

IBM CICS Configuration Manager for z/OS, Version 5.4

Highlights

- Manage IBM® CICS® Transaction Server for z/OS® (CICS TS) resource definitions across your enterprise from a single point of control
- Manipulate definitions seamlessly across CSDs, IBM CICSplex® System Manager (SM) data repositories and z/OS File System (zFS)
- Distribute CICS resources across multiple sites using integrated export and import function
- Simplify user access with a powerful plug-in for IBM CICS Explorer®
- Create, edit, rename, compare, copy, move, and remove definitions either individually or in groups
- Promote multiple definitions using packages, migration schemes and transformation rules to transform definitions automatically, to match the target environment
- Use the audit trail to generate reports and back out changes to any previous version of the definitions
- Compare CSDs and report definitions missing or having different values for all or user selectable attributes
- Assess COLD START impact using updated CICS definitions when compared with the CICS region's current runtime resources

Recent enhancements

- CICS TS V5.4 support
 - Including support for the new MQMONITOR definition
- Support for CICS resource definition and application artifacts stored in a zFS file system
- Journaling of CICS resource definition changes made using the resource management utility DFHCSDUP
- Enable ADD and DELETE commands to be added to DFHCSDUP format export file
- Inhibit Server Connection input on the CICS CM Interactive System Programming Facility (ISPF) main menu

- Improve SSL connect error messages

The value of control

Accurate and up-to-date CICS resource definitions are essential to maintain the high availability expected of the critical information systems running in your CICS environment. Resource definitions need to be updated frequently, for example to support application changes or upgrading to a new version of CICS TS. To upgrade your CICS systems and applications, you might have to configure new CICS systems, provision resources, modify existing, and deploy new applications. Each of these tasks requires you to create or modify your CICS resource definitions.

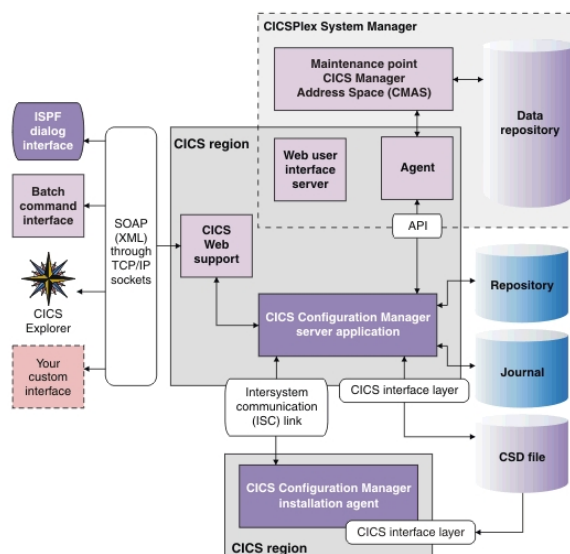


Figure 1 CICS Configuration Manager architecture

IBM CICS Configuration Manager for z/OS (CICS CM), Version 5.4, enables you to control all CICS resource definitions within your enterprise systems through a single interface (see Figure 1). CICS CM helps you gain tighter and more transparent control over CICS administration, which is critical for the smooth operation of CICS systems, and facilitates collaboration among the people involved in making and tracking changes.

Resources such as files, programs, and terminals are defined to each of the CICS systems you run. You

must move your application resource definitions from development and testing environments to your production environment. These definitions can be stored in CICS system definition (CSD) files or CICSplex SM data repositories.

Controlling the required changes to CICS resource definitions in multiple CICS regions and environments can be a challenge. Manual errors that can occur when the changes are being made can potentially lead to application downtime, which, in turn, can cause customer dissatisfaction. Lack of an audit trail of changes can make it difficult to identify and resolve problems. Furthermore, complex CICS topologies can make routine definition updates a labour-intensive task. To improve collaboration between the roles involved in the updates, you might need to automate your resource definition management processes and integrate with the change-management products you are currently using.

CICS CM provides comprehensive facilities to administer and maintain resource definitions across multiple CICS regions, including regions that are controlled by CICSplex SM. CICS CM helps simplify CICS administration, lower maintenance costs and reduce errors. It also helps improve productivity of IT staff, including managers, system programmers and application developers, by:

- Helping to optimize day-to-day CICS system management and administration.
- Streamlining resource-definition processes for new application development and deployment, and integration with the change-management products.
- Improving change control and auditability of CICS systems.
- Easing upgrades between releases of CICS TS.

CICS Explorer

CICS Explorer enables users with broader and less-specialized skills to access the power of CICS CM and deliver additional value when it is used in conjunction with other CICS tools.

The CICS CM plug-in for CICS Explorer offers an Eclipse-based graphical user interface (see Figure 2) to most of the functions available in the TSO/ISPF user interface.

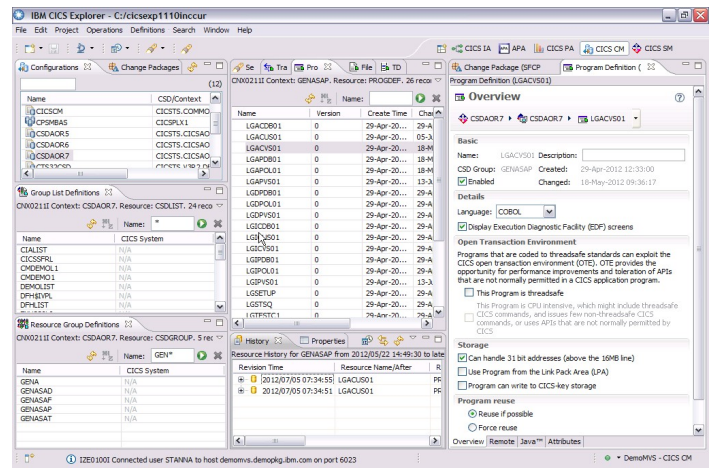


Figure 2 View, edit, install, or move CICS resource definitions using the CICS Explorer

Maintain and change your resource definitions more easily

CICS CM provides both intuitive CICS Explorer, easy-to-use Time Sharing Option (TSO) ISPF and Batch interfaces to transparently manage resource definitions for CICS TS across multiple CICS regions. These interfaces enable you to edit resource definitions more effectively than if you used the Resource Definition Online (RDO) CEDA transaction provided by CICS TS, because they help hide the complexities of your CICS topology and help avoid errors. For example, you can:

- Edit resource definitions while the regions that use them are inactive.
- Edit RDO definitions from CSD files or CICSplex SM data repositories in the same session.
- Use the extensive field-sensitive help capabilities for all resource definition attributes.
- View and compare resource-definition histories, including groups and lists.
- Explore definitions using an expandable tree structure of lists and groups.
- Filter your view of definitions according to flexible, user-defined criteria.
- Use advanced search and display capabilities available throughout the product.
- Copy or move definitions across configurations.
- Perform actions such as INSTALL and NEWCOPY on multiple definitions, across multiple active CICS regions, in a single step.

If your environments are intentionally partitioned to protect against inadvertent change, such as with test and production environments or separately managed remote sites, you can use the import and export function provided by CICS CM. This utility enables you to control the transfer of resource definitions between physically partitioned environments. If both the exporting and importing sites have CICS CM, then, in addition to exporting and importing ad hoc selections of resource definitions, you can export and import change packages. As a result, you can take advantage of CICS CM capabilities even when you have environments that are intentionally partitioned.

Access comprehensive reports on your resource definitions

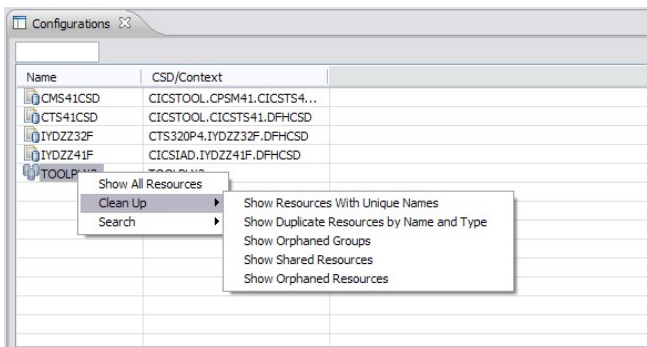


Figure 3 CSD clean-up in CICS Explorer

As part of your resource-definition management process, you often require a detailed understanding of the current definitions in your system. For example, you need to know which definitions have become redundant or if any have been defined twice. CICS CM provides advanced search and display capabilities to help you explore resource relationships with both the CICS Explorer (see Figure 3) and ISPF interface.

You can compare resource definitions from multiple CICS configurations, and filter resource definitions by multiple user defined criteria (such as name, type and group) with support for full wildcard generic searches. You can also choose to search within results. You can locate resource definitions that match your search criteria or that have specified attribute values. And you can compare the attribute values of two resource definitions side by side, with differences highlighted. You can also compare groups and lists across different CSD files or CICSplex SM contexts, and select your own criteria for highlighting the differences. CICS CM search supports both *and* and *or* conditions, which enhances searching capabilities.

In addition to your current resource definition analysis, CICS CM enables you to retrieve and restore historical versions of definitions and compare historical versions with current definitions.

To complement its comprehensive online-reporting capabilities, CICS CM also allows its reports to be saved and printed, enabling detailed analysis and improved auditability.

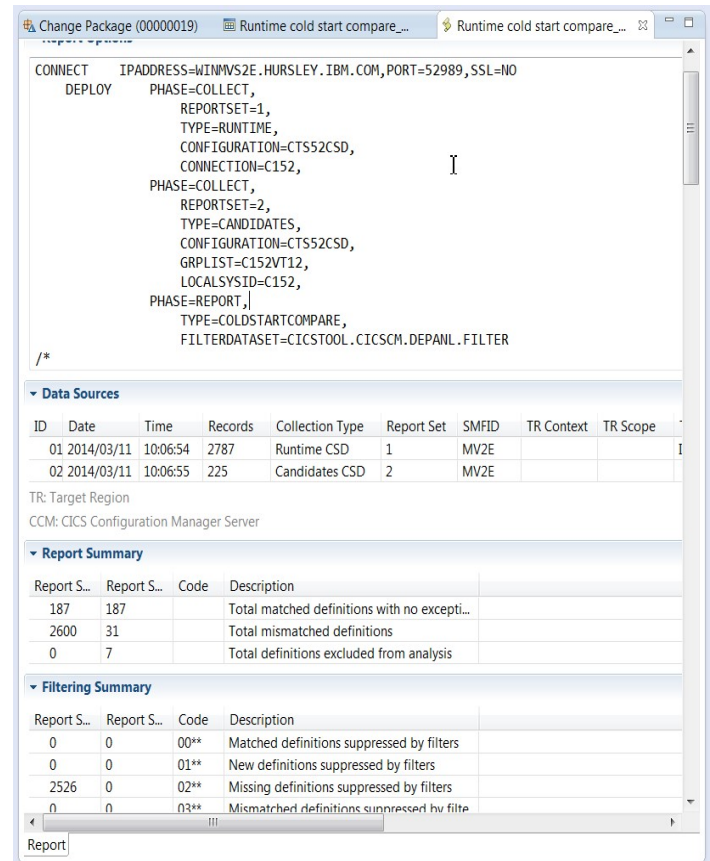


Figure 4 Deployment Analysis - Cold Start report

Batch and plug-in *Deployment Analysis* reports enable you to list or compare resource definitions in active CICS regions, CSD files, and CICSplex SM data repositories, in various combinations. The reports help you to answer questions about your CICS environment, and avoid potentially costly surprises caused by unexpected differences.

Keep tight control over changes

Your enterprise's business controls might require you to maintain systematic records of changes to your resource definitions for auditing or reporting purposes. You might also need an appropriate process to track approvals, or you might have to back out changes. CICS CM can help you gain more control over the movement of definitions by enabling you to create *change packages* and specify required approval levels. These packages enable authorized users to copy one or more resource definitions across multiple CICS

configurations using a single command, and to back out all of the changes in a single step, if necessary.

Using CICS CM options, you can define approval requirements before changes are implemented, while maintaining the integrity of the change package. You can easily define your own approval rules for every change package, specifying the number and roles of the required approvers. After you have defined rules for a change package, that package isn't applied to a CICS system until the necessary approvals have been received. This capability enables you to provide controlled access to the users that you choose, such as your application development team.

To help ensure that you can control or back out any change if necessary, CICS CM provides an audit trail of changed resources, dates and times, and the list of approvers, along with the ability to produce a range of reports to suit your needs. You can reverse changes, reverting to previous definitions, any number of states back, which enables you to test an upgrade and easily back out of it if needed.

Automate your resource-definition process

To help automate your resource definition management even further, CICS CM enables you to group a set of resource definitions into a change package and link pairs of source and target CICS configurations by defining them as *migration schemes*. As an option, for each pair of CICS configurations in a migration scheme, you can select a set of *transformation rules*. These rules allow a resource definition to be modified during an upgrade to match its target environment. Transformation rules also enable you to search and replace definitions within a single CICS configuration, or you can use processing options to allow or disallow the application of further rules. Transformation rules provide a robust way to automate resource-definition management to help you save time moving definitions in complex CICS configurations, potentially eliminating errors caused by manual processes.

For example, you can define upgrade paths between environments, enabling you to systematically and repeatedly promote definitions from development to test, and then from test to production, with minimal effort.

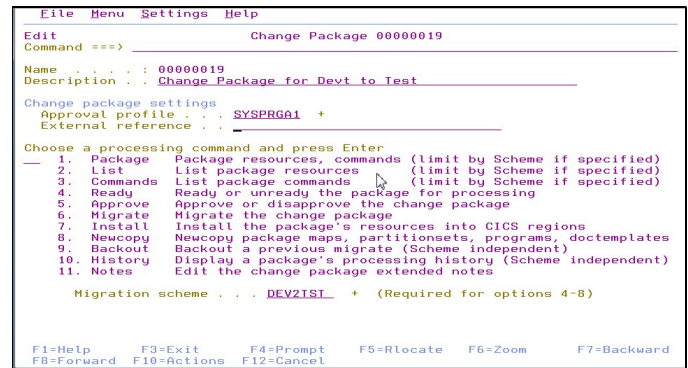


Figure 5 Create and manage change packages

A Packaging perspective for the plug-in for CICS Explorer (see Figure 5) provides developers with a more accessible way to create, populate, and migrate change packages, and gives administrators the power to manage configurations, packages, and migration schemes. A common interface speeds up the application deployment lifecycle and assists collaboration between DevOps roles. CICS Explorer reduces the need to switch to green-screen interfaces.

CICSplex SM Topology and Workload Management resource types can also be managed, so that you can reconfigure dynamic mobile workloads quickly.

You can also use change packages to perform further migration tasks after the migration of resource definitions:

- Add a resource definition to a resource group (RESGROUP) in a context-based target CICS configuration.
- Remove a resource definition from a resource group in a context-based target CICS configuration.
- Delete a resource definition from either a CSD-based or a context-based target CICS configuration.

Designed to fit in with your existing processes

Although you can manage resources online, CICS CM has been designed to accommodate your established procedures. If you need CICS CM to be tailored completely to your environment, you can use the server user exit points and the SOAP XML application programming interface (API) provided to integrate CICS CM with your existing processes. You can use events in CICS CM, through the server exit points, to drive corresponding activity in your existing administrative processes and change management tools. For example, you can synchronize updates in your change-management tool, such as

IBM Rational® Team Concert (RTC) or an in-house change-control solution. Or perhaps your organization has specific naming conventions and standards for all the environments that you maintain. CICS CM user exits can facilitate site-based enforcement and validation of these conventions and standards.

User exits implemented during *ready*, *approve* and *upgrade* processing can generate events to which other associated processes can react. You can use this capability to help ensure that security updates have been made for the appropriate transaction changes or to allocate data sets for new VSAM files.

The CICS CM SOAP XML API and the batch interface are also provided so that you can integrate CICS Configuration Manager with your existing processes, for example to manage the upgrade and approval of change packages. This capability enables you to perform these procedures using time-scheduling products, and coordinate definition upgrades with the upgrade of code elements maintained by other products.

Designed for ease of use

CICS CM includes many features designed to optimize ease of use and to maximize performance. One of these features is the data take-up utility. This utility is a batch program that supports the initial take-up of CSD and CICSplex SM context data. It simplifies the input of CICS configuration data, which helps minimize your time to deployment of CICS CM.

Other key usability features include:

- Intuitive CICS Explorer plug-in
- Easy navigation through ISPF dialogs
- Extensive help facility
- Detailed and easy-to-use diagnostics facilities
- Flexible object filtering
- Multiple resource processing optimized for high performance
- API commands that are consistent with existing interfaces, like CEDDA, to help minimize the learning curve
- A journal archive and offload utility for CICS CM journal records

Scenario: Working with CICSplex SM

If you plan to use the Business Application Services (BAS) component of CICSplex SM, during the upgrade phase, you will have a mixed environment of CSDs and CICSplex SM data repositories. Through its online-management interfaces, CICS CM provides a view of your resources that is completely independent from and transparent to the underlying repository, enabling you to easily move, copy and upgrade definitions between these two environments.

You can also use CICS CM to create and maintain full-function BAS objects:

- Resource assignment (RASGNDEF)
- Resource assignments in resource description (RASINDSC)
- System link (SYSLINK)

Scenario: CICS version upgrades

CICS CM is especially valuable when you are upgrading to a new version of CICS TS, including Version 5.4. You can make initial productivity gains using the tool to upgrade your existing definitions to the new test system. Later, you can gain repeated benefit—first, as you upgrade definitions to production systems and, later, as CICS CM becomes part of your normal workflow-management processes.

Scenario: Cold-start analysis

The *cold start compare* deployment analysis report compares a set of *runtime* resource definitions (collected from an active CICS region) with a set of *candidate* resource definitions (stored in a CSD file, CICSplex SM data repository, or combination of the two). This report (see Figure 4) helps you to answer questions like: “What will be the effect of cold-starting a CICS region?” and “What can I do to put it right?”

Scenario: CSD cleanup

CSDs in development and test environments can get cluttered with ad hoc resource definition creation. These definitions can then remain on CSDs for many years and no one wants to delete them ... just in case! The CICS CM CSD cleanup reports can identify redundant and orphaned resources that can be safely deleted to save space and improve definition management.

Scenario: Distributed development

Many CICS customer sites today have application development in offshore sites or at other remote sites. With time differences, it is not always possible to contact systems programmers when resource definition changes are required. Using security and standards enforcement capabilities that CICS CM provides, resource definition changes can be easily delegated to application programmers.

Scenario: Where did that CSD group go?

When the last resource definition in a CSD group is deleted, CICS deletes the group. If this group is in a group list in the CICS region’s GRPLIST then the CICS region initialization stops with an operator message about the missing group. With CICS CM, the user has the option to automatically remove a CSD group from a CSD list when the group is deleted, this resolves the problem of CICS startup issues due to missing CSD groups.

CICS Tools — your pathway to success

CICS CM is one of the four core foundational CICS tools that exploit and augment the latest operational efficiency and service agility enhancements in CICS TS V5.4 in a way that positions you for the next transformational era in technology, moving towards a service delivery platform for cloud computing.

CICS Tools can help you to optimize your CICS resources and achieve greater capacity and improve the availability of your critical enterprise systems.

Their powerful automation capabilities can speed service delivery, improve standardization, and reduce risk, while rich discovery, advanced visualization, and comprehensive reporting provide the insight needed to ensure that your applications run smoothly and changes are efficient and reliable.

Support for the application and platform resources introduced in CICS TS V5 help you to achieve value from the new version of CICS more quickly. The tools include modern interfaces integrated with CICS Explorer, helping both new and experienced IT personnel to be more productive with minimal training delay. Foundational enhancements continue to extend the tools capabilities in many areas.

The other core foundational CICS tools are:

- CICS Deployment Assistant for z/OS (CICS DA) V5.3
- CICS Interdependency Analyzer for z/OS (CICS IA) V5.3
- CICS Performance Analyzer for z/OS (CICS PA) V5.4

For more information

To learn more about CICS CM, V5.4, contact your IBM representative or IBM Business Partner, or visit:

ibm.com/software/products/en/cics-cm

For hardware and software requirements, go to the *System requirements* tab of this web page.

To learn more about other IBM CICS Tools, visit:

ibm.com/software/data/enterprise-application-servers/cics/products/tools/

© Copyright IBM Corporation 2009, 2017. US Government Users Restricted Rights - Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

IBM, the IBM logo, ibm.com, CICS, CICS Explorer, CICSplex, Rational and z/OS are trademarks of IBM Corporation, registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the Web at “Copyright and trademark information” www.ibm.com/legal/copytrade.shtml.

GI13-4411-00

