IBM

CICS Transaction Gateway Version 3.1

Highlights

Designed to deliver efficient and reliable Web access to your business critical CICS* applications with...

...Choice of access model and deployment platform
From Java** beans to COM objects to procedural programming, CICS Transaction Gateway supports a choice of server programming models and deployment across major execution platforms.

...Simplicity of use
From straightforward installation, configuration and operation, to support for popular Integrated Development Environments (IDEs) and proven APIs, CICS Transaction Gateway delivers ease of use.

...Performance and scalability
Employing efficient communications together with multithreading and SMP exploitation, CICS Transaction Gateway delivers the performance and scalability you need and expect.

...Comprehensive security
With features that enable privacy, authentication and authorisation, CICS Transaction Gateway delivers the security features critical to successful Web-based business operations.
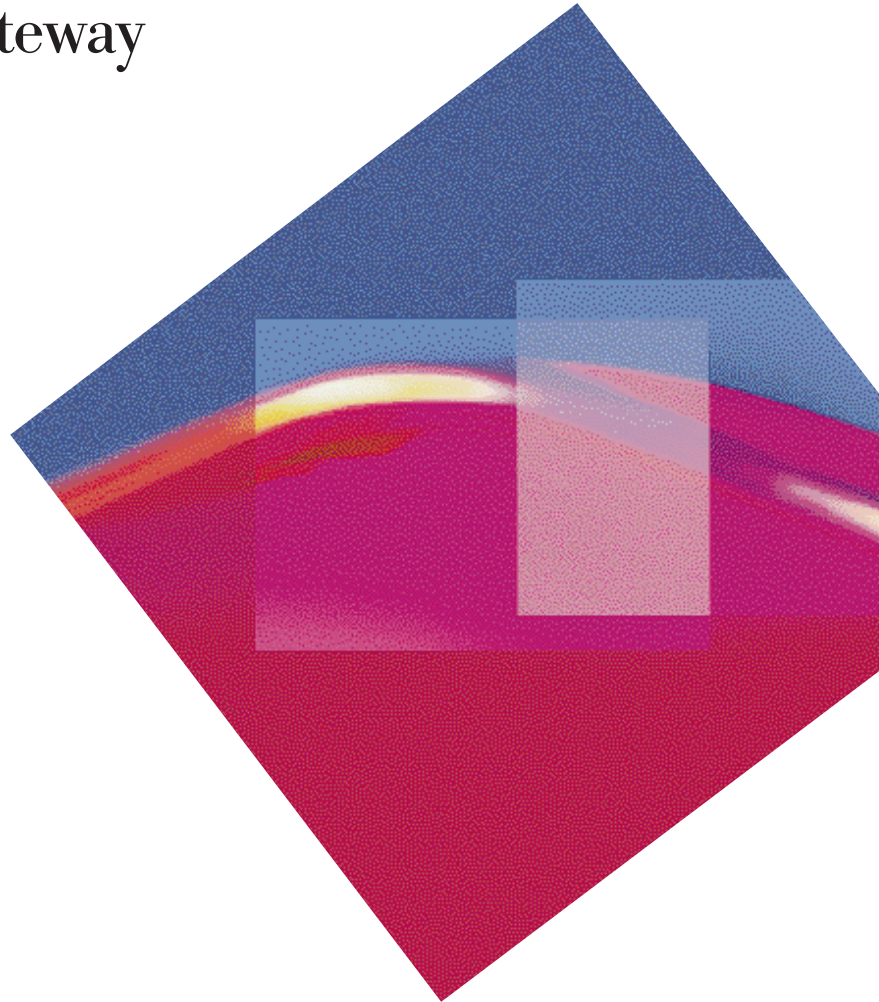
What do you get with CICS Transaction Gateway Version 3.1?

Integrated Gateway product supporting

- Attachment of Web browsers via Java** applets and servlets
- Language bindings for Java, C++, C, Visual Basic, COBOL, PL/I, Smalltalk and REXX.

plus the functional capabilities of CICS Universal Client Version 3.1

- External Call Interface (ECI)
- External Presentation Interface (EPI)
- External Security Interface (ESI)
- CICS 3270 terminal emulation and printer support
- Telnet TN3270 support
- Workload Manager (Windows** 98/NT** only).

Supported on the following platforms

- OS/390* (ECI only)
- Windows NT**
- Windows 98 (development only)
- AIX*
- Solaris
- OS/2*.

Supporting the following protocols for communications with CICS servers

- SNA LU6.2
- TCP/IP
- CICS host TCP/IP access feature (TCP62)
- NetBIOS
- DCE (Windows NT only).

Packaging and availability

- Downloadable from CICS Web site (subject to licensing)
- Available on CD-ROM
- Included with selected IBM products
- National Language Support and DBCS enabled with support for 6 languages
- Online documentation in Adobe PDF format.

Choice of access method and deployment platform

With today's ever increasing range of Internet access products, you need to choose the best and most flexible way to access your valuable business critical CICS applications. You need to choose a product that provides the widest range of options to enable you to implement the solution of your choice. Whether you plan to implement simple Web sites based on HTML or are developing more sophisticated Java based solutions, CICS Transaction Gateway provides this choice. Using this exciting product from IBM, you can develop your business solutions to allow Web browsers, network computers (NCs) or internet-enabled consumer devices to interact with your CICS applications.

If you need simple rendering of CICS 3270 application screens into HTML for display on standard Web browsers, CICS Transaction Gateway can provide the answer. It will automatically translate 3270 data streams from existing CICS applications into HTML, and transmit this to a browser using the HTTP protocol. Should you wish to present information from CICS applications using HTML forms, then you can create your own HTML templates and Java servlets to accomplish this.

Where Java enabled Web browsers are deployed as part of your business solution, CICS Transaction Gateway allows you to develop client applets that can access both CICS 3270 based applications and CICS programs that use COMMAREA. This support is enabled through the use of Java classes and Java beans supplied with the product.

Finally, when you decide that you want to develop and deploy server side Java beans or COM objects that form part of a larger three tier solution, CICS Transaction Gateway enables these objects to interact with your business critical CICS server applications. These objects interoperate with your CICS applications using the ECI and EPI programming interfaces which are available in Java, C++, Visual Basic, and other languages.

Your ability to choose the best execution platform for your gateway is also important. CICS Transaction Gateway provides a single, consistent implementation that can be deployed across a number of execution platforms. The Gateway is a superset of the CICS Universal Client product, and fully exploits its features and capabilities.
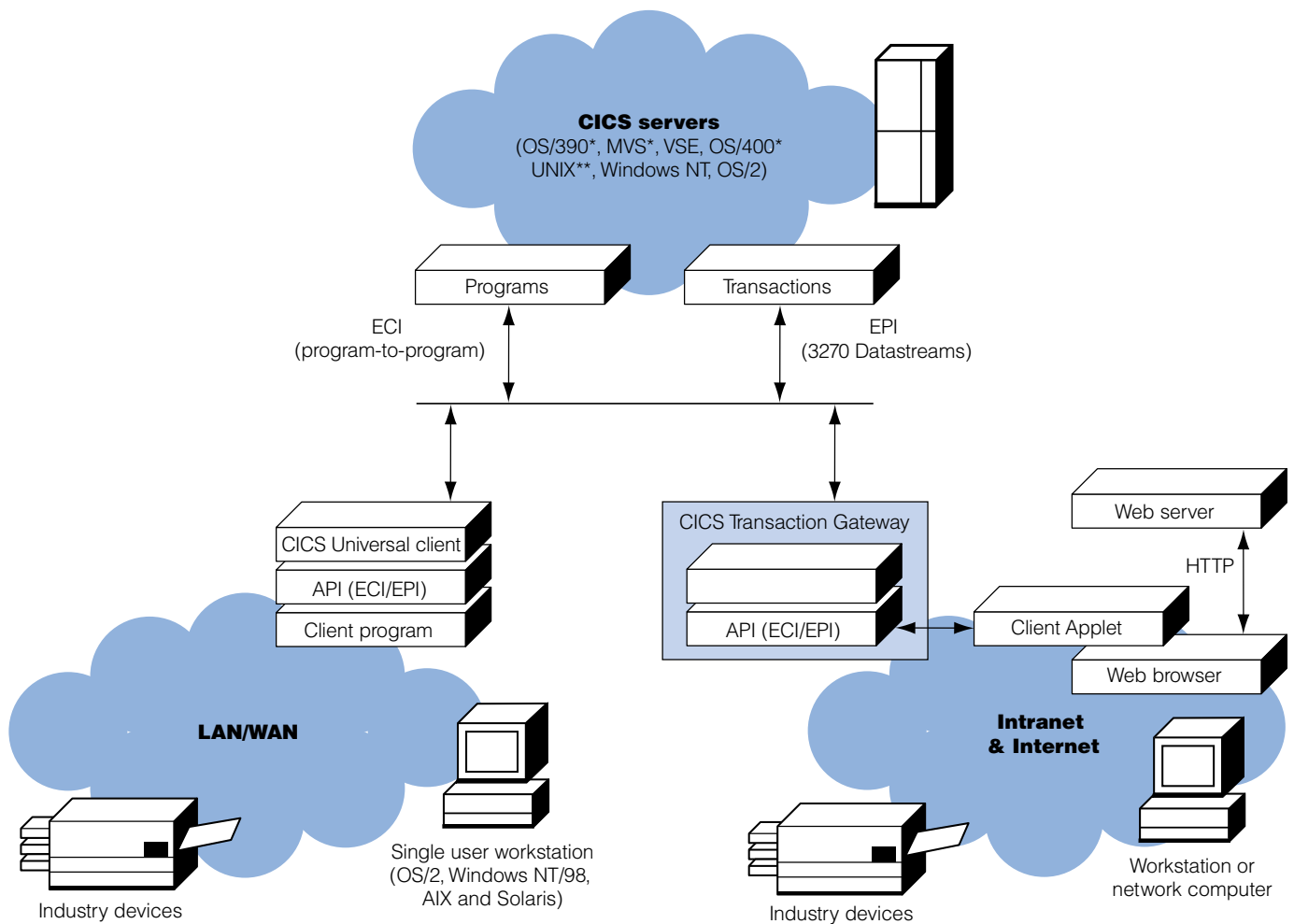
Simplicity of use

Ease of use, from product installation, through system development to solution implementation, allows for a more rapid deployment of your new system and realisation of your projected business benefits (whether cost savings or competitive advantage).

CICS Transaction Gateway has been designed to enable simple and straight forward installation. The installation process lets your developers quickly and easily set up and administer a gateway server. In Windows NT environments for example, installation is performed using InstallShield, while at runtime, the gateway executes as a Windows NT service.

To facilitate development of front end applications, CICS Transaction Gateway is supported by many popular Integrated Development Environments (IDEs), such as IBM VisualAge* for Java and VisualAge Interspace. These enable you to develop applications that interoperate with CICS servers rapidly using visual construction and other production features, such as the Interspace test environment.

Efficient and effective interoperation between your Web applications and CICS is crucial to a successful and robust Web solution. CICS Transaction Gateway includes implementations of IBM's well proven External Call Interface (ECI), External Presentation Interface (EPI) and External Security Interface (ESI). These APIs are supported in a range of 3GL programming languages including C, C++ and COBOL as well as Java and Microsoft** COM based objects.

CICS servers
(OS/390*, MVS*, VSE, OS/400*
UNIX**, Windows NT, OS/2)

Programs

Transactions

ECI
(program-to-program)

EPI
(3270 Datastreams)

CICS Universal client

API (ECI/EPI)

Client program

CICS Transaction Gateway

API (ECI/EPI)

Web server

HTTP

Client Applet

Web browser

LAN/WAN

Intranet & Internet

Industry devices

Single user workstation
(OS/2, Windows NT/98,
AIX and Solaris)

Industry devices

Workstation or
network computer

CICS Transaction Gateway V3.1

Performance and scalability

Although you may be starting with a simple system today, over time your needs will grow. When this happens, you will need a product that can scale to match your needs. CICS Transaction Gateway is designed to handle the very high workloads that e-business applications demand.

CICS Transaction Gateway is implemented as multithreaded daemons which handle communication with CICS servers and with Java applets. Execution code has been highly optimised, enabling support for large numbers of connected Web browsers that can deliver sub-second response times to end-users. In addition, CICS Transaction Gateway can transparently exploit the hardware architecture of Symmetric Multiprocessor (SMP) machines.

Using integrated CICS Universal Clients functionality, CICS Transaction Gateway provides both the efficient communications with CICS servers you need with the scalability required for future growth. When you need to support a high workload with large numbers of client applications, CICS Transaction Gateway's sophisticated load balancing facilities (Windows only) enable transactional workload to be distributed across a number of CICS regions or CICS servers as appropriate.

Comprehensive security

Access to your business critical applications needs to be secure and safe. CICS Transaction Gateway provides a wide and comprehensive range of security features to ensure that all your security needs are satisfied.

Privacy is ensured through support for Secure Sockets Layer (SSL) and HTTP over SSL (HTTP-S), which provide encryption of the data flows between a browser and the gateway.

CICS Transaction Gateway provides secure authentication by supporting X.509 client certificates and by mapping these certificates to RACF* userids and passwords which underpin the further authentication checks performed by CICS security mechanisms (OS/390 only). To facilitate management of userids and passwords, the new External Security Interface (ESI) allows appropriate external applications of your choice to verify passwords as well as to process expired passwords.

Finally, CICS Transaction Gateway allows the standard CICS server authorisation mechanisms to operate, letting you control end-user access to both transactions and data.

CICS server platform		Transaction Gateway platform			
		Windows NT, 95 and 98	OS/2	AIX	Solaris
• CICS/ESA* V4R1	Communications protocols supported	SNA and TCP62 (see Notes 1 and 4)		SNA	
• CICS Transaction Server for OS/390 V1R1 and later	Standard functions supported	ECI, TN3270, AutoInstall, ESI EPI and 3270 emulation (see Note 2)			
• CICS/VSE/ESA* V2R3	Communications protocols supported	SNA (see Note 4)			
• CICS Transaction Server for VSE V1R1	Standard functions supported	ECI, TN3270, AutoInstall EPI and 3270 emulation (see Note 3)			
CICS/400* V4R4	Communications protocols supported	SNA			
	Standard functions supported	ECI, TN3270, AutoInstall,EPI and 3270 emulation			
• TXSeries* V4.2 for AIX, Solaris and Windows NT and later (see Note 5)	Communications protocols supported	SNA and TCP/IP (see Note 6)			
	Standard functions supported	ECI, TN3270, AutoInstall, EPI and 3270 emulation			
• CICS Transaction Server for OS/2 Warp V4.1 (See Note 8)	Communications protocols supported	SNA, TCP/IP, NetBIOS (see Note 7)	SNA, TCP/IP		TCP/IP
• VisualAge CICS Enterprise Application Development for OS/2 and Windows NT (see Note 9)	Standard functions supported	ECI, TN3270, AutoInstall, EPI and 3270			

Notes:
(1) CICS Transaction Gateway for Windows 95/98 is supported for application development only
(2) CICS/ESA V4R1 requires PTF's UN90142 and UN90143
(3) CICS/VSE V2R3 requires PTF's UN90168 and UN90169
(4) Including via IntranetWare** for SAA
(5) TXSeries V4.2 for AIX, Solaris and Windows require PFT 6 to be applied
(6) DCE is supported on Windows NT platform only
(7) NetBIOS is not supported on Windows 98
(8) CICS Transaction Server for OS/2 Warp V4.1 contains CICS for OS/2 V3.1
(9) In VisualAge COBOL V2.2 and VisualAge PL/1 V2.1, not for production use

Note: For support for EPI extensions on secure terminals the following APARS need to be applied.

CICS/ESA V4R1   PQ30167
CICS TS V1R3   PQ30168
CICS/VSE V2R3   PQ30169
CICS TS VSE/ESA V1R1   PQ30170

This product will also be shipped with WebShere™ Application Server Enterprise or Advanced edition when available.

The IBM home page can be found on the Internet at www.ibm.com and more information on CICS can be found at www.software.ibm.com/cics

IBM is a registered trademark of International Business Machines Corporation.

*   CICS, OS/2, AIX, VisualAge, OS/390,VSE/ESA, MVS, OS/400, CICS/ESA, CICS/VSE, CICS/400, RACF and TXSeries are trademarks of International Business Machines Corporation.

** UNIX is a trademark of The Open Group.

** Microsoft, Windows 95 and Windows NT are trademarks of Microsoft Corporation.

** Java and all Java-based trademarks and logos are trademarks or registered trademarks of Sun Microsystems, Inc. in the U.S. and other countries.

Other company, product or service names may be trademarks.

References in this publication to IBM products, programs or services do not imply that IBM intends to make these available in all countries in which IBM operates. Any reference to an IBM product, program or service is not intended to imply that only IBM's product, program or service may be used. Any functionally equivalent product, program or service may be used instead.

This publication is for general guidance only.

Printed in England by Cedar Colour Ltd