



IBM CICS V5.4

All you need to know

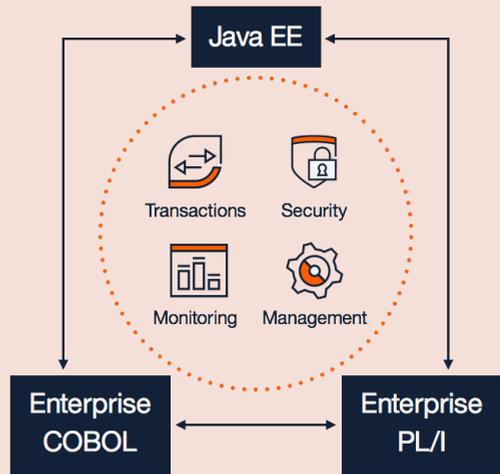


CICS Transaction Server V5.4

An unparalleled mixed-language application server

IBM® CICS® Transaction Server for z/OS® has evolved to become the world's most powerful mixed-language application server.

Applications can share core programming contexts such as **security, transactionality, management and monitoring**, regardless of the language its components are written in.



This allows developers to create incredible mixed-language applications that include **Java™ EE 7 Full Platform** capabilities.

No sticky tape required.



Why choose CICS TS V5.4?

Enables developers to create powerful **Java EE 7 Full Platform** applications.



A new **Asynchronous API** can be used to minimise application idle time as workloads can run concurrently using a parent-child logic model.

The newly available IBM z/OS Provisioning Toolkit gives developers the ability to rapidly **provision CICS development environments in minutes** through a simple command line



Java EE 7 Full Platform

Java is an incredibly popular and versatile programming language for creating enterprise applications. CICS TS now supports applications written to the Java EE 7 Full Platform specification by using the embedded version of WebSphere® Liberty. This provides an ideal environment for enterprises to modernize existing CICS applications, taking advantage of technologies like JAX-RS to provide new interfaces and services in CICS.

These Java EE applications can easily be integrated into an existing solution. You can use the standard CICS API to LINK from programs in other languages such as COBOL, and to pass large volumes of structured data between the two programs.

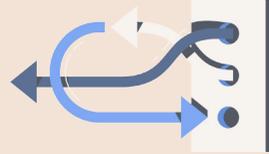
CICS TS V5.4 also delivers a number of enhancements for Java development and management, including the CICS TS remote development feature for Java which adds remote CICS connectivity to a local Eclipse development environment.

Learn about architecting CICS Java solutions:
ibm.biz/cics-java-courses



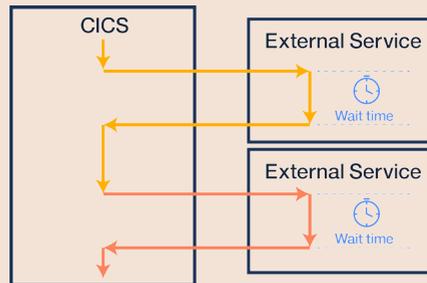
New Asynchronous API

Designed to minimise application idle time when workloads could be run concurrently, this API enables developers to easily incorporate programming logic that follows a ‘parent-child’ model.



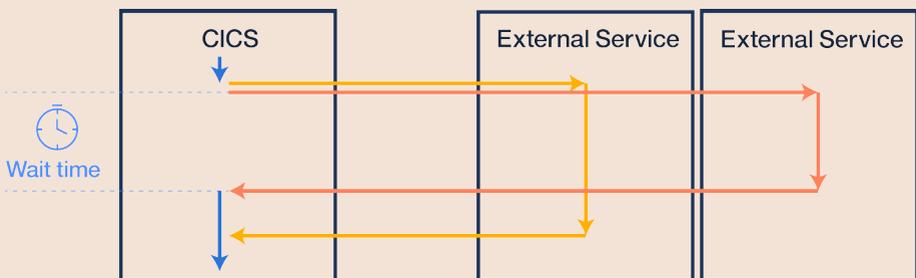
This API is particularly powerful when you need to call out to multiple services. For example pulling data from disparate locations in your enterprise, or using a third party for credit checking.

Before



The CICS application’s response time can be reduced, as the time spent waiting for responses occurs simultaneously.

Using the Asynchronous API



Even if the CICS application doesn’t have multiple services to call, you can still make response time savings if you continue processing in the caller thread whilst waiting for a response.

For more information: ibm.biz/cicsdev-async

IBM z/OS Provisioning Toolkit

The CICS TS V5.4 open beta introduced the CICS Provisioning Toolkit, a new technology that enabled the rapid provisioning of CICS development environments.

This has been transformed into a brand new offering to support multiple z/OS subsystems including CICS, WebSphere Liberty, MQ and z/OS Connect Enterprise Edition.

The z/OS Provisioning Toolkit simplifies application development on z Systems, enabling developers to provision environments **in minutes** through a simple, command line interface.



System programmers can preconfigure these environments, control access through z/OS security and set appropriate provisioning limits. It uses common terminology to simplify the conversation between teams - an **image** refers to a preconfigured environment and a **container** is the runtime environment created by running an image.

This has been made available at no additional charge to existing clients of IBM z/OS V2.1 or later.

To find out more and to download today, visit the mainframe developer center: ibm.biz/zospt-devcenter

Policies

CICS policies provide a standardized way of enforcing controls on an application environment, and can be tailored to suit development or production systems. You can define rules to manage resources efficiently, such as the amount of CPU time a task is allowed to consume before triggering an action.

System management in CICS TS V5.4 is simplified with policies now providing the same capabilities as CICS system events, but with additional advantages:

- Able to define multiple rules into a single policy
- Can write to the CICS log **in addition** to emitting an event
- Removes requirement to define a capture specification for each event

Defining and editing policies has also been made far simpler with a new policy rules editor in IBM CICS Explorer.

See how Danske Bank use policies to ensure performance related issues are caught early in the development cycle:

ibm.biz/mwzs-policies





Security and resilience

A primary concern for any enterprise and one of the main reasons clients continue to trust CICS is our reputation for being a secure and reliable environment. CICS TS V5.4 introduces a number of key enhancements to keep your systems available and protected.

- CICS Explorer now supports user authentication through certificates stored on a Smartcard.
- Support for 3 new checks which define security best practices with IBM Health Checker for z/OS
- CICS TS can now utilize the z/OS Workload Manager Health API to ensure a region is ready to receive work after system initialization.
- New CICS transactions CEDG and CEDY for debugging applications in a production environment - without risking inadvertently overwriting sensitive in-memory storage.
- CICS 3270 Intrusion Detection Service (IDS) can help alert you to 3270 protocol violations as they occur in CICS BMS applications.
- CICSplex SM managed regions' internal tasks now run as CICS systems transactions and have been implemented under the standard CICS CAT1 security category.
- Additional security infrastructure enhancements are added to: Kerberos support; RACF® passtickets and logging of userids; System Authorization Facility (SAF) security registration.

Interoperability

Non-CICS programs running on z/OS are able to call CICS programs and pass data through the EXCI API. CICS TS V5.4 now includes the ability to pass Channels and Containers over the EXCI, removing the 32KB restriction of a COMMAREA.

Containers are named blocks of data and are grouped into sets called **channels**, which can then be passed between applications. This is the standard mechanism in CICS for passing large volumes of structured data between CICS applications, and is now available for communications between CICS and other applications running on z/OS - such as batch applications.

Discover more in this post: ibm.biz/

MQ

Administration of CICS applications utilizing IBM MQ is simplified through the new MQMONITOR resource, which can be a trigger monitor, an MQ bridge monitor, or a user-written monitor. The AUTOSTART option on this resource provides the ability to automatically start monitors when the CICS-MQ connection is started; monitors are automatically stopped when the CICS-MQ connection is stopped.

Additionally, the IBM MQ resource adapter can now be configured as a JMS provider in the CICS Liberty JVM server.

Usability and automation

CICS TS V5.4 delivers a number of enhancements to help you interact with CICS easily and efficiently.

Quick Filters in CICS Explorer enable you to create views which focus on specific information. They can be added to existing views and saved into permanent view configurations for rapid access to frequently used information.

These saved configurations can also be exported for sharing across teams or for back-up purposes, with a new ability to import into CICS Explorer instances from a central web server.

The DFHDPLOY batch utility can now perform PIPELINE SCAN, PROGRAM NEWCOPY and PROGRAM PHASEIN operations, enabling automation to be written to update these resources without requiring the direct use of the CICSplex SM API.

Upgrades to z/OS have also been made simpler for CICS users as system auto install is now used to install program definitions for Language Environment (LE) as required.

Only those programs that are used will have their definitions installed. This drastically reduces the number of installed definitions and removes the need for LE definitions to be refreshed for each individual CICS region when z/OS is upgraded.



Find out more



Java Redbook video courses

ibm.biz/cics-java-courses



CICS Developer Center

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GitHub Samples

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