



IBM Software Group: CICS Product Portfolio

IBM CICS Transaction Gateway Version 6.0

Part 3: Latest Enhancements

Andrew Bates
Market Manager
batesan@uk.ibm.com

www.ibm.com/cics/ctg

ON DEMAND BUSINESS™

© 2004 IBM Corporation

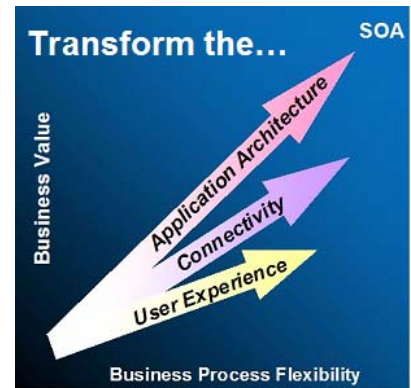
Agenda

- **Application Transformation**
- **What is the CICS Transaction Gateway?**
- **Why use the JCA?**
- **3 Key Characteristics of the CICS Transaction Gateway**
- **A Simple, Easy to Implement Solution**
- **Four Key Customer Value Areas**
- **Increased Qualities of Service**
- **Improved Systems Management**
- **Better Support for Security**
- **Enhanced Ease of Use**
- **Summary**
- **Further Resources**

Duration: Approx 20 Minutes

Application Transformation

- **Focus on Reducing:**
 - Cost
 - Risk
 - Time to Market
- **Focus on Increasing:**
 - Application Reuse
 - Employee Productivity






Transform applications
for use in mixed workloads.

Reduce risk and cost.

What is the CICS Transaction Gateway?

CICS Transaction Gateway provides three core capabilities:

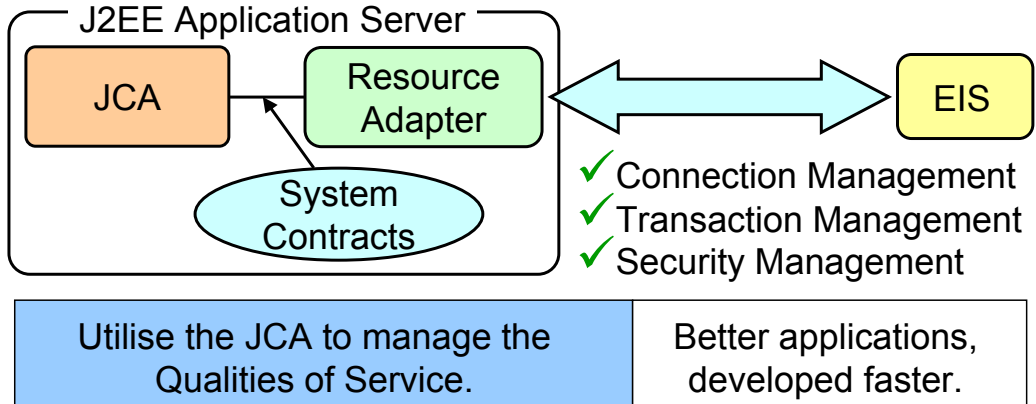
 <p>Plumbing</p> <p><i>J2EE connector into CICS</i></p> <ul style="list-style-type: none"> High performing and scalable inbound connector to CICS applications Provides connectors to COMMAREA and 3270-based CICS applications 	 <p>Interfaces</p> <p><i>Java and non-Java API's</i></p> <ul style="list-style-type: none"> Standard JCA interface provides best Qualities of Service Base Java, C, C++, COBOL and COM interfaces are supported but stabilized 	 <p>Integration</p> <p><i>WebSphere, CICS and others</i></p> <ul style="list-style-type: none"> All supported CICS releases 3 versions of WebSphere Application Server across 7 different platforms 5 SNA servers (AIX, Windows, Linux on zSeries)
---	--	---

Supported connectivity from
WebSphere to all CICS servers.

Integrate all your
CICS assets.

Why use the JCA?

- **JCA provides two key advantages:**
 - Standard programming interface to all Enterprise Information Systems (EIS)
 - Delegated management of Connections, Transactions and Security



3 Key Characteristics of the CICS TG

- **Very popular CICS connectivity method, because:**
 - **High performing**
 - 1,000+ TPS with optimised data handling
 - **Secure**
 - SSL implementation and good integration with CICS
 - **Scalable**
 - Multi-Threaded technology and load balancing capabilities
- **Improvements in each of these three key areas in V6.0**

Provides high performing, secure and scalable access to CICS.

Production proven over many years.

A simple, easy to implement solution

- **Popular with System Programmers and Application Developers**
 - **Ease of System Programming**
 - Requires minimal changes to CICS and usually no changes to existing CICS applications
 - Provides simple, familiar mechanisms with which to configure and manage your gateway
 - **Ease of Application Development**
 - Implements the industry standard JCA (J2EE Connector Architecture) interface
 - JCA provides delegated management of Transactions, Connections and Security

Requires minimal or no changes to CICS systems and applications.

Ease of implementation.

Enhancements in CICS TG V6.0 have focused on four key technical value areas:

1. Qualities of Service

- Performance enhancements through optimization of the product and via exploitation of the latest J2EE and Linux standards.
- Considerable Availability and Scalability enhancement on our flagship z/OS platform.

2. Systems Management

- Improved Administration of the gateway through a more functional interface, better aligned with the native operating system.
- Problem Determination and Management have been enhanced through better recording and control of system information.

Enhanced Performance, Availability,
Scalability and Management.

More power &
More control.

Enhancements in CICS TG V6.0 have focused on four key technical value areas:

3. Security

- Support for the Industry leading SSL protocol enables fine tuned control of your network security.
- Exploitation of the advanced z/OS security features provides a faster and more comprehensive security solution.

4. Ease of Use

- New, industry standard installation vastly simplifies the process of installing, migrating and applying maintenance.
- Redesigned and searchable Eclipse-based information center provides a greatly improved interface for online documentation.

Advanced security capabilities,
simpler product deployment.

Better security,
Less complexity.

Increased Qualities of Service

- **Performance Enhancements:**
 - Improved performance of data processing on z/OS provides significant CPU usage savings when null padded COMMAREAS are used
 - Improved performance of data processing of null padded COMMAREAS within the Java client provides throughput improvements across all platforms.
 - Improved runtime performance of the CICS TG on distributed platforms, provides CPU reduction
 - Support for Transaction and Connection improvements in JCA V1.5 provides improved performance for J2EE applications.

Enhanced data processing and runtime operation.

Performance boost out of the box.

Increased Qualities of Service

- **Availability and Scalability**
 - Significant z/OS enhancements through two EXCI pipe usage modifications:
 1. Introduced is an option to limit the number of EXCI pipes used per thread to one.
 2. CICS TS V2 will provide an APAR (PQ92943) to increase the maximum number of pipes from 100 to 250 (not a CICS TG enhancement)
 - Improved performance and scalability on Linux
 - Support for NPTL, a high-performance multi-threading capability that improves scalability for multi-threaded applications.

Support higher numbers of concurrent users.

Respond to peak demands.

Improved Systems Management

- **All Platforms**
 - New Normal (quiesce) Shutdown allows all units of work to safely complete before shutdown
- **CICS TG on z/OS**
 - New SDSF command based systems administration interface provides improvements in both usability and functionality.
 - the ability to direct all runtime messages to the IBM Job Entry Subsystem (JES) instead of using HFS files
 - A new configuration infrastructure enables multiple Gateway daemons on z/OS to be configured and run independently much more easily

Improvements in functionality and system reliability.

Better operational capabilities

Improved Systems Management

- **CICS TG on Multiplatforms**
 - The command-based systems administration tool provides improved usability and the added capability of invoking shutdown processing
 - A new services function has been introduced that uses standard UNIX or Linux mechanisms to start and stop the gateway
 - Support for IBM Communications Server for Linux on zSeries, providing an SNA interface to CICS
 - More control over the management of the gateway log files

Improvements in the interface,
and management of information.

Better problem
determination.

Better Support for Security

- **Control of SSL Cipher Suite**
 - A new external configuration option for SSL connections, allows the SSL cipher suite to be specified.
 - This enables fine tuned control of the algorithms that can be used for encryption of network data sent to the Gateway.
 - Enables immediate exploitation of new Cipher Suites, as they are supported by Java
- **Additionally, on z/OS:**
 - Introduced the ability to store your SSL private keys and certificates within the RACF database
 - Introduced support for hardware cryptography cards when using JSSE SSL.

Better security infrastructure,
supporting latest encryption levels.

Good guys in,
bad guys out.

Enhanced Ease of Use

- **Simplified Installation and Migration**
 - z/OS SMP/e installation vastly simplifies the task of installing, upgrading and applying maintenance to the CICS TG
 - Install Shield Multiplatforms provides a significantly simplified installation and configuration; particularly on UNIX and Linux

- **Eclipse Based Information Center:**
 - New method of viewing IBM product information, based on the Eclipse framework, providing improved interface.
 - Introduces advanced search capabilities, including ability to search all installed IBM information centers in one search

Simpler migration and upgrades,
find information faster.

Even easier
implementation.



Comprehensive Tooling



The IBM Software Development Platform is a comprehensive set of tools that forms a complete and modular solution for building software in an on demand world.

Rational. software

WebSphere. software



WebSphere Studio

- Asset Analyzer
- Application Developer Integration Edition
- Enterprise Developer
- Application Monitor

CICS Tools

IBM @server Tools

The IBM Software Development Platform.

A complete IBM solution.

Summary

Middleware is Everywhere.

Can you see it?

- Significant enhancements in four major customer value areas:
1. **Qualities of Service:**
Performance enhancements via product optimization and exploitation of the latest J2EE and Linux standards
Considerable Availability and Scalability enhancement on the flagship z/OS platform
 2. **Systems Management**
Improved Administration through a more functional interface, better aligned with the native operating system
Problem Determination and Management enhanced through better recording and control of system information
 3. **Security**
Support for the Industry leading SSL protocol enables fine tuned control of your network security
Advanced z/OS security features provides a faster and more comprehensive security solution
 4. **Systems Management**
New, industry standard installation vastly simplifies the process of installing, migrating and applying maintenance
Redesigned and searchable Eclipse-based information center provides improved interface for online documentation
 - CICS Transaction Gateway is a high performing, scaleable and easy to use connector into CICS.



ON DEMAND BUSINESS

Further Resources

This presentation is 3 in a series of 3. Please see also:

CICS Transaction Gateway V6.0: Part 1 – Business Value

CICS Transaction Gateway V6.0: Part 2 – Technical Value

- **Much more information can be found online:**
 - CICS: www.ibm.com/cics
 - CICS Transaction Gateway: www.ibm.com/cics/ctg
 - IBM Software Development Platform: www.ibm.com/developerworks/platform
- **Of particular interest on the CICS Library www.ibm.com/cics/library**
 - Redbooks
 - Online Information Center
- **Be sure to check BOTH announcement letters www.ibm.com/common/ssi**
 - CICS Transaction Gateway for z/OS V6.0, 30th November 2004, US letter 204-283
 - CICS Transaction Gateway for Multiplatforms V6.0, 30th November 2004, US letter 204-284

Trademarks

developerWorks, e-business on demand, Electronic Service Agent, IBMLink, IMS, Informix, iSeries, MVS, MVS/ESA, Redbooks, SmoothStart, TXSeries, and zArchitecture are trademarks of International Business Machines Corporation in the United States or other countries or both.

AIX, CICS, CICS/ESA, CICS/MVS, CICSplex, DB2, DB2 Connect, DB2 Universal Database, Encina, ESCON, eServer, Language Environment, MQSeries, OS/390, Parallel Sysplex, Passport Advantage, pSeries, RACF, Rational, S/390, SecureWay, SP1, Sysplex Timer, System/390, SystemPac, the e-business logo, Tivoli, Universal Database, VisualAge, WebSphere, z/OS, and zSeries are registered trademarks of International Business Machines Corporation in the United States or other countries or both.

Intel is a trademark of Intel Corporation.

Microsoft, Windows and Windows NT are trademarks or registered trademarks of Microsoft Corporation.

Java is a trademark of Sun Microsystems, Inc.

Linux is a trademark of Linus Torvalds in the United States, other countries or both.

UNIX is a registered trademark of the Open Company in the United States and other countries.

Other company, product, and service names may be trademarks or service marks of others.

© Copyright IBM Corporation 2004

IBM United Kingdom Limited
Hursley Park
Winchester
Hampshire
SO21 2JN
United Kingdom

Produced in the United Kingdom
11-04
All Rights Reserved