



# IBM WebSphere Process Server and WebSphere ESB for z/OS powers your SOA on IBM System z

## Overview

WebSphere® Process Server for z/OS® and WebSphere Enterprise Service Bus (ESB) for z/OS introduce rich business integration capabilities to power your service-oriented architecture (SOA) on System z™. Built to a common unified standards-based platform, both programs are designed to extend the value of core applications and databases while retaining the availability, security, and recoverability qualities of System z.

**WebSphere ESB for z/OS** delivers a flexible connectivity infrastructure to integrate applications and services. It can be used to reduce the number and complexity of interfaces:

- Matches and routes messages between services
- Converts transport protocols between requestor and service
- Transforms message formats between requestor and service
- Distributes business events to and from disparate resources

With Web services and Java™ Message Service (JMS) connectivity and service-oriented integration, you can improve flexibility, minimize disruption, and allow intelligent interactions with business events.

**WebSphere Process Server for z/OS** delivers robust process automation, advanced human workflow, business rules, application integration, and enterprise service bus capabilities on a single, integrated platform on z/OS with native Web services and JMS support.

- Delivers process choreography and state machines
- Provides rules for flexible decision making
- Allows object mapping and enterprise service bus message transformation

- Creates cross-referencing between common business objects
- Supports staff and human task management for workflow
- Offers selectors to dynamically invoke service components

Designed to make plug and play of service components for business integration a reality, WebSphere Process Server for z/OS can automate all styles of business processes, while supporting the end-to-end process life cycle.

Leveraging a common platform facilitates the creation of composite applications, lets you to create a modular, integrated software portfolio incrementally while maximizing reuse of skills throughout the software stack. Elements of the unified platform shared by WebSphere Process Server and WebSphere ESB for z/OS include:

- Service Component Architecture
- Common install, administration, and security infrastructure
- Supports range of application adapters and ISV solutions
- Common Event Infrastructure for monitoring

Both WebSphere Process Server and WebSphere ESB for z/OS use **WebSphere Integration Developer** as their companion tool, offering rich visual editors to create composite integration solutions. This tooling, based on Eclipse technology, can be combined with the entire suite of WebSphere and IBM Rational® tools. It supports the SOA life cycle and service integration on System z.

## Key prerequisites

z/OS V1.4, or later

## Planned availability date

June 23, 2006

## At a glance

IBM WebSphere Process Server and WebSphere ESB for z/OS features include:

- Common integration platform
- Robust process automation
- Comprehensive human workflow
- Enterprise service bus (ESB)
- Composite applications
- Native Java Message Service (JMS) and Web services
- Retaining z/OS Qualities of Service

### For ordering, contact:

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

**800-IBM-CALL**

Reference: LE001

*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>.*

---

## Description

---

### *WebSphere ESB for z/OS*

WebSphere ESB for z/OS delivers the following capabilities in the Web services environment:

- Facilitates interactions between service interaction end points using different protocols, such as: Sample Object Access Protocol (SOAP) over HTTP, SOAP over JMS, JMS, and Java Communication Architecture (JCA) adapters
- Supports creation on mediations between those end points that can transform, log, and route the message
- Supports Web services connectivity, messaging, and service-oriented integration to underpin interactions between end points in SOA-based applications beyond the basic connectivity options offered by the interaction protocols used in an SOA
- Is easy to use from initial configuration of the ESB runtime to modeling of ESB-based mediated interactions for testing, deployment, and administration of ESB-based solutions
- Reduces the time required to see a return on your investment when developing and managing ESB-based solutions by providing predefined solution elements such as mediation components and enabling the use of adapters to a large set of applications
- Delivers seamless integration with the WebSphere platform, exploiting WebSphere scalability and high availability as well as administration and configuration features

For addition details, refer to the **Additional information** section.

### *WebSphere Process Server for z/OS V6.0*

**WebSphere Process Server for z/OS, V6** delivers the next-generation business process server including WebSphere ESB for z/OS. It accelerate the deployment of composite applications extending and integrating a company's existing IT assets.

WebSphere Process Server for z/OS offers robust process automation, advanced human workflow, business rules, and application-to-application (A2A) capabilities all on a single, integrated SOA platform on z/OS with native Java Message Service (JMS) support. This platform leverages many years of IBM domain expertise and client experience to offer best-of-breed support for integration development, while at the same time adding new ground-breaking capabilities.

WebSphere Process Server for z/OS delivers a comprehensive list of service components for the deployment of composite integration solutions to support several styles of process automation:

- Business processes
- Business state machines
- Human tasks
- Business rules
- Selectors
- Relationships
- Mediations for Service Interfaces, Business Objects, and Message formats

### **Business process — Service composition using Web Services-Business Process Execution Language (WS-BPEL)**

The business-process component in WebSphere Process Server for z/OS implements a WS-BPEL-compliant process engine for service composition. WS-BPEL defines a model and a grammar for describing the behavior of business processes in a service-oriented world, based on the interactions of the process with its “partners”, for example, other referenced services.

Support for WS-BPEL includes:

- Management of service composition, while implementation details stay hidden.
- Common language to describe all styles of executable processes. Generates Java code for the server. Service implementation details are resolved later.
- Identification of transaction scope: Long- and short-running business processes.
- Identification of scope of error recovery: Compensation support to “undo” already committed transactions in case of a failure later in the business process.
- Integrated fault and event handling to manage exceptions to a process.
- Support offered by an intuitive drag-and-drop business process editor with an easy-to-use authoring experience to visually define the sequence and flow of the steps in a WS-BPEL process, as well as a visual business-process debugger to step through and debug WS-BPEL business processes.

### **Business state machine —Simplified design for long-lived, event-centric processes**

WebSphere Process Server for z/OS provides a business-state machine component to model and enact heavily event-driven business-process scenarios. State machines simplify design when you can not predict the order of sequence or events in your process. Examples include:

- When events may be handled differently depending on the current “state” of a process
- When processes may need to revert to earlier states at any time
- When a timeout can change the process state without requiring an event

These kinds of event-driven scenarios are sometimes hard to model in a standard WS-BPEL editor, but they are easy to model in a Unified Modeling Language (UML) state machine diagram while generating WS-BPEL for execution. The combination of WS-BPEL with business state machines gives WebSphere Process Server for z/OS a unique edge when it comes to business-process automation.

### **Human tasks — Interact with a business process (and other services)**

Human task support expands the reach of WS-BPEL to include activities requiring human interaction as steps in an automated business process. Business processes involving human interaction are interruptible and persistent (a person may take a long time to complete the task) and resume when the person completes the task.

WebSphere Process Server for z/OS provides a stand-alone human task management component that is defined as a service and can participate in a standard WS-BPEL process.

Human tasks can be used to invoke services (for example, a business process), participate in a business process (traditional staff activity), or administer a business process (process administrator). Additionally, pure human tasks may be used to implement specific processing.

Human task support includes:

- Staff activity nodes to represent a step in a business process that is performed manually
- Ability to assign people (for example, direct reports) to specific instances of a process via staff queries that are resolved at runtime using an existing enterprise directory
- Dynamic setting of duration and calendar attributes for staff activities
- Dynamic setting of staff assignment via custom attributes
- Managing the creation, transfer, and deletion of work items
- Specific creation and tracking of human tasks, in addition to the “claim save transfer complete” model for processing and tracking tasks
- Java Server Faces (JSF) components to create custom clients
- Graphical browser-based interface for querying, claiming, working with, completing, and transferring work items to another user

#### **Business rules — Flexible decision making and dynamic changes at runtime**

WebSphere Process Server for z/OS contains a business rule component that supports:

- Rule sets: Consisting of a series of If/Then conditions; multiple conditions can evaluate to true.
- Decision tables: Offering a decision tree in which one and only one path can evaluate to true.
- Grouping of rule sets and decision tables into a rule group for service component deployment.
- Web client, allowing staff to make changes to business rules using an intuitive user interface at runtime rather than having to deploy the business rules again from the development environment. The Web client comes with national language-supported plain text display capabilities.

By encapsulating business rules into a dedicated service component, a rule can be managed by the domain expert for that particular business rule, and it can be used across multiple processes for maximum business flexibility.

#### **Selectors — Dynamic service selection at runtime**

The selector component of WebSphere Process Server for z/OS provides for the dynamic selection and invocation of target services at runtime.

- Any service component can be invoked through a selector.
- Various selector criteria are supported (for example, date).

- A Web Interface modifies the selection criteria and target services (which may not even have existed when the selector component was deployed).

#### **Relationship management services for common business objects (for example, client)**

Relationship management services in WebSphere Process Server for z/OS enable the lookup, cross-referencing, and federation of common business objects across disparate Enterprise Information System (EIS) systems. It can be used to convert different representations of key information for access to common business objects (for example client ID) and data sets in various back-end systems, and keep track of which data sets represent information about the same object.

- Relationships can be called from a business object map when converting one business object into another to manage the key information. Lookup relationships can be defined for static data (for example, mapping).
- Postal or zip codes can be translated into city names.

#### **Mediations for service interfaces, business objects, and message formats**

WebSphere Process Server provides a wide range of mediation capabilities in order to facilitate the development of component-based integration solutions:

- Interface maps: Can be used to convert syntactical differences in semantically identical interfaces. These are beneficial for importing existing services that may have a different interface definition than required. They implement a completely canonical integration solution where one component has no knowledge of the implementation details of another component.
- Object maps: Can be used to translate one business object into another. As part of an interface map, it is often necessary to translate the arguments of an operation.
- Message format mediations: WebSphere ESB supports the mediation of interactions between service end points, including protocol transcoding and pre-built mediation functions for XML message transformations, message logging, content- and context-based message routing, and database lookup. Customers can augment the function provided by the supplied primitives by programming their own “custom primitives.”

#### **Common functions**

The following functions, tools, and components support both WebSphere ESB for z/OS and WebSphere Process Server for z/OS.

#### **WebSphere Integration Developer tool**

Both WebSphere Process Server for z/OS and WebSphere ESB for z/OS are supported by the companion tool WebSphere Integration Developer V6 for developing composite integration solutions that can be deployed to a range of server platforms.

WebSphere Integration Developer delivers an eclipse-based development environment for building service-oriented, component-based applications that extend and integrate your existing IT assets. Focuses on developer productivity by providing easy-to-use, authoring tools. This allows integration developers to rapidly build and debug composite business integration applications.

Combined with other IBM development tools, for example, WebSphere Enterprise Developer for zSeries®, Rational Application Developer, and WebSphere Business Modeler, WebSphere Integration Developer provides unparalleled support for creating composite business process applications.

### **Back-end system connectivity — Supports range of application adapters and ISV solutions**

WebSphere Process Server and WebSphere ESB for z/OS, together with their companion tool WebSphere Integration Developer, offer integrated, open standards-based support for building composite applications.

Key capabilities include:

- WS-BPEL business processes that integrate with back-end systems.
- Service Component Architecture, normalizing invocation complexity through Java interface and WSDL port type service descriptions. You can export and import such definitions natively supporting a range of transport bindings natively for every service component.
- Support for advanced Web services (JSR 109 and JAX-RPC-based).
- Support for calling EJB session beans.
- Support for JMS messaging through the integrated WebSphere messaging resources (with full connectivity to existing WebSphere MQ-based networks).
- Wizards to quickly and simply expose CICS® or IMS™ programs as enterprise services, including the ability to import definitions from COBOL, C structures, CICS Basic Mapping Support (BMS), and IMS Message Format Service (MFS) definitions.
- Support for the entire suite of WebSphere Business Integration Adapters.

Integrated tool support for using J2EE Connector (J2C) 1.0 and 1.5 resource adapters to access back-end systems is provided, including

- Enhanced tool integration for J2C adapters with tool plug-in extensions (available from IBM and IBM Business Partners)
- Enhanced J2C 1.5 resource adapter support to leverage WebSphere Adapters
- Sophisticated wizards to manage the low-level data handling requirements for J2C resource adapters
- Easy-to-use tools for creating services out of J2C resource adapters or WebSphere Business Integration Adapters and including those services as part of a composite integration solution

Universal connectivity is enabled by WebSphere ESB for z/OS, to connect interaction end points using a variety of interaction protocols (for example, JMS 1.1) and APIs.

- Supports interactions via JMS 1.1 implemented in WebSphere Platform Messaging as well as SOAP over HTTP(S) and SOAP over JMS
- Allows interoperability with the WebSphere family (WebSphere Application Server, WebSphere MQ, and WebSphere Message and Event Brokers) and can leverage WebSphere Adapters for capture and dissemination of business events

- Can be used in combination with an existing WebSphere MQ messaging installation to integrate new environments in an open, standards-based way
- Interoperates with WebSphere Message Broker and can be used to implement complex topologies, with WebSphere ESB handling standards-based Web service interactions and WebSphere Message Broker taking care of non-Web services application integration

### **Common event infrastructure for monitoring and management events**

WebSphere Process Server and ESB for z/OS publish management events to the common event infrastructure (CEI) using the open standard common base event (CBE) format to distribute management events to business dashboards, such as WebSphere Business Monitor, and IT monitoring tools.

### **Seamless integration with the WebSphere platform**

WebSphere Process Server and WebSphere ESB for z/OS fully leverage the capabilities of the underlying WebSphere Application Server for z/OS, enabling composite integration solutions to enjoy the benefits of a common installation, administration and security infrastructure with the premier Java 2 Enterprise Edition (J2EE) and Web services hosting platform for an On Demand Business on z/OS.

They inherit its functions and qualities of service, including workload balancing, clustering, high-availability, fail-over, Web services gateway, systems management, (for example IBM Tivoli® Performance Viewer) and scalability features, as well as integration with

- IBM Tivoli security, directory, and systems management offerings include Tivoli Access Manager (for optional use, to deliver a secure, unified, and personalized experience that will help manage growth and complexity) and Tivoli Directory (for optional use, as an LDAP server).
- IBM Tivoli Composite Application Manager for SOA for added monitoring and management capabilities. The product uses the common WebSphere Administrative Console. Clients with the appropriate skills can take full advantage of the underlying capabilities of WebSphere Application Server Network Deployment.
- SAF/RACF®.

### **Unique qualities of service on z/OS**

WebSphere Process Server and WebSphere ESB for z/OS combine the value of open standards with native z/OS Qualities for Service for mission-critical composite applications. They enable you to standardize on System z as the platform for core business processes, applications, and data.

WebSphere Process Server and WebSphere ESB for z/OS exploit resource managers and unique capabilities available only on z/OS, such as:

- Industries most stringent security manager, RACF
- System-managed Resource Recovery Services (RRS) for transaction coordination
- Management of workload sharing towards achievement of business goals, with the z/OS Workload Manager (WLM)
- Dynamic application of software changes
- SMPT/E installation process

- zSeries Application Assist Processors (zAAP) to execute Java workloads under z/OS

### ***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 as of June 23, 2006, 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 US Section 508 Voluntary Product Accessibility Template (VPAT) can be requested via the IBM Web site at:

[http://www.ibm.com/able/product\\_accessibility/index.html](http://www.ibm.com/able/product_accessibility/index.html)

### ***Value Unit-based pricing***

Value Unit pricing for eligible zSeries IPLA programs enables a lower cost of incremental growth and enterprise aggregation. Each zSeries 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 zSeries 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 offers additional price benefits for customers. The quantity of each zSeries IPLA program that you have acquired is referred to as "entitled license capacity." If you wish to grow your entitled license capacity for a zSeries IPLA program, the calculation to determine additional needed Value Units is based upon the number of Value Units already acquired.

For each zSeries 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, 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 zSeries IPLA program you selected, refer to the **Terms and conditions** section.

---

## **Product positioning**

---

### ***WebSphere ESB***

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

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

For additional information, refer to the **Additional information** section.

### ***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 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 information on WebSphere Process Server V6.0.1 and WebSphere Integrator Developer V6.0.1, refer to Software Announcement 205-309, dated November 22, 2005.

For information on WebSphere ESB V6.0.1, refer to Software Announcement 205-311, dated November 22, 2005.

### ***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 206-088

<https://www.ibm.com/partnerworld/mem/sla.jsp?num=206-088>

**Trademarks**

System z and IMS are trademarks of International Business Machines Corporation in the United States or other countries or both.

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

Java is a trademark of Sun Microsystems, Inc.

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



# IBM United States Announcement Supplemental Information

April 25, 2006

## Additional information

### **WebSphere® Enterprise Service Bus (WebSphere ESB) for z/OS® — Additional detail**

#### **Broad connectivity for SOA end points**

ESB supports a variety of interactions between service end points on the following levels:

- WebSphere ESB for z/OS enables you to connect interaction end points using a variety of interaction protocols (for example, Java™ Message Service (JMS) 1.1) and APIs.
- It supports interactions via JMS 1.1 implemented in WebSphere Platform Messaging as well as SOAP over HTTP(S) and SOAP over JMS.
- It allows interoperation with the WebSphere family (WebSphere Application Server, WebSphere MQ, and WebSphere Message and Event Brokers) and can leverage WebSphere Adapters for capture and dissemination of business events.
- The Message Service Clients for C/C++ and for .NET enable non-Java applications to connect to the ESB and the Web Services Client is a JAX-RPC-like Web services client for C++ to enables users to connect to Web services hosted on WebSphere from within a C++ environment.
- Features at this level can be used to perform basic protocol conversion between interaction end points where the protocol used by the requester to dispatch their requests (for example, SOAP over HTTP) is different from that of the service provider that is to handle those requests (for example, SOAP over JMS).
- Spectrum of Interaction Models include:
  - Support for a range of interaction models including request/reply, point-to-point, and publish/subscribe-style interactions.
  - Supports WS-\* Standards including WS-Security and WS-Atomic Transactions. It includes a UDDI 3.0 Registry that can be used to publish and manage service end point metadata.
- Mediation services
  - Supports mediation of interactions between end points beyond protocol conversion
  - Enables handling of integration logic processing in the ESB instead of in the interacting end points
  - Includes support for content and context-based routing of messages that are exchanged via the ESB as well as other operations on those messages such as logging or transformation of those messages

Prebuilt mediation functions allow mediations to be visually composed and include XML transformation, message logging, message routing, and database lookup. You can augment the function offered by the supplied primitives by programming your own *custom mediation functions*.

Supplied mediation functions include:

- Fail, which throws an exception and terminates the path through the mediation flow.
- Stop, which silently terminates the path through the mediation flow.
- MessageFilter, which compares the content of the message to a list of XPath expressions configured by the user, and routes the message to the next mediation primitive based on the result. The integration developer can use this primitive in conjunction with the Stop primitive to create a filter.
- XSLT, which transforms messages according to transformations defined by an XSL style sheet.
- DatabaseLookup, which searches values from a database and stores them as elements, identified by XPath expressions, in the message.
- MessageLogger, which logs an XML copy of the message to a database for future retrieval or audit. The integration developer customizes the message primitives (for example, by naming the database to be searched or by providing the XSL style sheet).

#### **Ease of use**

WebSphere ESB for z/OS and WebSphere Integration Developer are designed to get you up and running quickly with comprehensive documentation, easy-to-understand samples, and compelling out-of-the-box experience. WebSphere Integration Developer delivers an easy-to-use tool that requires minimal programming skills to perform the typical tasks of an integration developer when modeling, testing, configuring, and deploying ESB-based applications. Integration developers declare interaction end points and, using graphical modeling tools in WebSphere Integration Developer, describe the envisioned interconnections between service requesters and providers.

In addition, the message flows between them along those connections often involving a set of mediations that need to be applied to make the interactions work. Mediation flows are assembled from a set of predefined mediation functions that are configured to perform the required message routing, enrichment, and transformation operations.

WID allows you to perform tests on mediation interactions before they are deployed in the WebSphere ESB for z/OS runtime environment.

The WebSphere ESB for z/OS administration console enables solution administrators to manage WebSphere

*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>.*

ESB for z/OS deployments with new role-based administration support that offers a simplified user experience for this user role as well as full access to the underlying WebSphere administration capabilities via progressive disclosure of functions.

### **Reduced time required to appreciate a return on investment**

WebSphere ESB for z/OS delivers an entry-level, cost-effective solution for services integration. It supports implementation of the ESB architecture pattern that lets you leverage existing IT investments by quickly building a flexible integration infrastructure to extend the value of existing investments. The product's extensive business and IT standards support facilitates greater interoperability and portability and allows you to utilize first-class support for hundreds of ISV solutions as well as extensive WebSphere Adapter support, including new JCA-based adapters.

The complementary WebSphere Integration Developer tools considerably shorten the development cycle for message flows between integration end points; pre-supplied mediation functions allow message flows to be visually composed and include XML transformation, message logging, message filtering, database lookup, and custom.

WebSphere ESB for z/OS managed interactions can be dynamically reconfigured to meet changing business processing loads by modifying interconnections and message flow interaction logic in WebSphere Integration Developer or to some degree in the WebSphere ESB for z/OS administration console; interaction end points can be dynamically added or replaced without affecting the rest of the ESB-based applications.

### **Seamless integration with the WebSphere platform**

WebSphere ESB for z/OS fully leverages the capabilities of the underlying WebSphere Application Server and inherits its Qualities of Service, workload balancing, clustering, high availability, and scalability features. Through the deep integration with WebSphere Application Server it also inherits integration with Tivoli® security, directory, and systems management offerings and includes Tivoli Access Manager (for optional use, to deliver a secure, unified, and personalized experience that will help manage growth and complexity) and Tivoli Directory (for optional use, as an LDAP server).

WebSphere ESB for z/OS integrates with IBM Tivoli Composite Application Manager for SOA for added monitoring and management capabilities. The product uses the common WebSphere Administrative Console to enable system management across WebSphere Application Server, WebSphere ESB for z/OS, and WebSphere Process Server. If you have the appropriate skills can take full advantage of the underlying capabilities of WebSphere Application Server Network Deployment.

WebSphere ESB for z/OS can be used in combination with an existing WebSphere MQ messaging installation to integrate new environments in an open, standards-based way. It interoperates with WebSphere Message Broker with which it can be used to implement complex topologies, with WebSphere ESB for z/OS handling standards-based Web service interactions and WebSphere Message Broker taking care of non-Web services application integration.

Because WebSphere ESB for z/OS shares development and administration tools with WebSphere Process Server, it is easy to start building an SOA infrastructure on

WebSphere ESB for z/OS and add more advanced service composition and orchestration capabilities supported in WebSphere Process Server if and when they are required.

Finally, WebSphere ESB for z/OS offers seamless integration with the WebSphere platform. Because it is built on top of the market-leading WebSphere Application Server Network Deployment, WebSphere ESB for z/OS leverages WebSphere qualities of service: clustering, fail-over, systems management, and security. Common tooling and administration means the move from WebSphere ESB for z/OS to WebSphere Process Server is painless, and integration with IBM Tivoli security and systems management offerings delivers world-class security and systems management capability.

### ***WebSphere ESB positioning — Additional detail***

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

- WebSphere Application Server is the leading J2EE application server and development environment, and includes a built-in JMS engine, for messaging between J2EE applications.
- WebSphere MQ, available on more than 80 platform configurations, offers the core of application integration connectivity, and integrates many differing platforms, systems, and applications. It delivers heterogeneous messaging, extending your ESB with assured, reliable message delivery.
- WebSphere Message Broker makes full use of the transport and connectivity options delivered by WebSphere MQ and WebSphere Application Server, and allows additional routing and transformation capabilities to implement an advanced ESB.
- WebSphere Event Broker lets you rapidly build a flexible, extensible, and secure infrastructure that leverages applications and devices across heterogeneous platforms through distributing real-time information from disparate sources of information. It delivers a powerful new means to unify organizations by extending WebSphere MQ messaging transport with other protocols, including those for enterprise, real-time, telemetry, mobile, and multicast end points.
- WebSphere Process Server, built using WebSphere ESB for z/OS, offers a rich and comprehensive SOA-based process integration solution, built on top of the industry's leading J2EE runtime, delivering process design and deployment and also management capabilities to extend any choice of application infrastructure and application integration. It is ideal for extending the service-oriented integration delivered by WebSphere ESB for z/OS to solve higher-level business problems.
- WebSphere MQ Extended Security Edition enhances WebSphere MQ with end-to-end, application-level data protection features. It enables enterprise-wide, remote management of security policies on your MQ network and can be deployed to existing production environments without changes to existing WebSphere MQ applications.
- WebSphere Portal delivers a single point of personalized interaction with applications, content, processes and people, integrating business processes and portal users via orchestrated workflow, and therefore helping to build scalable and reliable portals



that improve employee productivity and increase client loyalty.

The IBM market-leading application integration software including WebSphere MQ, WebSphere ESB for z/OS, and WebSphere Message Broker helps organizations:

- Quickly and economically address business integration issues
- Become more agile and take rapid advantage of new business opportunities
- Stay flexible
- Maintain client orientation
- Gain competitive position advantage

WebSphere ESB for z/OS allows organizations to maximize flexibility as an integrated, On Demand Business by:

- Routing messages between services
- Converting transport protocols between requestor and service
- Transforming message formats between requestor and service
- Handling business events from disparate sources
- Improving time to value with an integrated, interactive, and visual development environment that reduces the need for programming skills

#### **SOA and an ESB**

In an SOA, a connectivity layer, often referred to as an ESB optimizes information distribution between service requesters and service providers. Each enterprise can deploy its own unique ESB, reflecting how far it has advanced toward becoming an On Demand Business.

Some users may find that simple messaging based connectivity between well-matched applications delivers the aspects of integration required to implement an effective ESB. Other users may find that to extend these capabilities out into their wider deployed infrastructure, they realize value of other parts of the WebSphere software portfolio. As key members of the WebSphere software portfolio, WebSphere ESB for z/OS and WebSphere Message Broker enable your users to begin deploying your ESB today.

These programs help maximize the value of your IT investment by broadening the range of environments this connectivity layer can reach, such as hardware and operating system platforms, and beyond more standardized programming models such as J2EE and .NET.

The proven delivery mechanisms of WebSphere MQ and the JMS messaging resources delivered by WebSphere Application Server, and available in WebSphere ESB for z/OS, extend the reach of the ESB with reliable connectivity throughout the enterprise for connecting and integrating virtually any type of application or system. WebSphere Application Server messaging resources offer a best-of-breed JMS implementation for use with connecting to J2EE-hosted applications. WebSphere MQ seamlessly extends those messaging resources to non-J2EE environments to integrate virtually anything, across more than 80 platforms. WebSphere ESB for z/OS can make use of both types of messaging environment as required.

WebSphere ESB for z/OS delivers an ESB that will connect applications that have standards-based interfaces in order to power your SOA. WebSphere ESB for z/OS is used in conjunction with WebSphere Integration Developer, which is designed with ease of use in mind and requires minimal programming skills, based around an interactive visual environment. To create a true ESB, WebSphere ESB for z/OS also supports seamless integration with the WebSphere software stack. This lets you move up the stack to solve more complex business problems, as well as the Web services-based integration delivered by WebSphere ESB for z/OS.

WebSphere Message Broker adds services such as content-based message routing and transformation, as well as support for a range of message distribution options and protocols to improve their flexibility and performance. These features allow WebSphere Message Broker to extend the standardized integration features of an ESB out to encompass all business systems and applications. They make full use of the IT assets of the business, and even promote improved integration with the applications and business processes of business partners.

WebSphere software delivers integration capabilities that enable you to begin reaping the benefits of SOAs. You can start deploying end-to-end environments that deliver the benefits of an ESB across all of a business infrastructure today.

IBM can help you to grow project-by-project toward an On Demand Business. WebSphere MQ, WebSphere Application Server, WebSphere ESB for z/OS, and WebSphere Message Broker play a pivotal role in creating SOAs and will continue to do so as IBM delivers enhanced capabilities to accelerate the deployment of ESBs that span the entire IT ecosystem.

---

### **Education support**

---

IBM delivers a comprehensive portfolio of education services to help customers successfully deploy and integrate IBM's 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 V6.0.1 can be found in the Information Center available on the Web at

<http://www.ibm.com/software/integration/wesb/library/infocenter/>

The IBM WebSphere Enterprise Service Bus for z/OS V6.0.1 Program Directory (GI13-0509-00) is available with your order, and on the Web at

<http://www.ibm.com/software/integration/wesb/library/infocenter/>

The IBM WebSphere Enterprise Service Bus for z/OS V6.0.1 License Information (GC34-6771-00) is available with your order, and on the Web at

<http://www.ibm.com/software/sla>

The license ID is L-TMAN-6N6DKK.

**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 V6.0.1 can be found in the Information Center available on the Web at

<http://www.ibm.com/software/integration/wps/library/infocenter/>

The IBM WebSphere Process Server for z/OS V6.0.1 Program Directory (GI10-0781) is available with your order, and on the Web at

<http://www.ibm.com/software/integration/wps/library/infocenter/doc>

The publication *WebSphere Process Server for z/OS V6.0.1 License Information* (LC23-4990) is available with your order, and on the Web at

<http://www.ibm.com/software/sla>

The license ID is L-MKOL-6N35WK.

**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/wesb/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 ESB, visit

<http://www.ibm.com/software/integration/wesb/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 runtime 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 runtime environment for security function and are neither IA (Information Assurance) 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 runtime environment and WebSphere Application Server for z/OS has been FIPS-140-2-certified.

## Extended entitlement

IBM plans to protect client 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 clients may require, IBM is offering extended entitlement to customers. Clients 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

<http://www.ibm.com/software/integration/wps/library>

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

**Direct customer support:** Direct customer support is provided by IBM Operational Support Services — SoftwareXcel. This fee service enhances clients' productivity by providing voice and electronic access into the IBM support organization. IBM Operational Support Services — SoftwareXcel will help answer questions pertaining to usage and suspected software defects for eligible products.

Installation and technical support is provided by Global Services. For more information call 800-IBM-4YOU (426-4968).

For technical support or assistance, contact your IBM representative or visit

<http://www.ibm.com/support>

You may contact your IBM representative for additional assistance at 800-IBM-SERV (800-426-7378), option #2 for software.

This product delivers functionality, Application Client Container, Application Server Tool Kit (AST), Tivoli Access Manager (TAM), WebSphere Edge, and Data Direct JDBC drivers on CD-ROM or downloaded to CD-ROM that is intended for deployment on distributed (non-z/OS) systems. These applications are provided with entitlement for software defect support through a renewable support/subscription license for this product. Requests for defect service should be reported through the IBM Call Centers, specifying WebSphere Process Server for z/OS V6.

For technical support or assistance, contact your IBM representative or visit

<http://www.ibm.com/support>

**Packaging:** The following information applies to both WebSphere Process Server for z/OS V6.0.1 and WebSphere ESB for z/OS V6.0.1.

Program components are delivered by traditional z/OS fulfillment, ServerPac.

Program components intended to run on the z/OS platform are delivered on a single tape. WebSphere Application Server for z/OS V6.0.1 (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 6 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 (2 CD-ROMs)
- Application Server Toolkit 6.0 (2 CD-ROMs)
- Edge Components 6.0 (7 CD-ROMs)
- Tivoli Access Manager 5.1 (6 CD-ROMs)

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 ESB 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.

---

## Ordering information

---

### Charge Metric

Program name	PID number	Charge metric
WebSphere ESB for z/OS	5655-R15	Value Unit
WebSphere Process Server for z/OS	5655-N53	Value Unit

The programs in this announcement all have value unit-based pricing.

Program name	Program number	Value Unit Exhibit
WebSphere ESB for z/OS	5655-R15	VUE007
WebSphere Process Server for z/OS	5655-N53	VUE007

For each zSeries® 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 zSeries 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

	MSUs minimum	MSUs maximum	Value Units/MSU
Base	1	3	1
Tier A	4	45	0.45
Tier B	46	175	0.36
Tier C	176	315	0.27
Tier D	316	+	0.2

Value Units for mainframes without MSU ratings:

Hardware	Value Units/machine
MP3000 H30	6
MP3000 H50	8
MP3000 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 zSeries IPLA product, the applicable Value Units would be:

Translation from MSUs to Value Units

MSUs	*	Value Units/MSU	=	Value Units
Base	3	1.00	=	3.00
Tier A	42	.45	=	18.90
Tier B	130	.36	=	46.80
Tier C	140	.27	=	37.80
Tier D	1,185	.20	=	237.00
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

<http://www14.software.ibm.com/webapp/ShopzSeries/ShopzSeries.jsp>

The products in this announcement have one charge unit — Value Units.

Translation from MSUs to Value Units (VUE007)

MSUs	Value Units/MSU	
Base	1-3	5.25
Tier A	4-45	.83
Tier B	46-175	.35
Tier C	176-315	.26
Tier D	316+	.20

**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 (VUE007)

MSUs	*	Value Units/MSU	=	Value Units
Base	3	5.25	=	15.75
Tier A	42	.83	=	34.86
Tier B	130	.35	=	45.50
Tier C	140	.26	=	36.40
Tier D	685	.20	=	137.00
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 VUE007:

MP3000 models

H30	=	21.00 Value Units/Machine
H50	=	22.00 Value Units/Machine
H70	=	26.00 Value Units/Machine
ESL Models	=	9.00 Value Units/Machine

**Basic license**

**OoCoD — WebSphere ESB for z/OS**

WebSphere ESB for z/OS is eligible for On/Off Capacity on Demand (On/Off CoD) with a Temporary Use Charge calculated based on MSUs-per day usage.

Program name WebSphere ESB for z/OS  
Program PID 5655-R15

Entitlement Identifier	Description	License option / pricing metric
S012HBD	WebSphere ESB for z/OS	Basic OTC, Per MSU-day TUC

**OoCoD — WebSphere Process Server for z/OS**

WebSphere Process Server for z/OS is eligible for On/Off Capacity on Demand (On/Off CoD) with a Temporary Use Charge calculated based on MSUs-per day usage.

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

Entitlement Identifier	Description	License option / pricing metric
S0123H6	WebSphere Process Server for z/OS	Basic OTC, Per MSU-day TUC

**Value Unit — Ordering Information**

Translation from MSUs to Value Units

MSUs	Value Units/MSU	
Base	1-3	x.xx
Tier A	4-45	x.xx
Tier B	46-175	x.xx
Tier C	176-315	x.xx
Tier D	316+	x.xx

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.

## WebSphere ESB for z/OS — Value Unit Ordering

Program name WebSphere ESB for z/OS  
 Program PID 5655-R15

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

Entitlement Identifier	Description	License option(s) / pricing metric(s)
S012HBD	WebSphere ESB for z/OS	Basic OTC, Value Units
S012HBD	WebSphere ESB for z/OS Trade-up from WebSphere Application Server for z/OS	Basic OTC, Value Units
Orderable Supply ID	Language	Distribution medium
S012HBC	English/Japanese	3480 tape

### Subscription and Support PID 5655-R16

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

Entitlement Identifier	Description	License option(s) / pricing metric(s)
S012HBJ	WebSphere ESB S&S	Basic ALC, Value Units SW S&S 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
S012HBH	English	Paper

## WebSphere Process Server for z/OS — Value Unit Ordering

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

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

Entitlement Identifier	Description	License option(s) / pricing metric(s)
S0123H6	WebSphere Process Server for z/OS	Basic OTC, Value Units
S0123H6	WebSphere Process Server for z/OS -- Trade-up from WebSphere Application Server for z/OS (5655-N01)	Basic OTC, Value Units
S0123H6	WebSphere Process Server for z/OS -- Trade-up from WebSphere ESB for z/OS (5655-R15)	Basic OTC, Value Units
Orderable Supply ID	Language	Distribution Medium
S0123H5	English/Japanese	3480 tape

### Subscription and Support PID 5655-P27

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

Entitlement Identifier	Description	License option(s) / pricing metric(s)
S0124HZ	WebSphere Process Server for z/OS S&S	Basic ALC, Value Units SW S&S 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
S012HBK	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 clients to future releases and versions at no additional charge. Note: The client is not entitled to new products.

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

**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.

### Support for provided non-z/OS programs

Non-z/OS programs are provided with WebSphere ESB for z/OS and WebSphere Process Server for z/OS. To ensure customers receive technical support for these non-z/OS programs, a no-charge support order is required from Passport Advantage®. Order the following per processor part numbers in Passport Advantage:

Description	Part number
WebSphere Enterprise Service Bus — Support Only per processor Annual Software Maintenance Renewal	E02GPLL
WebSphere Process Server Support Only per processor Annual Software Maintenance Renewal	E02I4LL

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

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

CBPDO and ServerPac are offered for electronic delivery, where ShopzSeries product ordering is available. For more details on electronic delivery, refer to the ShopzSeries help information.

<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 available density tape media be selected. Currently offered media types are:

- CBPDOs — 3480, 3480 Compressed, 3590<sup>1</sup>
- ServerPacs — 3480, 3480 Compressed, 3490E, 3590<sup>1</sup>
- SystemPacs — 3480, 3480 Compressed, 3490E, 3590<sup>1</sup>

<sup>1</sup> 3590 is highest density media, which will ship the fewest number of media.

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 general availability.
- SystemPac shipments will begin four weeks after general availability due to additional customization, and data input verification.

---

## **Terms and conditions**

---

**Agreement:** 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:

- WebSphere Process Server for z/OS V6.0.1: L-MKOL-6N35WK

- WebSphere ESB for z/OS V6.0.1: L-TMAN-6N6DKK

**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 zSeries IBM Operational Support Services — SoftwareXcel is an option for those clients 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 Services Announcement 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 zSeries 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 zSeries 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 zSeries IPLA program you selected, refer to the **Ordering information** section.

Program number	Program name	Terms
5655-N53	WebSphere Process Server for z/OS	Execution-based
5655-R15	WebSphere ESB for z/OS	Execution-based

**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 zSeries IPLA program with these terms equals the MSU rated capacity of the machine(s) where the zSeries IPLA program executes.

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

<http://www-1.ibm.com/servers/eserver/zseries/library/swpriceinfo/>

**Reference-based:** The required license capacity of a zSeries 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 zSeries IPLA sub-capacity program with these terms equals the capacity of the LPAR(s) where the zSeries IPLA program executes.

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

**Reference-based:** The required license capacity of a zSeries 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.

**Full machine-based:** The required license capacity of a zSeries IPLA program with full machine-based terms equals the MSU rated capacity of the machine(s) where the zSeries 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 zSeries Exhibits Web site

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

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

### Additional information for products with reference-based terms

zSeries IPLA sub-capacity programs with reference-based terms adds value to the parent program across the environment, regardless of where in environment the zSeries IPLA program executes.

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

When a zSeries IPLA sub-capacity program with reference-based terms is used in a qualified Parallel Sysplex environment the required license capacity of the zSeries 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 Hardware Announcement 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 zSeries 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 zSeries (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 zSeries 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 zSeries 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® zSeries 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 zSeries 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, clients 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.

## 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 clients 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, client-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

### On/Off Capacity on Demand

#### WebSphere Enterprise Service Bus for z/OS — OOCoD

WebSphere ESB for z/OS is eligible for On/Off Capacity on Demand (On/Off CoD) with a Temporary Use Charge calculated based on MSUs-per day usage.

Program name WebSphere ESB for z/OS  
Program PID 5655-R15

Entitlement Identifier	Description	License option / pricing metric
S012HBD	WebSphere ESB for z/OS	Basic OTC, Per MSU-day TUC

#### WebSphere Process Server for z/OS — OOCoD

WebSphere Process Server for z/OS is eligible for On/Off Capacity on Demand (On/Off CoD) with a Temporary Use Charge calculated based on MSUs-per day usage.

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

Entitlement Identifier	Description	License option / pricing metric
S0123H6	WebSphere Process Server for z/OS	Basic OTC, Per MSU-day TUC

#### WebSphere ESB for z/OS — Value Unit

Program name WebSphere ESB for z/OS  
Program PID 5655-R15

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

Entitlement Identifier	Description	License option(s) / pricing metric(s)
S012HBD	WebSphere ESB for z/OS	Basic OTC, Value Units
S012HBD	WebSphere ESB for z/OS Trade-up from WebSphere Application Server for z/OS	Basic OTC, Value Units

#### Subscription and Support PID 5655-R16

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

Entitlement Identifier	Description	License option(s) / pricing metric(s)
S012HBJ	WebSphere ESB S&S	Basic ALC, Value Units SW S&S Basic MLC, Value Units SW S&S (EMEA only) Decline SW S&S (no charge) Per MSU SW S&S Registration



## WebSphere Process Server for z/OS — Value Unit

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

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

Entitlement Identifier	Description	License option(s) / pricing metric(s)
S0123H6	WebSphere Process Server for z/OS	Basic OTC, Value Units
S0123H6	WebSphere Process Server for z/OS -- Trade-up from WebSphere Application Server for z/OS (5655-N01)	Basic OTC, Value Units
S0123H6	WebSphere Process Server for z/OS -- Trade-up from WebSphere ESB for z/OS (5655-R15)	Basic OTC, Value Units

Subscription and Support PID 5655-P27

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

Entitlement Identifier	Description	License option(s) / pricing metric(s)
S0124HZ	WebSphere Process Server for z/OS S&S	Basic ALC, Value Units SW S&S Basic MLC, Value Units SW S&S (EMEA only) Decline SW S&S (no charge) Per MSU SW S&S Registration

### 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 client to future releases and versions at no additional charge. Note that the client is not entitled to new products.

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

**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 clients 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 client 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 clients. Rates are based on a client'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)  
Internet: [callserv@ca.ibm.com](mailto:callserv@ca.ibm.com)  
Mail: IBM Americas Call Centers  
Dept. Teleweb Customer Support, 9th floor  
105 Moatfield Drive  
North York, Ontario  
Canada M3B 3R1

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

iSeries, System/370, z/Architecture, System z9, and Electronic Service Agent are trademarks of International Business Machines Corporation in the United States or other countries or both.

WebSphere, z/OS, Tivoli, zSeries, S/390, Passport Advantage, SystemPac, 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.

Java is a trademark of Sun Microsystems, Inc.

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