IBM WebSphere Process Server and WebSphere Enterprise Service Bus for z/OS V6.0.2 — The SOA platform for service mediation and orchestration

At a glance

WebSphere Enterprise Service Bus (WebSphere ESB) for z/OS, WebSphere Process Server for z/OS, and WebSphere Integration Developer deliver:

• A single, integrated platform for deploying and executing service hosting, mediations, and orchestration with end-to-end transactions

• One tool, one set of skills based on business-driven design principles for discovering, authoring (building), and integrating process, mediation, adapter, and component services

• Comprehensive advanced human workflow capabilities

• Dynamic administration and configuration without restarting and redeploying

• Rich integration with Information Management technologies Dynamic invocation and discovery of services with WebSphere Service Registry and Repository for end-to-end service governance and orchestration

• Extended reach with enterprise-wide connectivity with Service Component Architecture (SCA) binding

• Refactoring of business object service flows for simplifying complexity and dependencies

• WebSphere Adapters integrated into WebSphere Integration Developer for superior out-of-the-box experience and end-to-end integration

• Build and cycle performance improvements

For ordering, contact:

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

800-IBM-CALL Reference: LE001

Overview

WebSphere® Enterprise Service Bus for z/OS®

WebSphere Enterprise Service Bus (ESB) for z/OS is a flexible connectivity infrastructure for integrating applications and services, designed to enable the development of a service-oriented architecture (SOA). Built on top of WebSphere Application Server for z/OS, WebSphere ESB delivers a standards-based connectivity and integration solution that allows you to create and deploy interactions quickly and easily between applications and services, with a reduced number and complexity of interfaces.
You can focus on your core business, rather than on your IT.

**WebSphere Process Server for z/OS**

WebSphere Process Server for z/OS is at the very heart of your business process management solutions. It ensures that the processes you design in WebSphere Business Modeler or WebSphere Integration Developer are executed consistently, reliably, securely, and with transactional integrity. Built on open standards, WebSphere Process Server deploys and executes processes that orchestrate services (people, information, systems, and trading partners) within your SOA or non-SOA infrastructure.

When combined with the power of WebSphere Business Monitor, processes can be optimized to meet changing business requirements, giving your business a competitive advantage. WebSphere Process Server is built upon and contains WebSphere ESB functionality.

**WebSphere Integration Developer**

WebSphere Integration Developer is the common tool for building SOA-based integration solutions across WebSphere Process Server for z/OS, WebSphere ESB for z/OS, and WebSphere Adapters. It simplifies integration with rich features that accelerate the adoption of SOA by rendering existing IT assets as service components, encouraging reuse and efficiency.

It enables integration developers to assemble complex business solutions requiring minimal skills — whether processes, mediations, adapters or code components.

You can construct process and integration solutions using drag and drop technology without having a working knowledge of Java™

---

**Key prerequisites**

z/OS V1.4, or later

**Planned availability date**

March 30, 2007

---

**Description**

**WebSphere ESB for z/OS**

WebSphere ESB for z/OS is a flexible connectivity infrastructure for integrating applications and services, designed to enable the development of an SOA. WebSphere ESB powers an SOA by reducing the complexity of integrating the applications and services.

WebSphere ESB delivers a standards-based integration platform for facilitating connectivity between services. With Web services connectivity, Java Message Service (JMS) messaging, and service-oriented integration, you can:

- Improve business flexibility by changing or creating services faster in your IT environment
- Minimize disruption by using WebSphere ESB to handle integration logic
- Allow intelligent interactions between the business events and end points

WebSphere ESB is easy to use from both a tools and a run-time perspective. WebSphere Integration Developer, the development tool of choice for WebSphere ESB, delivers an integrated, interactive, and visual development experience that requires minimal programming skills. You can start up and run quickly with a compelling out-of-the-box experience that is supported by easy-to-understand samples and comprehensive documentation.

The ability to simplify the task of declaring services and defining interconnections and visually compose mediation functions with first-class tool support for intelligent message routing, enrichment, and transformation makes development easier. New role-based administration support makes it easy to manage WebSphere ESB deployments through a simplified user experience for solution administrators.

You can also reduce the time required to see a return on your investment. WebSphere ESB facilitates the dynamic reconfiguration of service interactions to meet changing business needs. Extensive WebSphere Adapter support provides connection to hundreds of ISV solutions. Pre-built mediation function saves time and development costs.
New features in WebSphere ESB for z/OS V6.0.2

To realize the benefits of SOA (providing business flexibility and responsiveness), information must flow freely throughout stages of the SOA life cycle. Administrators require the flexibility to change things on the fly as business conditions change. Business monitors need the ability to feed and define key events for scoreboard monitoring. In addition, WebSphere ESB provides integration with WebSphere Service Registry and Repository.

In this release, WebSphere ESB greatly enhances integration throughout the SOA life cycle with other IBM SOA Foundation products. New administration features enable dynamic reconfiguration. Integration with WebSphere Service Registry and Repository delivers end-to-end service governance.

Increased business flexibility and responsiveness through dynamic reconfiguration

- Administrative configuration of end points: Administrators can modify the definition of a service end point as their business requirements change.
- Administrative configuration of mediations: Administrators can dynamically change the details of how the mediation will behave on the runtime.
- Dynamic end-point selection: Administrators can change end points programmatically without human intervention, based on a value contained in a message, the time of the day, by looking up an end-point definition from a registry, or any other pre-determined parameters.

Flexible and dynamic service consumability

Integration with WebSphere Service Registry and Repository allows WebSphere ESB to use metadata from the registry and repository to govern its behavior and help ensure that run-time changes are governed by approved policies.

- New dynamic end-point lookup primitive: Administrator can query service end-point information from WebSphere Service Registry and Repository with the dynamic end-point lookup primitive without redevelopment and deployment.
- ITCAM for SOA feeds service performance information to WebSphere Service Registry and Repository, giving WebSphere ESB better control for dynamic selection of service end-points.

Simplified and reduced time to market

- Accelerate time to market and reduce development time with bundled technology adapters via WebSphere Integration Developer packaging
- Increase business activity management (BAM) flexibility with the CEI (common event infrastructure) primitive so that you can define and feed events into WebSphere Monitor.
- Set a value in a message element without writing message transformation code by using the message element setter.

Enhancements in WebSphere ESB V6.0.2 include:

- Extends WebSphere MQ assets as part of your ESB faster with the new WebSphere MQ JMS binding
- Integrates with WebSphere Message Broker and WebSphere MQ is easier and faster with WebSphere MQ native binding support
- Provides configuration wizard
- Delivers significantly improved performance
- Provides new samples to facilitate development of custom data bindings (datahandler support)

WebSphere Process Server for z/OS

WebSphere Process Server delivers a unique integration framework that simplifies existing IT. Often, as IT assets grow to support business demand, so too does their complexity and manageability. WebSphere Process Server helps deliver an SOA infrastructure that provides one common model to orchestrate, mediate, connect, map, and execute the underlying IT functions. With this, WebSphere Process Server simplifies integration of business processes by leveraging existing IT assets as reusable services. But without the complexities associated with traditional integration methodologies.
One of the biggest challenges for businesses is to have the agility to respond on demand to business processes. Unlike the traditional integration methodologies, WebSphere Process Server allows you to respond dynamically to business demands and adapt to business conditions. This is made possible with the rich features like business rules, business state machines, and interface mapping. Its open standards-based services architecture allows you to change underlying IT assets, with minimal impact on business processes.

WebSphere Process Server is part of an entire integration platform that reaches to the very core of business applications such as SAP, Oracle, and many others using predefined business and technology WebSphere adapters.

WebSphere Process Server is built using a common platform and tools that inherit the capabilities of WebSphere ESB and WebSphere Application Server, which provides rich capability. It also exploits technology from other IBM brands such as DB2®, IBM Tivoli®, Lotus®, and IBM Rational®, as well as third-party platforms such as Microsoft™ .NET and Java.

**New features in WebSphere Process Server for z/OS V6.0.2 include all of WebSphere ESB plus**

- Integrates more out-of-the-box functions with Web services, application adapters and advanced messaging capabilities — WebSphere Process Server can natively integrate with WebSphere MQ infrastructures throughout your enterprise, in addition to leveraging the embedded JMS provider, Web services, and a wide range of application and technology adapters.

- **Allow easy-to-use comprehensive human-centric business process management (BPM) scenarios:**
  - Provides a Web customer generation tool for business users to rapidly generate custom user interfaces, JSP forms and task lists. These lists can be easily extended for further content integration.
  - Has a customizable out-of-the-box administration and configuration customer for administrators.
  - Enhanced support to build customers for business users from powerful JavaServer Faces (JSF) components, for both Web-based and WebSphere Portal customers.
  - Supports a Web services interface for workflow customer applications on any platform, including .NET and J2EE (which means easier access for remote customers to interact with the process).
  - Provides a remote customer install option, which provides an environment for custom remote customers who use the WebSphere Process Server APIs (not just on the same system as WebSphere Process Server).
  - Allows work to be assigned to a group, or team, of individuals who all share the same job or responsibility, in shifts or in parallel.
  - Handles ad hoc tasks: Gives line of business users the flexibility to create additional tasks (insert additional tasks into a task-list), schedule follow-up work for the same user, or follow-on tasks for co-workers, and handle events that were not planned for in advance.
  - Provides post-processing of staff query results allows you to plug in customer-specific workforce management policies, such as staff workload balancing, substitute when absent, or prefer active users, and supports the integration of additional custom staff repositories.
  - Allows you to query and filter lists of business processes based on customer-specific process data, such as order ID or customer name; and storing those queries and filters as private views.
  - Allows you to redistribute tasks in reflection of organizational staff and responsibility changes, using a timer-controlled daemon.
  - Allows you to automatically present users the next task at hand within the same business process, using a server-controlled page flow capability.
  - Provides users with a graphical view of processes, to track status and drill down into each individual activity.

- Supports service governance with dynamic run-time discovery and invocation of services — WebSphere Service Registry and Repository integration with WebSphere Process Server provides true end-to-end governance for all services, dynamically discovering and invoking
services and service metadata information at runtime. This allows real-time process behavior adaptation.

- Provides run-time administration improvements (dynamic reconfiguration, with no need to rebuild or redeploy):
  - Administration configuration of mediation properties and end points
  - Dynamic end-point selection: Administrator can intervene to get part of the process to interface to a different system (for example, to change from Oracle to Siebel dynamically for future process instances)
  - Ability to handle unmodeled faults from Web service invocations
  - Ability to add mediation modules after deployment without going into WebSphere Integration Developer
  - Event sequencing: Preserve the processing sequence of events in which they were generated remotely
  - Configurable cleanup service to automatically delete business process instances from the database
  - New IT-level observation, reporting and statistic capabilities, offering graphical charts and flexible drill-down capabilities for historical and accumulated data such as average process duration or actual work time

- Enables tight integration between information services and business processes:
  - Introduces an Information Service Activity which provides direct access to relational database systems with the support of full SQL and interaction with other information management services, (for example, Extract, Transform, Load (ETL)) and federated access to heterogeneous information sources such as ECM systems
  - Supports WebSphere Integration Developer tooling plug-in for information management activities

- Provides business rule design time, run time, and operational improvements:
  - Ability to support more common business rule logic scenarios, including
    - Specifying initialization logic for a decision table
    - Specifying an "otherwise" clause on decision table conditions
    - Using "return" option available in rule sets to force execution of rule list to end
  - Simplified rule programming model lowers development time/cost
  - Improved visibility to business rule changes is enabled through new audit capabilities, including support for an "approval" scenario as rules are promoted from one environment to another
  - New business rule import/export capability greatly simplifies the process of maintaining consistency between server or environment instances

- Provides new samples to facilitate development of custom data bindings (datahandler support).

**WebSphere Integration Developer**

WebSphere Integration Developer is the common tool for building SOA-based integration solutions across WebSphere Process Server and WebSphere ESB.

- Simplifies integration with rich features that accelerate the adoption of SOA by rendering existing IT assets as service components, encouraging reuse and efficiency.
- Enables integration developers to assemble complex business solutions that require minimal skills, whether they involve processes, mediations, adapters, or code components. Users can construct process and integration solutions using drag and drop technology without having a working knowledge of Java.

WebSphere Business Modeler leverages the capabilities of WebSphere Integration Developer and provides a business-centric view of process modeling. The integration developer need only learn one set of skills, applying one tool to many uses.

For WebSphere Integrator Developer ordering information, refer to 206-244, dated October 10,
New features in WebSphere Integration Developer V6.0.2

• Faster authoring of BPM solutions and easier integration to external services.

• Refactoring: Changes made in one place get reflected in other dependent places, reducing complexity to resolve errors and dependencies.

• Integration of WebSphere Business Monitor: Can now feed WebSphere Business Monitor, in addition to WebSphere Business Modeler input.

• Built-in e-mail, FTP, Flat File, and JDBC adapters for development and production use.

• Bundles packaged application adapters (SAP, PeopleSoft, Oracle E-business, JD Edwards) for development use.

• Support for event sequencing constructs.

• Rapid Web customer generation tool.

• Ease-of-integration
  – Web Services Description Language (WSDL) and XML Schema Definition (XSD) integration improvements, industry schemas for data models (industry-defined and customer-defined patterns), Microsoft Web Services, synchronization with Rational Application Developer, and Web Services Interoperability
  – Improved integration with WebSphere Business Monitor and Rational RequisitePro®
  – Integrates with WebSphere Service Registry and Repository
  – Ability to interact with WebSphere MQ Workflow User-Defined Program Execution Server (UPES) application programs

• Mediation tooling support for WebSphere ESB enhancements
  – New mediation primitives for WebSphere Service Registry and Repository lookup, CEI event emission, message setting, and dynamic endpoint invocation
  – Support for promoting primitive properties to be changed at administration time at the primitive, flow and component level
  – Support for unmodeled faults on a response
  – Support for in-place custom Java snippets that does not require a Java component

Accessibility by people with disabilities

Features of WebSphere Process Server for z/OS and WebSphere ESB for z/OS that support use by people with disabilities include:

• Using assistive technologies such as screen readers and screen magnifier software

• Customizing display attributes such as color, contrast, and font size

• Operating the system using only the keyboard

Section 508 of the U.S. Rehabilitation Act

WebSphere Process Server for z/OS and WebSphere ESB for z/OS software is fully accessible and Section 508 compliant. Both products are capable when used in accordance with the associated IBM documentation, of satisfying the applicable requirements of Section 508 of the Rehabilitation Act, provided that any assisting technology used with the products properly interoperate with them. A U.S. Section 508 Voluntary Product Accessibility Template (VPAT) can be requested via the IBM Web site at


Value Unit-based pricing

Value Unit pricing for eligible System z™ 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 customers. 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 stipulates 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 offers additional price benefits for customers. 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, and
• 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 VUs or vice-versa, use the Value Unit Converter Tool. For additional information or to obtain a copy of the Value Unit Converter Tool Web site 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

WebSphere ESB for z/OS

WebSphere delivers several software products to meet your diverse integration needs as they span varying programming models, qualities of service, and multiple data types. WebSphere products are designed to meet your requirements, from the creation of a single application to the implementation of an enterprise-wide SOA.

WebSphere ESB for z/OS delivers Web services connectivity, JMS messaging, and service-oriented integration for fast implementation and deployment of an enterprise service bus without the need for programming.

WebSphere Process Server for z/OS

WebSphere Process Server is a single, integrated platform with the combined benefits of the industry's top application server and integration capabilities. It provides business flexibility on a highly scalable, reliable platform. WebSphere Process Server offers robust process automation, advanced human workflow, and business rules with rich integration capabilities all on a common, native SOA platform with full ESB Connectivity.

WebSphere Integration Developer

WebSphere Integration Developer offers role-based development experience that specifically targets the integration developer role on a single and integrated Eclipse platform. It can be expanded to other roles like business analyst or J2EE developer or enterprise developer by adding other products from the IBM family of development tools.

Reference information
For ordering information on WebSphere Enterprise Server Bus for z/OS V6 and WebSphere Process Server for z/OS V6, refer to 206-088, dated April 25, 2006.


For information on WebSphere Business Monitor V6.0.2, refer to 206-254, dated October 10, 2006.


For information on WebSphere Business Modeler Publishing Server V6.0.2, refer to 206-239, dated September 26, 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 206-243


**Trademarks**

System z is a trademark of International Business Machines Corporation in the United States or other countries or both.

WebSphere, z/OS, Tivoli, Lotus, DB2, Rational, and RequisitePro are registered trademarks of International Business Machines Corporation in the United States or other countries or both.

Microsoft is a trademark of Microsoft Corporation.

Java is a trademark of Sun Microsystems, Inc.

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

**Education support**

IBM delivers a comprehensive portfolio of education services to help customers successfully deploy and integrate WebSphere® Application and Integration middleware products to their maximum potential.

Education is a key component to ensuring software success. The IBM education team is committed to providing the highest quality education available to help your company prosper in today’s competitive marketplace. We take pride in our ability to deliver successful education programs that provide your people with the skills necessary to make your business profitable using IBM software.

The IBM education team works closely with IBM product developers and IBM services organizations to ensure that the courses we offer provide the most up-to-the-minute technical and product information. Our courses place an emphasis on the advanced knowledge and insight that only these sources can provide. We draw from a deep pool of IBM technical experience in the development of our courses, and pass that knowledge on to our students.

For more information about available education offerings, visit the Web site and search on the product name

http://www.ibm.com/software/education

**Offering Information**

Product information is available via the Offering Information Web site

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

**WebSphere ESB:** The primary delivery for product documentation for WebSphere ESB for z/OS® V6.0.2 can be found in the Information Center available on the Web at


The publication The IBM WebSphere Enterprise Service Bus for z/OS V6.0.2 Program Directory (GI13-0509) is available with your order, and on the Web at


The publication The IBM WebSphere Enterprise Service Bus for z/OS V6.0.2 License Information (GC34-6771) is available with your order, and on the Web at

http://www.ibm.com/softwaresla

The license ID is L-TMAN-6S9CWJ.

**Note:** This document is an extension to the IBM International Program License Agreement (Z125-3301) and contains terms and conditions specific to the WebSphere ESB for z/OS program; it also contains terms that supersede license terms which may be included with components of the Program. This document details your rights and obligations for the software included in CD-ROM package (LK4T-2575).

**WebSphere Process Server:** The primary delivery for product documentation for WebSphere Process Server for z/OS V6.0.2 can be found in the Information Center available on the Web at


The publication IBM WebSphere Process Server for z/OS V6.0.2 Program Directory (GI10-0781) is available with your order, and on the Web at


The publication WebSphere Process Server for z/OS V6.0.2 License Information (LC23-4990) is available with your order, and on the Web at

http://www.ibm.com/softwaresla

The license ID is L-MKOL-6RWHSK.

**Note:** This document is an extension to the IBM International Program License Agreement (Z125-3301) and contains terms and conditions specific to the WebSphere Process Server for z/OS program. It also contains terms that supersede license terms which may be included with components of the program. This document details your rights and obligations for the software included in CD-ROM package (LK4T-1419).

**Technical information**

**Hardware requirements:** For details on hardware requirements for WebSphere Process Server, visit

http://www.ibm.com/software/integration/wps/sysreqs

For details on hardware requirements for WebSphere ESB, visit

http://www.ibm.com/software/integration/wsesb/sysreqs
Software requirements: For details on software requirements for WebSphere Process Server, visit

http://www.ibm.com/software/integration/wps/sysreqs

For details on software requirements for WebSphere Enterprise Service Bus, visit

http://www.ibm.com/software/integration/wsesb/sysreqs

Planning information

Globalization

WebSphere Process Server for z/OS and WebSphere ESB for z/OS provide basic enablement support for all locales. In addition to English, both products provide translations for Japanese.

Note: WebSphere Process Server and WebSphere ESB include prerequisite and complementary products. These bundled prerequisite and complementary products will include translations for the following languages (if available):

- French
- Italian
- German
- Spanish
- Brazilian Portuguese
- Japanese
- Korean
- Simplified Chinese
- Traditional Chinese

Common criteria

WebSphere Process Server for z/OS and WebSphere ESB for z/OS rely on security functionality from the WebSphere Application Server for z/OS V6 run-time environment, and there has been no direct security functionality added to these products. Therefore, a Common criteria evaluation is not necessary because these products rely on the underlying run-time environment for security function and are neither Information Assurance (IA) nor IA-enabled.

FIPS 140-2

The cryptographic functionality of WebSphere Process Server for z/OS and WebSphere ESB for z/OS are managed by the WebSphere Application Server for z/OS V6 run-time environment.

Extended entitlement

IBM plans to protect customers’ investments and does not expect current customers to migrate immediately from currently entitled products to WebSphere Process Server for z/OS. In order to facilitate the extended migration periods that some customers may require, IBM is offering extended entitlement.

Customers with active subscription to eligible products can activate extended entitlement to WebSphere Process Server for z/OS. For information on extended entitlement activation, eligible products and their equivalent extended entitlement products, and general information about extended entitlement, visit the Entitlement section at


Customers should contact their IBM sales representatives for questions and additional assistance.

Packaging: The following information applies to both WebSphere Process Server for z/OS V6.0.2 and WebSphere ESB for z/OS V6.0.2.

Program components are delivered by traditional z/OS fulfillment:
Program components intended to run on the z/OS platform are delivered on a single tape. WebSphere Application Server for z/OS V6.0.2 (with the latest available service level) is included on both the WebSphere Process Server for z/OS and WebSphere ESB for z/OS product tapes.

In addition to the components intended to run on the z/OS platform, there are several which are intended to run on non-z/OS systems. They are described in the following paragraphs.

Included on the product tape and installed into the HFS for FTP download and installation on other non-z/OS platforms are six install images, each of which may include as available:

- Application Server Client
- DataDirect Technologies JDBC Drivers

In addition to the materials provided on tape, the following CD-ROMs are included:

- Messaging Clients
- Process Server Clients (included only with WebSphere Process Server for z/OS)
- Application Server Toolkit 6.0
- Edge Components 6.0
- Tivoli® Access Manager 5.1

All of these CD-ROMs are intended to be installed and run on non-z/OS platforms.

**Security, auditability, and control**

WebSphere Process Server for z/OS and WebSphere Enterprise Service Bus for z/OS use the security and auditability features of the host software. 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 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/](http://www.ibm.com/software/sw-services/)

---

### Ordering information

#### Charge Metric

<table>
<thead>
<tr>
<th>Program name</th>
<th>PID number</th>
<th>Charge metric</th>
</tr>
</thead>
<tbody>
<tr>
<td>WebSphere Enterprise Service Bus for z/OS</td>
<td>5655-R15</td>
<td>Value Unit</td>
</tr>
<tr>
<td>WebSphere Process Server for z/OS</td>
<td>5655-N53</td>
<td>Value Unit</td>
</tr>
</tbody>
</table>


The programs in this announcement all have Value Unit-Based pricing.
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:

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

### Value Unit exhibit VUE007

<table>
<thead>
<tr>
<th>MSUs</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Value Units/MSU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Tier A</td>
<td>4</td>
<td>45</td>
<td>0.45</td>
</tr>
<tr>
<td>Tier B</td>
<td>46</td>
<td>175</td>
<td>0.36</td>
</tr>
<tr>
<td>Tier C</td>
<td>176</td>
<td>315</td>
<td>0.27</td>
</tr>
<tr>
<td>Tier D</td>
<td>316</td>
<td>+</td>
<td>0.2</td>
</tr>
</tbody>
</table>

Value Units for mainframes without MSU ratings

<table>
<thead>
<tr>
<th>Hardware</th>
<th>Value Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MP3000 H80</td>
<td>6</td>
</tr>
<tr>
<td>MP3000 H80</td>
<td>8</td>
</tr>
<tr>
<td>MP3000 H70</td>
<td>12</td>
</tr>
<tr>
<td>ESL Model</td>
<td>2</td>
</tr>
</tbody>
</table>

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:

**Translation from MSUs to Value Units**

<table>
<thead>
<tr>
<th>MSUs</th>
<th>Value Units/MSU</th>
<th>Value Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base</td>
<td>1.00</td>
<td>3.00</td>
</tr>
<tr>
<td>Tier A</td>
<td>0.45</td>
<td>18.90</td>
</tr>
<tr>
<td>Tier B</td>
<td>0.36</td>
<td>46.80</td>
</tr>
<tr>
<td>Tier C</td>
<td>0.27</td>
<td>37.80</td>
</tr>
<tr>
<td>Tier D</td>
<td>0.20</td>
<td>237.00</td>
</tr>
</tbody>
</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**

ShopSystem z 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). ShopSystem z is available in the U.S. and several countries in Europe. In countries where ShopSystem z 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 ShopSystem z Web site at

http://www14.software.ibm.com/we
The products in this announcement have one charge unit — Value Units.

Translation from MSUs to Value Units Example using VUE001

<table>
<thead>
<tr>
<th>MSUs</th>
<th>Value Units/MSU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base 1-3</td>
<td>5.25</td>
</tr>
<tr>
<td>Tier A 4-45</td>
<td>.83</td>
</tr>
<tr>
<td>Tier B 46-175</td>
<td>.35</td>
</tr>
<tr>
<td>Tier C 176-315</td>
<td>.26</td>
</tr>
<tr>
<td>Tier D 316+</td>
<td>.20</td>
</tr>
</tbody>
</table>

**Note:** For the actual translation from MSUs to Value Units for this product, see the table that follows.

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

If the customer has installed 1,000 MSUs, the applicable Value Units would be:

Translation from MSUs to Value Units (VUE001)

<table>
<thead>
<tr>
<th>MSUs</th>
<th>*</th>
<th>Value Units/MSU</th>
<th>Value Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base</td>
<td>3</td>
<td>5.25</td>
<td>15.75</td>
</tr>
<tr>
<td>Tier A</td>
<td>42</td>
<td>.83</td>
<td>34.86</td>
</tr>
<tr>
<td>Tier B</td>
<td>130</td>
<td>.35</td>
<td>45.50</td>
</tr>
<tr>
<td>Tier C</td>
<td>140</td>
<td>.26</td>
<td>36.40</td>
</tr>
<tr>
<td>Tier D</td>
<td>685</td>
<td>.20</td>
<td>137.00</td>
</tr>
</tbody>
</table>

Total 1,000 270

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

Value Units for non-MSU-based S/390® processors using VUE001

MP3000 models

<table>
<thead>
<tr>
<th>Model</th>
<th>Value Units/Machine</th>
</tr>
</thead>
<tbody>
<tr>
<td>H30</td>
<td>21.00</td>
</tr>
<tr>
<td>H50</td>
<td>22.00</td>
</tr>
<tr>
<td>H70</td>
<td>26.00</td>
</tr>
</tbody>
</table>

ESL Models = 9.00 Value Units/Machine

WebSphere Process Server for z/OS — Value Unit Ordering

**Note:** AP (for Japan only)

Program name: WebSphere Process Server for z/OS
Program PID 5655-N53

Orderable Supply ID Language Distribution Medium
S013J2V English/Japanese 3480 tape

**Basic license**

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

**Customized Offerings**

Product media is shipped only via Customized Offerings (for example, CBPDO, ServerPac, SystemPac®). Non-customized items (CDs, diskettes, source media, media kits) will continue to be shipped via the stand-alone product.

---

**Terms and conditions**
Licensing: IBM International Program License Agreement and License Information document. Proofs of Entitlement (PoE) are required for all authorized use.

These products are licensed under the IBM Program License Agreement (IPLA), and the associated Agreement for Acquisition of Software Maintenance, which provides for support with ongoing access to releases and versions of the program. These programs have 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.

For more information about the specific license terms that apply to these products, visit http://www.ibm.com/software/sla

Use the following IDs to locate the applicable product license which will be available on, or near, the planned general availability:

- WebSphere Process Server for z/OS V6.0.2: L-MKOL-6RWHSK
- WebSphere Enterprise Service Bus for z/OS V6.0.2: L-TMAN-6S9CWJ

Note When WebSphere Process Server for z/OS or WebSphere ESB for z/OS is acquired as a program trade up and installed, you may not use or transfer use of the program from which you traded.

S/390 and System z IBM Operational Support Services — SoftwareXcel is an option for those customers who desire added services.

Limited warranty: Yes

Warranty: This program includes a warranty for one year from acquisition from IBM or an authorized IBM Business Partner. For one year from acquisition of the program, this warranty provides the customer with access to databases containing program information and FAQs, including any known fixes to defects, which the customer can download or otherwise obtain and install.

Program support: Enhanced Support, called Subscription and Support, 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. The customer 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, return it within 30 days from the invoice date, to the party (either IBM or its reseller) from whom you acquired it, for a 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 the customer.

Copy and use on home/portable computer: No

Volume orders (IVO): No

Passport Advantage® applies: No

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

iSeries™ Software Maintenance applies: No

Variable charges apply: Yes

Educational allowance available: Yes, 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:

- System z IPLA program that you select
- Applicable Value Unit Exhibit
- 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</th>
</tr>
</thead>
<tbody>
<tr>
<td>5655-N53</td>
<td>WebSphere Process for z/OS</td>
<td>Execution based</td>
</tr>
<tr>
<td>5655-R15</td>
<td>WebSphere ESB for z/OS</td>
<td>Execution based</td>
</tr>
</tbody>
</table>

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

Execution-based, z/OS-based, Full-Machine-based: The required capacity of a System z IPLA program with these terms equals the MSU rated capacity of the machine where the System z IPLA program executes.

For more information on mainframe MSU rated capacities, visit the Web site


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:

Execution-based: The required capacity of a System z IPLA sub-capacity program with these terms equals the capacity of the LPAR where the System z IPLA program executes.

z/OS-based: The required license capacity of a System z IPLA program with these terms equals the license capacity of z/OS (and z/OS.e) on the machine(s) where the System z IPLA program executes.

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

Full Machine-based: The required license capacity of a System z IPLA program with full machine-based terms equals the MSU rated capacity of the machine where the System z IPLA program executes.

For more information on mainframe MSU rated capacities, refer to The System/370™, System/390®, and zSeries 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.

**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 environment the System z IPLA program executes.

An environment is defined as either a single/stand-alone machine or a qualified Parallel Sysplex®. Customers may have one or more different environments across their 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

1. That meets the criteria defined in 198-001, dated January 13, 1998
2. 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 IBM 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 EWLC, TWLC, zELC and z/OS.e 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 System z 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 product's own execution as reported to IBM in accordance with the requirements for reporting sub-capacity utilization for products.

**On/Off Capacity on Demand**

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

IBM Global Services has transformed its delivery of hardware and software support services to put you on the road to higher systems availability. IBM Electronic Services is a Web-enabled solution that provides you with an exclusive, no-additional-charge enhancement to the service and support available on the IBM eServer platform. These services provide the opportunity for greater system availability due to faster problem resolution and preemptive monitoring. IBM Electronic Services is comprised of two separate, but complementary, elements: IBM Electronic Services news page and IBM Electronic Service Agent™.

IBM Electronic Services news page provides you with a single Internet entry point that replaces the multiple entry points traditionally used by customers to access IBM Internet services and support. The news page enables you to gain easier access to IBM resources for assistance in resolving technical problems.

The IBM Electronic Service Agent is no-additional-charge software that resides on your IBM eServer system. It is designed to proactively monitor events and transmit system inventory information to IBM on a periodic, customer-defined timetable. The IBM Electronic Service Agent tracks system inventory, hardware error logs, and performance information. If the server is under a current IBM maintenance service agreement or within the IBM warranty period, the Service Agent automatically reports hardware problems to IBM. Early knowledge about potential problems enables IBM to provide proactive service that may result in higher system availability and performance. In addition, information collected through the Service Agent will be made available to IBM service support representatives when they are helping answer your questions or diagnosing problems.

To learn how IBM Electronic Services can work for you, visit http://www.ibm.com/support/electronic

Prices

For pricing information, refer to 206-088, dated April 25, 2006.

**Variable charges:** The applicable processor-based one-time charge will be based on the group of the designated machine on which the program is licensed for use. If the program is designated to a processor in a group for which no charge is listed, the charge of the next higher group listed applies. For movement to a machine in a higher group, an upgrade charge equal to the difference in the then-current charges between the two groups will apply. For movement to a machine in a lower group, there will be no adjustment or refund of charges paid.

IBM Global Financing

IBM Global Financing offers competitive financing to credit-qualified customers to assist them in acquiring IT solutions. Offerings include financing for IT acquisition, including hardware, software, and services, both from IBM and other manufacturers or vendors. Offerings (for all customer segments: small, medium, and large enterprise), rates, terms, and availability can vary by country. Contact your local IBM Global Financing organization or visit http://www.ibm.com/financing

IBM Global Financing offerings are provided through IBM Credit LLC in the United States and other IBM subsidiaries and divisions worldwide to qualified commercial and government customers. Rates are based on a customer's credit rating, financing terms, offering type, equipment type, and options, and may vary by country. Other restrictions may apply. Rates and offerings are subject to change, extension, or withdrawal without notice.

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).

Phone: 800-IBM-CALL (426-2255)
Fax: 800-2IBM-FAX (242-6329)
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.

**Trademarks**

System z, iSeries, System/370, z/Architecture, and Electronic Service Agent are trademarks of International Business Machines Corporation in the United States or other countries or both.

WebSphere, z/OS, Tivoli, S/390, SystemPac, Passport Advantage, zSeries, eServer, System/390, Parallel Sysplex, and OS/390 are registered trademarks of International Business Machines Corporation in the United States or other countries or both.

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

This announcement is provided for your information only. For additional information, contact your IBM representative, call 800-IBM-4YOU, or visit the IBM home page at: http://www.ibm.com.