

IBM CICS Deployment Assistant for z/OS, Version 5.3

Recent enhancements

- Support for IBM® CICS® Transaction Server V5.3
- New configuration tool for easier configuring of CICS DA server
- Discovery and cloning can now be initiated through the RESTful API
- New API sample programs demonstrate how the RESTful API can be invoked from REXX or JavaScript
- CICS DA can now de-provision existing or CICS DA-created CICS regions
- Execute user supplied JCL procedures as part of the clone process
- Apply user supplied naming rules when cloning CICS regions

Features

- Intuitive IBM CICS Explorer® plug-in
- View, print and manage your CICS infrastructure
- Discovery of over 30 entity types
- Visualization with tagging and filtering
- Connections view with scoping
- Export model for external reporting
- Discover CICS regions and dependencies
- Provisioning wizards to create new IBM CICSplex® System Manager infrastructure
- CICSplex enable and clone existing CICS regions
- Ability to start and stop a CICS region
- Eclipse cheat sheets for CICS version upgrades
- RESTful API to access model, invoke discovery or clone CICS regions
- Comparison view
- TCP/IP usage report

Benefits

- Simplify and automate complex tasks
- Reduce costs, risks and dependency on specialized CICS skills
- Validate that CICS topology and initialization options are as expected
- Promote standardization and reduce complexity
- Accelerate CICS version upgrades
- Accelerate the deployment of new CICS capabilities and line-of-business applications

The power of discovery

IBM CICS Deployment Assistant for z/OS® V5.3 (CICS DA) helps you use the latest IBM CICS technology – including the new Mobile and Cloud support - faster and easier than ever before. With CICS DA you can discover, model, visualize, and deploy new and existing CICS regions, using automation and best practice built on your own knowledge and experience, and that of IBM. Enhancements in v5.3 include a new configuration tool for easier configuration of CICS DA so that you can start using it to understand and enhance your z/OS environment.

CICS DA includes a zAAP-offloadable, server component with enhanced discovery, which creates a centralized and up-to-date model of your CICS infrastructure. The server uses RESTful interfaces to expose the model to other applications.

A plug-in for IBM CICS Explorer provides advanced visualization with tagging and filtering, letting you view, print, and manage your CICS infrastructure as you want to see it (see Figure 1).

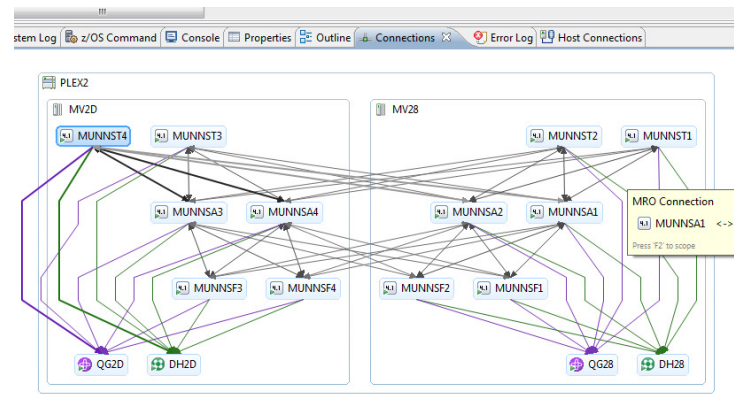


Figure 1. Scoping the Connections view

The host server component and the tightly integrated plug-in for the CICS Explorer work together to give the systems, development, and operations teams a powerful toolkit to manage CICS system deployment.

Rich model

CICS DA discovers and creates a rich model of CICSplexes and CICS regions together with their startup options, connectivity relationships, and major subsystem dependencies.

Discovered CICS regions and other entities in the model can be used to visualize and manage the CICS environment more effectively.

CICS DA discovers a wide range of entities in a z/OS Sysplex including: CICSplex, CICSplex SM server, managed CICS region, unmanaged CICS region, CICS system group, CMAS network, CMAS, CICS coupling facility data table server, CICS named counter server, CICS temporary storage server (see Figure 2 **Error! Reference source not found.**).

CICS DA can also discover CICS Transaction Gateway, IBM DB2®, IBM IMS™, and IBM WebSphere® MQ subsystems, as well as CICSplex SM MON, RTA, and WLM specifications.

In addition, the following connections are discovered: CMAS to CMAS, IPIC, ISC and MRO connections between managed regions, TCP/IP listener ports, and managed region connections to DB2, MQ, and IMS.

RESTful API

The CICS DA RESTful API was introduced in v5.2 and provided easy access to the insight captured in the discovered model. For example, users of management tools such as service dashboards could benefit from the rich model of CICS and related subsystems and their inter-relationships.

CICS DA v5.3 has extended this API to allow CICS DA to be driven programmatically to clone CICS regions or to update the discovered model. One opportunity offered by this extension is to programmatically define multiple clone operations in advance, and invoke them automatically to create regions when required.

The API returns the model in JSON and XML format, so it can also be used from browsers, mobile devices or z/OS programs. Samples demonstrating the use of the CICS DA RESTful API are available in JavaScript and REXX.

Visualization

The discovered model can be loaded and viewed from within the CICS DA perspective in the CICS Explorer. CICS DA graphically visualizes the topology of the discovered data, displaying all of the entities and connections that have been discovered within each LPAR within the Sysplex. An Eclipse-style project explorer tree view is also available.

The model can be viewed graphically in multiple ways: a standard physical topology view, a tagged view, a CMAS-focused view, and a connections view. As the zoom level increases, more information is displayed for each entity.

Users can print the graphical visualization and the graphical connections view by using Print capabilities in Eclipse.

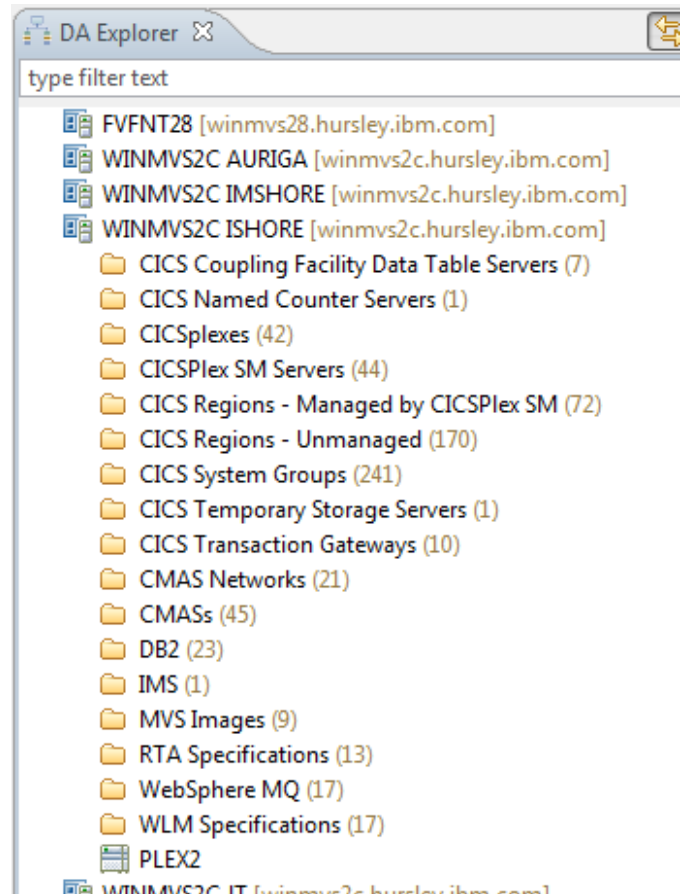


Figure 2. The Explorer view shows discovered entities by type

Tagging and Filtering

Each of the entities (from the explorer tree or the visualization) can be opened to display more information within an editor. One of the editable fields is the entity's tag, which is a comma-separated list of strings, like web tagging.

The graphical visualization offers a tagged view onto the data where common tags are horizontally aligned so it is possible to identify what entities have been tagged in the same way across all the discovered LPARs.

The graphical visualization offers the user the ability to control what they can see; a filter dialog offers this by providing checkboxes for all the different types of entities discovered as well as the tags it has uncovered.

Tags can also be arranged vertically so you can order the display in different ways, for example by region type, using tags like TOR, AOR, and FOR. Alternatively, you could tag your regions with an application name: sales, accounts, finance, etc and order the tags according to your preference.

Navigation

Customers with very large CICS environments can use the *outline* view to navigate the model more easily (see Figure 3).

Hyperlinks are available from the editors of discovered entities so that the user can manage individual CICS regions by linking to the relevant view in the CICS SM perspective. When used in this way, the plug-in automatically creates the necessary connection definitions by using discovered node and port information.

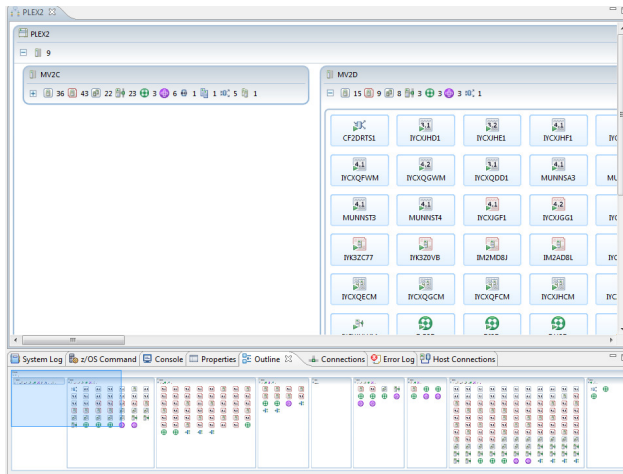


Figure 3 Navigating large models with the outline view

Views can also be scoped (see Figure 1) to show just the entities that are directly or indirectly connected to the selected node, automatically simplifying the diagram, without losing any critical information.

Provisioning wizards

CICS DA can automate the execution of key tasks such as creating CICS management infrastructure and cloning CICS regions.

CICS DA clones existing CICS regions by creating and submitting the necessary JCL, startup options, datasets, and resource definitions. The *Clone* and CICSplex enablement wizards support a wide range of client requirements. For example, JCL can contain PROC and INCLUDE statements, and CICSplex SM and CICS TS startup parameters can be modified.

Cloning options enable clients to benefit from automation across a wider range of deployment architectures. CICS DA can be used to clone unmanaged CICS regions and those regions managed by CICSplex SM. Cloning regions lets the systems team standardize the creation of production CICS regions, and gives the developers and testers the tools to manage theirs.

Cloning CICS regions to run on different LPARs in the Sysplex or into different CICSplexes and system groups can help to create test or high availability clones of production regions. You can also use CICS DA to clone regions into a CICS Transaction Server Value Unit Edition environment, running in a zNALC LPAR.

Wizards are also provided to create the base CICSplex SM environment and new CICSplexes.

CICS DA v5.3 adds the ability to extend the Clone operation with user-defined actions that enhance the cloning process in a context sensitive manner. Also included is the ability to pre-define naming transforms to enable site specific naming conventions to be included in the cloning process.

De-provisioning CICS regions

CICS DA v5.3 offers the ability to de-provision CICS regions that were created by CICS DA, or even pre-existing CICS regions. Combined with the provisioning capabilities provided by CICS DA, this makes it easy to create, destroy and re-create CICS regions as business requirements dictate.

CICS upgrade cheat sheets

Cheat sheets are available to provide advice on upgrading to CICS TS V4.2, V5.1, V5.2 and V5.3. Cheat sheets in Eclipse are a way to guide a user along a path using documentation as the guide.

Model export and reporting

The model can be exported in CSV format to standard spreadsheet tools for external analysis and reporting.

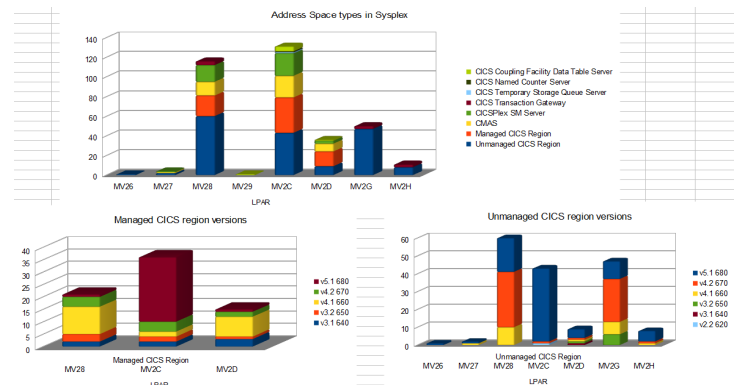


Figure 4 Sample reports

Sample reports are provided (see Figure 4), which help you to answer questions such as:

- What address spaces are executing in my Sysplex?
- What are all these address spaces?
- Which versions of CICS am I running?
- What could be affecting my MLC?

CICS DA server

CICS DA includes an independent server written in zAAP-offloadable Java™, which is packaged and deployed on z/OS using OSGi technology (see Figure 5 **Error! Reference source not found.**).

Discovery steps are started from within the server and the discovered model is stored in the zFS, enabling all the connected clients to share a common representation of the system topology.

The centralized model and the logging of all model changes and host operations by the server provide a level of governance typically not available when using in-house tooling.

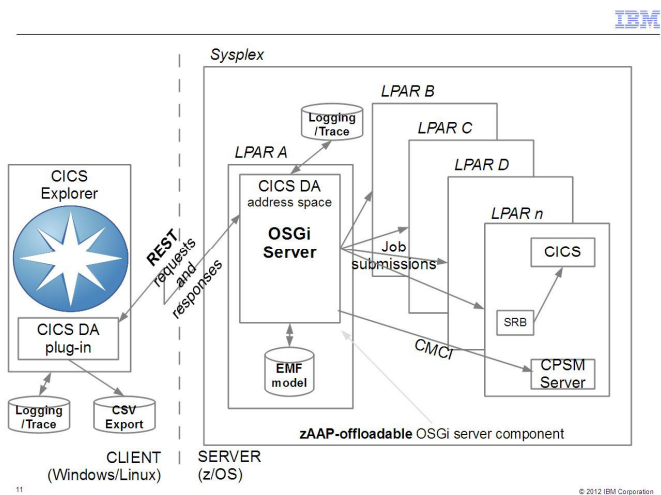


Figure 5. CICS DA architecture

The CICS DA server and plug-in ensure that sufficient logging, trace and first failure data capture information is available. This reduces the time required to diagnose and resolve issues.

TCP/IP port support

During CICS DA discovery, the TCP/IP stacks on the mainframe are queried to determine which ports are listening for CMCI or CICSplex SM data requests. Discovered ports are displayed in a filterable and searchable table in the plug-in.

With virtual IP addressing enabled on the TCPIP stacks, an individual listening port can have its own assigned IP address that is not using the stack's IP address. CICS DA ensures that the DNS host name resolution occurs for the assigned IP address.

CICS DA can use networks including IPv6 seamlessly.

Scenario: Implementing CICSplex SM

For those customers yet to implement CICSplex System Manager, CICS DA provides a very easy to use wizard that does most of the work. Simply enter the name of the new CICSplex, some TCP/IP port numbers, and a couple of other details to a template and the wizard creates the CICSplex SM CMAS and Web UI server region pair to form the basis of a new CICSplex SM topology.

Another wizard creates a new CICSplex with associated maintenance point CMAS. New system groups can then be created within the CICSplex and existing unmanaged regions can be *plexified*, that is, added to the CICSplex to create a new managed region.

Once regions are managed, they can then be accessed and controlled by CICS Explorer as the single point of control for the entire CICSplex.

Scenario: Investigations

How can you answer questions such as:

- In which z/OS images (LPARS) are my CICS assets executing?
- What is the type of each address space? Is it a CMAS, CICS region, MQ, etc?
- Which Sysplex are the address spaces running in?
- What LPARs are within the current Sysplex?
- What address spaces are running within each LPAR?
- Which CICS regions are CPSM Servers?
- What CMASs does each CPSM Server know about?
- What is connected to what?
- Which address spaces are listening on what TCPIP ports?
- How are the CMASs connected?
- What is listening on a given port across TCP/IP stacks and LPARs?
- Is a specific TCP/IP port number available on every LPAR in the Sysplex?

Who knows what the current system topology looks like? Who has the skills to discover it? More importantly, how much effort would it take you to gather the information and how long would it remain current. CICS DA gives you the ability to obtain the answers to those questions quickly and efficiently and provide the tabular and graphical reports that your management need.

Summary

CICS DA provides important benefits to the enterprise. By simplifying and automating complex tasks, it improves productivity and reduces costs, risks, and dependency on specialized CICS skills. By promoting standardization and reducing complexity it helps to accelerate the deployment of new CICS capabilities and line-of-business applications, while minimizing errors and the associated risk of failure.

CICS DA can remove or automate many of the complex, multistep processes required to perform activities such as cloning an existing CICS region, and significantly reduce the time required to validate CICS topology and initialization options during setup or problem determination.

CICS DA is based on IBM CICS Explorer, which has already shown that it can increase the productivity of highly skilled CICS technical users, as well as providing an intuitive entry-point for broadly skilled staff, by integrating powerful tools into a single Eclipse-based user interface.

CICS DA can help you improve your management and consistency of provisioned topologies in your enterprise, and help you implement Information Technology Infrastructure Library (ITIL) and IBM service management processes, such as change, release, and incident management.

If you're running CICS systems without the information and automation provided by CICS DA, it can be challenging to perform tasks such as identifying your current infrastructure topologies and creating new regions from scratch with consistent datasets and JCL.

CICS Tools — your pathway to success

CICS Deployment Assistant is one of the four core foundational CICS tools that exploit and augment the latest operational efficiency and service agility enhancements in CICS TS V5.3 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, achieve greater capacity, and improve the availability of your critical enterprise systems. The powerful automation capabilities of CICS Tools can speed service delivery, improve standardization, and reduce risk, and rich discovery, advanced visualization, and comprehensive reporting provide the insight that you need to ensure that your applications run smoothly and changes are efficient and reliable.

Support for the Cloud capabilities 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:

- IBM CICS Interdependency Analyzer for z/OS V5.3
- IBM CICS Performance Analyzer for z/OS V5.3
- IBM CICS Configuration Manager for z/OS V5.3

CICS tools are also available in the following conveniently packaged offerings:

- IBM CICS Modernization Solution Pack
- IBM CICS Optimization Solution Pack

For more information

To learn more about CICS Deployment Assistant, contact your IBM representative or IBM Business Partner, or visit:

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

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

To learn more about other IBM CICS Tools, visit:

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