IBM CICS Transaction Gateway, Version 5

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Highlights

- **Connects IBM WebSphere software platform for e-business with IBM CICS applications**

- **Offers a comprehensive security-rich environment for optimal authentication and authorization**

- **Provides implementation of the J2EE Connector Architecture**

- **Offers a choice of application server programming models to deploy across most major execution platforms**

- **Delivers best-of-breed performance and scalability by using memory-based access to optimize connection to CICS applications**

Extend core business processes and applications to the Web faster

To reach Internet-smart customers with products and services, you need to use the Web as more than just an information repository. The key to successful e-business — the kind that attracts and keeps customers, makes the sale and cuts cost — is to extend your core business processes and applications to the Web. To be able to offer the products and services customers want, when they want them. To know your workforce has the tools needed to work efficiently. You want to build engaging, security-rich Web applications that quickly and easily connect self-service-oriented consumers to your company.

You don't need to start at the bottom. You already have established processes in place representing a substantial financial and technological investment. The challenge is to make familiar business systems accessible in new ways.
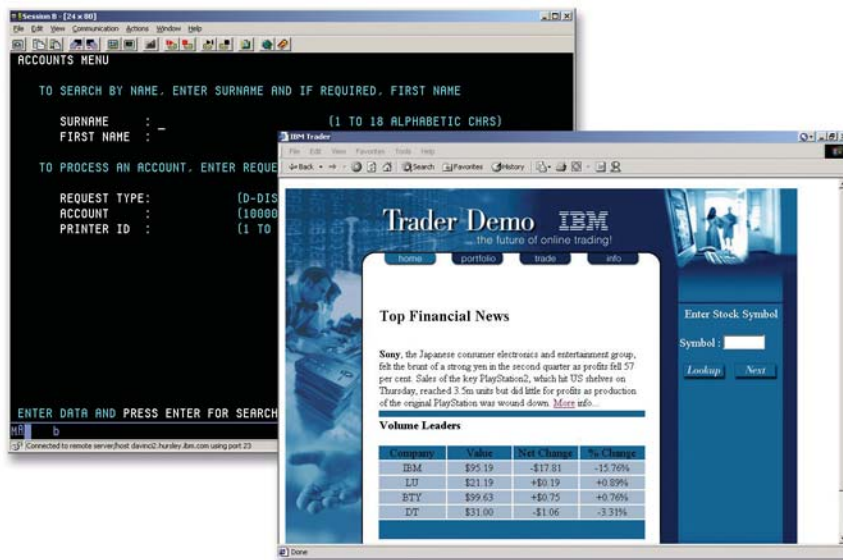
IBM offers an immediate solution. IBM CICS® Transaction Gateway, Version 5 can help you integrate your Web site with your core business application systems running on CICS servers, providing simple, efficient and scalable productivity.

Industry-leading J2EE support
As an e-business connector within the IBM Framework for e-business, CICS Transaction Gateway allows you to run CICS applications that work with IBM WebSphere® Application Server or almost any Web server. And with today's focus on building e-business applications based on open standards, Java™ 2 Platform, Enterprise Edition (J2EE) specification offers an industry-leading blueprint for end-to-end solutions. CICS Transaction Gateway implements the J2EE Connector Architecture (JCA), enabling it to operate with any compliant application server.

CICS Transaction Gateway implements the Common Client Interface (CCI) defined by JCA, allowing you to create applications with tools—such as IBM WebSphere Studio Application Developer— to provide adapters for CICS COMMAREA applications or 3270 transactions. The service provider interface (SPI), defined by JCA,

accesses pooling, transaction management and security services provided by the Web application servers, so that you can create more thoroughly integrated solutions.

Choosing the right deployment
You need to provide consistent and reliable access to your business-critical CICS applications through traditional Web browsers and Internet-enabled consumer devices alike. CICS Transaction Gateway gives you the flexibility to create HTML code-based Web sites or develop more sophisticated Web applications using Java technology or C++, depending on your needs.

If you need simple rendering of CICS 3270 application screens into HTML code, CICS Transaction Gateway provides the terminal servlet. It automatically translates 3270 data streams from existing CICS applications into HTML and transmits these to a browser using HTTP. To present information from CICS applications using HTML forms, you can then create your own HTML templates and Java servlets.

When you want to develop and deploy integration applications using Java servlets, Enterprise JavaBeans (EJB) components or COM objects that form part of a three-tier solution, CICS Transaction Gateway integrates
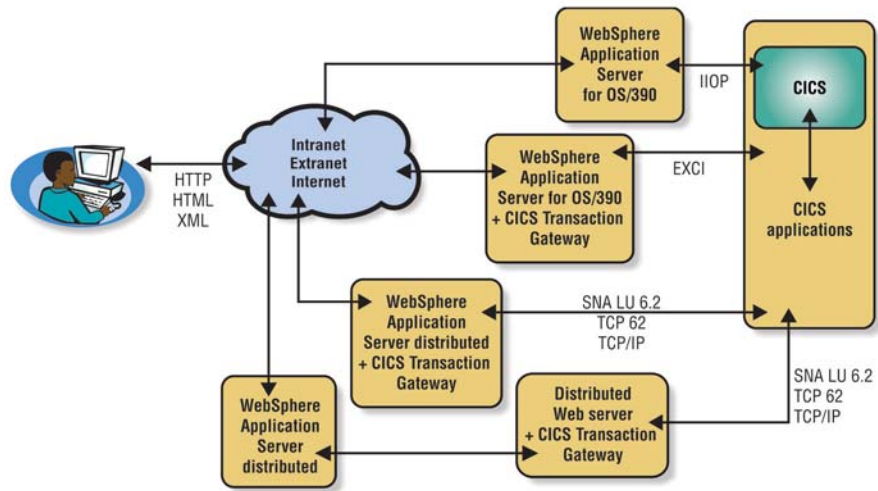
Typical configuration of an IBM CICS Transaction Gateway in a two- or three-tier environment

these objects with your business-critical CICS server applications using the IBM external call interface (ECI) and external presentation interface (EPI). These provide access to CICS COMMAREA applications and 3270 transactions and are available in Java, C++, C and Microsoft® Visual Basic.

Choosing the right deployment platform for your gateway is equally important. CICS Transaction Gateway can be deployed across an increasing number of runtime environments, from Microsoft Windows® and popular UNIX® platforms to Linux® on IBM zSeries™ and IBM z/OS™ operating environments for mainframe systems.

With CICS Transaction Gateway, you also have a comprehensive range of networking options to connect to your CICS systems, including native TCP/IP, enhanced support for TCP62[1], SNA LU6.2 and memory-based protocols. TCP62 is available on all supported platforms—except z/OS—providing an option to connect to CICS Transaction Server that minimizes dependence on SNA networks.

Performance and scalability

As your system grows, business-critical system workloads can become highly demanding. You need to adjust quickly to unpredictable peaks. Manage thousands of transactions per second. Achieve exceptionally high system availability. CICS Transaction Gateway delivers.

CICS Transaction Gateway uses multithreaded daemons to handle communication with front-end application servers and back-end CICS systems. Deployment code is optimized, enabling support for large numbers of concurrent requests and subsecond response times to end users. CICS Transaction Gateway can also nondisruptively exploit the hardware architecture of both symmetric multiprocessor (SMP) and clustered server systems.

In the z/OS environment, CICS Transaction Gateway can support workloads in excess of 1,000 transactions per second using multiple gateway images and reusing memory-based external CICS interface (EXCI) pipes. Sophisticated load balancing and failover facilities enable transactional workload to be distributed across a number of CICS regions or CICS servers as appropriate. In the z/OS environment, CICS Transaction Gateway supports logging of EXCI return codes.

A security-rich environment

CICS Transaction Gateway provides comprehensive security features including support for Secure Socket Layer (SSL) and HTTP over SSL (HTTP-S). This enables data flow encryption between the application server and the gateway of up to 128 bits.

CICS Transaction Gateway provides secure authentication with support for X.509 client certificates. These certificates are mapped to IBM RACF® user IDs and passwords to further enhance authentication checks performed by CICS security mechanisms. To facilitate the management of user IDs and passwords, the external security interface (ESI) enables appropriate customer applications to verify user passwords, as well as to process expired passwords. And, CICS Transaction Gateway enables the standard CICS server authorization mechanisms to operate, allowing fine-grained control over end-user access to both transactions and data.

Leverage IBM expertise

Take advantage of IBM e-business experience and technological innovation to get started quickly. IBM offers consulting and technical support services and extensive documentation, such as IBM Redbooks® to help you along the way. And because CICS Transaction Gateway is a fully integrated product, an easy-to-use graphical configuration utility can help you implement CICS solutions faster.

For more information

To learn more about how IBM CICS Transaction Gateway can help you bring your business-critical applications to the Web, visit:

ibm.com/cics/ctg

IBM CICS Transaction Gateway, Version 5 at a glance

Supported integrated gateway products

- Web browsers attached through Java servlets and JSP components
- Language bindings for Java, Version 1.3, C++, C and Visual Basic, as well as the functional capabilities of CICS client programming interfaces
- ECI, EPI and ESI
- Support for JCA and IBM Common Connector Framework
- CICS Transaction Gateway for IBM OS/390® provides a J2EE technology-compliant and recoverable resource services (RRS) technology-compliant connector, allowing two-phase commit capability
- Terminal servlet providing 3270 emulation and attached browsers
- Workload manager

Supported operating systems

- Microsoft Windows NT® Workstation, Version 4.0 with Service Pack 6a
- Windows NT Server, Version 4.0 with Service Pack 6a*
- Windows 2000, Profession Edition, with IBM SP1®
- Windows 2000 Server with SP1 (with Windows 2000 Terminal Services feature)
- Windows XP, Professional Edition
- IBM AIX®, Version 4.3.3 with Service Pack 25 or AIX, Version 5.1
- Sun Solaris, Version 7 (32-bit mode runs in 64-bit mode) operating environment and Sun Solaris, Version 8 (32-bit mode runs in 64-bit mode) operating environment
- HP-UX, Version 11.0 (32-bit runs in 64-bit mode)
- HP-UX, Version 11i (32-bit runs in 64-bit mode)
- Linux for zSeries (SuSE, Version 7.0, kernel level 2.2.16 and 2.4, and TurboLinux, Version 6 or TurboLinux, Version 6.5)
- OS/390, Version 2 Release 10 or higher, or z/OS, Version 1.2

Supported network protocols

- TCP/IP
- TCP62
- SNA LU6.2
- Multiregion operation (MRO)/EXCI

Packaging and availability

- Available on CD-ROM as a separately priced runtime product, or included with IBM WebSphere Studio Application Developer, Integration Edition, for development use
- National language support (NLS)- and double-byte character set (DBCS)-enabled with support for 13 languages
- Online documentation in PDF format

* Neither CICS Transaction Gateway, Version 5 nor IBM CICS Universal Client, Version 5 is supported with Windows NT, Version 4.0 Terminal Server. CICS Transaction Gateway, Version 5 is supported with Windows 2000 Terminal Services.

IBM CICS Transaction Gateway, Version 5 at a glance (continued)

Supported Java Development Kit (JDK) levels

- IBM SDK, Level 1.3.1 (all platforms)
- IBM SDK, Level 1.3 (on Windows, AIX, OS/390 and Linux for zSeries)
- Sun Java SDK, Level 1.3 (Sun Solaris) operating environment
- HP Java SDK, Level 1.3 (HP-UX)

Supported application servers

- IBM WebSphere Application Server for OS/390, Version 3.5
- WebSphere Application Server, Version 4.0, Enterprise Edition and
  WebSphere Application Server, Version 4.0, Advanced Edition
  (on Windows NT, Windows 2000, AIX and Sun Solaris)
- WebSphere Application Server, Version 4.0.3, Advanced Edition (Linux for zSeries)
- WebSphere Application Server for z/OS and OS/390, Version 4.0.1

Supported Web servers

- IBM HTTP Server, Version 1.3 (Windows NT, Windows 2000, AIX, Sun Solaris operating
  environment and HP-UX)
- Microsoft Internet Information Server, Version 5.0 (Windows 2000 and Windows NT)
- Apache HTTP Server, Version 1.3.12 (SuSE, Version 7.0)

Supported CICS servers

- CICS Transaction Server for z/OS, Version 2 Release 2
- CICS Transaction Server for OS/390, Version 1 Release 3
- CICS Transaction Server for OS/390, Version 1 Release 2
- IBM CICS/ESA®, Version 4, Release 1
- CICS Transaction Server for VSE/ESA™, Version 1.1.0
- CICS Transaction Server for VSE/ESA, Version 1.1.1
- CICS for VSE/ESA, Version 2.3
- CICS for IBM OS/400®, Version 4.4
- IBM TXSeries™, Version 4.2 (HP-UX); TXSeries, Version 4.3 with PTF 4
  (Windows NT, AIX, Sun Solaris operating environment); and TXSeries, Version 5.0
  (AIX and Windows)
- CICS Transaction Server for IBM OS/2®, Version 4.1

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