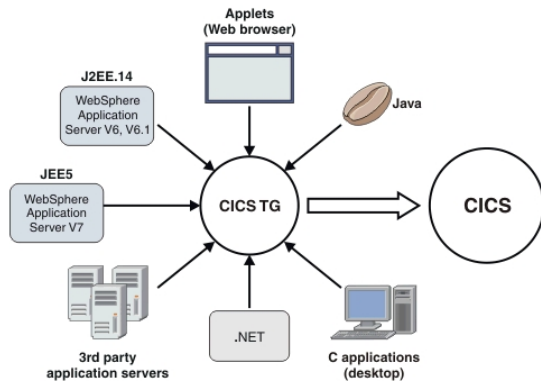**IBM**®

Secure, Scalable and Flexible SOA Access to CICS®

CICS Transaction Gateway V8.0

CICS® Transaction Gateway V8.0 provides significant enhancements over previous releases in the key areas of open integration, high availability, and integration with CICS Transaction Server V4.1.

Highlights

- Open integration with extended support for Java™ Enterprise Edition (JEE) Application Servers and .NET environments, optimization for WebSphere® Application Server, plus channels and containers support for ECI v2 for handling larger amounts of data.
- Support for highly available XA configurations on z/OS®, plus exploitation of the Java 6 runtime environment.
- Extended interoperability and simplified security with CICS Transaction Server V4.1, plus integration with CICS Explorer[tm]

Much of the world's data is processed on mainframes, using the qualities of service of proven transaction servers such as IBM CICS Transaction Server for z/OS. Delivering access to CICS applications through standards-based interfaces is becoming a key requirement in many of today's sophisticated service-oriented solutions.

CICS Transaction Gateway is the premier IBM middleware product, proven over many years to deliver high performing, security-rich and scalable access to CICS. Implementing CICS Transaction Gateway requires minimal changes to CICS systems and usually no changes to CICS applications. CICS Transaction Gateway enables the rapid exploitation of existing enterprise applications for clients hosted either on IBM WebSphere® Application Server or on other JEE application servers. CICS Transaction Gateway is available on a range of IBM platforms and can be deployed in a number of different topologies.

The ability to reuse CICS applications in mixed CICS, Java and other workloads, delivers real business value by increasing system flexibility and by helping to reduce costs.

Open integration

CICS Transaction Gateway provides extended support for Java Enterprise Edition (JEE) application servers and .NET environments, and is optimized for WebSphere Application Server.

CICS Transaction Gateway V8.0 is the premier connector for integration with WebSphere Application Server, both on host and distributed systems.

The CICS Transaction Gateway V8.0 now enables a broad range of .NET applications, for example C# or VB.NET clients to connect to CICS COMMAREA programs through the ECI

interface. In such a scenario CICS Transaction Gateway is used in a remote mode topology.

Channels and containers for ECIv2

The External Call Interface v2 (ECIv2) remote client API now provides support for the CICS Transaction Server for z/OS (CICS TS) channels and containers programming model. This provides a simple method for remote clients to exchange data with CICS programs, in amounts that far exceed the 32 KB limit that applies to the COMMAREA, and additionally provides an optimized and more structured data interface. This enhancement to ECIv2 support provides for potential usage in a wide variety of client runtime environments, including Microsoft®.NET, COBOL, and C++, and extends the capability for migration of ECI CICS Universal Client applications to a lightweight client footprint.

JEE Installation Verification Test (IVT)

JEE application server support is further extended by the provision of an installation verification test (IVT). This allows simple verification of the CICS JCA resource adapters for usage in any application server that complies with the J2EE 1.4 specification.

64-bit local mode Java support

CICS Transaction Gateway for Multiplatforms V8.0 can operate in local mode within 64-bit Java runtime environments. Support is provided through the ECI resource adapters and enables a direct IPIC connection to a CICS server in a 2 tier environment. This provides enhanced compatibility and scalability for local deployment with 64-bit JEE application servers.

The list of supported JEE application servers now includes local CICS Transaction Gateway for Multiplatforms V8.0 in the 64-bit Java Runtime Environment provided by WebSphere Application Server for Multiplatforms.

Applets support for SSL

In addition to the existing Secure Sockets Layer (SSL) support, Java applets can now use an encrypted SSL or Transport Layer Security (TLS) connection to a remote Gateway daemon, allowing stringent encryption and authentication capabilities and better interoperation with a variety of secure clients.

High availability on z/OS

CICS Transaction Gateway supports improved scalability and availability with highly available XA configurations, plus exploitation of the Java 6 runtime environment.
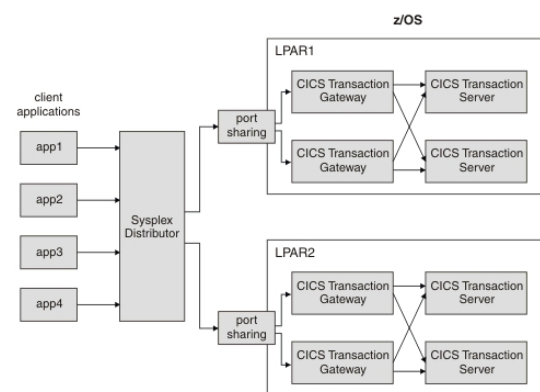
CICS Transaction Gateway for z/OS V8.0, the premium CICS Transaction Gateway product, offers new improvements made to the high availability support introduced in previous versions. For the first time, it is possible to create a sysplex-wide highly available Gateway solution incorporating XA transactions, maintaining transactional scope with CICS systems across the parallel sysplex whilst ensuring that confidence in system up-time is maximized.

Dynamic server selection for XA requests

The Gateway daemon component of the CICS Transaction Gateway for z/OS V8.0 supports dynamic server selection for all types of ECI requests, including two-phase commit requests using the XA protocol. This support allows the default server and logical server

rules or the CICS request exit infrastructure to be used to create a sysplex-wide high availability CICS infrastructure.

CICS request exit enhancement

An enhancement to the CICS request exit infrastructure allows customized commands to be sent to exits. This new capability provides a simple solution for the dynamic control of server selection polices when creating a high availability CICS Transaction Gateway infrastructure.

Support for Java 6

CICS Transaction Gateway V8.0 also provides exploitation for the IBM[(r)] 32-bit SDK for z/OS Java 2 Technology Edition Version 6. This includes exploitation of the Java shared class cache technology on z/OS, providing for faster start-up times and reduced storage consumption when running multiple Gateway daemons in the same z/OS logical partition (LPAR).

Integration with CICS Transaction Server V4.1

CICS Transaction Gateway provides extended interoperability and simplified security with CICS, and exploitation with CICS Explorer.

This latest version of CICS Transaction Gateway sees further improvements to allow adopters of CICS Transaction Server for z/OS V4.1 to get the most out of their CICS-based solutions.

Identity propagation

With the introduction of IBM z/OS V1.11, CICS Transaction Gateway V8.0 supports the z/OS identity propagation capabilities that allow security identities operating in the distributed environment to be associated with security identities used on the server (z/OS user IDs). This enables CICS applications to participate in end-to-end security solutions, therefore benefiting from improved cross-platform accountability and auditing, providing an alternative to custom written identity mapping. This function provides support for identity contexts sent from the JCA managed environment in WebSphere Application Server through the CICS ECI resource adapter and an IPIC connection into CICS TS V4.1 over a trusted IPIC connection. CICS TS V4.1 provides support for identity propagation through APARs PK95579 and PK83741.

CICS Explorer integration

The CICS Explorer is the new systems management tool framework for CICS, for use with CICS TS V3 and CICS TS V4.

The CICS Explorer provides an intuitive, easy-to-use way of managing one or more CICS regions. A plug-in is now available for use with the CICS Explorer which provides the ability to manage Gateway daemons at version V7.1 or later on any platform. This latest CICS Explorer plug-in also provides an improved set of views and customizations, together with integrated connection management and built-in Gateway and CICS test functions. The earlier unsupported SupportPac™ (CS05) is replaced by the CICS Explorer plug-in for CICS Transaction Gateway Version 8. For more information see:

http://www.ibm.com/software/htp/cics/explorer

Multi-sockets for IPIC connections to CICS

CICS Transaction Gateway supports IPIC connections to CICS that use up to two TCP/IP sockets per connection. This feature helps to alleviate lock contention under load, and can also reduce CPU usage when compared with the previous version of the product.

Supported hardware

- IBM System z® machine supported by Linux® or z/OS
- 32-bit or 64-bit IBM System p® supported by IBM AIX® or Linux
- 32-bit or 64-bit Sun SPARC system supported by Sun Solaris
- 32-bit or 64-bit HP PA-RISC 1.1 or 2.0 system supported by HP-UX
- 64-bit HP Itanium® system supported by HP-UX
- Intel® Pentium®, AMD Opteron or Intel EM64T system supported by Microsoft Windows® or Linux

Supported operating systems

- z/OS V1.9 or later
- AIX V5.3 or AIX V6.1 (with 32- or 64-bit kernel)
- Linux on System z: RHEL 5, SLES 10, SLES 11 (with 64-bit kernel)
- Linux on Intel: RHEL 5, SLES 10 or SLES 11, (with 32- or 64-bit kernel)
- Linux on POWER® RHEL 5, SLES 10, or SLES 11, (with 64-bit kernel)
- Sun Solaris V10 (with 32- or 64-bit kernel)
- HP-UX11i V2 or V3 (with 32- or 64-bit kernel)
- Microsoft Windows XP (with 32-bit kernel)
- Microsoft Windows Vista, Windows 7, Windows 2003, and Windows 2008 (with 32- or 64-bit kernel)

Supported CICS systems

CICS Transaction Gateway is designed to provide interoperability with all supported levels of CICS. The following list summarizes the CICS servers currently supported by IBM:

- CICS Transaction Server for z/OS V3.1, or later
- CICS Transaction Server for z/OS V4.1, or later
- TXSeries for Multiplatforms V6.0, or later
- CICS/VSE V2.3
- CICS Transaction Server for VSE V1.1
- CICS Transaction Server V5.4 for i5/OS®, or later

Supported application servers

- IBM WebSphere Application Server V6.1
- IBM WebSphere Application Server V7.0

CICS Transaction Gateway V8.0 also supports other JEE application servers. To check whether a JEE application server can be used with CICS Transaction Gateway V8.0, use the Installation Verification Test (IVT) provided with the product.

For more information
Contact your IBM representative or IBM Business Partner or visit:

http://www-01.ibm.com/software/htp/cics/ctg/