

TXSeries for Multiplatforms



# Installation Guide

*Version 6.2*



TXSeries for Multiplatforms



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*Version 6.2*

**Note**

Before using this information and the product it supports, be sure to read the general information under "Notices" on page 49.

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## About this book

Before using this book, you should look first at the *TXSeries for Multiplatforms Release Notes* for the latest information about TXSeries® for Multiplatforms and its documentation library.

This book describes how to install and configure TXSeries for Multiplatforms software on your operating system.

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## Who should read this book

This book is intended for TXSeries for Multiplatforms administrators who are familiar with the chosen operating system.

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## Document organization

- Chapter 1, “Introduction to TXSeries for Multiplatforms,” on page 1 introduces the TXSeries for Multiplatforms product and explains how to use this document.
- Chapter 2, “CICS prerequisites and supported locales,” on page 3 describes the hardware and software prerequisites for TXSeries for Multiplatforms, and provides a list of locales that CICS® supports.
- Chapter 3, “Installing CICS,” on page 9 describes how to install CICS for the first time from the TXSeries for Multiplatforms software CD-ROM.
- Chapter 4, “Using silent installation for CICS,” on page 13 describes how to install CICS silently.
- Chapter 5, “Configuring and starting your CICS region,” on page 15 describes how to configure and start a CICS region and the file manager that the region uses for queue management.
- Chapter 6, “Running the CICS Installation Verification Program,” on page 19 describes how to use the CICS Installation Verification Program (IVP) to determine whether a CICS region is running correctly and whether CICS applications can be successfully developed on a machine.
- Chapter 7, “Installing and uninstalling interim service fixes,” on page 27 describes how to install and uninstall interim service fixes.
- Chapter 8, “Migrating to TXSeries for Multiplatforms Version 6.2 from an earlier version,” on page 31 describes what you need to consider when migrating to TXSeries for Multiplatforms Version 6.2 from an earlier version of TXSeries for Multiplatforms.
- Chapter 9, “Uninstalling CICS,” on page 39 describes how to stop and unconfigure CICS, and remove CICS software from a machine.
- Appendix A, “Obtaining additional information,” on page 41 lists all the TXSeries for Multiplatforms documentation that is available. It also describes how to install and view the TXSeries for Multiplatforms online documentation.
- Appendix B, “The CICS directory structure,” on page 45 describes the CICS directory structure that is created when you install CICS.

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## Conventions used in this book

TXSeries for Multiplatforms documentation uses the following typographical and keying conventions.

Table 1. Conventions that are used in this book

Convention	Meaning
<b>Bold</b>	Indicates values that you must use literally, such as commands, functions, and resource definition attributes and their values. When referring to graphical user interfaces (GUIs), bold also indicates menus, menu items, labels, buttons, icons, and folders.
Monospace	Indicates text that you must enter at a command prompt. Monospace also indicates screen text and code examples.
<i>Italics</i>	Indicates variable values that you must provide (for example, you supply the name of a file for <i>file_name</i> ). Italics also indicates emphasis and the titles of books.
< >	Encloses the names of keys on the keyboard.
<Ctrl-x>	Where x is the name of a key, indicates a control-character sequence. For example, <Ctrl-c> means hold down the <b>Ctrl</b> key while you press the <b>c</b> key.
<Return>	Refers to the key labeled with the word Return, the word Enter, or the left arrow.
%	Represents the UNIX <sup>®</sup> command-shell prompt for a command that does not require <b>root</b> privileges.
#	Represents the UNIX command-shell prompt for a command that requires <b>root</b> privileges.
C:\>	Represents the Windows <sup>®</sup> command prompt.
>	When used to describe a menu, shows a series of menu selections. For example, "Select <b>File &gt; New</b> " means "From the <b>File</b> menu, select the <b>New</b> command."
Entering commands	When instructed to "enter" or "issue" a command, type the command and then press <Return>. For example, the instruction "Enter the <b>ls</b> command" means type <b>ls</b> at a command prompt and then press <Return>.
[ ]	Encloses optional items in syntax descriptions.
{ }	Encloses lists from which you must choose an item in syntax descriptions.
	Separates items in a list of choices enclosed in { } (braces) in syntax descriptions.
...	Ellipses in syntax descriptions indicate that you can repeat the preceding item one or more times. Ellipses in examples indicate that information was omitted from the example for the sake of brevity.
IN	In function descriptions, indicates parameters whose values are used to pass data to the function. These parameters are not used to return modified data to the calling routine. (Do <i>not</i> include the IN declaration in your code.)
OUT	In function descriptions, indicates parameters whose values are used to return modified data to the calling routine. These parameters are not used to pass data to the function. (Do <i>not</i> include the OUT declaration in your code.)

Table 1. Conventions that are used in this book (continued)

Convention	Meaning
INOUT	In function descriptions, indicates parameters whose values are passed to the function, modified by the function, and returned to the calling routine. These parameters serve as both IN and OUT parameters. (Do <i>not</i> include the INOUT declaration in your code.)
\$CICS	Indicates the full path name of the location in which the CICS product is installed; for example, <b>/usr/lpp/cics</b> on AIX®. If the CICS environment variable is set to the product path name, you can use the examples exactly as shown in this book; otherwise, you must replace all instances of \$CICS with the CICS product path name.
CICS on Open Systems	Refers collectively to the CICS product for all supported UNIX platforms.
TXSeries for Multiplatforms	Refers collectively to the CICS for AIX, CICS for HP-UX (HP-UX PA-RISC and HP-UX IPF), CICS for Solaris, and CICS for Windows products.
CICS	Refers generically to the CICS for AIX, CICS for HP-UX, CICS for Solaris, and CICS for Windows products. Other CICS products in the CICS Family are distinguished by their operating system (for example, IBM® mainframe-based CICS for the z/OS® platform).

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## How to send your comments

Your feedback is important. It helps IBM provide the most accurate and highest quality information. If you have any comments about this book or any other TXSeries for Multiplatforms documentation, send your comments by e-mail to [idrcf@hursley.ibm.com](mailto:idrcf@hursley.ibm.com). Be sure to include the name of the book, the document number of the book, the version of TXSeries for Multiplatforms and, if applicable, the specific location of the information you are commenting on (for example, a page number or table number).



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## Chapter 1. Introduction to TXSeries for Multiplatforms

TXSeries for Multiplatforms is a general-purpose online transaction-processing software that handles security, data integrity, and resource scheduling. CICS integrates the basic business software services that online transaction processing applications require.

An instance of a CICS system is called a CICS *region*. A region contains multiple processes, but it is configured and administered as a single unit, and it controls a common set of resources.

Each user's interaction with a CICS region involves one or more transactions. In CICS terms, a *transaction* is a basic operation that is offered to the user. For example, a banking application can include a query transaction, a debit transaction, and so on. The transactions that make up an application are written by CICS application developers. When a user selects a particular transaction, CICS schedules that transaction to run in an *application server*. The CICS region monitors the progress of the transaction, and serves its requests for data, communications, and other resources. When the transaction is completed, the CICS region commits any data changes, and frees resources for other transactions to use.

The typical user interface to a CICS application is through a CICS Universal Client or a CICS Transaction Gateway.

**Note:** CICS Universal Client is not installed as part of TXSeries installation. You must install it manually from the CD-ROM available in the TXSeries media pack.

A CICS region uses a *file manager* to store system and user files and queues. A file manager can be either a Structured File Server (SFS) server, or a Relational Database Manager (RDBM) such as IBM DB2 Universal Database™ (DB2®). An SFS server is a recoverable server that manages access to data that is stored in record-oriented files. It provides transactional integrity and flexible storage management. An RDBM manages access to data that is stored in a database. It provides services and utilities for managing recovery, sharing, and distribution of the data.

---

### How to use this document

This document describes:

- How to install TXSeries for Multiplatforms.
- How to configure a basic TXSeries for Multiplatforms system, using the default settings supplied with CICS.
- How to use CICS commands to start your region, client, and SFS file manager.
- How to uninstall TXSeries for Multiplatforms.

### What you need to know before you start

Before you start your installation, you should have read the following documents:

- *TXSeries for Multiplatforms Release Notes* for the latest information about TXSeries for Multiplatforms and its documentation library.
- *TXSeries for Multiplatforms Concepts and Planning* for information about the different options for configuring CICS, and the supported file managers (optional).

When you have completed the instructions in this document, you will have installed, configured, and tested a basic TXSeries for Multiplatforms system with the CICS Structured File Server (SFS) file manager. If you require a more advanced configuration (for example, if you want to use DB2 or Oracle as your file manager), you will be directed to instructions that describe how to add this to your system.

---

## Chapter 2. CICS prerequisites and supported locales

This chapter describes the hardware and software requirements for the installation of TXSeries for Multiplatforms, and the supported locales, for the supported platforms.

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### Hardware prerequisites

The following sections describe the disk space requirements for TXSeries for Multiplatforms.

### Disk space requirements

CICS requires disk space for installation, and it requires additional disk space when it is configured and run. The default file manager for CICS is the CICS Structured File Server (SFS), which is installed by default. If you want to run a Structured File Server (SFS) on this machine, you must allocate disk space for the log and data volumes that the SFS uses.

The following sections summarize CICS disk space requirements:

- “Disk space for installing CICS” describes the disk space requirements for installing CICS.
- “Disk space for configuring and running CICS” on page 4 describes the disk space requirements for configuring and running CICS.
- “Disk space for SFS server volumes and log archive files” on page 4 describes the disk space that is required for you to run an SFS server.

### Disk space for installing CICS

The disk space required to install CICS must be available in the installation directory (shown in Table 2), where CICS binaries, libraries, messages, and associated files are installed.

Table 2. Location for CICS installation

Platform	Installation directory
AIX	/usr/lpp/cics
HP-UX	/opt/cics
Solaris	/opt/cics
Windows	User chosen

Table 3. Location for CICS Workload Manager installation

Platform	Installation directory
AIX	/usr/lpp/cicssm

Table 4 lists the maximum disk space required for this installation of CICS on the different supported operating systems.

Table 4. Disk space requirements for installing CICS

Component	AIX	HP-UX	Solaris	Windows
CICS, uninstaller, and bundled jvm	270 MB	350 MB	270 MB	200 MB

Table 4. Disk space requirements for installing CICS (continued)

Workload Manager	30 MB	-	-	-
<b>Maximum space required</b>	<b>300 MB</b>	<b>350 MB</b>	<b>270 MB</b>	<b>200 MB</b>

## Disk space for configuring and running CICS

Besides the disk space that is required for the installation of CICS, you must also allocate disk space for CICS configuration files, log files, and core files in the /var directory. Table 5 lists the disk space requirements for a typical CICS configuration on all supported platforms.

Table 5. Disk space requirements for running CICS

CICS configuration	Disk space
Region (with default SFS server)	8 MB, plus: <ul style="list-style-type: none"> <li>• 4 MB per SFS server.</li> <li>• 8 MB per additional region</li> </ul>

It is recommended that you monitor the swap space usage for your system to determine if any additional swap space (paging) would be required to run CICS on this system. If required, refer the Operating System guidelines for altering the swap space. The amount of swap space that is required depends upon the number of CICS regions that are running on a machine, the size of each region task pool, and the number of application servers, listener processes, and remote procedure call (RPC) listener threads that are configured for each region.

## Disk space for SFS server volumes and log archive files

On machines that are running an SFS server, you must provide space for primary log and data volumes. Table 6 lists the recommended additional disk space required for these volumes.

Table 6. SFS log and data storage requirements

Primary data volume	Primary log volume	Data volume mirror	Log volume mirror	Log archive files
64 MB	64 MB	64 MB	64 MB	4 MB (or 80 MB if media recovery archiving (MRA) is enabled)

For details about mirroring and log archive files, see the *TXSeries for Multiplatforms SFS Server and PPC Gateway Server: Advanced Administration*.

**Mirror volumes:** If you choose to mirror your log and data volumes, you must allocate space for the mirror volumes. Mirror server data and log volumes is strongly recommended to ensure the recoverability of data. When allocating space for mirror volumes, note the following:

- Allocate the same amount of disk space for a mirror volume that you allocated to its corresponding primary volume. For example, an 8 MB primary volume requires an 8 MB mirror volume; a 64 MB primary volume requires a 64 MB mirror volume.
- Place the mirror volume on a different physical disk from the disk that contains the corresponding primary volume.



For details about mirroring, see the *TXSeries for Multiplatforms SFS Server and PPC Gateway Server: Advanced Administration*.

**Log archive files:** Media archiving is strongly recommended because it is used to recover SFS log files and restore data. When allocating disk space for the SFS log archive files generated by media archiving, note the following:

- Choose an appropriate location in the local file system for log archive files. By default, they are stored in the /LogArchive directory in the server working directory.
- A minimum of 4 MB is required for the /LogArchive directory. However, it is recommended that you allocate as much space as possible for it.
- Media archiving can be used only to recover SFS data. It cannot be used with a PPC Gateway server.

For a description of media archiving, see the *TXSeries for Multiplatforms SFS Server and PPC Gateway Server: Advanced Administration*.

### **Determining disk space requirements: an example**

If you want to install CICS and run a region with the default SFS server, you must have the following disk space:

- 135 MB of space for the installation of CICS.
- 12 MB of storage space for the configuration and running of CICS (8 MB for the region, and 4 MB for the SFS server).
- 128 MB of space for the SFS server log and data volumes.

In addition, allocate another 132 MB for the SFS mirror volumes and log archive files, if you plan to use them.

---

## **Software prerequisites**

This section describes the software prerequisites for installing TXSeries for Multiplatforms. Before installing CICS, ensure that supported version of the operating system is installed. The latest information about the specified operating environment is available from the TXSeries for Multiplatforms home page: <http://www.ibm.com/cics/txseries>.

## **Operating system**

The minimum required level for the supported operating systems is listed in the following table:

*Table 7. Operating system requirements*

<b>Operating System</b>	<b>Version</b>
AIX	AIX Version 5.3 + TL 5 + 5300-05-CSP
HP-UX	HP-UX 11iv2 ( B11.23 )
Solaris	Solaris 10 (119689-07 or a superseding patch from Sun)
Windows	Windows Server 2003 + SP2

## **SNA Support**

The supported SNA products and the minimum level required are listed in the following table. (This is required if you intend to use System Network Architecture (SNA) connections directly from the CICS region on the machine.)

Table 8. SNA product requirements

Operating System	SNA Product	Minimum Version
AIX	IBM Communication Server fro AIX	Version 6.3
HP-UX PA-RISC	HP SNAPPlus2	R7.11.23.100
HP-UX IPF	HP SNAPPlus2	R7.11.23.100
Solaris	Data Connection SNAP-IX	Version v7.0.2.8
Windows	IBM Communication Server for Windows	Version 6.1.2
	Microsoft® Host Integration Server	2004

## CICS-supported locales

The CICS supported locales are listed in the following tables.

Table 9. CICS supported locales for AIX

Language	Locale	Code Page
U.S. English	en_US	ISO8859-1
German	de_DE	ISO8859-1
Spanish	es_ES	ISO8859-1
French	fr_FR	ISO8859-1
Italian	it_IT	ISO8859-1
Brazilian Portuguese	pt_BR	ISO8859-1
Korean	ko_KR	IBM-eucKR
Japanese (MBCS EUC)	ja_JP	IBM-eucJP
Japanese (DBCS PC)	Ja_JP	IBM-932 and IBM-943
Simplified Chinese	zh_CN	IBM-eucCN and Zh_CN.GB18030
Traditional Chinese	Zh_TW	Zh_TW.big5 and IBM-eucTW

Table 10. CICS supported locales for HP-UX

Language	Locale	Code Page
U.S. English	en_US.iso88591	ISO8859-1
German	de_DE.iso88591	ISO8859-1
Spanish	es_ES.iso88591	ISO8859-1
French	fr_FR.iso88591	ISO8859-1
Italian	it_IT.iso88591	ISO8859-1
Portuguese	pt_PT.iso88591	ISO8859-1
Korean	ko_KR.eucKR	eucKR
Japanese (MBCS EUC)	ja_JP.eucJP	eucJP
Japanese (DBCS PC)	ja_JP.SJIS	SJIS
Simplified Chinese	zh_CN.hp15CN	hp15CN and gb18030
Traditional Chinese	zh_TW.big5	big5

Table 11. CICS supported locales for Solaris

Language	Locale	Code Page
U.S. English	en_US	ISO8859-1
German	de	ISO8859-1
Spanish	es	ISO8859-1
French	fr	ISO8859-1
Italian	it	ISO8859-1
Brazilian Portuguese	pt_BR	ISO8859-1
Korean	ko	eucKR
Japanese (MBCS EUC)	ja	eucJP
Japanese (DBCS PC)	ja_JP.PCK	ja_JP.PCK
Simplified Chinese	zh	eucCN and GB18030
Traditional Chinese	zh_TW.BIG5	BIG5

Table 12. CICS supported locales for Windows

Language	Locale	Code Page
U.S. English	En_US	ISO8859-1
German	De_DE	ISO8859-1
Spanish	Es_ES	ISO8859-1
French	Fr_FR	ISO8859-1
Italian	It_IT	ISO8859-1
Brazilian Portuguese	Pt_BR	ISO8859-1
Korean	ko_KR	IBM-eucKR
Japanese (DBCS PC)	Ja_JP	IBM-932 and IBM-943
Simplified Chinese	zh_CN	IBM-eucCN and Zh_CN.GB18030
Traditional Chinese	Zh_TW	Zh_TW.big5 and IBM-eucTW



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## Chapter 3. Installing CICS

This chapter describes how to install TXSeries for Multiplatforms. The procedures that are given in this chapter assume that all the prerequisites that are described in Chapter 2, “CICS prerequisites and supported locales,” on page 3 are installed. If you need information about how to mount the IBM TXSeries for Multiplatforms CD-ROM, refer to the information supplied with your operating system.

Before you start, note that the TXSeries for Multiplatforms Product Setup program requires a working directory for its resources. This directory is created in /tmp. The working directory can be as large as 100 MB. Therefore, ensure that enough space is available in /tmp. If the working directory is too small, the necessary resources cannot be set up and the installation process fails.

You can install CICS in two ways:

### GUI mode installation

The graphical user interface installation process. This is described in “GUI mode installation procedure.”

### Console mode installation

The console mode installation process. This is described in “Console mode installation procedure” on page 10. (You need to use this method of installation on Open Systems if you do not have X-server running on your machine.)

**Note:** TXSeries for Multiplatforms does not get integrated with the native operating system tools for installing and uninstalling software packages. Hence, TXSeries for Multiplatforms will not get listed in the operating system specific installed packages’ listing tools, such as lspp on AIX. To find out the current version of TXSeries installed on your machine use the following command:

```
# cicscp version
```

---

## GUI mode installation procedure

To use the GUI to install CICS:

1. Ensure that you are logged into your machine with super user (root) privileges.
2. Insert and mount the TXSeries for Multiplatforms software CD-ROM into the CD-ROM drive.
3. Start the Product Setup program (for example, execute TXSeriesV62-AIX.bin to install on the AIX platform).
4. Click **Next** on the Product Welcome Panel.
5. If the machine already has TXSeries for Multiplatforms Version 6.0 or later installed, a dialog opens asking if you want to upgrade to TXSeries for Multiplatforms Version 6.2. Click **Yes** to upgrade the level of TXSeries for Multiplatforms to Version 6.2.
6. The Software License Agreement window opens. Read the License Agreement and click the button to accept all its terms. Click **Next**.
7. On Windows platforms, a window opens requesting that you select an installation location for TXSeries. Select the required location and click **Next**.
8. The installation selection summary window opens.
9. Review the information that is in the installation selection summary window, then click **Install**.

The TXSeries for Multiplatforms Product Setup program begins installing CICS into the installation location.

The Product Setup program automatically installs all the supported locales for CICS, and updates the environment variable NLSPATH.

10. When the installation is complete, the Setup Complete window opens. Choose any or all of the following options:
  - View TXSeries for Multiplatforms README file.
  - View TXSeries for Multiplatforms install log file.
  - Create default CICS region configuration. (Not applicable on Windows).

If you choose to create the default CICS region configuration:

- a. You are prompted to choose the CICS region name (by default, this is TXCICS62).
- b. Click **Next** to create the default CICS region configuration.
- c. You will be informed when the default CICS region has been created successfully. Click **OK**.

**Note:** You can view the installation log or product readme file at any time after the installation completes from the installation directory.

11. Click **Finish** to complete the installation of CICS.

---

## Console mode installation procedure

To use console mode to install CICS:

1. Ensure that you are logged into your machine with super user (root) privileges.
2. Insert and mount the TXSeries for Multiplatforms software CD-ROM into the CD-ROM drive.
3. Enter this command at the prompt to start the console install:

```
/TXSeriesV62-platform.bin -console
```

Where *platform* is the name of your platform.

4. Follow the instructions that are displayed on the screen. (These instructions guide you to complete the tasks that are listed in steps 4 on page 9 through 11 in “GUI mode installation procedure” on page 9.)

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## TXSeries integration with IBM Tivoli Provisioning Manager

TXSeries V6.2 provides a new facility that helps installing TXSeries on multiple systems using the IBM Tivoli<sup>®</sup> Provisioning Manager (TPM). This facility greatly reduces TXSeries deployment effort by automating the installation process on multiple systems.

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## Environment variables

During installation, the CICS Product Setup program creates or updates these environment variables:

Table 13. AIX environment variables created during installation

Environment Variable	Value
PATH	/usr/lpp/cics/bin and /usr/lpp/cicssm/bin
LIBPATH	/usr/lpp/cics/lib/ and /usr/lpp/cicssm/lib

Table 13. AIX environment variables created during installation (continued)

Environment Variable	Value
NLSPATH	/usr/lpp/cics/msg/%L/%N, /usr/lpp/cics/msg/C/%N and /usr/lpp/cicssm/msg/en_US/%N
On AIX, asynchronous I/O is required for the functioning of CICS: if this is not already enabled, it is enabled automatically when you install CICS	

Table 14. HP-UX environment variables created during installation

Environment Variable	Value
PATH	/opt/cics/bin
SHLIB_PATH	/opt/cics/lib
NLSPATH	/opt/cics/msg/%L/%N, /opt/cics/msg/C/%N
CICSPATH	/opt/cics

Table 15. Solaris environment variables created during installation

Environment Variable	Value
PATH	/opt/cics/bin
LD_LIBRARY_PATH	/opt/cics/lib
NLSPATH	/opt/cics/msg/%L/%N, /opt/cics/msg/C/%N
CICSPATH	/opt/cics

Table 16. Windows environment variables created during installation

Environment Variable	Value
PATH	install_directory\bin
LIB	install_directory\lib
CICSNLS	install_directory\msg\{OS LANG}\@N
NLSPATH	install_directory\msg\{OS LANG}\@N
CICSPATH	install_directory

You must set the TERM environment variable to **vt100** or **xterm**, according to your requirements. When you have set the TERM environment variable, create one of the following links, as appropriate:

```
#ln -s cics_install_dir/etc/3270keys.vt100 /etc/3270.keys
```

or

```
#ln -s cics_install_dir/etc/3270keys.xterm /etc/3270.keys
```

---

## Creating CICS users and groups

During installation of CICS, the following required user and groups are automatically created:

- An operating system group named **cics**.
- An operating system group named **cicsterm**.
- An operating system group named **cicssm** (on AIX only).
- An operating system user named **cics**.
- An operating system user named **cicssm** (on AIX only).

Many CICS procedures are accessible only when you are logged in as **root**. Other CICS procedures require that you are logged in as a user with root privileges. CICS also requires that the **root** and **cics** users be members of the **cics** and **cicsterm** groups.

On AIX, for the users created during installation (**cics** and **cicssm**), the default authentication method is set by the installation process to local authentication by adding `SYSTEM="files"` and `registry=files` to the `/etc/security/user` file. For example:

```
cicssm:
  admin = false
  SYSTEM = "files"
  registry = files
```

```
cics:
  admin = false
  SYSTEM = "files"
  registry = files
```



---

## Chapter 4. Using silent installation for CICS

You can use *silent installation* functions to install TXSeries for Multiplatforms by specifying the installation options in a response file (called TXSeriesV62.res, by default). Silent installation enables you to bypass the CICS Product Setup program, where you must manually click the installation options that you want. Silent installation is useful when you want to install the same configuration on multiple machines.

A default TXSeriesV62.res file is supplied with TXSeries for Multiplatforms. It silently installs CICS at the installation location described in Table 2 on page 3.

---

### Running the silent installation

To install CICS silently by using the default TXSeriesV62.res file, enter the following command from the location in which the CD-ROM is mounted:

```
/TXSeriesV62-platform.bin -options response_file -silent
```

where *platform* is the name of your platform, and *response\_file* is the full path name for the TXSeriesV62.res file (for example, /tmp/CICS/TXSeriesV62.res).

After issuing this command, check the txseriesv62\_install.log file that is in the install location to determine whether the silent installation was successful. A result code of 0 indicates that the installation was successful; a code of -1 indicates that the installation failed.

**Note:** The TXSeriesV62.res response file contains the default options for the installation of CICS. If you want to modify any of these options, you must create a custom response file, as described in “Creating and using a custom TXSeriesV62.res file.”

---

### Creating and using a custom TXSeriesV62.res file

If you do not want to install CICS silently with the options that are specified in the default TXSeriesV62.res response file, you can create a custom response file. This section describes how to create a custom response file.

**Note:** While the installation options that you select are recorded in the response file, CICS is actually being installed to your specifications on the machine where you are creating the response file.

To create a custom response file:

1. Enter one of the following commands:

- GUI installation:

```
/TXSeriesV62-platform.bin -options-record response_file
```

- Console installation:

```
/TXSeriesV62-platform.bin -options-record response_file -console
```

where *platform* is the name of your platform, and *response\_file* is the full path name of the response file that you are creating.

The CICS Product Setup program starts. It prepares the InstallShield Wizard and opens the Welcome window.

2. Proceed through the installation windows, and select the installation options that you want for your silent installation. Each option that you select is recorded in the custom response file that you are creating.

| After you have given the command, refer to the txseriesv62\_install.log file to  
| determine whether the silent installation was successful. A result code of 0 indicates  
| that the installation was successful; a code of -1 indicates that the installation failed.

---

## Chapter 5. Configuring and starting your CICS region

This chapter describes how to configure and start your new CICS region and default SFS file manager.

1. “Configuring the default SFS server”
2. “Configuring and starting your new CICS region” on page 16
3. “Configuring a listener process (on Windows systems)” on page 17

When you have completed these tasks, you will be ready to run the CICS Installation Verification Program (IVP) to determine whether your configuration is successful. This is described in Chapter 6, “Running the CICS Installation Verification Program,” on page 19.

---

### Configuring the default SFS server

For a CICS region to use an SFS server as a file manager, configure and start the SFS server:

1. Ensure that you are logged in as **root**.
2. Configure the SFS server. Enter the **cicscp create sfs\_server** command:

```
#cics_install_dir/bin/cicscp -v create sfs_server \  
././cics/sfs/sfs_server_name
```

where *sfs\_server\_name* is the first seven characters of the name of the machine on which you are creating the SFS server.

When it is run for the first time, the **cicscp start region** command checks whether a local SFS server exists. If no SFS server is configured on the machine, the **cicscp start region** command automatically creates an SFS server whose name is based on the name of the host machine. If you specify a name other than the name of your machine for the *sfs\_server\_name* variable, **cicscp start region** creates two SFS servers: one that uses the name of the host machine, and one that uses the name that you specified.

The **cicscp create sfs\_server** command:

- Invokes the **cicsdefaultservers** command, if necessary. This command automatically creates the following resource definition files that contain information that CICS uses when you create an SFS server, DB2 or Oracle database, or Peer-to-Peer Communications (PPC) Gateway server:
    - */var/cics\_servers/SSD/SSD.stanza*, which contains Structured File Server Definitions (SSD)
    - */var/cics\_servers/SCD/SCD.stanza*, which contains Schema File Server Definitions (SCD)
    - */var/cics\_servers/GSD/GSD.stanza*, which contains Gateway Server Definitions (GSD)
  - Creates a unique *short\_name* value in the SSD for the SFS server, if one is not supplied as an attribute override.
  - Creates a user ID for the SFS server that is specified in the SSD file.
  - Creates a binding file for the SFS server if the CICS machine is running in a remote procedure call (RPC)-only environment. The binding file makes binding information available to clients and servers. It is an ASCII file that consists of a server name and an associated string binding.
3. Start the SFS server. Enter the **cicscp start sfs\_server** command:

```
# cics_install_dir/bin/cicscp -v start sfs_server \  
./cics/sfs/sfs_server_name
```

4. Verify that the SFS server is running. Enter the command:

```
# CICS_install_dir/bin/sfsadmin list lvols -server \  
./cics/sfs/sfs_server_name
```

The command output displays the name of the data volume that is created for the SFS server if the server is running correctly.

**Note:** The above default configuration of the SFS server creates volumes in file devices. In case you want to create SFS server volumes in a raw disk partition on a Solaris platform, complete the following steps:

- a. Use the operating system utility to create raw partitions for the SFS server volumes.

- b. Set the following environment variables to specify the created volumes:

- CICSVOL\_RAWDSK\_DATA

This variable specifies the raw partition created for the data logical volume for the SFS server.

- CICSVOL\_RAWDSK\_LOG

This variable specifies the raw partition created for the log logical volume for the SFS server.

To set CICS CICSVOL\_RAWDSK\_DATA and CICSVOL\_RAWDSK\_LOG in a Korn shell, specify the path name for the appropriate SFS data volume (for example, /dev/dsk/vol1) and log volume (for example, /dev/dsk/vol2) as follows:

```
export CICSVOL_RAWDSK_DATA /dev/dsk/vol1  
export CICSVOL_RAWDSK_LOG /dev/dsk/vol2
```

- c. Configure the SFS server by entering the **cicscp create sfs\_server** command:

```
# /opt/cics/bin/cicscp -v create sfs_server \  
./cics/sfs/sfs_server_name
```

---

## Configuring and starting your new CICS region

Perform the following steps on the machine on which you intend to run a region that uses a local SFS server:

1. Ensure that you are logged in as **root**.
2. Ensure that the SFS is running.
3. Configure the region. Enter the **cicscp create region** command:

```
#cics_install_dir/bin/cicscp -v create region region_name
```

where *region\_name* is the name of the region that you want to create.

**Note:** The name of your region must not exceed eight characters in length. Do not use underscores (  ), spaces, or the word "stanza" in the region name. Also, if you intend to connect the region to a network, ensure that the region name meets these requirements:

- It is in uppercase letters if it is to be attached to a Systems Network Architecture (SNA) network.
- It is unique among all CICS systems that are connected to the network by way of TCP/IP or SNA.
- It follows the naming conventions of the network.

The **cicscp create region** command uses system defaults to create the resource definition queues that the region requires.

4. Start the region. Enter the **cicscp start region** command:

```
# cics_install_dir/bin/cicscp -v start region region_name
```

where *region\_name* is the name of the region that you want to start.

5. If the region was created and started successfully, a directory for it exists in the directory *var/cics\_regions*. This directory has the name that you specified for the region. Change the working directory to this region directory and list its contents. Verify that the following files and directories exist in the *var/cics\_regions/region\_name* directory:

- bin
- data
- database
- dumps
- environment
- log
- maps
- region\_restart
- region.properties

6. Verify that the region required queues of the region exist on the SFS server. Enter the command:

```
# cics_install_dir/bin/sfsadmin list files -server \  
././cics/sfs/sfs_server_name
```

The command output must include the seven required queues of the region that are listed below. The name of each queue begins with the region name.

- *region\_name*cicsnlqfile
- *region\_name*cicsnrrectsqfile
- *region\_name*cicsplqfile
- *region\_name*cicsrectsqfile
- *region\_name*cicstdqlgfile
- *region\_name*cicstdqnofile
- *region\_name*cicstdqphfile

---

## Configuring a listener process (on Windows systems)

Before you start your newly configured CICS region, you should configure support for the CICS local terminal. The CICS local terminal (*cicslterm.exe*) is a lightweight CICS client that is available only for Windows systems. The procedure in this section describes how to set up a listener process on your machine.

**Note:** *cicslterm* should be used for installation verification tests only. For all other purposes, the CICS Universal Client (CUC) supplied *cicsterm* is recommended.

The listener process enables the region to listen for requests from the CICS local terminal. Because you must cold start your region after defining a listener process, you should perform this task before you start your new CICS region for the first time:

1. Run the following command to add a listener definition to the region

```
cicsadd -c ld -r REGION1 -P REGION1 Protocol=NamedPipe  
NamedPipeName=CICSAA
```

2. Use a text editor to open the local CICS client initialization file (*cicslcli.ini*), which is in the *\opt\cics\bin* directory by default.

3. Find the entry that has CICSAA as the value for the Named pipe name field.
4. Change the value of the Server field to the name of your region (for example, Server = REGION1 for a region named REGION1). The server name must be unique within the initialization file, and does not need to match any CICS server name.
5. If TXSeries is running on a double-byte character set (DBCS) version of Windows, add the following entry to the local CICS client initialization file:  
`ModelTerm = hft-mb 7`
6. Save and close the local CICS client initialization file.
7. Click **Start > Programs > IBM > TXSeries for Multiplatforms > Stop All Local Terminals** to stop all CICS client processes running on the machine. Ensure that the 3270 Terminal Emulator window for each terminal has closed.

---

## Chapter 6. Running the CICS Installation Verification Program

You can use the CICS Installation Verification Program (IVP) to determine whether a CICS region is running correctly and whether CICS applications can be successfully developed on a machine.

The CICS IVPs for C and COBOL are both described here.

The CICS IVP must be run on a machine that contains both a CICS region, and a CICS Transaction Gateway or CICS Universal Client.

---

### Using the CICS IVP with C

To configure the CICS IVP for the C programming language, perform the following steps on the machine that contains the region that you want to test:

1. Log into the machine as **root**.
2. Ensure that your PATH environment variable includes the directories /bin, /usr/bin, *cics\_install\_dir*/bin, and the directory that contains the executable files for the C compiler.
3. Stop the region that you want to test. Enter the command:

```
# cics_install_dir/bin/cicscp -v stop region region_name
```

where *region\_name* is the name of the local region.

4. Ensure that the SFS server that manages the region files is running. Enter the command:

```
# cics_install_dir/bin/sfsadmin list lvols -server \  
./:cics/sfs/sfs_server_name
```

where *sfs\_server\_name* is the name of the SFS server. The command output displays the name of the data volume that was created for the SFS server, if it is running correctly.

5. Enter the command:

```
# cics_install_dir/bin/cicsivp -r region_name \  
-s ./:cics/sfs/sfs_server_name -v data_volume
```

where:

- *region\_name* is the name of the region that is to be tested
- *sfs\_server\_name* is the name of the SFS server
- *data\_volume* is the name of the data volume of the SFS server

6. To test a development system, go to step 7.  
To test a production system, go to step 10 on page 21.
7. Compile the executable files:

#### On Open Systems

- a. Copy the IVP source files to the region bin directory. Enter the commands:

```
# cd /var/cics_regions/region_name/bin  
# cp -R cics_install_dir/samples/ivp/* .  
# chmod 777 *
```

where *region\_name* is the name of the region.

- b. Enter the **make Makefile C** command:

#### AIX and HP-UX

```
# /usr/bin/make Makefile C
```

#### Solaris

```
# /usr/ccs/bin/make Makefile C
```

Ensure that no error messages are in the output of the **make Makefile C** command.

- c. Copy the maps from the region bin directory into the region map directory as follows. Enter the commands:

#### AIX

```
# cp *map /var/cics_regions/region_name/maps/en_US/.
# cp dfhdall /var/cics_regions/region_name/maps/en_US/.
# cp dfhdcom /var/cics_regions/region_name/maps/en_US/.
# cp dfhdmnu /var/cics_regions/region_name/maps/en_US/.
# cp dfhdbrw /var/cics_regions/region_name/maps/en_US/.
# cp dfhdren /var/cics_regions/region_name/maps/en_US/.
```

#### HP-UX and Solaris

```
# cp *map /var/cics_regions/region_name/maps/prime/.
# cp dfhdall /var/cics_regions/region_name/maps/en_US/.
# cp dfhdcom /var/cics_regions/region_name/maps/en_US/.
# cp dfhdmnu /var/cics_regions/region_name/maps/en_US/.
# cp dfhdbrw /var/cics_regions/region_name/maps/en_US/.
# cp dfhdren /var/cics_regions/region_name/maps/en_US/.
```

### On Windows Systems

- a. From a command prompt, change directories to the *installation\_directory*\samples\ivp directory (where *installation\_directory* is the directory in which you installed CICS). This directory contains the C program and map source files (.ccs and .bms, respectively).

- b. Enter the **nmake** command as follows to compile all of the IVP executable files for the C language:

```
C:\> nmake C
```

- c. Use operating system utilities or the copy command to copy the executable files (.dll) to the *var\cics\_regions\region\_name\bin* directory. Copy all the .map files (\*.map) to the *var\cics\_regions\region\_name\maps\prime* directory.

8. Update the Program Definitions (PD) for the CICS IVP programs and map sets. Enter the commands:

```
# cics_install_dir/bin/cicsupdate -c pd -r region_name \
DFHDALL PathName="dfhdall"
# cics_install_dir/bin/cicsupdate -c pd -r region_name \
DFHDCOM PathName="dfhdcom"
# cics_install_dir/bin/cicsupdate -c pd -r region_name \
DFHDGB PathName="dfhdgb.map"
# cics_install_dir/bin/cicsupdate -c pd -r region_name \
DFHDGK PathName="dfhdgk.map"
# cics_install_dir/bin/cicsupdate -c pd -r region_name \
DFHDMNU PathName="dfhdmnu"
# cics_install_dir/bin/cicsupdate -c pd -r region_name \
DFHDBRW PathName="dfhdbrw"
# cics_install_dir/bin/cicsupdate -c pd -r region_name \
DFHDGA PathName="dfhdga.map"
# cics_install_dir/bin/cicsupdate -c pd -r region_name \
DFHDGC PathName="dfhdgc.map"
```



```
# cics_install_dir/bin/cicsupdate -c pd -r region_name \  
DFHDGL PathName="dfhdgl.map"  
# cics_install_dir/bin/cicsupdate -c pd -r region_name \  
DFHDREN PathName="dfhdren"
```

9. Verify that the path names have been correctly entered for the commands by viewing the PD.stanza file:

```
# more /var/cics_regions/region_name/database/PD/PD.stanza
```

10. Cold start the region that you are testing. Enter the command:

```
# cics_install_dir/bin/cicscp -v start region region_name StartType=cold
```

where *region\_name* is the name of the region that you are testing.

11. Connect to the region:

#### On Open Systems:

Enter the command:

```
# cics_install_dir/bin/cicslterm -r region_name -t MENU
```

CICS displays the INSTRUCTIONS C version screen.

#### On Windows Systems:

- a. Click **Start > Programs > IBM > TXSeries for Multiplatforms > Start Local Terminal** to start a local terminal. For more information about starting the CICS local terminal, refer to “Configuring a listener process (on Windows systems)” on page 17.
  - b. Make sure that the terminal has been cleared by pressing Clear (typically mapped to the Esc key).
  - c. Type MENU and press Enter. The Operator Instruction sample program begins.
12. In the **ENTER TRANSACTION** field, type ADDS
  13. In the **NUMBER** field, type 111111.
  14. Press Return. CICS displays the FILE ADD screen.
  15. In the FILE ADD screen, type values into the fields as follows. Press Tab to advance from one field to the next:  
NAME: JOE  
ADDRESS: 123 MAIN  
PHONE: 5555555  
DATE: 121501  
AMOUNT: \$1000.00  
COMMENT: COMMENT  
  
When you have finished typing values into the fields, press Return.  
If the region is configured and running correctly, the INSTRUCTIONS C version screen is displayed again, and the message RECORD ADDED appears.
  16. To browse the newly added record:
    - a. Type BRWS in the **ENTER TRANSACTION** field.
    - b. Type 111111 in the **NUMBER** field.
    - c. Press Return. CICS displays the FILE BROWSE screen. The contents of the record that you added are displayed.
  17. (Optional.) To queue a record for printing, type OREN in the **ENTER TRANSACTION** field, then enter the record number in the **Number** field. When five records have been queued, the OREQ transaction automatically runs to print the queued records.

You can use the IVP interface to execute CICS transactions and to add, update, inquire about, print, and browse the data.

---

## Using the CICS IVP with COBOL

To configure the CICS IVP for IBM COBOL, ACUCOBOL-GT<sup>®</sup>, or Micro Focus Server Express COBOL, perform the following steps on the machine that contains the region that you want to test.

On Windows systems, because the COBOL compiler does not provide the **nmake** utility required to compile the IVP source files, you must also make sure that you have Microsoft Visual C++ is installed on your machine and that its location is included in your PATH environment variable.

1. Log into the machine as **root**.
2. If you have not already installed the appropriate version of IBM COBOL, ACUCOBOL-GT, or Micro Focus Server Express COBOL, do so now. See your COBOL documentation for installation instructions.
3. Follow the instructions for your COBOL compiler:
  - If you are using ACUCOBOL-GT, go to step 4.
  - If you are using Micro Focus Server Express COBOL, go to step 5.
  - If you are using Micro Focus Net Express COBOL, go to step 6 on page 23.
  - If you are using IBM COBOL, go to step 7 on page 23.
4. For ACUCOBOL-GT:
  - a. CICS assumes the default ACUCOBOL-GT installation directory to be `/opt/acu` for Open Systems platforms. If you want to install the ACUCOBOL-GT product into a directory other than `/opt/acu`, create a soft link called `/opt/acu` that points to the real ACUCOBOL-GT installation directory. Ensure that the library search environment variable includes the directory that contains the ACUCOBOL-GT library files, usually `/opt/acu/lib`. For ACUCOBOL-GT on Windows, make sure that the ACUCOBOL installation directory (`ACU_install_path/bin`) is included in PATH environment variable.
  - b. Make sure that ACUCOBOL licenses are in place and the ACUCOBOL license server is running. For more information on ACUCOBOL-GT license management, refer to the *TXSeries for Multiplatforms Administration Guide*.
  - c. CICS supplies a prebuilt version of the ACUCOBOL-GT language method object, called `cicsprACUCOB`, in the CICS bin directory (which contains the ACUCOBOL-GT language interface and support routines). You can use this default method object as it is.
  - d. You must cold start the region for these settings to take effect. Refer to your ACUCOBOL-GT documentation for more information on these environment variables.
  - e. Go to step 7 on page 23.
5. For Micro Focus Server Express COBOL:
  - a. Ensure that your PATH environment variable includes the directories `/bin`, `/usr/bin`, `cics_install_dir/bin`, and the directory that contains the COBOL executable files (usually either `install_dir/cobol/bin`, or `/usr/lib/cobol/bin`).
  - b. Ensure that your LIBPATH environment variable for AIX includes the directory that contains the COBOL library files (usually either `install_dir/cobol/lib`, or `/usr/lib/cobol/coblib`).
  - c. Set the COBDIR environment variable to the directory in which COBOL is installed (usually either `install_dir/cobol` or `/usr/lib/cobol`).

- d. If you want each region that is on the machine to use the same COBOL language method file (which contains the COBOL run-time and support routines), change the working directory to *cics\_install\_dir/bin*.  
If you want the region that you are testing to use a unique COBOL language method file, change the working directory to */var/cics\_regions/region\_name/bin*.  
Note that versions of the COBOL language method file that are in the */var/cics\_regions/region\_name/bin* directory take precedence over those that are in the *cics\_install\_dir/bin* directory.
  - e. List the contents of the current directory. If the directory already contains the file *cicsprCOBOL*, make a backup copy of this file.
  - f. Create the *cicsprCOBOL* Micro Focus Server Express language method file and the *cobinitsig.gnt* signal initialization file and place them into the current working directory. Enter the command:  

```
# cics_install_dir/bin/cicsmkcobol
```
  - g. Go to step 7.
6. For Micro Focus Net Express COBOL:
    - a. Ensure that your *PATH* environment variable includes directory that contains the COBOL executable files.
    - b. Ensure that your *LIB* environment variable includes the directory that contains the COBOL library files.
    - c. Set the *COBDIR* environment variable to the directory in which COBOL is installed.
    - d. If you want each region that is on the machine to use the same COBOL language method file (which contains the COBOL run-time and support routines), change the working directory to *cics\_install\_dir/bin*.  
If you want the region that you are testing to use a unique COBOL language method file, change the working directory to *C:\var\cics\_regions\region\_name\bin*.  
Note that versions of the COBOL language method file that are in the *C:\var\cics\_regions\region\_name\bin* directory take precedence over those that are in the *cics\_install\_dir\bin* directory.
    - e. Go to step 7.
  7. Stop the local region that you want to test. Enter the command:  

```
# cics_install_dir/bin/cicscp -v stop region region_name
```

  
where *region\_name* is the name of the region that you want to test.
  8. Ensure that the SFS server that manages the region files is running. Enter the command:  

```
# cics_install_dir/bin/sfsadmin list lvols -server \  
./cics/sfs/sfs_server_name
```

  
where *sfs\_server\_name* is the name of the SFS server. The command output displays the name of the data volume that was created for the SFS server, if it is running correctly.
  9. Enter one of the following commands.
    - If you are using ACUCOBOL-GT, enter the command:  

```
# cics_install_dir/bin/cicsivp -r region_name \  
-s ./cics/sfs/sfs_server_name -v data_volume -l ACUCOB
```

where:

- *region\_name* is the name of the region that is to be tested
- *sfs\_server\_name* is the name of the SFS server
- *data\_volume* is the name of the data volume of the SFS server
- If you are using Micro Focus Server Express COBOL, enter the command:

```
# cics_install_dir/bin/cicsivp -r region_name \  
-s ./:/cics/sfs/sfs_server_name -v data_volume -l COBOL
```

where:

- *region\_name* is the name of the region that is to be tested
- *sfs\_server\_name* is the name of the SFS server
- *data\_volume* is the name of the data volume of the SFS server
- If you are using IBM COBOL, enter the command:

```
# cics_install_dir/bin/cicsivp -r region_name \  
-s ./:/cics/sfs/sfs_server_name -v data_volume -l IBMCOB
```

where:

- *region\_name* is the name of the region that is to be tested
  - *sfs\_server\_name* is the name of the SFS server
  - *data\_volume* is the name of the data volume of the SFS server
10. To test an application development system, go to step 11.  
To test a production system, go to step 14 on page 26.
  11. Compile the executable files

#### On Open systems

- a. Copy the IVP source files to the region bin directory. Enter the commands:

```
# cd /var/cics_regions/region_name/bin  
# cp -R cics_install_dir/samples/ivp/* .  
# chmod 777 *
```

- b. Compile the source files:

- If you are using ACUCOBOL-GT, enter the command:  
/usr/bin/make ACUCOB
- If you are using Micro Focus Server Express COBOL, enter the command:  
/usr/bin/make Makefile COBOL
- If you are using IBM COBOL, enter the command:  
/usr/bin/make Makefile IBMCOB

Ensure that no error messages are in the output of the **make** command.

- c. Copy the maps from the region bin directory into the region map directory.

#### AIX

Enter the command:

```
# cp *map /var/cics_regions/region_name/maps/en_US/.
```

#### HP-UX and Solaris

Enter the command:

```
# cp *map /var/cics_regions/region_name/maps/prime/.
```

#### On Windows systems

- a. From a command prompt, change directories to the *installation\_directory\samples\ivp* directory (where

*installation\_directory* is the directory in which you installed CICS). This directory contains the COBOL program and map source files (.ccp and .bms, respectively).

b. Perform one of the following steps.

- If you are using Micro Focus NetExpress, perform the following steps:

1) Enter the **nmake** command as follows to compile all of the IVP executable files:

```
C:\> nmake COBOL
```

2) Use operating system utilities or the copy command to copy the executable files (.cbmfnt ) to the `\var\cics_regions\region_name\bin` directory. Copy all .map files (\*.map) to `\var\cics_regions\region_name\maps\prime` directory.

- If you are using IBM VisualAge® COBOL, perform the following steps:

1) Enter the **nmake** command as follows to compile all of the IVP executable files:

```
C:\> nmake IBMCOB
```

2) Use operating system utilities or the copy command to copy the executable files (.ibmco) to the `\var\cics_regions\region_name\bin` directory. Copy all .map files (\*.map) to `\var\cics_regions\region_name\maps\prime` directory.

- If you are using ACUCOBOL-GT, perform the following steps:

1) Enter the **nmake** command as follows to compile all of the IVP executable files:

```
C:\> nmake ACUCOB
```

2) Use operating system utilities or the copy command to copy the executable files (.acu) to the `\var\cics_regions\region_name\bin` directory. Copy all .map files (\*.map) to `\var\cics_regions\region_name\maps\prime` directory.

12. Update the Program Definitions (PD) for the CICS IVP programs and map sets. Enter the commands:

```
# cics_install_dir/bin/cicsupdate -c pd -r region_name \
DFHCGA PathName="DFHCGA.map"
# cics_install_dir/bin/cicsupdate -c pd -r region_name \
DFHCGC PathName="DFHCGC.map"
# cics_install_dir/bin/cicsupdate -c pd -r region_name \
DFHCGL PathName="DFHCGL.map"
# cics_install_dir/bin/cicsupdate -c pd -r region_name \
DFHCBRW PathName="dfhcbw"
# cics_install_dir/bin/cicsupdate -c pd -r region_name \
DFHCMNU PathName="dfhcmnu"
# cics_install_dir/bin/cicsupdate -c pd -r region_name \
DFHCGB PathName="DFHCGB.map"
# cics_install_dir/bin/cicsupdate -c pd -r region_name \
DFHCGK PathName="DFHCGK.map"
# cics_install_dir/bin/cicsupdate -c pd -r region_name \
DFHCALL PathName="dfhcall"
# cics_install_dir/bin/cicsupdate -c pd -r region_name \
DFHCCOM PathName="dfhccom"
# cics_install_dir/bin/cicsupdate -c pd -r region_name \
DFHCREN PathName="dfhcren"
```

13. Verify that the path names have been correctly entered for the commands by viewing the PD.stanza file:

```
# more /var/cics_regions/region_name/database/PD/PD.stanza
```

14. Cold start the region that you are testing. Enter the command:  
`# cics_install_dir/bin/cicscp -v start region region_name StartType=cold`

15. Connect to the region.

**On Open systems**

Enter the command:

```
# cics_install_dir/bin/cicslterm -r region_name -t MENU
```

CICS displays the INSTRUCTIONS COBOL version screen.

**On Windows systems**

- a. To start a local terminal, click **Start > Programs > IBM >TXSeries for Multiplatforms > Start Local Terminal**.

For more information about starting the CICS local terminal, refer to “Configuring a listener process (on Windows systems)” on page 17.

- b. Make sure that the terminal has been cleared by pressing Clear (typically mapped to the Esc key).

- c. Type MENU and press Enter. The Operator Instruction sample program begins.

16. In the **ENTER TRANSACTION** field, type ADDS.

17. In the **NUMBER** field, type 222222.

18. Press Return. CICS displays the FILE ADD screen.

19. In the FILE ADD screen, type values into the fields as follows. Press Tab to advance to the next field:

```
NAME: JOE
ADDRESS: 123 MAIN
PHONE: 5555555
DATE: 121501
AMOUNT: $1000.00
COMMENT: COMMENT
```

When you have finished typing values into the fields, press Return.

If the region is configured and running correctly, the INSTRUCTIONS COBOL version screen is displayed again, and the message RECORD ADDED appears.

20. To browse the newly added record:

- a. Type BRWS in the **ENTER TRANSACTION** field.

- b. Type 222222 in the **NUMBER** field.

- c. Press Return. CICS displays the FILE BROWSE screen. The contents of the record that you added are displayed.

21. (Optional.) To queue a record for printing, type OREN in the **ENTER TRANSACTION** field, then enter the record number in the **Number** field. When five records have been queued, the OREQ transaction automatically runs to print the queued records.

You can use the IVP interface to execute CICS transactions and to add, update, inquire about, print, and browse the data.

---

## Chapter 7. Installing and uninstalling interim service fixes

You can install interim services fixes for TXSeries for Multiplatforms by running the **TXSeriesIFixInstaller** installer from the command line. To uninstall the interim service fixes run the **TXSeriesIFixUnInstaller** uninstaller from the command line.

---

### Installing interim service fixes

You can install interim service fixes for TXSeries for Multiplatforms by running the **TXSeriesIFixInstaller** installer. The **TXSeriesIFixInstaller** installer can be run on all TXSeries supported operating systems.

The **TXSeriesIFixInstaller** installer displays messages in the default language of your system. English is the default language when you run the installer in the *silent* mode.

You can choose to run the installer in one of the following modes. The default mode is *verbose*.

**silent** Performs the installation silently, without any display, using the default values for installation locations and backup.

**verbose**

Performs the installation interactively and displays the details of what is happening at each step.

**extract**

Extracts the files which are to be updated or created in the fix, in the same directory structure to the **files** folder.

**info** Displays the details of the fix and possible options of the particular fix.

To run the **TXSeriesIFixInstaller** installer:

1. Ensure that all CICS processes are stopped.
2. Ensure that you are logged into your machine as a user with root or administrator privileges.
3. Enter the following command from the command line:

**On Windows**

```
TXSeriesIFixInstaller [help | jarfilename [silent | verbose |  
extract | info] ]
```

where *TXSeriesIFixInstaller* is the *TXSeriesIFixInstaller.bat* program, *jarfilename* is the name of the service fix file, and *silent*, *verbose*, *extract*, and *info* are the different modes from which you must choose one mode to run the installer.

**On AIX, HP-UX and Solaris**

```
TXSeriesIFixInstaller [help | jarfilename [silent | verbose |  
extract | info] ]
```

where *TXSeriesIFixInstaller* is the *TXSeriesIFixInstaller.sh* program, *jarfilename* is the name of the service fix file, and *silent*, *verbose*, *extract*, and *info* are the different modes from which you must choose one mode to run the installer.

The **TXSeriesIFixInstaller** installer:

- Performs basic checks to verify that the following conditions exist:
  - The JAR file is not corrupted, and contains all the required files.
  - The user has installation privileges.
  - The installer is for the intended operating system.
  - The fix is intended for the current version.
  - No CICS processes are running.
- Checks whether the installer had crashed in the previous run. If yes, it rolls back to the previous set of files before trying again.
- Creates a backup of the files that are to be updated. This step is skipped if the installer is rolled back.
- Updates the files. However, if an error occurs while updating the files, then the files are automatically rolled back.
- Creates all logs in the default logs folder.

---

## Uninstalling interim service fixes

You can uninstall interim service fixes for TXSeries for Multiplatforms by running the **TXSeriesIFixUnInstaller** uninstaller. You can also use the uninstaller to check whether further uninstallations are possible and make multiple rollbacks at one time. The **TXSeriesIFixUnInstaller** uninstaller can be run on all TXSeries supported operating systems.

The **TXSeriesIFixUnInstaller** uninstaller displays messages in the default language of your system. English is the default language when you run the uninstaller in the *silent* mode.

You can choose to run the uninstaller in one of the following modes. The default mode is *verbose*.

**silent** Performs the uninstallation silently, without any display. You are informed only if there is an error during uninstallation. Only the current fix is uninstalled.

**Note:** If you want to perform a series of uninstallations it is recommended that you use the verbose mode.

**verbose**

Performs the uninstallation interactively and displays the details of what is happening at each step.

**extract**

Extracts the files which are to be updated or created in the fix, in the same directory structure to the **files** folder.

**info**

Displays the details of the fix and possible options of the particular fix.

To run the **TXSeriesIFixUnInstaller** uninstaller:

1. Ensure that all CICS processes are stopped.
2. Ensure that you are logged into your machine as a user with root or administrator privileges.
3. Enter the following command from the command line:

**On Windows**

```
TXSeriesIFixUnInstaller [help | jarfilename [silent | verbose |
extract | info] ]
```



| where `TXSeriesIFixUnInstaller` is the `TXSeriesIFixUnInstaller.bat` program,  
| *jarfilename* is the name of the service fix file, and `silent`, `verbose`, `extract`, and  
| `info` are the different modes from which you must choose one mode to run the  
| uninstaller.

### | **On AIX, HP-UX and Solaris**

```
| TXSeriesIFixUnInstaller [help | jarfilename [silent | verbose |  
| extract | info] ]
```

| where `TXSeriesIFixUnInstaller` is the `TXSeriesIFixUnInstaller.sh` program,  
| *jarfilename* is the name of the service fix file, and `silent`, `verbose`, `extract`, and  
| `info` are the different modes from which you must choose one mode to run the  
| uninstaller.

| The **TXSeriesIFixUnInstaller** uninstaller:

- | • Performs basic checks to verify that the following conditions exist:
  - | – The JAR file is not corrupted, and contains all the required files.
  - | – The user has uninstallation privileges.
  - | – The uninstaller is for the intended operating system.
  - | – The fix is intended for the current version.
  - | – No CICS processes are running.
- | • Searches for all the possible uninstallations.
- | • Checks whether the uninstaller had crashed in the previous run. If yes, the user  
| is informed of the same and asked to confirm whether the uninstaller should be  
| run.
- | • Prompts the user to specify which uninstallations to make.
- | • Deletes the files.
- | • Creates all logs in the default logs folder.



---

## Chapter 8. Migrating to TXSeries for Multiplatforms Version 6.2 from an earlier version

This chapter discusses what you need to consider when migrating to TXSeries for Multiplatforms Version 6.2 from an earlier version (Version 5.1 or Version 6.1 for non-AIX platforms, and Version 6.0 or Version 6.1 for AIX). It covers the following topics:

- “Migrating to TXSeries for Multiplatforms Version 6.2”
- “Migrating SFS data to SFS servers across machines” on page 33
- “Migration tasks to be performed after migrating the region” on page 34
- “Migrating data and starting the migrated CICS region” on page 36

---

### Migrating to TXSeries for Multiplatforms Version 6.2

TXSeries for Multiplatforms Version 6.2 provides tools to help you migrate your (Version 5.1 and Version 6.1 for non-AIX platforms, and Version 6.0 and Version 6.1 for AIX) regions to TXSeries for Multiplatforms Version 6.2. Prerequisites for installing and upgrading CICS are described in “Software prerequisites” on page 5.

1. Use the **cicsexport** utility to export your existing CICS region. This creates an archive file that you can import if you are moving the region to a new machine, and that will also serve as a backup if you encounter problems during your migration.

Run the following command to export the region to an archive file:

```
# install_dir/bin/cicsexport -r region_name -o archive_file
```

Where:

- *install\_dir* is the directory where CICS is installed (usr/lpp/cics on AIX, opt/cics on HP-UX and Solaris, or C:\opt\cics by default on Windows),
- *region\_name* is the name of the region to export
- *archive\_file* is the name of the archive file to be created

2. Uninstall your old version of CICS.
3. Install TXSeries for Multiplatforms Version 6.2.
4. If you are moving the region to a new machine, import your CICS region as described in this step. If you are migrating to a new version of TXSeries on the same machine, omit this step and go to Step 5 on page 32.
  - a. Transfer the archive file created using **cicsexport** command to the machine where Version 6.2 is installed (using FTP or any other method).
  - b. Use the **cicsimport** utility as shown below to import the region:

```
# install_dir/bin/cicsimport -r region_name -i archive_file  
byteorder_specifier
```

Where:

- *install\_dir* is the directory where CICS is installed (usr/lpp/cics on AIX, opt/cics on HP-UX and Solaris, or C:\opt\cics by default on Windows)
- *region\_name* is the name of the region to import using the information in *archive\_file*. *region\_name* must be the name of the region that was exported from Version 5.1 or Version 6.1 for non-AIX platforms, and Version 6.0 or Version 6.1 for AIX, and must not be the name of an existing region on the new machine.
- *archive\_file* is the name of the archive file created when you ran the **cicsexport** command.

- *byteorder\_specifier* indicates whether byte swapping is necessary while importing the region from the archive file. Operating systems like AIX, Solaris and HP-UX run on machines that support Big Endian byte order. Windows runs on Intel® machines that support Little Endian byte order. If byte swapping is required because you are migrating between big-endian and little-endian machines, specify -B. If you are migrating from big-endian machine to a big-endian machine or little-endian machine to a little-endian machine and byte swapping is not required, do not specify this option.
5. Use the **cicsmigrate** utility to migrate your CICS region to the latest level (see the *TXSeries for Multiplatforms Administration Reference* for information about other options that you can use with this command).
    - On Open Systems:
      - a. Create an upgrade script as follows:
 

```
# install_dir/bin/cicsmigrate -g script_name -o log_filename
-r region_name
```

Where:

        - *install\_dir* is the directory where CICS is installed (usr/lpp/cics on AIX, opt/cics on HP-UX and Solaris)
        - *script\_name* is the full path name of the upgrade script
        - *log\_filename* is the log file , that logs the information about the migration
        - *region\_name* is the region that needs to be migrated
      - b. Run the upgrade script by entering the following command:
 

```
# ksh script_name
```

where, *script\_name* is the full path name of the upgrade script.

When this script has run, the region has been migrated to the latest version level.
    - On Windows, run the upgrade script as follows:
 

```
# install_dir\bin\cicsmigrate region_name
```

Where:

      - *install\_dir* is the directory where CICS is installed (C:\opt\cics by default)
      - *region\_name* is the region that needs to be migrated

When this script has run, the region has been migrated to the latest version level.
6. To verify whether it is migrated successfully, check your region's database RD.stanza file. It will have migration level m113 as a first entry on the file.
7. Add an IP Listener (if not present) for the region and configure the CICS Transaction Gateway.
8. Cold start each region on the machine you upgraded by entering the following command for each region:
 

```
# install_dir/bin/cicscp -v start region region_name StartType=cold
```
9. To ensure that no errors occurred during the region restart, check the appropriate console.*number* file in the */var/cics\_regions/region\_name* directory. (To determine the appropriate console file, view the region's console.nam file in the same directory.)
10. If you shut down any remote regions, restart them now by entering the following command on the remote machine:

```
| # cicscp -v start region region_name  
| # $(CTGPATH)/bin/cicsterm -S=ServerName
```

- | 11. Run a CICS based or user application transaction on the CTG terminal to test  
| the region.
- | 12. Now follow the instructions given in “Migrating SFS data to SFS servers across  
| machines,” “Migration tasks to be performed after migrating the region” on  
| page 34, and “Migrating data and starting the migrated CICS region” on page  
| 36.

---

## Migrating SFS data to SFS servers across machines

| On the TXSeries Version 5.1 or Version 6.1 for non-AIX platforms, and Version 6.0  
| or Version 6.1 for AIX machine that hosts the CICS region that needs to be  
| migrated to CICS 6.2, run the following commands to dump the SFS data to the flat  
| file so that the data in the flat file can be read by the other machine for update.

| If you are migrating from Version 5.1, ensure that the environment variable  
| ENCINA\_BINDING\_FILE is set to ENCINA\_BINDING\_FILE=/var/cics\_servers/  
| server\_bindings before running the SFS export file command.

### Migrating region files across machine:

- | 1. Export the seven region files to flat file. (Refer: “Migrating SFS data to SFS  
| servers across machines” to export the files.)
  - Xcicsnlqfile
  - Xcicsnrectsqfil
  - Xcicsplqfile
  - Xcicsrectsqfile
  - Xcicstdqlgfile
  - Xcicstdqnofile
  - Xcicstdqphfile

| where X represents the region name

- | 2. Transfer the exported files to the target machine. Before importing these files  
| (using cicssdt or sfsadmin), start and stop the targeted region once.
- | 3. Import these files with the targeted region name. For example, Xcicsnlqfile to  
| Ycicsnlqfile.

| This will help in retaining the TSQs from the old machine to the target machine.

## Migrating SFS data using cicssdt

- | 1. On the TXSeries Version 5.1 or Version 6.1 for non-AIX platforms, and Version  
| 6.0 or Version 6.1 for AIX machine that hosts the CICS region that needs to be  
| migrated to CICS 6.2, use the **cicssdt** command to convert the SFS file to a flat  
| file:

```
| # cicssdt -s SFS_server_name -c stof file-name
```

| Where:

- | • *SFS\_server\_name* is the name of the SFS server where the SFS file is  
| present.
  - | • *file-name* is the SFS file where the data has to be read and dumped to a flat  
| file.
- | 2. FTP or copy the flat file generated by this command (named *file-name.sdt*) to  
| the CICS Version 6.2 machine.

3. On the CICS Version 6.2 machine issue the following command to update the data on the SFS server.

```
# cicsdtd -s SFS_server_name -c ftos file-name
```

Where:

- *SFS\_server\_name* is the name of the SFS server.
- *file-name* is the name of the flat file from which the data will be read and written to the SFS.

## Migrating SFS data using the sfsadmin utility

1. On the TXSeries Version 5.1 or Version 6.1 for non-AIX platforms, and Version 6.0 or Version 6.1 for AIX machine that hosts the CICS region that needs to be migrated to CICS 6.2, run the following command to export the file:

```
# sfsadmin export file SFS_file -server SFS_server_name  
-target Target_file_name
```

Where:

- *SFS\_file* is the name of the SFS file to be migrated.
- *SFS\_server\_name* is the name of the SFS server where the *SFS\_file* is located.
- *Target\_file\_name* is the file where the SFS data will be exported. It will be generated as *target\_file\_name.nnnnnnnn* where *nnnnnnnn* increments based on the size of data dumped.

2. FTP or copy the *target\_file\_name.nnnnnnnn* files generated by this command to the CICS Version 6.2 machine.
3. On the CICS Version 6.2 machine issue the following command to import the data on the SFS server:

```
# sfsadmin import file -server SFSServerName SourceFileName  
-target TargetFileName -targetvolume SFSDataVolume
```

Where:

- *SFS\_server\_name* is the name of the SFS server and must be a fully qualified server name *./:cics/sfs/SFS\_server\_name*.
- *SourceFileName* is the input file created in Step 1.
- *TargetFileName* is the file where the SFS data will be written.
- *SFSDataVolume* is the SFS data volume.

4. Check whether the imported file is present in the SFS server by entering the following command:

```
# sfsadmin list files -server SFS_server_name
```

where *SFS\_server\_name* is the name of the SFS server

---

## Migration tasks to be performed after migrating the region

Perform all of the migration tasks described in this section that are required by your CICS system.

### SFS Server

If the machine contains an SFS server, verify that the logical volumes for the SFS server's log and data volumes are owned by the user ID for the SFS server.

**Note:** In TXSeries Version 6.2, all the logical volumes for the SFS and PPC server's log and data volumes are owned by the **cics** user ID.

## Security and authentication

- If any region is using an External Security Manager (ESM), recompile the ESM. Specify the location of the esm module with the absolute path of the esm module for the ESModule attribute.
- If the region is using an External Authentication Manager (EAM), recompile the EAM. Specify the location of the EAM module with the absolute path of the EAM module for the EAMModule attribute.

## Applications and compilers

- Remove all the applications present (as binary executables), and maps under the directory `/var/cics_regions/region_name/maps`, and recompile the BMS maps. Recompile the applications and copy them to the `/var/cics_regions/region_name/bin` directory. Refer to the *TXSeries for Multiplatforms Application Programming Guide* for information about recompiling your applications.
- If MicroFocus Server Express COBOL is installed on the machine, upgrade the cicsprCOBOL language method file (which contains the COBOL runtime and support routines) as follows:
  1. Change the working directory to `/var/cics_regions/region_name/bin` and list the contents of the directory
  2. If cicsprCOBOL exists, remove it and recreate it by using the `cicsmkcobol` command.
- If any region on the machine uses a unique COBOL language method file, then for each region, change the working directory to `/var/cics_regions/region_name/bin`, remove the existing cicsprCOBOL file, and recreate it by using the `cicsmkcobol` command.

**Note:** If any copy of cicsprCOBOL was built to support transactions using other products (such as a relational database management product), rebuild the cicsprCOBOL language method file by using the same operands that were used originally. See the *TXSeries for Multiplatforms Administration Guide* for more information.

- Recompile all COBOL applications.

## Databases

- If any region uses a DB2 database for file management, do the following:
  1. Check the version of DB2 installed on the machine. If necessary, upgrade DB2 to the supported version according to the instructions in your DB2 documentation.
  2. Verify that DB2 is running; if necessary, start the database. See your DB2 documentation for instructions about how to do this.
  3. Ensure that your environment is set up for DB2 administration and that the `LD_LIBRARY_PATH` environment variable contains the value `$DB2DIR/lib`.
  4. Rebind the file-management packages for each region that uses the database by entering the following command.

```
# /opt/cics/bin/cicsdb2conf -I -s -r region_name -C -i instance_name \  
-a database_name
```

In this command, the `-I` option directs the command to ignore non-fatal errors, and the `-s` option suppresses creation of the product definition (XAD). The `region_name` is the name of the region using the corresponding DB2 instance (`instance_name`) and DB2 database (`database_name`).

**Note:** The `cicsdb2conf` command returns error messages about creation of queue objects. You can safely ignore these errors.

- If Oracle is used as File Manager, issue the following command:  

```
# cicsoraconf -r regionName -C -u oracleuserid/passwd
```
- If any CICS applications on this machine use the XA interface for communicating with XA-enabled relational databases, rebuild the switch load files (you do not need not rebuild switch load files if you are using CICS-supplied DB2 switch load files). For instructions about how to rebuild the switch load files, see the *TXSeries for Multiplatforms Administration Guide*.

## PPC Gateway server

If any region on this machine uses a PPC Gateway server on another machine, verify that the remote PPC Gateway server is running.

## Copies of the CICS system

If you previously exported a CICS region for use as an emergency backup, or for use as a template in creating other CICS regions, export the new version of that region by entering the following command:

```
# /opt/cics/bin/cicsexport -r region_name -o archive_file
```

In this command, *region\_name* is the name of the region to export into archive file *archive\_file*. The region name must be the name of an existing region.

## EPI and ECI interfaces

If the applications on this machine use the External Presentation Interface (EPI) or External Call Interface (ECI) application programming interfaces, recompile the applications.

RPC EPI libraries and RPC ECI libraries are not supplied with TXSeries. Therefore, if you want to migrate an EPI or ECI application from TXSeries 5.1 or an earlier version, recompile the application with CUC libraries instead of RPC EPI libraries or RPC ECI libraries.

## SNA setup

If the region to be migrated used SNA for communication, SNA needs to be set up on the new machine. For information about setting up SNA, refer to the *TXSeries for Multiplatforms Intercommunication Guide*.

Modify the appropriate attributes in the CD and LD stanza files to replicate the same communication definitions for intersystem communication between CICS regions.

---

## Migrating data and starting the migrated CICS region

Use the `cicssdt`, `cicsodt`, or `cicsddt` commands to migrate the data from Version 5.1 or Version 6.1 file manager for non-AIX platforms, and Version 6.0 or Version 6.1 file manager for AIX to the Version 6.2 file manager before starting the file manager or the region. These commands are described in the section about migrating file and queue management in the *TXSeries for Multiplatforms Administration Guide*. If you use the SFS server for your file manager, modify the following stanza entries before starting the region:

- Modify the File Definition entries in FD Stanza to reflect the current file manager on the new machine.



|  
|

- Modify the **DefaultFileServer** attribute in the Region Definition entries in RD Stanza to reflect the current file manager on the new machine.

When you have migrated your data, warm start the SFS server (if used), and cold start the migrated region.



---

## Chapter 9. Uninstalling CICS

This chapter describes how to remove TXSeries for Multiplatforms software.

---

### Uninstalling CICS

This section describes how to remove CICS software from your machine. If you are unfamiliar with the process of stopping regions and file managers, see the *TXSeries for Multiplatforms Administration Guide*.

To remove CICS software from your machine:

1. Ensure that you are logged into your machine with root privileges.
2. Ensure that all CICS services that are on the machine are stopped.
3. Uninstall CICS by using either GUI mode, console mode, or silent mode:

- For GUI mode uninstallation:

- a. Execute the following command from the *installation\_directory/\_uninst* directory:

```
# uninstall.bin
```

Where *installation\_directory* is the installation directory described in Table 2 on page 3 by default.

The CICS Product Setup program starts and the removal summary window opens.

- b. Click **Uninstall** to begin uninstalling CICS.
- c. When uninstallation is complete, click **Finish** to close the window.

- For console mode uninstallation:

- a. Execute the following command from the *installation\_directory/\_uninst* directory:

```
# uninstall.bin -console
```

Where *installation\_directory* is the installation directory described in Table 2 on page 3 by default.

- For silent mode uninstallation:

- Execute the following command from the *installation\_directory/\_uninst* directory:

```
# uninstall.bin -silent
```

Where *installation\_directory* is the installation directory described in Table 2 on page 3 by default.

Note that the CICS uninstallation process does not remove the CICS data directories listed in Table 21 on page 46 and any user data in CICS install directory (described in Table 2 on page 3).



---

## Appendix A. Obtaining additional information

This section lists all the documentation that is available for TXSeries for Multiplatforms, describes the contents of the documentation CD-ROM, and describes how to view this documentation on your machine. It also describes additional information about CICS products that is available on the World Wide Web (WWW), education and training opportunities, and the complete IBM Publications library.

---

### The documentation library for TXSeries for Multiplatforms

Table 17 lists all the publications that are available for TXSeries for Multiplatforms. The documentation is organized by platform under each product or product grouping, where applicable.

Table 17. The library for TXSeries for Multiplatforms

Form number	Document name	Document description
SC34-6632	<i>TXSeries for Multiplatforms Installation Guide</i>	Provides complete instructions for installing, configuring, and upgrading to the latest version of TXSeries for Multiplatforms.
SC34-6631	<i>TXSeries for Multiplatforms Concepts and Planning</i>	Introduces the TXSeries for Multiplatforms product, and provides high-level descriptions of transaction processing.
GC34-6645	<i>TXSeries for Multiplatforms Release Notes</i>	Provides platform- and release-specific information about TXSeries for Multiplatforms, including descriptions of new features, information for features or changes that were learned too late for incorporation into the product documentation, descriptions of defects that have been fixed since the last release of the product, and information about known restrictions that were associated with TXSeries for Multiplatforms and, where possible, suitable work-arounds.
SC34-6746	<i>TXSeries for Multiplatforms Administration Guide</i>	Provides guide information for administering CICS and CICS applications. It also includes the CICS glossary.
SC34-6641	<i>TXSeries for Multiplatforms Administration Reference</i>	Provides complete reference information for commands used to administer CICS on all supported platforms.
SC34-6627	<i>TXSeries for Multiplatforms SFS Server and PPC Gateway Server: Advanced Administration</i>	Provides information about administering the CICS SFS server and the CICS PPC Gateway server.
SC34-6634	<i>TXSeries for Multiplatforms Application Programming Guide</i>	Provides information about writing CICS application programs on all supported platforms.
SC34-6640	<i>TXSeries for Multiplatforms Application Programming Reference</i>	Provides reference information for the CICS application programming interfaces on all supported platforms.
SC34-6633	<i>TXSeries for Multiplatforms C++ Foundation Classes Programming Guide and Reference</i>	Provides information about writing CICS application programs in the C++ language.
SC34-6747	<i>TXSeries for Multiplatforms Front-End Programming Interface for Windows</i>	Provides information about using the CICS Front-End Programming Interface for Windows.
SC34-6636	<i>TXSeries for Multiplatforms Problem Determination Guide</i>	Helps administrators identify and diagnose problems with a CICS system or application. It describes symptoms of problems and their possible causes.

Table 17. The library for TXSeries for Multiplatforms (continued)

Form number	Document name	Document description
SC34-6638	<i>TXSeries for Multiplatforms Using CICS Workload Management</i>	Describes the CICS Workload Management utility.
SC34-6639	<i>TXSeries for Multiplatforms Messages and Codes</i>	Lists and describes all messages and codes that can be issued by a TXSeries for Multiplatforms system.
SC34-6644	<i>TXSeries for Multiplatforms Intercommunication Guide</i>	Describes how to implement communications between a CICS region and other systems (for example, another CICS region on a UNIX or Windows machine or another application on a system such as a mainframe).
SC34-6642	<i>TXSeries for Multiplatforms Using IBM Communications Server for AIX with CICS</i>	Provides information for using CICS with the Systems Network Architecture (SNA) package provided by IBM Communications Server for AIX.
SC34-6750	<i>TXSeries for Multiplatforms Using HP-UX SNAplus2 with CICS</i>	Provides information for using CICS with the Systems Network Architecture (SNA) package provided by HP-SNAPlus2.
SC34-6751	<i>TXSeries for Multiplatforms Using SNAP-IX for Solaris with CICS</i>	Provides information for using CICS with the Systems Network Architecture (SNA) package provided by SNAP-IX.
SC34-6748	<i>TXSeries for Multiplatforms Using IBM Communications Server for Windows Systems with CICS</i>	Provides information for using CICS with the Systems Network Architecture (SNA) package provided by IBM Communications Server for Windows.

All documentation is supplied with the products in Hypertext Markup Language (HTML) and Portable Document Format (PDF) except the *TXSeries for Multiplatforms Release Notes*, which are available only in HTML from the Web at [www.ibm.com/software/htp/cics/txseries/library](http://www.ibm.com/software/htp/cics/txseries/library).

**Note:** Not all documentation is available in all supported languages. All HTML, PDF, and printed documentation is available in U.S. English. For other languages, only a subset of the documentation is available in each format.

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## The documentation CD-ROM for TXSeries for Multiplatforms

The documentation CD-ROM contains the complete documentation library for TXSeries for Multiplatforms for all supported platforms, as listed in Table 17 on page 41. The only exception is the *TXSeries for Multiplatforms Release Notes*, which are available in HTML on the Web.

The documents that are on the documentation CD-ROM are in the following formats:

### Eclipse Help System plug-in

This is a structured HTML representation of the information that allows you to search across the library. You can run the viewer directly from the CD-ROM or copy it onto your hard disk.

For instructions about how to view the Eclipse Help System plug-in, including instructions for adding the documentation plug-in to an existing Eclipse installation on your machine, see the readme file that is on the documentation CD-ROM.

## PDF

Using the latest version of Adobe® Acrobat Reader you can view, search, or print the documentation directly from the CD-ROM or install it from the CD-ROM onto a local machine and perform the same operations on it from there. (The Adobe Acrobat Reader can be downloaded from the Web at no charge.) See “Viewing the documentation in PDF from a CD-ROM.”

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## Viewing the documentation in PDF from a CD-ROM

You can view the TXSeries for Multiplatforms documentation in PDF directly from one of the documentation CD-ROMs. The documentation is stored in the root directory named PDF. The PDF files have long file names that match the titles of the publications. To read a PDF book:

1. Open Adobe Acrobat
2. Choose **File -> Open**
3. Navigate to the CD-ROM PDF directory
4. Select the publication that you want to view.

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## Information on the World Wide Web (WWW)

Many sources of information on CICS are accessible from the TXSeries for Multiplatforms home page:

<http://www.ibm.com/cics/txseries>

This site includes information about the TXSeries for Multiplatforms products, including the complete online documentation set and details of educational opportunities and events that are related to these products. This site also provides access to the CICS support site, which contains Program Temporary Fixes (PTFs) and information about third-party products that are supported for use with CICS.

Other useful Web sites include:

- The IBM Publications Catalog Web site (<http://www.elink.ibm.com/public/applications/publications/cgibin/pbi.cgi>): Use this site to search for, read summaries of, and order books that are related to WebSphere® and CICS. Some of these books are referred to from the books that are supplied with CICS.
- The IBM Learning Services and Worldwide Information Web sites (<http://www.ibm.com/services/learning> and <http://www.ibm.com>): Use these sites to find the courses that are offered for CICS and related topics. Information about courses and whether they are available in your area is available from these Web sites. You can also get information by calling 1-800-IBM-TEACH (1-800-426-8322), or by contacting your IBM representative.





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## Appendix B. The CICS directory structure

CICS creates four logical directory structures during installation. One logical directory structure is created in the installation directory, and three in the /var directory. This appendix describes the contents and purpose of these directories and their subdirectories.

---

### The CICS system directory structure

The CICS installation procedure uses the installation directory listed for your platform in Table 2 on page 3 as the target installation directory. This directory contains the following subdirectories and files:

Table 18. The installation directory structure of the CICS installation directory

DEFAULT	This file contains the default settings for the CICS Resource Definitions.
/bin	This subdirectory contains executable and shell scripts. It is normally included in the PATH for all CICS users.
/classes	This subdirectory contains Java™ classes for use in the CICS environment.
/docs	This subdirectory contains the README files in all the supported locales.
/etc	This subdirectory contains miscellaneous files that CICS uses, such as key mapping files.
/include	This subdirectory contains copybook and header files that are used during application development.
/lib	This subdirectory contains library files that are used by CICS.
/maps	This subdirectory contains basic mapping support (BMS) map definitions that are used by CICS-supplied transactions.
/msg	This subdirectory contains CICS message catalogs for all the supported locales in the respective directories.
/samples	This subdirectory contains source files for samples. To compile or update any of these files, you must first copy each file to a directory for which you have read and write permission.
/examples	This subdirectory contains example source files.
/utils	This subdirectory contains CICS utilities.
/wui	This subdirectory contains files used by the Administration Interface.
/logs	This subdirectory contains TXSeries installation and uninstallation related log files.
/_uninst	This subdirectory contains TXSeries product uninstaller related files.
/var	This subdirectory contains sarpc related files.
/_jvm	This subdirectory contains the JRE required for TXSeries.
/license	This subdirectory contains the license related information.

---

### The CICS Workload Manager system directory structure

The CICS installation procedure uses the installation directory listed for your platform in Table 3 on page 3 as the target installation directory for the Workload Manager. Two directory structures are used by CICS WLM. They are install\_dir/cicssm (where install\_dir is /usr/lpp on AIX) and /var/cicssm.

The install\_dir/cicssm directory consists of the following subdirectories:

Table 19. Directory structure for the install\_dir/cicssm directory

/bin	This subdirectory contains CICS WLM executable files.
------	---

Table 19. Directory structure for the `install_dir/cicssm` directory (continued)

<code>/lib</code>	This subdirectory contains CICS WLM libraries.
<code>/msg</code>	This subdirectory contains CICS WLM message catalog.
<code>/samples</code>	This subdirectory contains sample CICS WLM exit and other code.

The `/var/cicssm` directory consists of the following subdirectories:

Table 20. Directory structure for the `/var/cicssm` directory

<code>/data</code>	This subdirectory is required for CICS WLM definitions.
<code>/log</code>	This subdirectory contains trace and message files for various components.
<code>/repos</code>	This subdirectory contains descriptions of the CICS configuration, and the locations of the WAP and WCM.

## CICS directory structure for regions, servers, and clients (`/var`)

The following directories are added to the `/var` directory during CICS installation and configuration:

Table 21. The `/var` directory structure

<code>/cics_clients</code>	This subdirectory contains all the CICS client related files.		
<code>/cics_regions</code>	This subdirectory holds the directory structure for each region that is created on the CICS system.		
	<code>/region_name</code>	This subdirectory is created when the region is configured. It contains the following subdirectories and files:	
		<code>/bin</code>	This subdirectory contains the executable CICS application files.
		<code>/classes</code>	This subdirectory contains the user's own Java and IIOF ORB files for use in the CICS environment.
		<code>/console.number</code>	These sequentially numbered files are created by the region and contain important region messages. In addition, the files <code>console.msg</code> and <code>console.nam</code> are also located here and contain region information.
		<code>/data</code>	This subdirectory contains various output files and statistics files, such as the <code>CCIN.out</code> , <code>CPLD.out</code> , <code>CPLI.out</code> , <code>CSMT.out</code> , <code>CSZL.out</code> , and <code>statsfile</code> files.

Table 21. The /var directory structure (continued)

		/database	<p>This subdirectory contains the resource definition databases for the following entities:</p> <ul style="list-style-type: none"> <li>• CD—Communications Definitions</li> <li>• FD—File Definitions</li> <li>• GD—Gateway Definitions</li> <li>• JD—Journal Definitions</li> <li>• LD—Listener Definitions</li> <li>• MD—Monitoring Definitions</li> <li>• OD—Object Definitions</li> <li>• PD—Program Definitions</li> <li>• RD—Region Definitions</li> <li>• TD—Transaction Definitions</li> <li>• TDD—Transient Data Definitions</li> <li>• TSD—Temporary Storage Definitions</li> <li>• UD—User Definitions</li> <li>• WD—Terminal Definitions</li> <li>• XAD—Product Definitions</li> </ul> <p><b>Note:</b> Do not attempt to edit any of the resource definition files directly. Instead, use the appropriate CICS commands to change, add, or delete entries in these files.</p>
		/dumps	This subdirectory contains the /dir1 subdirectory that stores transaction and system dump files.
		/environment	This file contains the environment variables for the region.
		/log	This subdirectory contains the region CICS log.
		/maps	<p>This directory contains the BMS map definitions. The following subdirectories are contained in this subdirectory:</p> <ul style="list-style-type: none"> <li>• /prime: This subdirectory is the default language directory that is examined after any language-specific directories are accessed by CICS.</li> <li>• /lang: These are language-specific subdirectories that are used by CICS.</li> </ul>
		/region.properties	This file identifies Java properties and classes that are running in the CICS environment.
		/region_restart	This file is used for warm starting the region.
		/symrecsnumber	These sequentially numbered files are created by the region when problems occur. They contain important information about symptoms of problems.
/cics_servers	This subdirectory is created when the <b>cicsdefaultservers</b> command is run. It contains the following subdirectories:		
	/cicsipc	This subdirectory contains the lock file <code>gs_lock</code> which is used by processes to synchronize access to shared memory.	
	/SSD	This subdirectory contains Structured File Server (SFS) server resource definition databases and the SFS server-specific subdirectories. The SFS server-specific subdirectories, <code>/var/opt/IBM/cics/cics_servers/SSD/cics/sfs/sfs_server_name</code> , contain the working files for the SFS server, such as the key, lock, msg, and restart files.	
	/SCD	This subdirectory contains the SFS server schema definitions.	
	/GSD	This subdirectory contains the PPC Gateway server resource definition databases and the PPC Gateway server-specific subdirectories. The PPC Gateway server-specific subdirectories, <code>/var/opt/IBM/cics/cics_servers/GSD/cics/ppc/gateway/ppc_server_name</code> , contain the working files for the PPC Gateway server, such as the key, msg, and restart files.	

| *Table 21. The /var directory structure (continued)*

	/archives	This subdirectory holds CICS region archives.
	/backups	This subdirectory holds backup data for the CICS region.
	/cics_src	This subdirectory contains a database that has dynamic information about the status of CICS regions and servers (SFS servers and PPC Gateway servers).
	/cicssm	This subdirectory contains all the CICS Workload Manager related files.

---

## CICS /usr directory structure

The following directories are added to the /usr directory during CICS installation and configuration:

*Table 22. The /usr directory structure*

/cicssm	This subdirectory holds the .profile file for user cicssm.
---------	--

---

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Spine information:



TXSeries for Multiplatforms

Installation Guide

Version 6.2

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