEYUPARM	SAMP	ANY	U	PDS	FB	80	15	1
SEYUPL1	SAMP	ANY	U	PDS	FB	80	255	58
SEYUPROC	SAMP	ANY	U	PDS	FB	80	15	1
SEYUSAMP	SAMP	ANY	U	PDS	FB	80	45	3
SEYULOAD	LMOD	ANY	U	PDS	U	0	1395	39
SEYUAUTH	LMOD	ANY	U	PDS	U	0	285	7
SEYULINK	LMOD	ANY	U	PDS	U	0	120	2
SEYULPA	LMOD	ANY	U	PDS	U	0	3975	1
SCICJCL	SAMP	ANY	U	PDS	FB	80	7	3
SCICLOAD	LMOD	ANY	U	PDS	U	0	57	3
SCICPNL	SAMP	ANY	U	PDS	FB	80	2	2
SCICDBRM	SAMP	ANY	U	PDS	FB	80	2	2
SCICBOOK	SAMP	ANY	U	PDS	FB	4096	21	2
SCICDOC	SAMP	ANY	U	PDS	VB	8192	91	2
SCICCMDS	SAMP	ANY	U	PDS	VB	255	2	2
SCICEXEC	SAMP	ANY	U	PDS	VB	255	3	2
SCICUSER	SAMP	ANY	U	PDS	VB	255	4	2
SCIZINST	SAMP	ANY	U	PDS	FB	80	3	2
SCIZMAC	SAMP	ANY	U	PDS	FB	80	33	8
SCIZSAMP	SAMP	ANY	U	PDS	FB	80	15	4
SCIZLOAD	LMOD	ANY	U	PDS	U	0	38	5

Figure 12. CICS Transaction Server File System Paths

DDNAME	T Y P E	Path Name
SDFHH001	N	/usr/lpp/cicsts/@ussdir@/IBM

Figure 13 (Page 1 of 2). Storage Requirements for CICS Transaction Server 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
ADFHINST	U	PDS	FB	80	60	6
ADFHMOD	U	PDS	U	0	1365	682
ADFHAPD1	U	PDS	FB	38	15	1
ADFHAPD2	U	PDS	FB	227	15	1
ADFHCLIB	U	PDS	FB	80	15	1
ADFHENV	U	PDS	V	30000	15	1
ADFHLANG	U	PDS	FB	80	15	1
ADFHMAC	U	PDS	FB	80	390	31
ADFHMLIB	U	PDS	FB	80	15	2
ADFHMSG	U	PDS	V	30646	345	1
ADFHMSRC	U	PDS	FB	80	660	23
ADFHPARM	U	PDS	FB	80	15	1
ADFHPLIB	U	PDS	FB	80	15	2
ADFHPROC	U	PDS	FB	80	30	3
ADFHSAMP	U	PDS	FB	80	495	43
ADFHCOB	U	PDS	FB	80	120	11
ADFHPL1	U	PDS	FB	80	105	9
ADFJMOD	U	PDS/E	U	0	45	NA
ADFHC370	U	PDS	FB	80	135	12
ADFHSDCK	U	PDS	FB	80	30	1
ADFHH001	U	PDS	V	32000	810	23
ADFHMOD2	U	PDS/E	U	0	165	NA
AEYUMOD	U	PDS	U	0	1635	914
AEYUVIEW	U	PDS/E	VB	32000	375	NA
AEYUCLIB	U	PDS	FB	80	15	1
AEYUCOB	U	PDS	FB	80	285	58
AEYUC370	U	PDS	FB	80	240	58
AEYUDEF	U	PDS	FB	80	15	1
AEYUMAC	U	PDS	FB	80	225	58

Figure 13 (Page 2 of 2). Storage Requirements for CICS Transaction Server 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
AEYUPARM	U	PDS	FB	80	15	1
AEYUPL1	U	PDS	FB	80	255	58
AEYUPROC	U	PDS	FB	80	15	1
AEYUSAMP	U	PDS	FB	80	45	3
ACICRMOD	U	PDS	U	0	2	2
ACICJCL	U	PDS	FB	80	7	3
ACICMOD	U	PDS	U	0	43	32
ACICPNL	U	PDS	FB	80	2	2
ACICDBRM	U	PDS	FB	80	2	2
ACICBOOK	U	PDS	FB	4096	21	2
ACICDOC	U	PDS	VB	8192	91	2
ACICCMDS	U	PDS	VB	255	2	2
ACICEXEC	U	PDS	VB	255	3	2
ACICUSER	U	PDS	VB	255	3	2
ACICDMOD	U	PDS	U	0	2	2
ACICDUSR	U	PDS	VB	255	3	2
ACIZINST	U	PDS	FB	80	3	2
ACIZMOD	U	PDS	U	0	21	6
ACIZMAC	U	PDS	FB	80	33	8
ACIZSAMP	U	PDS	FB	80	15	4

5.3 FMIDs Deleted

Installing CICS Transaction Server 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 CICS Transaction Server 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, see the SMP/E manuals for instructions.

5.4 Special Considerations

For this release the Java level has changed to V6.0.1. Please remember this if using DFHISTAR.

You have a choice of installation methods:

- DFHISTAR when coded and run will generate the install jobs and some post install jobs for you. DFHIHELP contains documentation to assist the coding of DFHISTAR.
- The standard method of install whereby those sample installation jobs listed in Figure 17 are each edited and submitted in turn.

5.4.1 The CICS Explorer

The CICS Explorer - "the new face of CICS" - is a systems management tool framework for CICS, providing an intuitive, easy-to-use way of managing one or more CICS regions. The CICS Explorer supports all of the new function in the release. It can act as a point of integration for CICS tools, whether developed by IBM, business partners, or customers. The CICS Explorer Software Development Kit (SDK) is also available to create, extend and integrate software tools as plug-ins to the Explorer framework.

Please refer to the following web page for details of the System Requirements for CICS Explorer:

<http://www.ibm.com/software/htp/cics/explorer/requirements/>

5.4.1.1 Availability: Customers can download and use a fully featured version of the CICS Explorer and a selection of plug-ins for CICS tools products. Further information can be found at **<http://www.ibm.com/cics/explorer/>**

5.4.1.2 Service and Support: For details on getting started with CICS Explorer, visit **<http://www.ibm.com/support/docview.wss?uid=swg21399558>**

For details on the latest version of CICS Explorer, and CICS tools plug-ins for CICS Explorer, visit **<http://www.ibm.com/support/docview.wss?uid=swg21404312>**

For details on ordering maintenance for CICS Explorer, and CICS tools plug-ins for CICS Explorer, visit **<http://www.ibm.com/support/docview.wss?uid=swg21380083>**

6.0 Installation Instructions

This chapter describes the installation method and the step-by-step procedures to install and to activate the functions of CICS Transaction Server.

Please note the following:

- 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.
- You can use the SMP/E manuals when working with the sample jobs for information about creating and initializing the SMPCSI and SMP/E control data sets.

6.1 Installing CICS Transaction Server

6.1.1 SMP/E Considerations for Installing CICS Transaction Server

Use the SMP/E RECEIVE, APPLY, and ACCEPT commands to install this release of CICS Transaction Server.

6.1.2 SMP/E Options Subentry Values

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

Subentry	Value	Comment
DSSPACE	3130,950,733	The space used if SMP/E allocates the RELFILE data sets
PEMAX	SMP/E Default	IBM recommends using the SMP/E default for PEMAX.
Binder return code	4	IBM recommends using a minimum return code of 4 for the binder.

6.1.3 SMP/E CALLLIBS Processing

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

- CSSLIB
- MACLIB
- MODGEN
- SCEELKED
- SCEELKEX
- SCEEBND2
- SCEEOBJ
- SCEECPP
- SCLBSID
- SCSFMOD0
- SDSNLOAD
- SEZARPCL
- SEZACMTX
- SISPLOAD

Note: CALLLIBs use the previous DDDEFs only to resolve the link-edit for CICS Transaction Server. These data sets are not updated during the installation of CICS Transaction Server.

6.1.4 Sample Jobs

The following sample installation jobs are provided as part of the product to help you install CICS Transaction Server:

Figure 15 (Page 1 of 2). Sample Installation Jobs

Job Name	Job Type	Description	RELFILE
DFHIHFS0		Sample job to create zFS data set and directory	IBM.HCI6700.F2
DFHIHFS1		Sample job to create and mount zFS directory	IBM.HCI6700.F2
DFHISMKD	MKDIR	Sample job to invoke the supplied DFHMKDIR EXEC to allocate zFS paths	IBM.HCI6700.F2
DFHALLOC	ALLOCATE	Sample job to allocate target and distribution libraries	IBM.HCI6700.F2
DFHSMPSU	ZONES	Sample job to setup SMP/E zones	IBM.HCI6700.F2
DFHDDDEF	DDDEF	Sample job to create DDDEF entries for Target and Distribution libraries	IBM.HCI6700.F2
DFHRECV	RECEIVE	Sample RECEIVE job from tape	IBM.HCI6700.F2
DFHRECVE	RECEIVE	Sample RECEIVE job from DASD	IBM.HCI6700.F2
DFHAPPLY	APPLY	Sample APPLY job	IBM.HCI6700.F2

Figure 15 (Page 2 of 2). Sample Installation Jobs

Job Name	Job Type	Description	RELFILE
DFHACCTP	ACCEPT	Sample ACCEPT job	IBM.HCI6700.F2

You can access the sample installation jobs by performing an SMP/E RECEIVE and then copying the jobs from the relfiles to a work data set for editing and submission. See Figure 15 on page 26 to find the appropriate relfile data set.

There are two installation methods provided, the first follows the IBM Corporate Standards. However, some users may be familiar with DFHISTAR and this method is still available. For more information on DFHISTAR refer to member DFHIHELP in data set 'IBM.HCI6700.F2' or refer to the "Installing CICS TS using DFHISTAR" section of the CICS Transaction Server Installation Guide.

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=*
//TAPEIN DD DSN=IBM.HCI6700.F2,UNIT=tunit,
// VOL=SER=volser,LABEL=(x,SL),
// DISP=(OLD,KEEP)
//FILEIN DD DSN=IBM.HCI6700.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,(750,750,750))
//SYSUT3 DD UNIT=SYSALLDA,SPACE=(TRK,(15,15))
//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 tape.

volser is the volume serial that matches the product tape.

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.HCI6700.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.

6.2 Run the installation Jobs

OMVS requirement

Before running the installation jobs:

- Ensure the MVS image was IPLed with OMVS in full-function mode.
- Ensure the user ID under which you are running the jobs has superuser authority.

Installation method choice

You must now choose which installation method to use:

- The traditional method which is documented below.
- The DFHISTAR method which will code all your install and post install JCL for you. Documentation for this can be found in SDFHINST member DFHIHELP.

Note: If you wish to install into a non-SMS managed environment add the appropriate STORCLAS parameter to the sample JCL.

This section describes the CICS Transaction Server installation jobs, and gives considerations that may affect how you use them.

The CICS Transaction Server jobs are in the library you created as a result of copying the installation file from the distribution tape

These jobs should be run one at a time. Before you run a job, read the information about it (starting in topic DFHIHFS0 on page 29).

After you have run a job, check its output before proceeding to the next job. If a job terminates abnormally, find out why it failed (the job log lists the error messages produced on each run). Correct the error, and then proceed as advised in the job description. In any case, do not attempt to run the next job until the previous job has run successfully.

All references below to 'zFS data set' means the data set created by the jobs for use within the z/OS UNIX File System.

6.2.1.1 The DFHIHFS0 Job:

creates a directory (/usr/lpp/cicsts) that is used as a parent directory for the zFS mounts required for each CICS release. This directory and mount is only ever created once for all CICS releases, and if the directory currently exists the job should not be run. The follow up job DFHIHFS1 creates a release specific zFS mounted in this directory for this release of CICS.

This job

- Creates the cicsts directory at /usr/lpp
- Mounts the zFS at directory /usr/lpp/cicsts
- Changes the permission settings for the /usr/lpp/cicsts directory to:
 - Owner=RWX
 - Group=RWX
 - Other=R-X

(In octal form: 775)

Where:

- R equates to Read
- W equates to Write
- X equates to Execute
- - equates to no permission

Notes:

1. **DFHIHFS0 only ever needs to be run once.**
2. RACF ALTER ACCESS to the zFS data sets must be granted before running this DFHIHFS0.
3. The /usr/lpp/cicsts directory contains only directories, each being a mount point.
4. CICS requires the MOUNT issued by DFHIHFS0 to access files stored in the zFS, but the MOUNT command is lost when you re-IPL MVS. SDFHINST member DFHBPXP0 contains a MOUNT command for /usr/lpp/cicsts. Copy this command into a BPXPRMxx member of the SYS1.PARMLIB data set to ensure the mount is restored when MVS is IPLed.
5. All steps of DFHIHFS0 must end with return code zero for the job to be successful.

6.2.1.2 The DFHIHFS1 Job:

creates a release specific zFS mounted in `/usr/lpp/cicsts` for this release of CICS. It

- Unmounts the zFS at directory `/usr/lpp/cicsts/ussdir` to allow the job to be rerun, and if necessary forces return code zero.
- Deletes from `/usr/lpp/cicsts` the directory defined by the `ussdir` parameter. This is to allow the job to rerun, and if necessary forces return code zero.
- Deletes the zFS specified in the `@hfs1dsn@` variable to allow the job to rerun, and if necessary forces return code zero.
- Creates the zFS specified by the `@hfs1dsn@` variable
- Creates the `ussdir` directory at `/usr/lpp/cicsts`, where `ussdir` is the name of the directory specified on the `ussdir` parameter.
- Mounts the zFS at directory `/usr/lpp/cicsts/ussdir`
- Changes the permission settings for the `ussdir` directory to 775.

All steps of DFHIHFS1 must end with return code zero for the job to be successful.

CICS requires the MOUNT issued by DFHIHFS1 to access files stored in the zFS, but the MOUNT command is lost when you re-IPL MVS. SDFHINST member DFHBXP1 contains a MOUNT command for `/usr/lpp/cicsts/ussdir`. Copy this command into a BPXPRMxx member of the SYS1.PARMLIB dataset to ensure the mount is restored when MVS is IPLed.

6.2.1.3 The DFHISMKD Job:

This job creates the directories in zFS.

The highest expected return code is 0.

Note: If you chose not to run DFHISTAR then you will need to code and run DFHIJVMS to populate these directories. Please follow the instructions provided within the job comments.

6.2.1.4 The DFHALLOC Job:

This job allocates and catalogs CICS Transaction Server distribution and target libraries.

To ensure that this job can be rerun, it deletes (and uncatalogs) the data sets that are allocated in the second step of the job.

If the DFHALLOC job terminates abnormally, examine the job log to determine the cause, correct the problem, then rerun the job.

The highest expected return code is 0.

6.2.1.5 The DFHSMPSU Job: This job sets up the SMP/E zones.

Note : Only run this job if you are installing CICS Transaction Server into its own zone.

Edit and submit the sample job DFHSMPSU to set up the zones for CICS Transaction Server. Consult the instructions in the sample job for more information.

The highest expected return code is 0.

6.2.1.6 The DFHDDDEF Job: This job creates DDDEF entries for the SMP/E target, and distribution zones.

If the DFHDDDEF job terminates abnormally, examine the job log to determine the cause, correct the problem, then re-run DFHDDDEF

The highest expected return code is 0, if you install into new zones and 8 if you are installing into existing zones.

Before you run the DFHDDDEF job

- If you have a DB2 SDSNLOAD library on your system, replace @DSNLOAD@ with the dataset name.
- If you do not have DB2 on your system, replace @DSNLOAD@ with the name of the SDFHLOAD dataset for this install, which contains a DB2 stub.

If installing from the download site, use the DFHRECVE job instead of the DFHRECV job.

6.2.1.7 The DFHRECV Job: This job RECEIVES the CICS Transaction Server software into the global zone.

It is the only installation job (apart from the initial IEBCOPY job) that requires the distribution tape to be mounted.

If the DFHRECV job terminates abnormally, examine the job log to determine the cause, correct the problem, then re-run DFHRECV.

The highest expected return code is 0.

6.2.1.8 The DFHRECVE Job: This job RECEIVES the CICS Transaction Server software from DASD into the global zone.

If the DFHRECVE job terminates abnormally, examine the job log to determine the cause, correct the problem, then re-run DFHRECVE.

The highest expected return code is 0.

6.2.1.9 The DFHAPPLY Job: This job performs the SMP/E APPLY function needed to install CICS Transaction Server into the target libraries.

Before you run the DFHAPPLY job

- **DFHAPPLY must be run on the same MVS image on which the zFS is installed.**

If you have modified the other installation jobs (for example, to use existing libraries and therefore existing target and distribution zones) consider splitting the DFHAPPLY job to do APPLY CHECK, APPLY) functions as two separate jobs.

The region size for the DFHAPPLY job is currently set to 'REGION=0M'. This is because this job requires more memory than the other install jobs. You might need to adjust your JES parameters (for example, with a JES2 /*JOBPARM LINES=99 statement) to avoid a system abend 722.

This job gives a return code of 4 or less when all is well. (See the “GIM23903W - LINK SUCCESSFUL . . .” message, listed in the report that is output by the apply job.) DFHAPPLY job may issue messages GIM23903W and GIM23913W depending on the execution environment of the installer. Both these messages are acceptable.

The binder produces IEW2454W messages during the APPLY stage for unresolved external references while some CICS Transaction Server load modules are being link-edited during installation, giving return code 4. You may also receive numerous IEW2646W and IEW2651W messages, which are conflicts with user-specified RMODE and AMODEs respectively. You can ignore these IEWxxxx messages, which are output for component object modules of executable CICS Transaction Server load modules.

Messages IEW2689W, IEW2470E, IEW2648E and IEW2303E might be displayed, and can also be ignored.

When you have run the DFHAPPLY job, you should see the following SMP/E message in the output from the job:

```
GIM20502I GIMSMP PROCESSING IS COMPLETE - THE HIGHEST RETURN CODE WAS 0
```

This SMP/E message can be ignored.

If any other SMP/E messages appear, see the *SMP/E: Messages and Codes* manual for guidance information about their meaning, and take the appropriate action.

If the DFHAPPLY job terminates abnormally, examine the job log to determine the cause, correct the problem, then re-run DFHAPPLY.

Note: If the DFHAPPLY job fails and you are using an existing global zone you must first REJECT the CICS Transaction Server base-level function SYSMOD before rerunning the DFHALLOC job. When you rerun the installation jobs, some steps that were successfully completed in the previous run will produce return codes with a value of '8'.

Enhanced HOLDDATA introduced ERROR HOLDS against FMIDs for HIPER APARs. Prior to installing, ensure you have the latest Enhanced HOLDDATA (available at <http://service.software.ibm.com/holdata/390holddata.html>). Install the FMIDs, ignoring the status of unresolved HIPER APARs. However, do not install the software until you have analyzed the unresolved APARs apply to your installation.

There are two methods to complete an FMID installation where ++HOLDS for HIPERs exist for the FMID(s) being installed:

1. To ensure that all recommended and critical service is installed with the FMID(s), add the SOURCEIDs of PRP, HIPER, and RSU* to the APPLY command. There may be PE or HIPER APARs that do not have resolving PTFs available yet. You need to analyze the symptom flags to determine if you want to BYPASS the specific ERROR HOLDS and continue the FMID installation.

```
APPLY S(fmid,fmid,...)
FORFMID(fmid,fmid,...)
SOURCEID(PRP,HIPER,RSU*,...)
GROUPEXTEND .
```

This method requires more initial research, but will provide resolution for all HIPERs that have fixes available and are not in a PE chain. There may still be unresolved PEs or HIPERs which will require the use of BYPASS.

2. To install the FMID(s) as it would have been installed prior to Enhanced HOLDDATA, you can add a BYPASS(HOLDCLASS(HIPER)) operand to the APPLY command. This will allow the FMID to be installed even though there are HIPER ERROR HOLDS against it. Note that not all ERROR HOLDS were bypassed, only the HIPER ERROR HOLDS. After the FMID(s) are installed, the SMP/E REPORT ERRSYSMODS command should be run to identify any missing HIPER maintenance.

```
APPLY S(fmid,fmid,...)
FORFMID(fmid,fmid,...)
SOURCEID(RSU*)
GROUPEXTEND
BYPASS(HOLDCLASS(HIPER)) .
other parameters documented in the program directory...
```

This method is the quicker of the two, but requires subsequent review of the REPORT ERRSYSMODS to investigate any HIPERs.

If you bypass any HOLDS during the installation of the FMID(s) because fixing PTFs were not yet available you can use the APAR Status Tracking (AST) function of ServiceLink or the APAR Tracking function of Resource Link to be notified when the fixing PTF is available.

Once you have taken any actions 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 apply all requisite SYSMODs. The requisite SYSMODS might be applicable to other functions.

Expected Return Codes and Messages from APPLY CHECK: 0

Expected Return Codes and Messages from APPLY: 4

Note!

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

6.2.1.10 The DFHACCPT Job This job performs the SMP/E ACCEPT function needed to install CICS Transaction Server into the distribution libraries.

Before you run the DFHACCPT job

- **DFHACCPT must be run on the same MVS image on which the zFS is installed.**

If you have modified the other installation jobs (for example, to use existing libraries and therefore existing target and distribution zones) consider splitting the DFHACCPT job to do ACCEPT CHECK and ACCEPT function as two separate jobs.

The region size for the DFHACCPT job is currently set to 'REGION=0M'. This is because this job requires more memory than the other install jobs. You may need to adjust your JES parameters (for example, with a JES2 /*JOBPARM LINES=99 statement) to avoid a system abend 722.

This job gives a return code of 0 when all is well. (See the “GIM23903W - LINK SUCCESSFUL . . .” message, listed in the report that is output by the apply job.) DFHACCPT job may issue messages GIM23903W and GIM23913W depending on the execution environment of the installer. Both these messages are acceptable.

If the DFHACCPT job terminates abnormally, examine the job log to determine the cause, correct the problem, then re-run DFHACCPT.

Note: If the DFHACCPT job fails and you are using an existing global zone you must first RESTORE the CICS Transaction Server base-level function SYSMOD before rerunning the DFHALLOC job. When you rerun the installation jobs, some steps that were successfully completed in the previous run will produce return codes with a value of '8'.

To receive the full benefit of the SMP/E Causer SYSMOD Summary Report, do *not* bypass the following on the ACCEPT CHECK: PRE, ID, REQ, and IFREQ. This is because the SMP/E root cause analysis identifies the cause only of **ERRORS** and not of **WARNINGS** (SYSMODs that are bypassed are treated as warnings, not errors, by SMP/E).

Before using SMP/E to load new distribution libraries, it is recommended that you set the ACCJCLIN indicator in the distribution zone. This will cause entries produced from JCLIN to be saved in the distribution zone whenever a SYSMOD containing inline JCLIN is ACCEPTed. For more information on the ACCJCLIN indicator, see the description of inline JCLIN in the SMP/E manuals.

Once you have taken any actions 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 accept all requisite SYSMODs. The requisite SYSMODS might be applicable to other functions.

Expected Return Codes and Messages from ACCEPT CHECK:

If PTFs containing replacement modules are being ACCEPTed, SMP/E ACCEPT processing will link-edit/bind the modules into the distribution libraries. During this processing, the Linkage Editor or Binder may issue messages documenting unresolved external references, resulting in a return code of 4 from the ACCEPT step. These messages can be ignored, because the distribution libraries are not executable and the unresolved external references will not affect the executable system libraries.

Expected Return Codes and Messages from ACCEPT: 0

6.2.2 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 CICS Transaction Server, 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.

6.3 Activating CICS Transaction Server

After you have loaded CICS Transaction Server to disk, you should perform the steps, described in the CICS Transaction Server for z/OS Installation Guide, GC34-7171

CICS Transaction Server is fully operational after the SMP/E installation is completed.

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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Program Directory for CICS Transaction Server for z/OS, June 2011

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Ease of product installation	1	2	3	4	5	N
Contents of Program Directory	1	2	3	4	5	N
Installation Verification Programs	1	2	3	4	5	N
Time to install the product	1	2	3	4	5	N
Readability and organization of Program Directory tasks	1	2	3	4	5	N
Necessity of all installation tasks	1	2	3	4	5	N
Accuracy of the definition of the installation tasks	1	2	3	4	5	N
Technical level of the installation tasks	1	2	3	4	5	N
Ease of getting the system into production after installation	1	2	3	4	5	N

How did you order this product?

- CBPDO
- CustomPac
- ServerPac
- Independent
- Other

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- Yes
- No

Were the people who did the installation experienced with the installation of z/OS products?

- Yes

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Printed in USA

G113-0565-00

