CICS Transaction Server for z/OS
Version 5 Release 2

What's New

GC34-7302-00

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Note
Before using this information and the product it supports, read the information in "Notices" on page 45.

This edition applies to the IBM CICS Transaction Server for z/OS Version 5 Release 2 (product number 5655-Y04) and to all subsequent releases and modifications until otherwise indicated in new editions.

Contents

Preface

What this book is about

This book provides information about new and changed function in CICS® Transaction Server for z/OS®, Version 5 Release 2. It gives an overview of the changes to reference information, and points you to the manuals where more detailed reference information is given.

The programming interface information given in this book is intended to show only what is new and changed from the previous release of CICS TS, and to highlight the benefits of the new function. For programming interface information, read the primary sources of programming interface and associated information in the following publications:

- *CICS Application Programming Reference*
- *CICS System Programming Reference*
- *CICS Customization Guide*
- *CICS External Interfaces Guide*
- *CICSPlex System Manager Application Programming Guide*
- *CICSPlex System Manager Application Programming Reference*

Who this book is for

This book is for those responsible for the following user tasks:

- Evaluation and planning
- System administration
- Programming
- Customization

What you need to know to understand this book

The book assumes that you are familiar with CICS and CICSPlex®, either as a systems administrator, or as a systems or application programmer.

Notes on terminology

When the term "CICS" is used without any qualification in this book, it refers to the CICS element of IBM® CICS TS.

"CICSPlex SM" is used for the CICSPlex System Manager element of IBM CICS TS.

"MVS™" is used for the operating system, which is a base element of z/OS.

Syntax notation

Syntax notation specifies the permissible combinations of options or attributes that you can specify on CICS commands, resource definitions, and many other things.

The conventions used in the syntax notation are:

Notation	Explanation
	Denotes a set of required alternatives. You must specify one (and only one) of the values shown.
	Denotes a set of required alternatives. You must specify at least one of the values shown. You can specify more than one of them, in any sequence.
	Denotes a set of optional alternatives. You can specify none, or one, of the values shown.
	Denotes a set of optional alternatives. You can specify none, one, or more than one of the values shown, in any sequence.
	Denotes a set of optional alternatives. You can specify none, or one, of the values shown. **A** is the default value that is used if you do not specify anything.
 **Name:** 	A reference to a named section of syntax notation.
	**A**= denote characters that should be entered exactly as shown. *value* denotes a variable, for which you should specify an appropriate value.

Location of topics in the information center

The topics in this publication can also be found in the CICS information center. The information center uses content types to structure how the information is displayed.

The information center content types are generally task-oriented, for example; upgrading, configuring, and installing. Other content types include reference, overview and scenario or tutorial-based information. The following mapping shows the relationship between topics in this publication and the information center content types, with links to the external information center:

Table 1. Mapping of PDF topics to information center content types. This table lists the relationship between topics in the PDF and topics in the content types in the information center

Set of topics in this publication	**Location in the information center**
All content	What's new overview

Part 1. Service agility

CICS Transaction Server for z/OS, Version 5 Release 2 builds on the advances in service agility that was provided in previous releases. Specifically, this release provides the following capabilities to help you in adapting your services with the agility that modern business environments demand.

Chapter 1. Increased capability and portability for Web applications written in Java

CICS Transaction Server for z/OS, Version 5 Release 2 upgrades the WebSphere® Application Server Liberty profile to Version 8.5.5 and supports a broader set of its features. Java database connectivity, transactionality, and security infrastructure are all functionally enhanced.

The Liberty profile is a lightweight development and application runtime environment that is well-suited to building web applications that do not require the full Java™ EE environment of traditional enterprise application server profiles. CICS supports the following capabilities:

- Java 7.0 and 7.1 for flexible levels of support.
- Java API for XML Web Services (JAX-WS), providing support for SOAP web services.
- DataSource, Java class accessing DB2 databases from Java applications.
- Application security support securing the server runtime environment and applications.
- RACF keyrings for storing SSL key stores.

Support is provided for JDBC type 2 data sources. This support enriches your options for access to other data managers. You can use the JDBC DataSource API to access relational data that is stored in either a local DB2® database, managed by CICS resources, or a remote database using JDBC type 4 connectivity.

Java Transaction API (JTA) support enables transactional web application developing using JTA API to be run in a Liberty JVM server and to coordinate transactional updates to both CICS resources and other third party resource managers, such as a JDBC type 4 driver connection using a remote data source.

You can take advantage of the full range of WebSphere Liberty Profile application security functions. These include an extended range of authentication options, including HTTP basic authentication, single sign-on using LTPA cookies, form login, Trust Association Interceptors, and SSL client certificate mapping. Authorization options include both JEE role authorization and CICS transaction and resource security, which is based on the authenticated SAF userid. The Secure Sockets Layer (SSL) support in the Liberty JVM server HTTP listener is extended to support certificates that are stored in both System Authorization Facility (SAF) keyrings and Java keystores.

Find out more

For more information about using CICS with WebSphere Application Server Liberty profile, see Liberty features.

Chapter 2. Easier interaction with mobile devices and mobile-optimized gateways

CICS Transaction Server for z/OS, Version 5 Release 2 provides support for web service requests with JSON and the conversion between JSON and application data. Support for JSON greatly simplifies the use of existing CICS services by mobile applications, particularly those managed by IBM Worklight® Server.

You can expose CICS applications as web services with JavaScript Object Notation (JSON) payloads, create new RESTful applications, call existing JSON applications, and convert JSON from any source to and from the application data.

This support for JSON and REpresentational State Transfer (REST) was previously available in the CICS TS Feature Pack for Mobile Extensions.

Find out more

For information about JSON, see Getting started with JSON web services. For information about upgrading JSON web services, see Upgrading JSON web services in Upgrading. For an architect's perspective on enabling mobile solutions with CICS, see this short video.

Chapter 3. Increased flexibility in data mapping

Data mapping for SOAP and JSON web services supports UTF-16 data and more COBOL clauses, including OCCURS DEPENDING ON. With this support, you can represent a larger range of characters in web services application data and the TRANSFORM API.

In the CICS data transformation service for SOAP and JSON web services and the TRANSFORM API, Unicode characters are transformed to UTF-16 data in COBOL, C, C++ and PL/I. Unicode is the widely adopted standard for handling most of the characters in use today and can be used as a basis for the internationalization and localization of CICS applications.

This release of CICS also supports the COBOL clause OCCURS DEPENDING ON, when the field is last in the structure, and the clause OCCURS INDEXED BY.

Find out more

For more information about options for data mapping with CICS, see High-level language and XML schema mapping and High-level language and JSON schema mapping.

Chapter 4. Increased support for high-availability scenarios

IP-connectivity (IPIC) support is extended to support more high-availability scenarios. This support helps to simplify the configuration and minimize the impact of issues that can arise when CICS® communicates across a wide area IP network.

Groups of regions from CICS Transaction Server for z/OS, Version 5 Release 2 can be clustered together and accessed through a shared TCP/IP end point from other client regions of CICS Transaction Server for z/OS, Version 5 Release 2. This support enables individual CICS regions to be removed as a single point of failure, while permitting planned or unplanned outages of individual components, and provides a migration path for VTAM® generic resource support when moving from SNA to an IP network.

Find out more

For more information about options for IPIC support, see Intercommunication using IP interconnectivity.

Chapter 5. Flexible installation

Installation in CICS Transaction Server for z/OS, Version 5 Release 2 is changed to offer more flexibility in switching between offerings.

You can obtain CICS Transaction Server for z/OS in three offerings:

- CICS TS for z/OS, Version 5.2, for full production capability.
- CICS TS Developer Trial 5.2, for a no-cost evaluation of the product.
- CICS TS VUE 5.2, for an alternative price model for the deployment of new Java workloads and service enablement.

Each of these offerings comprises of two components:

- CICS TS for z/OS V5.2 - base component
- An activation module specific to the offering

You must install both of these components. Each component is installed separately and has its own Program Directory. Having one CICS TS for z/OS V5.2 - base component for all three editions of CICS TS for z/OS makes it possible to apply service to CICS TS Developer Trial 5.2 , and to upgrade from CICS TS Developer Trial 5.2 to either of the other two offerings, without the need to reinstall the base component.

Find out more

For information about the installation components, see Installing. For information about changes to existing procedures, such as procedures to start CICS regions, see Changing start procedures to include the activation module.

For information about the offerings, see CICS Transaction Server for z/OS Developer Trial and CICS Transaction Server for z/OS Value Unit Edition.

Part 2. Operational efficiency

CICS Transaction Server for z/OS, Version 5 Release 2 builds on the advances in operational efficiency that was delivered in previous releases. Specifically, this release provides the following capabilities to help in managing your CICS infrastructure.

Chapter 6. Increased support for policy-based management

The number of supported policies thresholds is expanded to cover a wider range of task thresholds that can be used to trigger autonomic actions.

Thresholds can be set on requests for start, syncpoint, transient data (TD) queues, temporary storage (TS) queues, and elapsed time on a user task.

Find out more

For more information about using policies with CICS, see New policy rule types and rule items.

Chapter 7. Increased security capabilities

Using a standards-based approach to security can reduce the need to create and manage custom security infrastructure. CICS Transaction Server for z/OS, Version 5 Release 2 supports the use of SAML and Kerberos security tokens for application security control. Cryptographic ciphers enable CICS to enforce the use of TLS 1.2, and check for conformance to the NIST-SP800-131a security standard.

Support for the Security Assertion Markup Language (SAML) was first introduced in the CICS TS Feature Pack for Security Token Extensions. Support for SAML allows web services to be configured to use SAML tokens, or for customer-written, SAML-aware applications to use SAML tokens.

CICS Transaction Server for z/OS, Version 5 Release 2 includes, and extends, the SAML support that was previously provided in the CICS TS Feature Pack for Security Token Extensions. Support is provided for both inbound and outbound use of SAML tokens, including the ability to add attributes to outbound SAML tokens. Web services can be configured to use SAML tokens in provider mode and requester mode. The CICS implementation of SAML is based on Java. This increases operational efficiency by enabling the SAML security token processing to be eligible for offloading to speciality engines

You can validate Kerberos security tokens with your region's external security manager, such as RACF. Provider mode web services can be configured to use Kerberos as their authentication method.

IP communications can be secured with stronger cryptographic standards, including Transport Layer Security (TLS) 1.2 and the full range of ciphers and protocols provided by System SSL. CICS can check and report on conformance to the guidelines in the National Institute of Standards and Technology (NIST) Special Publication 800-131A (NIST-SP800-131A), which includes support for TLS.

Find out more

For more information about support for SAML security tokens, see Overview of SAML support.

For more information about Kerberos token validation, see Kerberos support.

For more information about making your CICS system conformant with NIST-SP800-131A and using the TLS security protocol, see Making your CICS system conformant to NIST SP800-131A.

Chapter 8. Performance enhancements

The 31-bit storage that is used by web services is reduced. More commands are now threadsafe.

Reducing the use of 31-bit storage by web services enables more transactions to run concurrently. Overall, reducing the use that CICS makes of 31-bit storage leaves more space for use by application programs and increases the potential for region consolidation.

Find out more

For more information about CICS commands that run as threadsafe, see Threadsafe commands.

Chapter 9. Diagnostic improvements

There are a number of enhancements to the information about CICS that you can access to help with problem determination.

These enhancements include:

- Ability to specify a dump code on a dump request that is made through CEMT PERFORM SNAP or PERFORM DUMP.
- Access, through EXEC CICS ASSIGN, to the error message that is referenced in the transaction abend control block for the CICS task, and to the program's link level in the local system.
- Ability through INQUIRE PROGRAM to see whether a program is resident or reusable without having to take and examine a dump.

Find out more

For information about CEMT PERFORM SNAP, see CEMT PERFORM DUMP|SNAP.

For information about EXEC CICS ASSIGN, see ASSIGN.

For information about INQUIRE PROGRAM, see INQUIRE PROGRAM.

Chapter 10. Improved search, integration, and customization of IBM documentation

Documentation for CICS is supplied in the IBM Knowledge Center. This format offers benefits in searching, filtering, saving, customizing, and printing documentation for all IBM products.

IBM Knowledge Center provides information for over 2500 IBM products. The information that was previously provided in product information centers is in IBM Knowledge Center. IBM Knowledge Center provides integrated tools for finding, filtering, customizing, saving, and sharing information. The benefits include:

Integration
IBM Knowledge Center is one place to go to find information about all IBM products that you use.

Consistency
There were differences in the presentation and function of information centers between products. IBM Knowledge Center provides the same set of functions for all product information.

Customization
You can use IBM Knowledge Center filtering capabilities to select the information that you need to use. You can build the information that you need into customized collections. For example, you might create a collection about the products that you use regularly, or a collection about a particular task, involving multiple products, that you plan to do in the coming months. IBM updates to the information in your collection are automatically reflected and you can create PDFs of your collections.

Feedback
You can rate the quality of topics and share your comments and tips with other users in the IBM Knowledge Center. You can continue to send feedback privately to IBM, if you prefer.

Find out more

For more information about the features of IBM Knowledge Center, see the home page. For more information about all the forms of documentation that is supplied with CICS TS for z/OS, Version 5.2, see Product documentation.

Part 3. Cloud enablement

CICS Transaction Server for z/OS, Version 5 Release 2 builds on the cloud enablement that was provided in the previous release. Specifically, this release provides the following capabilities to support the integration of CICS with a cloud-based environment.

Chapter 11. Lifecycle management of multiple versions of applications

You can install and manage multiple versions of an application on the same platform instance. New versions of an application can be deployed to the platform without having to remove the previous version.

This capability gives you flexibility to consolidate multiple versions on one platform, to be able to upgrade to a new version of an application without the need to disable or remove the old version, and to phase access to one version of an application for some users, while other users remain on an alternative version.

Library and program resources that are defined in CICS bundles as part of an application can be made private to that version of the application. This separation avoids resource name clashes between applications and application versions, and is useful for server consolidation.

Applications can now have two application contexts: the initial context that is used to monitor each application and application operation resource usage across tasks and CICS regions, and a new, current context. The current application context changes each time that the associated task passes through an application entry point. URIMAP resources can now be set as application entry points in addition to PROGRAM resources.

Dynamic routing for cloud applications is supported through the CICSPlex SM router access exit, EYU9WRAM.

Find out more

For information about the multi-versioned use of private resources, application contexts and application entry points, see Cloud enablement with platforms. For existing users, see Multi-versioning for applications deployed on platforms. For information about using EYU9WRAM, see Dynamic routing with CICSPlex SM.

Chapter 12. Integration of CICS applications with cloud-based infrastructure

You can model a CICS application component in products such as IBM Workload Deployer so that it can be included in the cloud application lifecycle of IBM PureApplication System and other cloud environments that are managed by IBM Workload Deployer.

Find out more

For more information about how to use IBM Workload Deployer to connect a CICS application to a cloud environment, see Scenario: Using CICS in a cloud environment.

Chapter 13. Increased scope for resource management in CICS bundles

More CICS resources can be defined and managed in CICS bundles and there are enhancements to the management of first-class platforms.

You can create resource definitions in CICS bundles for the following resources: FILE, JVMSERVER, and TCPIPSERVICE, and for the following web services resources: PIPELINE and WEBSERVICE.

In addition, first-class platforms provide the ability to define and create new topologies, and to add and remove regions from installed platforms.

Find out more

For more information about defining resources in bundles, see Defining CICS bundles.

For more information about management of first-class platforms, see Setting up a platform.

Part 4. New in CICS Explorer and CICS Explorer SDK

Since the release of CICS Transaction Server for z/OS, Version 5 Release 1, IBM has released a number of significant enhancements to the CICS Explorer and the CICS Explorer SDK.

- Support for CICSPlex SM workload management.
- Extra workload content is shown in the CICSplex Explorer view.
- Define FILE resources in a CICS Bundle project.
- Define JVMSERVER resources (JVM servers) and associated JVM profiles in a CICS Bundle project.
- Define PIPELINE resources and associated pipeline configuration files in a CICS Bundle project.
- Define TCPIPSERVICE resources in a CICS Bundle project.
- Define WEBSERVICE resources in a CICS Bundle project.
- Generate URIMAP resources and associated alias transactions using an existing WEBSERVICE definition in a CICS Bundle project.
- View the private resources and application entry points for each installed version of an application on a platform, using the online application editor.
- Disable and discard an installed application in a single step, using the online application editor.
- View the availability status of installed applications and CICS bundles, and make them available or unavailable to users through their application entry points, using the Cloud Explorer view or the online application editor.
- New Operation and Workload Management views added.
- The user guides for CICS Explorer® and the CICS Tools plug-ins are now included in the IBM Knowledge Center. However, some of the information in the user guides is generated only at run time in the CICS Explorer product, and so some content does not show in the IBM Knowledge Center. Refer to the relevant user guide in the CICS Explorer Help to see the complete content.

Find out more

For more information about the features of CICS Explorer, see the CICS Explorer and plug-ins User Guides.

Part 5. General information

This section covers system requirements and high-level language support.

System requirements

The minimum required level of operating requirements for CICS Transaction Server are described in Detailed system requirements for CICS Transaction Server.

Chapter 14. High-level language support

This topic lists the high-level programming languages and compilers that are in service on z/OS and have CICS translator support and Language Environment® runtime support with CICS Transaction Server for z/OS, Version 5 Release 2.

All COBOL, PL/I, C, and C++ compilers listed in this topic can use the integrated CICS translator for CICS online programs. In addition the COBOL, C and C++ compilers can use the integrated translator for batch programs using the External CICS Interface (EXCI) command level API.

COBOL

Product name	PID	Translator	Run time
Enterprise COBOL for z/OS V3.4	5655-G53	Supported	Supported
Enterprise COBOL for z/OS V4.2	5655-S71	Supported	Supported
Enterprise COBOL for z/OS V5.1	5655-W32	Supported	Supported

PL/I

Product name	PID	Translator	Run time
Enterprise PL/I for z/OS V3.9	5655-H31	Supported	Supported
Enterprise PL/I for z/OS V4.2, V4.3, and V4.4	5655-W67	Supported	Supported

C and C++

Product name	PID	Translator	Run time
z/OS V1.12 and V1.13 XL C/C++	5694-A01 - Optional feature of z/OS	Supported	Supported
z/OS V2.1 XL C/C++	5655-121 - Optional feature of z/OS	Supported	Supported

Assembler

Product name	PID	Translator	Run time
High Level Assembler for MVS and VM and VSE V1.6 and later	5696-234	Supported	Supported

Java

Product name	PID	Run time
IBM 64-bit SDK for z/OS, Java Technology Edition, V7	5655-W44	Supported
IBM 64-bit SDK for z/OS, Java Technology Edition, Version 7 Release 1	5644-W44	Supported

Compilers and high-level language versions withdrawn from service

The compilers and high-level programming languages listed here have been withdrawn from service on z/OS. This topic states the level of CICS translator support and Language Environment runtime support that is provided with CICS Transaction Server for z/OS, Version 5 Release 2 for your existing programs that were compiled using these compilers.

For information about the availability and end of service dates for IBM products, see the IBM Software Support Lifecycle page.

Only the more recent COBOL, PL/I, C, and C++ compilers listed in this topic can use the integrated CICS translator. For more information about the integrated CICS translator, see Translation and compilation in Developing applications.

Language Environment runtime required

Language Environment is a base element of z/OS and provides the common runtime environment for COBOL, PL/I, C, and C++. For more information about how CICS uses the services of Language Environment, see Programming languages and Language Environment in Developing applications.

Pre-Language Environment compilers provided native runtime libraries for programming languages, but the native runtime libraries are not supported in CICS Transaction Server for z/OS, Version 5 Release 2. However, Language Environment provides object and load module compatibility for applications that are generated with certain pre-Language Environment compilers. Load modules that are created with these compilers, and link-edited with their associated runtime libraries, are compatible with the Language Environment without relinking. Also, object modules created with these compilers can be linked and run with Language Environment without recompiling.

Assembler

Product name	PID	CICS translator	CICS integrated translator	Language Environment runtime support
High Level Assembler for MVS and VM and VSE V1.4 and V1.5	5694-234	Supported	Not supported	Supported

C and C++

Product name	PID	CICS translator	CICS integrated translator	Language Environment runtime support
C/370™ V1 (pre-Language Environment)	5688-040	Supported	Not supported	Supported: see Language Environment runtime required
C/370 V2 (pre-Language Environment)	5688-187 5688-188	Supported	Not supported	Supported: see Language Environment runtime required
SAA AD/Cycle C/370	5688-216	Not supported	Not supported	Supported
C/C++ for MVS/ESA	5655-121	Supported	Not supported	Supported
C/C++ for OS/390®	5647-A01 - Component of OS/390	Supported	Not supported	Supported
C/C++ for z/OS and OS/390	5694-A01 - Component of z/OS	Supported	Not supported	Supported
z/OS V1.4, V1.5, and V1.6 C/C++	5694-A01 - Component of z/OS	Supported	Not supported	Supported
z/OS V1.7, V1.8, V1.9, V1.10, and V1.11 XL C/C++	5694-A01 - Component of z/OS	Supported	Supported	Supported

COBOL

Product name	PID	CICS translator	CICS integrated translator	Language Environment runtime support
OS/VS COBOL (pre-Language Environment)	5740-CB1 5740-CB4 5740-LM1	Not supported	Not supported	Not supported
VS COBOL II Release 3 or later (pre-Language Environment)	5668-022 5668-023 5668-958	Not supported	Not supported	Not supported
VS COBOL II Release 3 or later (with Language Environment runtime)	5668-022 5668-023 5668-958	Supported	Not supported	Supported: see Language Environment runtime required
COBOL/370	5688-197	Supported	Not supported	Supported
COBOL for MVS & VM V1.2	5688–197	Supported	Not supported	Supported

Product name	PID	CICS translator	CICS integrated translator	Language Environment runtime support
COBOL for OS/390& VM V2.1	5648-A25	Supported	Not supported	Supported
COBOL for OS/390 & VM V2.2	5648-A25	Supported	Supported	Supported
Enterprise COBOL for z/OS and OS/390 V3.1, V3.2, and V3.3	5655-G53	Supported	Supported	Supported
Enterprise COBOL for z/OS and OS/390 V4.1	5655-S71	Supported	Supported	Supported

Java

Product name	PID	Runtime support
Java for OS/390 V1.1.8	5655-A46	These products cannot be used with CICS TS 5.2. Java application bytecode created using these products should run on the supported SDK product, provided the application does not use deprecated APIs and is not affected by any incompatibilities introduced with Java version changes.
VisualAge® for Java, Enterprise Edition for OS/390	5655-JAV	
IBM Developer Kit for OS/390, Java 2 Technology Edition, SDK 1.3.1	5655-D35	
IBM SDK for z/OS, Java Technology Edition, V1.4.2	5655-I56	
IBM SDK for z/OS, Java Technology Edition, V5	5655-N98	

PL/I

Product name	PID	CICS translator	CICS integrated translator	Language Environment runtime support
OS PL/I Optimizing Compiler Version 1 (pre-Language Environment)	5734-PL1	Not supported	Not supported	Supported: see Language Environment runtime required. Note: For OS PL/I Version 1, Release 3 (object modules) and Release 5.1 (load modules) are supported.

Product name	PID	CICS translator	CICS integrated translator	Language Environment runtime support
OS PL/I Optimizing Compiler Version 2 (pre-Language Environment)	5668-909 5668-910 5668-911	Not supported	Not supported	Supported: see Language Environment runtime required
SAA AD/Cycle PL/I for MVS and VM	5688-235	Supported	Not supported	Supported
PL/I for MVS and VM V1	5688-235	Supported	Not supported	Supported
VisualAge PL/I for OS/390 V2	5655-B22	Supported	Supported	Supported
Enterprise PL/I for z/OS V3.1, V3.2, V3.3, V3.4, V3.5, V3.6, V3.7 and V3.8	5655-H31	Supported	Supported	Supported
Enterprise PL/I for z/OS V4.1	5655-W67	Supported	Supported	Supported

Part 6. Appendixes

Notices

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Bibliography

CICS books for CICS Transaction Server for z/OS

General

CICS Transaction Server for z/OS Program Directory, GI13-3326
CICS Transaction Server for z/OS What's New, GC34-7302
CICS Transaction Server for z/OS Upgrading from CICS TS Version 3.1, GC34-7296
CICS Transaction Server for z/OS Upgrading from CICS TS Version 3.2, GC34-7297
CICS Transaction Server for z/OS Upgrading from CICS TS Version 4.1, GC34-7298
CICS Transaction Server for z/OS Upgrading from CICS TS Version 4.2, GC34-7299
CICS Transaction Server for z/OS Upgrading from CICS TS Version 5.1, GC34-7300
CICS Transaction Server for z/OS Installation Guide, GC34-7279

Access to CICS

CICS Internet Guide, SC34-7281
CICS Web Services Guide, SC34-7301

Administration

CICS System Definition Guide, SC34-7293
CICS Customization Guide, SC34-7269
CICS Resource Definition Guide, SC34-7290
CICS Operations and Utilities Guide, SC34-7285
CICS RACF® Security Guide, SC34-7288
CICS Supplied Transactions, SC34-7292

Programming

CICS Application Programming Guide, SC34-7266
CICS Application Programming Reference, SC34-7267
CICS System Programming Reference, SC34-7294
CICS Front End Programming Interface User's Guide, SC34-7277
CICS C++ OO Class Libraries, SC34-7270
CICS Distributed Transaction Programming Guide, SC34-7275
CICS Business Transaction Services, SC34-7268
Java Applications in CICS, SC34-7282

Diagnosis

CICS Problem Determination Guide, GC34-7287
CICS Performance Guide, SC34-7286
CICS Messages and Codes Vol 1, GC34-7283
CICS Messages and Codes Vol 2, GC34-7284
CICS Diagnosis Reference, GC34-7274
CICS Recovery and Restart Guide, SC34-7289
CICS Data Areas, GC34-7271
CICS Trace Entries, SC34-7295
CICS Debugging Tools Interfaces Reference, GC34-7273

Communication

CICS Intercommunication Guide, SC34-7280
CICS External Interfaces Guide, SC34-7276

Databases

CICS DB2 Guide, SC34-7272

CICS IMS™ Database Control Guide, SC34-7278

CICS Shared Data Tables Guide, SC34-7291

CICSPlex SM books for CICS Transaction Server for z/OS

General

CICSPlex SM Concepts and Planning, SC34-7306
CICSPlex SM Web User Interface Guide, SC34-7316

Administration and Management

CICSPlex SM Administration, SC34-7303
CICSPlex SM Operations Views Reference, SC34-7312
CICSPlex SM Monitor Views Reference, SC34-7311
CICSPlex SM Managing Workloads, SC34-7309
CICSPlex SM Managing Resource Usage, SC34-7308
CICSPlex SM Managing Business Applications, SC34-7307

Programming

CICSPlex SM Application Programming Guide, SC34-7304
CICSPlex SM Application Programming Reference, SC34-7305

Diagnosis

CICSPlex SM Resource Tables Reference Vol 1, SC34-7314
CICSPlex SM Resource Tables Reference Vol 2, SC34-7315
CICSPlex SM Messages and Codes, GC34-7310
CICSPlex SM Problem Determination, GC34-7313

Other CICS publications

The following publications contain further information about CICS, but are not provided as part of CICS Transaction Server for z/OS, Version 5 Release 2.

Designing and Programming CICS Applications, SR23-9692

CICS Application Migration Aid Guide, SC33-0768

CICS Family: API Structure, SC33-1007

CICS Family: Client/Server Programming, SC33-1435

CICS Family: Interproduct Communication, SC34-6853

CICS Family: Communicating from CICS on System/390, SC34-6854

CICS Transaction Gateway for z/OS Administration, SC34-5528

CICS Family: General Information, GC33-0155

CICS 4.1 Sample Applications Guide, SC33-1173

CICS/ESA 3.3 XRF Guide , SC33-0661

Accessibility

Accessibility features help a user who has a physical disability, such as restricted mobility or limited vision, to use software products successfully.

You can perform most tasks required to set up, run, and maintain your CICS system in one of these ways:

- using a 3270 emulator logged on to CICS
- using a 3270 emulator logged on to TSO
- using a 3270 emulator as an MVS system console

IBM Personal Communications provides 3270 emulation with accessibility features for people with disabilities. You can use this product to provide the accessibility features you need in your CICS system.

Readers' Comments — We'd Like to Hear from You

CICS Transaction Server for z/OS
Version 5 Release 2
What's New

Publication No. GC34-7302-00

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