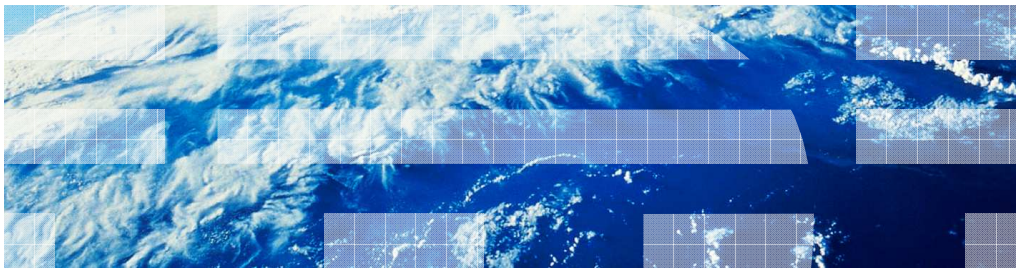
CICS Transaction Gateway

What is new in V7.2



Hello and welcome to this introduction to what's new in CICS® Transaction Gateway Version 7.2.

Overview

- High availability
- New remote connectivity
- Integration with CICS Explorer™

There are three major areas of function that we are going to talk about in this presentation. These are high availability, the new remote connectivity options, and integration with the CICS Explorer.

High availability features in 7.2

Default server

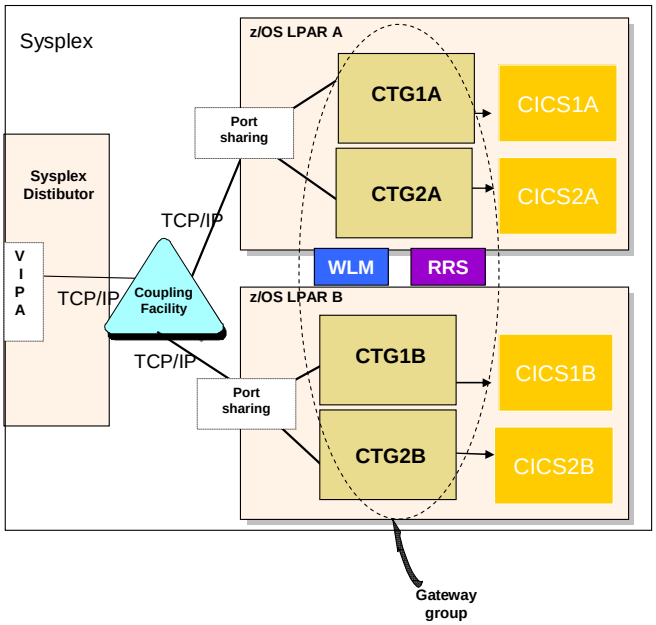
- Supported on all platforms
- Replacement for DFHJVSYSTEM_00 supporting IPIC and EXCI servers
- Supported for synconreturn and extended ECI requests (not XA)

Server name remapping (z/OS only)

- Mechanism to redirect ECI requests to a defined CICS server when using IP load balancing
- CICS server can be local to the LPAR or Gateway
- Supported for synconreturn and extended ECI requests (not XA)
- Two supported options:
  1. Logical server definitions
  2. CICS request exit

Sysplex XA recovery (z/OS only)

- Gateway cloning supported across multiple LPARs with XA transactions
- **Gateway group** defined using applid naming convention



The high availability feature enables the CICS TG on z/OS to participate in an end-to-end system where the failure of a single component does not mean that the whole system fails. This is shown in the diagram here where there are a number of CICS TG and CICS TS regions on different LPARs within a sysplex and work is routed to them using a sysplex distributor. Applications connecting to this system see a single point of entry and do not need to know how the request gets to a CICS region.

Three main features have been introduced in CICS TG Version 7.2 to enable this type of system topology.

The first is improved default server configuration. This is supported on all platforms and allows a client application logic to defer CICS server selection to the Gateway daemon at run time, allowing deployment affinities to be removed from client applications. The new function allows for connections to CICS using IPIC to be set as the default server as opposed to methods for providing this in earlier releases.

Secondly, we have the concept of server name remapping, which allows for the CICS TG on z/OS to direct work to a CICS server chosen using defined rules that override the CICS server specified by the client application. This function is logically the equivalent to the DFHXCURM exit provided for EXCI, but has the advantages of allowing IPIC connections to be used, and allowing the Gateway daemon to track the CICS servers that are being used with it's monitoring and statistics functions.

There are two ways of performing server name remapping:

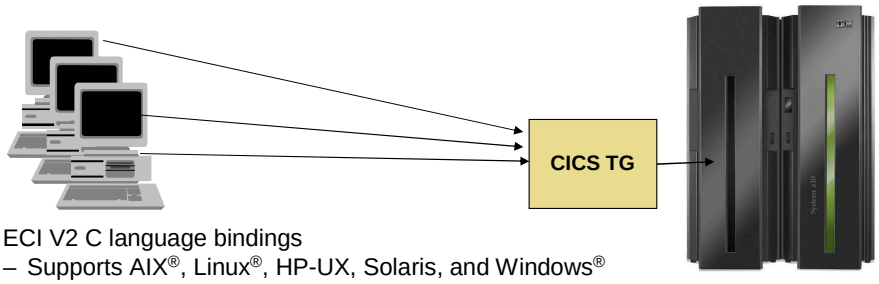
- Logical Servers allow a CICS server name to be remapped on a one-to-one basis to a CICS server defined for that Gateway daemon. This allows for a client application to specify one CICS server name, which might then potentially be sent to a CICS region local to the Gateway daemon processing that request.

- The second is the CICS request exit, which is a user-written Java™ class that decides where to send a request based on the information provided. Using this method of server name remapping, it is possible to retry a failing request between a group of CICS servers, if one becomes unavailable.

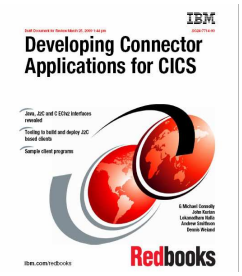
Server name remapping is currently available for synconreturn and one-phase commit extended ECI requests only.

Finally the CICS TG on z/OS configured for TCP/IP load balancing and two-phase commit XA transaction support can now distribute the group of Gateway daemons across multiple LPARs, removing the restriction where all Gateway daemons within such a single group needed to be on the same LPAR.

Remote C client



- ECI V2 C language bindings
  - Supports AIX®, Linux®, HP-UX, Solaris, and Windows® platforms
  - Potential usage from COBOL and .NET environments
  - One-phase commit
- Migration path from CICS Universal Client
  - Lightweight client footprint
  - Simple code changes from ECI v1
- Exploit CICS TG QoS
  - Performance, high availability, security, and monitoring
- See “Developing Connector Applications for CICS”
  - IBM Redbooks® Publication
  - http://w3.itso.ibm.com/redpieces/abstracts/sg247714.html

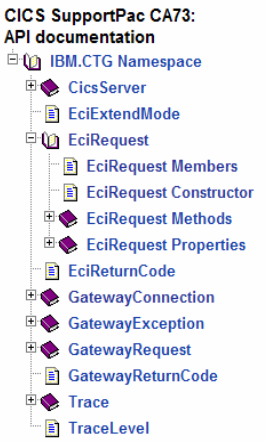


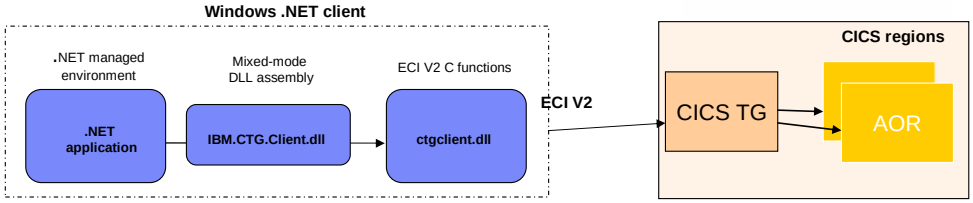
The remote C client support adds a new C-language API called ECI V2 to the product. This allows C applications to interact with CICS server via an intermediate Gateway daemon through a lightweight communications layer. This provides a migration path from applications that currently use the CICS Universal Client to call programs in CICS. By connecting to a Gateway daemon it is now possible for C applications to exploit the qualities of service and scalability provided by that topology.

The latest CICS TG Redbooks publication, "Developing Connector Applications for CICS" contains chapters on writings ECI V2 applications and migrating existing applications to use this new API.

Develop .NET applications

- Use the CICS TG ECI V2 APIs in a .NET managed runtime for C#, C++, or VB.NET applications
- Category 3 SupportPac CA73 **(fully supported API)**
- Provides a supported .NET API interface using a mixed mode DLL
- Includes an HTML programming reference
- Connects to Gateways on all CICS TG platforms





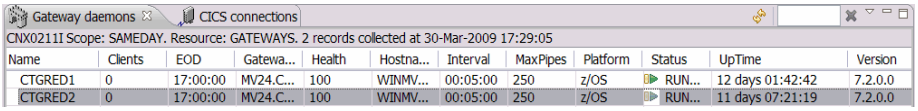
The ECI V2 API can also be used as a way of integrating with other programming languages that support calling of C library functions. An example of this is the .NET API provided as part of Support Pac CA73. This is a fully supported SupportPac containing a mixed mode DLL and documentation allowing applications in a .NET environment to call CICS programs through a Gateway daemon.

CICS TG plug-in for CICS Explorer CS05

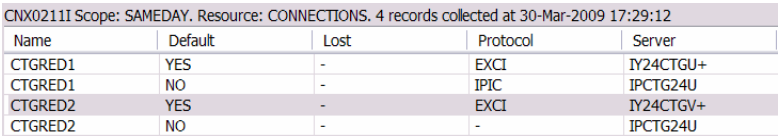
SupportPac CS05 preview

Gateway daemon and Connection views

- Use the Gateway daemon view to see status and activity of multiple Gateway daemons



- Use the connectivity view to see details of the Gateway connections to CICS



Customizable Display

- Customize which attributes are displayed, and in what order
- Create a customized composite perspective (for example including both CICS TG and CICSPlex® SM)
- Context sensitive help

Finally we have the CICS TG plug-in for CICS Explorer. The CICS Explorer is an extensible technology designed to provide new ways of accessing information about CICS systems and related products.

The CICS TG plug-in, available in SupportPac CS05, allows information about CICS Transaction Gateways on z/OS to be displayed alongside the CICS Transaction Server information. Information currently available shows the status of multiple Gateway daemons and the CICS server connections that each Gateway is using.

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