IBM CICS Transaction Gateway for z/OS V7.1 delivers access to CICS containers and extended systems monitoring capabilities

At a glance

CICS Transaction Gateway (CICS TG) for z/OS V7.1 provides important new capabilities:

- Extended CICS integration support, exploiting the new IP Interconnectivity (IPIC) for Distributed Program Link (DPL) provided in CICS Transaction Server for z/OS (CICS TS) V3.2
- Extensions to systems monitoring capabilities, including advanced system metrics, interval statistics, support by CICS Performance Analyzer for z/OS (CICS PA), a transaction monitoring infrastructure, and advanced workload monitoring through the support of Enterprise Workload Manager (EWLM)

For ordering, contact:

Your IBM representative, an IBM Business Partner, or the Americas Call Centers at

800-IBM-CALL Reference: LE001

Overview

CICS® Transaction Gateway (CICS TG), a market-leading Java™ 2 Platform, Enterprise Edition (J2EE) connector, is production proven for over a thousand customers as a high-performing, security-rich, and scalable method of service-oriented architecture (SOA) access to CICS.

The new release of CICS TG for z/OS®, V7.1, provides interoperation with the CICS Transaction Server for z/OS (CICS TS) V3.2 channels and containers programming model. This provides the ability for J2EE applications to exchange large amounts of data with CICS programs, far exceeding the 32-KB limit that applies to COMMAREA-based interactions.

CICS TG for z/OS V7.1 also delivers the following in the area of extended CICS integration:

- New deployment options for XA support, to enable two-phase commit from J2EE applications in WebSphere® Application Server directly into CICS TS V3.2
- New deployment options for Secure Sockets Layer (SSL) support, to enable Java clients to use an encrypted connection directly into CICS TS V3.2

There is also a range of systems monitoring improvements, providing:

- Advanced system metrics providing enhanced problem determination and capacity planning capabilities.
- Interval-based statistics, recorded off-line to the System Monitoring
Facility (SMF), can be processed with CICS Performance Analyzer for z/OS (CICS PA) V2.1, providing the ability to integrate CICS TG systems monitoring with standard policies and procedures used on z/OS.

- A transaction monitoring infrastructure for end-to-end analysis of composite J2EE and CICS applications.
- Support for Enterprise Workload Manager (EWLM) when using IP Interconnectivity (IPIC) connections to CICS TS V3.2. This makes possible end-to-end workload monitoring of composite applications deployed in WebSphere Application Server and CICS TS.

Key prerequisites

- z/OS V1.7, or later
- IBM 31-bit Runtime Environment for z/OS, Java 2 Technology Edition, V5
- CICS TS V2.2, V2.3, V3.1, or V3.2

Planned availability date

December 7, 2007

Description

CICS Transaction Gateway for z/OS V7.1

CICS TG, a market-leading Java 2 Platform, Enterprise Edition (J2EE) connector, is production-proven for over a thousand customers as a high-performing, security-rich, and scalable method of SOA access to CICS. CICS TG:

- Delivers J2EE standards-based access to CICS applications, while requiring minimal changes to CICS and usually no changes to existing CICS applications
- Enables the rapid deployment of CICS applications as services in an enterprise-wide SOA
- Allows the reuse of existing CICS applications as services in comprehensive and sophisticated J2EE and Web services solutions hosted on powerful application servers such as WebSphere Application Server
- Allows CICS applications rapidly to be service-enabled by connecting them to new environments — such as the Enterprise Service Bus (ESB), the heart of an SOA

The strategic interface within CICS TG that enables this connectivity is the J2EE Connector Architecture (JCA) Common Client Interface (CCI), a core component of J2EE that defines a programming standard to all Enterprise Information Systems (EISs). JCA is now a popular method of connectivity because of its ease of implementation and high qualities of service. Using Java Servlets or Enterprise JavaBeans (EJB) components, the External Call Interface (ECI) can be utilized to allow access to CICS COMMAREA- or container-based applications. A choice of TCP/IP or SSL connectivity options is supported.

Enhancements in CICS TG for z/OS V7.1

CICS TG for z/OS V7.1 provides significant enhancements over previous releases in two principal areas:

- Extended CICS integration
- Advanced systems monitoring

Extended CICS integration

CICS TG V7.1 now exploits the IPIC for DPL provided in CICS TS V3.2. This new CICS intercommunication protocol is part of a multi-release cross-product initiative, introduced by CICS TS V3.2. Use of IPIC delivers the following benefits:

- Channels as modern-day COMMAREA:s Interoperation with the CICS TS V3 channels and containers programming model provides an improved method of exchanging data with CICS
programs, in amounts that far exceed the 32-KB limit that applies to COMMAREAs and additionally provides an optimized and more structured data interface. Support will be provided from both the JCA ECI resource adapter and the CICS TG base classes.

- **Extended XA support:** Deployment options when using XA support with the CICS ECI resource adapter are expanded to support both IPIC and EXCI connections when using the CICS TG for z/OS. This feature enables J2EE applications to invoke CICS programs within the scope of a two-phase commit transaction using the CICS TG for z/OS and the XA capabilities of CICS TS V3.2.

- **Extended Secure Sockets Layer / Transport Layer Security (SSL/TLS) support:** Options for secure intercommunication are enhanced through the exploitation of the CICS TS V3.2 support for SSL/TLS, when using a local mode CICS TG on any supported platform. This feature enables Java clients to use an encrypted connection to a CICS TS V3.2 system, providing for secure transmission of data and optionally for authentication using X509 certificates.

- **Request level timeout:** ECI requests using an IPIC connection to CICS TS V3.2 can now specify a timeout value per request.

CICS TG continues to provide optimized interconnectivity from a wide variety of clients into all CICS systems supported by IBM. CICS TG for z/OS V7.1 provides TCP/IP network optimizations to improve response times for Java clients connecting to CICS through the Gateway daemon.

**Advanced systems monitoring**

CICS TG V7.1 now provides enhanced facilities for capacity planning and problem determination within the Gateway daemon. Use of CICS TG V7.1 delivers the following benefits:

- **Advanced system metrics:** Advanced capacity planning, throughput and availability metrics are provided for the Gateway daemon on all platforms. This function allows systems administrators and capacity planners to analyze system utilization metrics and to perform on-line problem determination. New statistics include network usage statistics for EXCI and IPIC connections to CICS, usage of critical system resources including region storage and Java Virtual Machine (JVM) heap, and analysis of response times and network throughput. If necessary, these values can be used to take action to reduce the need for planned outages or prevent the occurrence of unplanned downtime. These statistics are made available through the extended z/OS system command-based administration interface and the external statistical API.

- **Interval statistics and off-line recording:** A mechanism is provided to record and reset statistics using a configurable interval. Statistics are recorded to the z/OS System Monitoring Facility (SMF) using a new SMF type 111 record. This allows analysis of trends and peak usage, enhancing the ability to perform capacity planning and performance monitoring of the Gateway daemon and providing for integration with the statistical collection policies and procedures used for the monitoring of CICS TS.

- **Support by CICS Performance Analyzer for z/OS:** CICS PA V2.1 is enhanced through the service channel by PTF for APAR PK53163 to provide support for the new SMF type 111 records generated by CICS TG for z/OS V7.1. CICS TG reporting is integrated into the existing CICS PA statistics reporting functions, including:
  - Online dialog reporting via the CICS statistics reporting facility: all CICS-related statistics can be viewed from the CICS PA ISPF dialog
  - Long-term historical collection for capacity planning and trend-analysis purposes using the CICS PA Historical Database (HDB) facility

- **Transaction monitoring:** A new request monitoring exit infrastructure is provided in the CICS TG for use in both local and remote Gateway scenarios. This infrastructure enables Independent Software Vendors (ISVs) to develop transaction monitoring solutions for on-line transaction tracking and off-line auditing. The exit infrastructure will be provided in both the Java client and the Gateway daemon, and will report response times and additional key information about all ECI-based requests as they flow through the CICS TG components.

- **Advanced workload monitoring:** As part of the exploitation of CICS TS V3.2 IPIC, support is provided for EWLM over IPIC connections to CICS TS V3.2. EWLM is the IBM implementation of the Application Response Measurement (ARM) standard from The Open Group. EWLM extends the capabilities of z/OS Workload Management (WLM) services to all members of the IBM eServer® family, making possible end-to-end workload monitoring in heterogeneous environments such as a WebSphere Application Server and CICS TS environment. Additionally, IPIC requests originating in a JCA resource adapter will automatically contain
point-of-entry information, enabling CICSPlex® SM (or equivalent CICS monitoring tools) to perform problem determination and off-line analysis of requests as they enter and flow across a CICSPlex.

Other enhancements
Clock changes: CICS TG now supports changes to system time while running.

Accessibility by people with disabilities
The following features support use by people with disabilities:

- Operation by keyboard alone
- Optional font enlargement and high-contrast display settings
- Ability to run with screen readers and screen magnifiers for use by people with visual impairment
- Communication of all information independently of color

The Information Center is accessible to people with visual, physical, or hearing impairment. All functions can be performed without the use of a mouse. Text descriptions are provided for all diagrams, which can be read by a screen reader. The publications documents are also provided in PDF format; this is accessible using Acrobat Reader 6.0, or later.

A U.S. Section 508 Voluntary Product Accessibility Template (VPAT) containing details on accessibility compliance can be requested at


Section 508 of the U.S. Rehabilitation Act
CICS TG for z/OS V7.1 is capable as of December 7, 2007, when used in accordance with the associated IBM documentation, of satisfying the applicable requirements of Section 508 of the Rehabilitation Act, provided that any assistive technology used with the product properly interoperates with it.

Value Unit-based pricing
Value Unit pricing for eligible IBM eServer System z™ IBM International Program License Agreement (IPLA) programs enables a lower cost of incremental growth and enterprise aggregation. Each System z IPLA product with Value Unit pricing, has a single price per Value Unit and a conversion matrix, called Value Unit Exhibit, for converting from some designated measurement to Value Units. Most commonly, Millions of Service Units (MSUs) is the measurement designated by IBM to be converted to Value Units. Some other measurements are engines or messages. Since MSUs are the most common measurement, that measurement will be used for the remainder of this description.

Value Unit pricing offers price benefits for you. For each System z IPLA program with Value Unit pricing, the quantity of that program needed to satisfy applicable IBM terms and conditions is referred to as the required license capacity. Each of the various Value Unit Exhibits stipulate that the larger your required license capacity, the fewer Value Units per MSU you will need. Value Unit Exhibits are uniquely identified by a three digit code and referred to using the nomenclature VUExxx, where xxx is the three digit code.

Subsequent acquisitions of Value Unit priced programs offer additional price benefits. The quantity of each System z IPLA program that you have acquired is referred to as entitled license capacity. If you wish to grow your entitled license capacity for a System z IPLA program, the calculation to determine additional needed Value Units is based upon the number of Value Units already acquired.

For each System z IPLA program with Value Unit pricing, you should:

- Determine the required license capacity, in MSUs
- Aggregate the MSUs across the enterprise
- Convert the total MSUs to Value Units, using the applicable Value Unit Exhibit
- Multiply the price per Value Unit by the total number of Value Units to determine the total cost
To simplify conversion from the designated measurement to Value Units or vice-versa, use the Value Unit Converter Tool. For additional information or to obtain a copy of the Value Unit Converter Tool, visit the Value Unit Converter Tool Web site:

http://ibm.com/zseries/swprice/vuctool

Note that Value Units of a given product cannot be exchanged, interchanged, or aggregated with Value Units of another product.

To determine the required license capacity for the System z IPLA program you selected, refer to the Terms and conditions section.

**Product positioning**

One of the key attributes of an SOA is its ability to reuse existing program assets. For many organizations, their key existing program assets are CICS-based applications. CICS TG allows CICS applications rapidly to be service-enabled by connecting them to new environments, such as the ESB, the heart of an SOA.

To enable comprehensive composite-application-serving infrastructures, CICS TG provides connectivity from WebSphere SOA foundation servers to CICS TS. The strategic interface within CICS TG that enables this is the JCA adapter, a core component of J2EE that defines a programming standard to all EISs. JCA is a popular method of J2EE connectivity because of its ease of implementation and high qualities of service.

JCA provides delegated management of connections, transactions, and security that are transparent to application developers. In a managed environment, like that of WebSphere Application Server, system contracts enable these management capabilities. They help to make the JCA a robust solution for integrating COMMAREA- or container-based CICS applications with J2EE applications running in WebSphere Application Server.

Tightly coupled connectivity solutions such as JCA, along with other J2EE standard services such as Java Message Service (JMS) and Java Database Connectivity (JDBC), can coexist with loosely coupled Web services to take advantage of the agility of service-oriented architectures.

Choosing the right deployment platform for your gateway is important. CICS TG V7.1 currently supports the following platforms:

- z/OS
- AIX®
- Linux™ on Intel®, POWER™, or IBM System z
- Microsoft® Windows®
- Sun Solaris on the SPARC platform
- HP-UX on RISC or Itanium platforms

Connectivity is provided on these platforms from all supported WebSphere Application Server environments to all supported CICS servers. The qualities of service of CICS TG are highest when deploying on the z/OS platform. The comparison of the qualities of service delivered on each platform and in each configuration is discussed in the publication Integrating WebSphere Application Server and CICS TS using the Java Connector Architecture (G224-7218).

TXSeries™ for Multiplatforms is a distributed CICS Online Transaction Processing (OLTP) environment for business-critical applications written in enterprise programming languages, and the CICS TG is the strategic connector between TXSeries CICS servers and WebSphere Application Servers. TXSeries is the ideal deployment environment for high-performance, distributed transactional applications that integrate well into your mixed-language, multiproduct SOA solution. TXSeries for Multiplatforms V6.1 extends and enhances the next generation of distributed CICS across a number of platforms. For further details on TXSeries for Multiplatforms V6.1, refer to its announcement in the Reference information section.

System z Tools help you to modernize and transform existing CICS applications whether your goal is to:

- Develop and deploy new workloads to leverage the unique performance, availability, security, and cost benefits of System z
Increase your responsiveness to business requirements by modernizing your mainframe platform.

Optimize management of your IT environment, reducing cost and complexity while improving governance and compliance.

To help you to transform your CICS TS into your SOA hub on System z, the System z Tools deliver support right across the life cycle whether you are building new or reusing existing applications.

Developers can now use CICS PA to understand the performance of new or changed CICS applications and to identify performance improvements including the runtime analysis of the CICS TG for z/OS. This helps to get the most benefit from your CICS application investments with reduced risk. In addition, IBM Tivoli® OMEGAMON® XE for CICS TG on z/OS can be used together with IBM Tivoli OMEGAMON XE for CICS to provide detailed metrics that help to diagnose performance-related problems within the problem management process, and to provide performance trend information for the capacity management process.

Reference information


For the announcement of TXSeries V6.1 for Windows, HP-UX, Solaris, and AIX, refer to 206-267, dated October 24, 2006.

Business Partner information

If you are a Direct Reseller - System Reseller acquiring products from IBM, you may link directly to Business Partner information for this announcement. A PartnerWorld ID and password are required (use IBM ID).

BP Attachment for Announcement Letter 207-277


Trademarks

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Offering Information

Product information is available via the Offering Information Web site

http://www.ibm.com/common/ssi

Publications

No hardcopy publications are shipped with this product, with the exception of the Program Directory (GI13-0512), which is provided only in hard-copy.
Information for CICS® TG for z/OS® V7.1 is delivered in the form of an Information Center based on the Eclipse platform. Delivery in this form exploits a common framework that is now employed by many other IBM products. This brings a range of benefits to the user. One of these is that the use of a common framework gives a common look and feel, and consistency of behavior, across all the using products. The infrastructure also allows you to customize your own Information Centers using plug-ins from multiple products, or to write your own plug-ins.

The Information Center for CICS TG for z/OS V7.1 is shipped on CD-ROM with the product. This Information Center applies to CICS TG for z/OS V7.1, CICS TG for Multiplatforms V7.1, and CICS Universal Clients V7.1.

From November 9, 2007, the Information Center can also be accessed at this Web site

http://publib.boulder.ibm.com/in focenter/cicstg/v7r1m0/index.jsp

Included in the Information Center are the following documents which specifically apply to CICS TG for z/OS V7.1:

<table>
<thead>
<tr>
<th>Title</th>
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<tbody>
<tr>
<td>CICS TG for z/OS V7.1: z/OS Administration</td>
<td>SC34-6754</td>
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<tr>
<td>CICS TG for z/OS V7.1: Messages</td>
<td>SC34-6757</td>
</tr>
<tr>
<td>CICS TG for z/OS V7.1: Programming Reference</td>
<td>SC34-6759</td>
</tr>
<tr>
<td>CICS TG for z/OS V7.1: Programming Guide</td>
<td>SC34-6758</td>
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</table>

The information in these documents is integrated into the Information Center. However, it is possible to download these documents separately, in PDF format only, either from the Information Center or from the IBM Publications Center. The IBM Publications Center is at


Technical information

**Hardware requirements**: CICS TG for z/OS V7.1 runs on any IBM System z™ machine that supports the required operating system.

**Software requirements**

- z/OS V1.7, or later
- IBM 31-bit Runtime Environment for z/OS, Java™ 2 Technology Edition, V5
- CICS TS for z/OS V2.2 or V2.3
- CICS TS for z/OS V3.1 or V3.2
- WebSphere® Application Server for z/OS V6.1
- WebSphere Application Server for z/OS V5.1 or V6.0 (when used in remote mode only)

**Note**: This requires the correct resource adapter for the level of WebSphere being used. For details, refer to the Supported Software for CICS Transaction Gateway products Web page.

- WebSphere Application Server for Multiplatforms V5.1, V6.0, or V6.1 (when used in remote mode only)

**Note**: This requires the correct resource adapter for the level of WebSphere being used. For details, refer to the Supported Software for CICS Transaction Gateway products Web page.

For the most up-to-date information and fuller details on software requirements, refer to Supported Software for CICS Transaction Gateway products at

http://www.ibm.com/software/htp/cics/ctg/reqs

**Compatibility**
Removal of TCP62: In the announcement of CICS TG for z/OS V6.1 (refer to 205-248, dated October 4, 2005), it was indicated that the next releases, that is CICS TG V7.0 and CICS Universal Client V7.0, would be the last releases that would contain TCP62 support for the AnyNet® protocol communicating with remote CICS systems using SNA over TCP/IP protocol encapsulation. Accordingly, this capability is removed from the V7.1 level of the products. For continued use of SNA over TCP/IP, it will be necessary to migrate TCP62 server definitions to SNA and implement another IBM Communications Server TCP/IP protocol encapsulation solution, such as Enterprise Extender or Remote API client support.

For information on migration for TCP62 to Enterprise Extender support, refer to


For information on the removal of AnyNet support from z/OS Communications Server, refer to the z/OS and z/OS.e statements of direction announcement, 203-266, dated October 7, 2003, and the z/OS V1.7 preview announcement, 205-034, dated February 15, 2005.

CICS TG base classes: CICS TG V7.1 will continue to support the following features of the CICS TG base classes, although support may be withdrawn in a future release:

• Generic replies for asynchronous External Call Interface (ECI) requests
• Non-validated message qualifiers for asynchronous ECI requests
• Non-validated units-of-work for ECI requests
• The AutoJavaGateway class

The recommended approach is to disable generic replies for asynchronous ECI requests, to validate all units of work and message qualifiers, and to use the local, TCP or SSL protocols in place of the auto protocol.

The CICS TG base classes (JavaGateway, ECIRequest, EPIRequest) are supported within the Web container in WebSphere Application Server V6.1 for compatibility reasons, with the following limitations:

• All ECI requests must be non-transactional. This means that only the field ECI_NO_EXTEND is supported on the ECIRequest constructor as the Extend_Mode.

• All ECI requests must be synchronous, that is only the fields ECI_SYNC or ECI_SYNC_TPN are supported as the call types.

• The EPIRequest class is not supported with WebSphere Application Server. Use the EPI support classes (Terminal, Screen, and Field) instead.

Note that support might be limited in a future release, and customers are encouraged to move to a JCA-based solution.

Applets: Applet support remains in CICS TG for Multiplatforms V7.1. As previously announced, it is expected to be removed in a future release. Users are encouraged to move any applet-based solution to a servlet or J2EE solution.

User Group requirements
This announcement satisfies or partially satisfies the following requirements from one or more of the worldwide user group communities.

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<thead>
<tr>
<th>Requirement number</th>
<th>Description</th>
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<td>MR011907448</td>
<td>Response times included in the available stats provided by CTG</td>
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<tr>
<td>MR052807547</td>
<td>CICS Transaction Gateway cannot return the response in adjusting system clock</td>
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<tr>
<td>MR0909054574</td>
<td>CICS Transaction Gateway cannot return the response in adjusting system clock</td>
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<tr>
<td>MR1024055654</td>
<td>ECITimeout is not supported on the OS/390® platform</td>
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<tr>
<td>MR1106067616</td>
<td>CICS Transaction Gateway to cut SMF records</td>
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<tr>
<td>MR1120062940</td>
<td>CICS Transaction Gateway Resetable Stats</td>
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MR0511053110  z/OS CTG timeout
MR0518056443  Eliminate 32KB limit for CICS Transaction Gateway communication
MR0602052145  Provide real time monitoring capability for CICS Transaction Gateway
MR1017053939  Provide Channel/Container support for CICS Transaction Gateway
MR0203065721  Allow ATTACHSEC(IDENTIFY) for distributed CICS Transaction Gateway
MR121003410  CTG/390: Thread identity support needed in remote mode
MR011907328  Interval high watermark
MR101306386  CTG message CTG6882E incomplete

Planning information

Packaging: CICS TG for z/OS V7.1 is shipped via Customized Offerings, on 3480 1/2-inch tape cartridge.

Also shipped are:

- IBM Program License Agreement (IPLA) in multilanguage booklet (Z125-3301)
- License Information in multilanguage booklet (GC34-6801)
- Proof of Entitlement (PoE)
- Program Directory in hardcopy (GI13-0512)
- Information Center CD-ROM (LCD4-7938)

Also included is an information sheet about CICS Tools (GI13-0526).

Security, auditability, and control

CICS TG for z/OS V7.1 uses the security and auditability features of the operating system under which it is running. Customers can use any Security Authorization Facility (SAF)-compliant security product, such as RACF®.

The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communication facilities.

Software Services

IBM Software Services has the breadth, depth, and reach to manage your services needs. You can leverage the deep technical skills of our lab-based, software services team and the business consulting, project management, and infrastructure expertise of our IBM Global Services team. Also, we extend our IBM Software Services reach through IBM Business Partners to provide an unmatched portfolio of capabilities. Together, we provide the global reach, intellectual capital, industry insight, and technology leadership to support any critical business need.

To learn more about IBM Software Services or to contact a Software Services sales specialist, visit

http://www.ibm.com/software/sw-services/

Ordering information

Charge metric

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<th>Program name</th>
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<td>CICS Transaction Gateway for z/OS V7.1</td>
<td>5655-R25</td>
<td>Value Units</td>
</tr>
<tr>
<td>CICS Transaction Gateway for z/OS</td>
<td>5655-M70</td>
<td>Value Units</td>
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<tr>
<td>Subscription and Support</td>
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IBM United States Announcement 207-277 IBM is a registered trademark of International Business Machines Corporation 9
The program in this announcement has Value Unit-Based pricing.

<table>
<thead>
<tr>
<th>Program number</th>
<th>Program name</th>
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<tbody>
<tr>
<td>5655-R25</td>
<td>CICS Transaction Gateway</td>
<td>VUE007</td>
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For each System z IPLA program with Value Unit pricing, the quantity of that program needed to satisfy applicable IBM terms and conditions is referred to as the **required license capacity**.

Your required license capacity is based upon the following factors:

- The System z IPLA program you select
- The applicable Value Unit Exhibit
- The applicable terms
- Whether your current mainframes are full-capacity or sub-capacity

**Value Unit exhibit VUE007**

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<th>MSUs</th>
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<tr>
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Value Units for mainframes without MSU ratings:

- **Hardware**
  - **HP3000** H30: 6
  - **HP3000** H50: 8
  - **HP3000** H70: 12
  - **ESL Models**: 2

**Ordering example**

The total number of Value Units is calculated according to the following example.

If your required license capacity is 1,500 MSUs for your selected System z IPLA product, the applicable Value Units would be:

\[
\text{Translation from MSUs to Value Units} \quad \text{MSUs} \times \text{Value Units/MSU} = \text{Value Units} \\
\]

<table>
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<th></th>
<th>MSUs</th>
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<tr>
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<td>Tier C</td>
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<td>Tier D</td>
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</table>

Total: 1,500 343.50

When calculating the total number of Value Units, the sum is to be rounded up to the next integer.

**Ordering z/OS through the Internet**

ShopzSeries provides an easy way to plan and order your z/OS ServerPac or CBPDO. It will analyze your current installation, determine the correct product migration, and present your new configuration based on z/OS. Additional products can also be added to your order (including determination of whether all product requisites are satisfied). ShopzSeries is available in the U.S. and several countries in Europe. In countries where ShopzSeries is not available yet, contact your IBM representative (or IBM Business Partner) to handle your order via the traditional IBM ordering process. For more details and availability, visit the ShopzSeries Web site at
Basic license: On/Off Capacity on Demand (On/Off CoD)

CICS TG for z/OS V7.1 is eligible for On/Off CoD with a temporary use charge calculated based on MSUs per-day usage.

Program Name: CICS Transaction Gateway for z/OS V7.1
Program PID: 5655-R25

Entitlement Identifier Description License option/ Pricing metric
S0138ZT CICS TG for z/OS V7.1 Basic OTC, Per MSU-day TUC

Value Unit pricing

To order, specify the program product number and the appropriate license or charge option. Also, specify the desired distribution medium. To suppress shipment of media, select the license-only option in CFSW.

Program Name: CICS Transaction Gateway for z/OS V7.1
Program PID: 5655-R25

The following information is a summary of all license options and pricing metrics offered for the above PID number.

Entitlement Identifier Description License option/ Pricing metric
S0138ZT CICS TG for z/OS V7.1 Basic OTC, Value units

Orderable Supply ID Language Distribution Medium
S0138ZZ U.S. English 3480 tape cartridge

Subscription and Support PID 5655-M70

The following information is a summary of all license options and pricing metrics offered for the above PID number.

Entitlement Identifier Description License option/ Pricing metrics
S0118LP CICS Transaction Gateway for z/OS Basic ALC, Value Units SW S&S
-- Subscription and Support
Basic MLC, Value Units SW S&S
(EMEA only)
Decline SW S&S (no charge)
Per MSU SW S&S Registration

Orderable Supply ID Language Distribution Medium
S0117GL U.S. English Paper

Subscription and Support

To receive voice technical support via telephone during normal business hours and future releases and versions at no additional charge, Subscription and Support must be ordered. The capacity of Subscription and Support (Value Units) must be the same as the capacity ordered for the product licenses.

To order, specify the Subscription and Support program number (PID) referenced above and the appropriate license or charge option.

IBM is also providing Subscription and Support for these products via a separately purchased offering under the terms of the IBM International Agreement for Acquisition of Software Maintenance (IAASM). This offering:
• Includes and extends the support services provided in the base support to include technical support via telephone during normal business hours.

• Entitles you to future releases and versions at no additional charge. Note that you are not entitled to new products.

When Subscription and Support is ordered, the charges will renew automatically annually unless cancelled by the customer.

**Single version charging**: To elect single version charging, you must notify and identify to IBM the prior program and replacement program, and the machine the programs are operating on.

**Customized Offerings**
Product deliverables are shipped only via Customized Offerings (for example, CBPDO, ServerPac, SystemPac®).

CBPDO and ServerPac are offered for Internet delivery, where ShopzSeries product ordering is available. Internet delivery of ServerPac may help improve automation and software delivery time. For more details on Internet delivery, refer to the ShopzSeries help information at http://www.software.ibm.com/ShopzSeries

Media type for this software product is chosen during the Customized Offerings ordering process. Based on your customer environment, it is recommended that the highest possible density tape media is selected. Currently offered media types are:

- CBPDOS — 3480, 3480 Compressed, 3490E, 3590, 3592*
- ServerPacs — 3480, 3480 Compressed, 3490E, 3590, 3592*
- SystemPacs — 3480, 3480 Compressed, 3490E, 3590, 3592*

* 3592 is highest density media. Selecting 3592 will ship the fewest number of media.

Once a product becomes generally available, it will be included in the next ServerPac and SystemPac monthly update.

Production of software product orders will begin on the planned general availability date.

- CBPDO shipments will begin one week after general availability.
- ServerPac shipments will begin two weeks after inclusion in ServerPac.
- SystemPac shipments will begin four weeks after inclusion in SystemPac due to additional customization, and data input verification.

**Terms and conditions**

The information provided in this announcement letter is for reference and convenience purposes only. The terms and conditions that govern any transaction with IBM are contained in the applicable contract documents such as the IBM International Program License Agreement, IBM International Passport Advantage® Agreement, and the IBM Agreement for Acquisition of Software Maintenance.

**Agreement**: IBM International Program License Agreement including the License Information (LI) document and Proof of Entitlement (PoE) govern your use of the program. PoEs are required for all authorized use.

**Agreement for acquisition of Software Maintenance**: The IBM Agreement for Acquisition of Software Maintenance (Z125-6011) applies for maintenance and does not require customer signatures.

This program is licensed under the IBM Program License Agreement (IPLA) and the associated Agreement for Acquisition of Software Maintenance, which provide for support with ongoing access to releases and versions of the program. This program has a one-time license charge for use of the program and an annual renewable charge for the enhanced support that includes telephone assistance (voice support for defects during normal business hours), as well as
access to updates, releases, and versions of the program as long as support is in effect.

S/390® and System z IBM Operational Support Services — SoftwareXcel is an option if you desire added services.

**Limited warranty:** Yes

IBM warrants that when the program is used in the specified operating environment, it will conform to its specifications. The warranty applies only to the unmodified portion of the program. IBM does not warrant uninterrupted or error-free operation of the program or that IBM will correct all program defects. You are responsible for the results obtained from the use of the program.

IBM provides you with access to IBM databases containing information on known program defects, defect corrections, restrictions, and bypasses at no additional charge. Consult the IBM Software Support Guide for further information at


IBM will maintain this information for at least one year after the original licensee acquires the program (warranty period).

**Program support:** Enhanced support, called Subscription and Support, includes telephone assistance, as well as access to updates, releases, and versions of the program as long as support is in effect. You will be notified of discontinuance of support with 12 months’ notice.

**Money-back guarantee:** If for any reason you are dissatisfied with the program and you are the original licensee, you may obtain a refund of the amount you paid for it, if within 30 days of your invoice date you return the program and its PoE to the party from whom you obtained it. If you downloaded the program, you may contact the party from whom you acquired it for instructions on how to obtain the refund.

For clarification, note that for programs acquired under any of IBM's On/Off Capacity on Demand (On/Off CoD) software offerings, this term does not apply since these offerings apply to programs already acquired and in use by you.

**Authorization for use on home/portable computer:** You may not copy and use this program on another computer without paying additional license fees.

**Other terms**

**Volume orders (IVO):** No

**IBM International Passport Advantage Agreement**

**Passport Advantage applies:** No

**Usage restriction:** Yes

The J2EE Connector Architecture (JCA) resource adapters supplied with the Program and packaged in the files named 'cicseci.rar' and 'cicseciXA.rar' and the Java client classes supplied with the Program and packaged in the file named 'ctgclient.jar' may be freely distributed by licensed users of the Program within their enterprise. Licensed users who choose to distribute these client classes assume responsibility for the support and maintenance of the distributed classes. IBM's consent to such distribution is on the basis that licensed users of the Program are responsible for ensuring that:

(i) no 'JAR' or 'RAR' file is modified from its original form

(ii) no 'JAR' or 'RAR' file is used other than within a Java environment supported by the Program and

(iii) all communication is to a CICS Transaction Gateway at the same or a higher release level than the version of the 'ctgclient.jar' or 'RAR' file.

For additional information, refer to the License Information document that is available on the IBM Software License Agreement Web site

Software Maintenance applies: No. For operating system software, the revised IBM Operational Support Services -- SoftwareXcel offering will provide support for those operating systems and associated products that are not available with the newly announced Software Maintenance offering. This will ensure total support coverage for your enterprise needs, including IBM and selected non-IBM products. For complete lists of products supported under both the current and revised SoftwareXcel offering, visit http://www.ibm.com/services/sl/products

For additional information on the revised IBM Operational Support Services, refer to 601-023, dated July 10, 2001.

IBM Operational Support Services -- SoftwareXcel: Yes

System i™ Software Maintenance applies: No

Variable charges apply: No

Educational allowance available: Yes. A 15% education allowance applies to qualified education institution customers.

Sub-capacity terms and conditions

For each System z IPLA program with Value Unit pricing, the quantity of that program needed to satisfy applicable IBM terms and conditions is referred to as the required license capacity. Your required license capacity is based upon the following factors:

- The System z IPLA program you select
- The applicable Value Unit Exhibit
- The applicable terms
- Whether your current mainframes are full capacity or sub-capacity

For more information on the Value Unit Exhibit for the System z IPLA program you selected, refer to the Ordering information section.

<table>
<thead>
<tr>
<th>Program number</th>
<th>Program name</th>
<th>Terms applicable</th>
<th>Parent program</th>
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<tbody>
<tr>
<td>5655-R25</td>
<td>CICS Transaction Gateway for z/OS V7.1</td>
<td>Reference-based</td>
<td>5697-E93</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5655-M15</td>
</tr>
</tbody>
</table>

Full-capacity mainframes: In cases where full capacity is applicable, the following terms apply.

Reference based: The required license capacity of a System z IPLA program with these terms equals the license capacity of the applicable monthly license charge (MLC) program. This MLC program is called the parent program.

Sub-capacity mainframes: In cases where sub-capacity is applicable, the following terms apply.

Reference based: The required license capacity of a System z IPLA program with these terms equals the license capacity of the applicable monthly license charge (MLC) program. This MLC program is called the parent program.

For more information on mainframe MSU-rated capacities, refer to The System/370™, System/390®, and System z Machine Exhibit (Z125-3901), or visit the Mainframes section of the System z Exhibits Web site

http://ibm.com/zseries/library/swpriceinfo/

For more information on sub-capacity System z IPLA terms and conditions, refer to 204-184, dated August 10, 2004.

For additional information for products with reference-based terms, System z IPLA sub-capacity
programs with reference-based terms adds value to the parent program across the environment, regardless of where in the environment the System z IPLA program executes.

An environment is defined as either a single or stand-alone machine or a qualified Parallel Sysplex®. You may have one or more different environments across the enterprise. To determine the required license capacity for each System z IPLA program with referenced-based terms, each environment should be assessed separately.

When a System z IPLA sub-capacity program with reference-based terms is used in a qualified Parallel Sysplex environment, the required license capacity of the System z IPLA program must equal with the license capacity of the parent program across the Parallel Sysplex. Qualified Parallel Sysplex refers to one:

- That meets the criteria defined in 198-001, dated January 13, 1998
- Where MLC pricing is aggregated across the Sysplex

**Sub-capacity eligibility:** To be eligible for sub-capacity charging on select System z IPLA programs, you must first implement and comply with all terms of either sub-capacity Workload License Charges (WLC) or sub-capacity Entry Workload License Charges (EWLC). To implement sub-capacity WLC or EWLC, a machine must be System z (or equivalent). On that machine:

- All instances of the OS/390 operating system must be migrated to the z/OS (or z/OS.e) operating systems
- Any licenses for the OS/390 operating system must be discontinued
- All instances of the z/OS operating (or z/OS.e) systems must be running in z/Architecture™ (64-bit) mode

For that machine, you must create and submit a Sub-Capacity Report to IBM each month. Sub-Capacity Reports must be generated using the Sub-Capacity Reporting Tool (SCRT). For additional information or to obtain a copy of SCRT, visit the System z Software Pricing Web site http://ibm.com/zseries/swprice

You must comply with all of the terms of the WLC or EWLC offering, whichever is applicable:

- The complete terms and conditions of sub-capacity WLC are defined in the IBM Customer Agreement — Attachment for System z Workload License Charges (Z125-6516).
- The complete terms and conditions for sub-capacity EWLC are defined in the IBM Customer Agreement — Attachment for IBM eServer® System z 890 and 800 License Charges (Z125-6587).

Additionally, you must sign and comply with the terms and conditions specified in the amendment to the IPLA contract — Amendment for IBM System z9™ and eServer zSeries Programs Sub-Capacity Pricing (Z125-6929). Once the amendment is signed, the terms in the amendment replace any and all previous System z IPLA sub-capacity terms and conditions.

**Sub-capacity utilization determination**

Sub-capacity utilization is determined based on the utilization of a sub-capacity eligible reference product and machine.

**On/Off Capacity on Demand (CoD)**

To be eligible for On/Off CoD pricing, you must be enabled for temporary capacity on the corresponding hardware, and the required contract, Attachment for Customer Initiated Upgrade and IBM eServer On/Off Capacity on Demand — Software (Z125-6611) must be signed prior to use.

**Prices**

Information on charges is available at http://www.ibm.com/support
Choose the option entitled Purchase/upgrade tools.

Order now

To order, contact the Americas Call Centers, your local IBM representative, or your IBM Business Partner.

To identify your local IBM representative or IBM Business Partner, call 800-IBM-4YOU (426-4968).

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Mail: IBM Telew eb Customer Support
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Reference: LE001

The Americas Call Centers, our national direct marketing organization, can add your name to the mailing list for catalogs of IBM products.

Note: Shipments will begin after the planned availability date.

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