



IBM WebSphere Application Server for z/OS , V8.0 enables intelligent management of application environments and helps deliver rich user experiences faster

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At a glance

WebSphere® Application Server is the leading open standards-based application foundation offering accelerated delivery of innovative applications and unmatched operational efficiency, reliability, administration, security, and control.

Enhancements in V8.0 include:

- Java™ Platform, Enterprise Edition (Java EE) 6 compliance, including Enterprise JavaBeans™ (EJB) 3.1, Java Persistence API (JPA) 2.0 and Servlet 3.0, and support for Java Platform Standard Edition 6.0, including the latest performance, security, and reliability enhancements delivered by the IBM® Java SDK for z/OS® V6.0.1 to accelerate Java application innovation
- Broad programming model support including Java EE 6, OSGi Applications, Web 2.0 and Mobile, Java Batch, XML, Service Component Architecture (SCA), Communications Enabled Applications (CEA), and Session Initiation Protocol (SIP)
- New monitored directory-based application install, update, and uninstall of Java EE applications
- Develop, manage, and maintain modular, versioned, and isolated OSGi Applications to improve developer productivity, business agility, and total cost of ownership
- New High Performance Extensible Logging (HPEL) problem determination tools and enhanced security and administration features to improve administrator productivity and control
- New simplified install and maintenance through IBM Installation Manager to improve efficiency and control
- Leveraging and integration with unique IBM System z® and IBM z/OS platform strengths to deliver cost effective innovative applications

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Overview

Your business requires a flexible, efficient, and strong foundation for service-oriented architecture (SOA) to align the advancements of business and IT towards improved business agility and reduced costs. WebSphere Application Server technology enables reuse and rapid creation of innovative applications and services that promote business agility - anticipating and adjusting to the mission-critical issues that help businesses win in the marketplace.

WebSphere Application Server offers a broad range of application foundation and programming model choice to support businesses of every size and includes advanced management to help decrease costs and grow your business. WebSphere Application Server enables clients and partners to build a strong foundation and reduce cost through:

- Capabilities to efficiently speed the delivery of new applications and services
- Operational efficiency and reliability
- Integrated management that provides security and control

WebSphere Application Server for z/OS, V8.0 builds on over a decade of leadership to offer Java EE 6 and broad programming model support, enhanced developer and administrator productivity, and improved security, installation, and maintenance. New and enhanced features in WebSphere Application Server for z/OS, V8.0 can help companies:

- Improve end-user experiences through rapid delivery of innovative applications
- Utilize diverse developer skills using comprehensive open standards-based programming models
- Achieve higher application security with flexible and granular control
- Manage geographically dispersed applications centrally to cut the cost of administration
- Leverage high performance to consolidate workloads, thereby reducing costs
- Maintain transaction integrity, overall reliability and scalability, and reduce downtime with industry leading quality of service
- Reuse and extend legacy and packaged applications to reduce costs, which can be further accelerated using the optional WebSphere Adapters V7.5
- Maximize developer productivity and project delivery speed by using the separately licensed IBM Rational® Application Developer for WebSphere Software or IBM Rational Application Developer Standard Edition for WebSphere Software to help deliver higher quality departmental to mission-critical applications for WebSphere Application Server

For more information on IBM Rational Application Developer support for IBM WebSphere software, refer to Software Announcement [211-174](#), dated April 5, 2011.

While delivering the same programming model and standards support as the rest of the WebSphere Application Server V8.0 family, WebSphere Application Server for z/OS, V8.0 offers enhanced performance, availability, and consumability by taking advantage of z/OS facilities and services:

- High availability enhancements for WebSphere Optimized Local Adapters resource adapter to failover scenarios
- High availability enhancements for resources and request routing by matching failure notification codes with response actions
- Performance improvement through z196 hardware exploitation
- Improved consumability with a more unified installation
- Enhanced system utilization by providing granular control over application server configuration parameters for application consolidation

For clients who need to build, deploy, and manage secure and portable innovative applications that run on a multitude of mobile, server, and desktop systems, WebSphere Application Server is the flexible and efficient SOA application platform of choice.

Key prerequisites

WebSphere Application Server for z/OS, V8.0 requires z/OS V1.10, or z/OS.e V1.10, or later. For details, refer to the [Hardware requirements](#) and [Software requirements](#) sections.

Planned availability date

June 17, 2011

Description

Your business requires a flexible, efficient and strong foundation for SOA to align the advancements of business and IT towards improved business agility and reduced costs. WebSphere Application Server meets your business needs by enabling rapid reuse and creation of innovative applications and services that promote business agility - anticipating and adjusting to the mission-critical issues that help businesses win in the marketplace. WebSphere Application Server offers a broad range of application foundation and programming model choice to support businesses of every size and includes advanced management to help decrease costs and grow your businesses.

WebSphere Application Server for z/OS, V8.0 builds on over a decade of leadership to offer:

Enhanced capabilities to speed the delivery of new applications and services

WebSphere Application Server for z/OS, V8.0 can help businesses offer richer user experiences through the rapid delivery of innovative applications. Developers can jumpstart their development efforts and leverage existing skills by selecting from the comprehensive set of open-standards-based programming models WebSphere Application Server V8.0 supports.

This allows developers to better align project needs with programming model capabilities and developer skills. WebSphere Application Server V8.0 can also speed application delivery through encouraging reuse and extending the life of existing application assets.

New and improved capabilities include

- Faster time to application development completion by enabling developers and architects to select the best programming model for the project at hand
- Java EE 6 programming model: Compliance with the latest Java EE specification which delivers ease of use and productivity enhancements and improves iterative development cycles for testing applications over previous version of the specification. Key enhancements include:
 - Enterprise JavaBeans (EJB) 3.1 adds singleton EJBs for easier creation and management of caches, simple beans with no interfaces, and allows EJBs to be packaged in web application archive (WAR) files to simplify application packaging.

The new embeddable EJB container can be used to unit test EJBs outside of the application server to improve iterative development cycles. EJB 3.1

also adds async-method invocations for handling long running requests and improvements to timers for calendar-based events and non-persistent timers.

- Contexts and Dependency Injection for Java (CDI) 1.0 frees developers from having to write logic to maintain objects within a context and provides new integration between web application expression language beans and EJBs.
- Java Persistence API (JPA) 2.0 includes improvements in mapping support to handle embedded collections and ordered lists. Pessimistic locking is now standardized to support write-mostly application performance. The new dynamic Criteria API allows dynamic construction of queries without requiring an in-depth knowledge of SQL.
- Java API for RESTful Web Services (JAX-RS) 1.1 is added to the platform in support of Web 2.0 programming and allows applications to easily and quickly expose resources to the web in a controlled fashion.
- JavaServer Faces (JSF) 2.0 includes support for Facelets, a much tighter integrated page description format that improves performance and UI composition capabilities. It also includes support for AJAX life cycles for better UI interaction, UI look and feel, customization through skins, and extensive use of annotations for improved developer productivity.
- Java Servlet 3.0 adds asynchronous protocol support for SIP and COMET as well as others. Servlet programming is simplified through the extensive use of annotations for declaring metadata. Automatic metadata discovery and integration provided by the web fragment support helps speed and simplify the integration of third-party presentation frameworks.
- Bean Validation 1.0 provides a declarative means for describing validation constraints for data. Developer efficiency is improved by not having to write and maintain validation logic multiple times in multiple places within the application.

Additionally, Bean Validation is integrated with JSF to ensure form data is automatically validated to be correct, with JPA to ensure incorrect data is not persisted, and with Java EE Connector architecture (JCA) to ensure Connectors are correctly configured.

- WebSphere Application Server provides high-performance, reliable, and scalable implementations of Java EE 6 specifications along with integration value add, such as Dynacache Servlet caching support for Servlet 3.0, security integration and support for a variety of application topologies.
- Support for Java Platform, Standard Edition 6.0, including the latest performance, security, and reliability enhancements delivered by the IBM Java SDK for z/OS V6.0.1 to accelerate Java application innovation.
- OSGi Applications programming model: Rapidly build, deploy, manage, and maintain modular applications using Java EE and OSGi technologies through versioned, isolated, and reusable OSGi bundles. Key capabilities include:
 - OSGi Enterprise Specification 4.2 Blueprint Container support for declarative assembly of components, which simplifies unit test outside of the application server
 - Compose isolated enterprise applications using multiple multi-version bundles with dynamic lifecycles
 - Deploy applications in archives containing only application-specific content, along with metadata referencing any shared bundles, resulting in lightweight memory requirements as only single copies of common bundles are loaded into memory
 - Extend application asset life and improve reuse by deploying existing web application archives (WAR files) as OSGi web application bundles (WAB) in order to use existing assets within an OSGi application
 - Support for applications to use versions of common utility classes, distinct from the versions used internally by WebSphere Application Server, without needing to configure Java EE application class loader policies
 - Improved modularity and simpler application maintenance and upgrading through simultaneously loading multiple versions of classes in the same application, using standard OSGi mechanisms
 - An integrated bundle repository and ability to configure external repositories, to support reuse through the provisioning of bundles to applications

- Administration enhancements to update deployed applications in a modular way, at the bundle level
- Extensions to the Blueprint component model for declarative transactions and container-managed JPA
- Web 2.0 and Mobile programming model: Deliver richer user experiences and extend the reach of enterprise applications to desktop web and mobile web applications to improve customer satisfaction. Key capabilities include:
 - Available as an optionally installable Feature Pack for WebSphere Application Server V8.0
 - Based on open source Apache Wink and Dojo projects, with IBM value add to simplify working with different protocols, data formats, and connectivity options
 - Faster delivery of richer user interfaces and user experiences to mobile and desktop browser based applications through support for Dojo 1.6 widget library
 - Enhanced developer productivity through new and improved rich internet application (RIA) and mobile application building blocks, including Directory Listing Service , File Upload Service, Graphics Conversion Service, Logging, Debug and Analytics Capture Service, and Device/browser Detection Service
 - Deliver rich enterprise user interfaces, including graphs and diagramming, through the new Dojo Diagrammer widget, based on technology from IBM ILOG® Visualization offerings
 - Faster delivery of rich client-side applications that integrate with server-side Java applications and services through a JAX-RS standalone client API, with the option of using Apache HttpClient 4.0
 - Developer productivity enhancements through built-in support for JavaScript™ Object Notation library (JSON4J) to simplify working with JavaScript objects within Java environments
 - Faster time to value and increased reuse of existing application assets through supported web remoting via simple configuration versus having to rewrite the original Java objects, EJBs, or web services to expose methods and map via HTTP GET/POST requests
 - ATOM and RSS libraries for exposing Java EE resources as Web 2.0 style "data feeds" to speed data integration within applications
 - Enhanced security and integration capabilities through Ajax Proxy support to securely allow browser access to cross-site services.
 - Richer, real-time application experiences through AJAX Messaging support to simplify pushing server-side events to client-side browser applications
- XML programming model: Enable application developers to simply and rapidly process XML data and documents using World Wide Web Consortium (W3C) open-standards-based XML technologies. Key capabilities include:
 - Extensible Stylesheet Language Transformations (XSLT) 2.0: A programming language used to transform XML data into a new XML format or into another presentation-oriented format such as HTML, XHTML, or SVG
 - XML Path Language (XPath) 2.0: A programming language designed to allow developers to select nodes from an XML document to accelerate processing performance and ease of use
 - XML Query Language (XQuery) 1.0: A query language optimized for retrieval of both structured and unstructured data
 - Improved XML-application reliability with new support for XML schema-aware processing and validation
 - IBM Thin Client for XML support to accelerate the delivery of client-side applications that utilize XSLT 2.0, XPath 2.0 and XQuery 1.0 through WebSphere Application Server
- Service Component Architecture (SCA) programming model: Increase reuse and accelerate innovative application delivery and management in a SOA. Key capabilities include:
 - Open SOA Collaboration (osoa.org) SCA 1.0 standards support
 - Based on open source Apache Tuscany project with IBM value add including integration and ease of use

- Extend existing application asset life and speed application delivery by creating service compositions using POJOs, EJB 2.1, EJB 3.0, EJB 3.1, OSGi Applications and Spring components, Java Servlets, and AJAX/JavaScript
- Speed application integration efforts through binding support for Web Services, JMS, SCA and EJB 2.0, EJB 2.1, EJB 3.0, EJB 3.1 and OSGi Applications components
- Expose business logic to Web 2.0 applications through JSON-RPC and ATOM Web feeds
- Speed the integration of data across disparate systems through Java Architecture for XML Binding (JAXB) or Service Data Objects (SDO) 2.1.1 data representation
- Improve deployment productivity through flexible service deployment as a standard Java Archive (JAR)
- Communications Enabled Applications (CEA) programming model: Simply and rapidly deliver rich and interactive user experiences by adding communications capabilities, like click-to-call and cobrowsing, to web applications. Key capabilities include:
 - Lower barrier to end user adoption through no client-side software or plug-in installations required
 - Pre-built, customizable, and extensible Web 2.0 widgets, including support for the iWidget specification to seamlessly integrate CEA widgets into WebSphere Portal applications
 - Click-to-Call widget: to create a multi-modal session between two parties which consists of a joint phone call and a joint web browsing session
 - Call Notifications widget: to receive notification of an incoming call
 - Collaboration Dialog widget: a data channel to share data between parties in a joint session
 - Contact Center Cobrowsing widget: to enable each party to control web browser navigation of the other party, with their permission, and highlight information for the other party to see, in a usage scenario between a user and a contact center representative
 - Peer-to-Peer Cobrowsing widget: to enable each party to control web browser navigation of the other party, with their permission, and highlight information for the other party to see, in a usage scenario between a two users
 - Two-way Synchronized Forms widget: an extension to the Contact Center Cobrowsing widget to enable real-time visual confirmation of form data that a contact center representative is entering into a web application
 - CEA widgets supported on WebKit-based mobile web browsers to extend reach to mobile applications
 - Using as little as three lines of code to enable any CEA widget onto an existing or new web application for unmatched simplicity and time to value
 - RESTful and XML Web service interfaces to programmatically add call control capabilities, such as make call, end call, and receive call notification, to new or existing applications
 - Accelerated proof of concepts through included telephony unit test environment and pre-testing with Avaya, Cisco, and Nortel unified communications systems
- Session Initiation Protocol (SIP) programming model: Develop, deliver, and manage powerful large-scale mission-critical converged communications services and applications. Key capabilities include:
 - Unmatched high availability, reliability, and scalability to meet the unique needs of network operators, network equipment providers, and independent software vendors delivering real time converged communications services
 - Support for the latest SIP Servlet specification (JSR 289) including annotation support to reduce complexity and improve productivity
 - Simplified control over routing SIP requests between multiple applications through business logic to improve developer productivity and ease of use
 - Multihome support to receive and send SIP requests over multiple network interfaces in order to increase security without sacrificing developer productivity

- Converged web services and SIP container support, adding to the existing converged HTTP and SIP Servlet container, to integrate web services applications and services into a SIP-based communications application for faster time to value and increased business agility o Simplified use of back-to-back user agents (B2BUA) through the new B2BUAHelper class to help increase developer productivity
- Improved firewall support to simplify the development and configuration of SIP applications that consume or provide services through a secure firewall environment
- Java Batch programming model: Reuse existing skills to quickly and cost effectively develop, deploy and manage batch applications. Key capabilities include:
 - Pre-integrated application framework, Java batch programming model and tools to improve developer productivity during the batch application life cycle
 - Container-managed services for checkpoint and restart capabilities of batch workloads to minimize manual intervention and total cost of ownership
 - Integrated administration of OLTP applications and batch jobs and integration with the WebSphere Administrative Console to reuse administrator skills and lower costs
 - Reduced infrastructure costs through concurrent execution of batch and online transaction processing (OLTP) workloads using shared business logic on a shared WebSphere Application Server infrastructure
 - Higher throughput and lower resource consumption for Java batch processing on IBM z/OS when collocated with data subsystems
 - Simple and rapid upgrade path to advanced batch capabilities through the separately available IBM WebSphere Extended Deployment Compute Grid product
- Enhanced developer productivity during the edit-compile-debug development lifecycle through monitored directory-based application install, uninstall, and update of Java EE applications. Simply add delete or update application files in the monitored directory to install, uninstall, or update an application.
- Rapid development of RESTful web applications through support for RESTful views of EJB applications and support for Contexts and Dependency Injection for Java (CDI) with JAX-RS.
- New and improved online samples to accelerate developers time to value when using new and improved capabilities in the product
- Increased developer and administrator productivity through the use of IBM Assembly and Deploy Tools for WebSphere Administration to rapidly assemble and deploy applications to WebSphere Application Server environments. These tools replace the previously available IBM Rational Application Developer Assembly and Deploy function and are restricted to assembly and deployment usage only.
- IBM Rational Application Developer for WebSphere Software with integrated programming model support for building and testing applications for WebSphere Application Server V8.0 is included on a trial basis. A full developer license to IBM Rational Application Developer for WebSphere Software can be easily purchased through a downloadable license key.
- Enhanced reuse and extended application asset life when integrating SAP Software, Siebel Business Applications, Oracle E-Business Suite, JD Edwards EnterpriseOne, and PeopleSoft Enterprise packaged applications with a WebSphere Application Server application. A development and unit testing license to WebSphere Adapters V7.5 is provided with WebSphere Application Server to speed application integration and development.

Enhanced integrated management that provides security and control

WebSphere Application Server for z/OS V8.0 offers world-class security and administrative control to help businesses confidently reduce costs and increase business agility. WebSphere Application Server's rich support for security specifications and granular security controls combined with unmatched centralized administrative capabilities help administrators productively manage and secure application environments their businesses depend on.

New and improved capabilities in WebSphere Application Server V8.0 include:

Installation and maintenance

- New simplified install, maintenance, and uninstall with automated prerequisite and interdependency checking through IBM Installation Manager to speed time-to-value
 - Support for WebSphere Application Server installations and related components including IBM HTTP Server, web server Plug-ins for WebSphere Application Server, WebSphere Customization Toolbox, WebSphere Edge Components, DMZ Secure Proxy Server for WebSphere Application Server, Application Client for WebSphere Application Server, and Pluggable Application Client for WebSphere Application Server
- Improved administrator productivity, repeatability, and standardization through new and improved Centralized Installation Manager which provides centralized and automated install, maintenance, and uninstall
- Reduced disk footprint requirements through enhanced component install granularity to optionally select whether to install WebSphere Application Server components, such as thin clients, EJB deploy and language packs

Administrator productivity and control

- Improved standardization and repeatability through new ability to clone a node, along with configuration modifications, such as Java Virtual Machine (JVM) heap size and classpath, within a cluster based on an existing node. This capability can also be used to recover an existing, but damaged node.
- Improved administrator productivity through Centralized Installation Manager enhancements to simplify the creation, augmenting, and deletion of WebSphere Application Server profiles on remote nodes.
- Enhanced operational efficiency and business agility through ability to administratively extend OSGi Applications-based running applications with new functionality without changing the application artifact, to enable independent application extension and evolution as business needs change.
- Enhanced operational efficiency and minimized downtime through ability to update a running OSGi Applications-based application by only impacting those bundles affected by the change, enabling rapid update of deployed OSGi Applications.
- Improved administrative ease of use and productivity through ability to rapidly locate and edit application configuration properties.
- Enhanced problem determination and application manageability using the new High Performance Extensible Logging (HPEL) log and trace framework. HPEL supports both command line and Administrative Console interactions to accelerate problem determination and uncover potential performance application and configuration bottlenecks.
- Further speed problem determination through the separately available IBM Support Assistant (ISA) which offers a workbench to quickly find key information, automates repetitive steps and includes a variety of serviceability tools.
- Enhanced problem determination through granular control of parameters such as request dispatch timeout, ability to dynamically create request based controls for tracing a particular application in a mixed workload environment and ability to tag message with an application.
- Enhanced ability for chargeback and capacity planning by providing granular control over SMF recording.

Migration and investment protection

- Improved time to value and reduced risk of down time through migration support for WebSphere Application Server V6.0, V6.1 and V7.0 configuration information using command-line tools and the GUI-based Configuration Migration Tool.
- Application migration speed and ease of use is further enhanced through the separately available WebSphere Application Server Migration Toolkit. Available via web download, the Application Migration Tool supports upgrades from WebSphere

Application Server V5.1, V6.0, V6.1, or V7.0 to WebSphere Application Server V8.0.

IBM has made significant investments in upward compatibility, configuration, and management process upgrades, as well as API preservation and consistency between WebSphere releases. But, with changing industry standard specifications, application changes are sometimes needed in order to support or exploit new levels of the industry standard being delivered. The Application Migration Tool helps customers to quickly and easily identify and implement those application changes as part of an upgrade to WebSphere Application Server V8.0.

- Improved cost of ownership, risk reduction, and increased life for existing application assets through continued mixed version cell support and the ability to utilize older Java EE levels in a modern WebSphere Application Server deployment.

A WebSphere Application Server Network Deployment V8.0 cell can contain and administer V6.1, V7.0, and V8.0 nodes. Additionally, customers can run J2EE 1.2, 1.3, 1.4, and Java EE 5 and Java EE 6 applications on WebSphere Application Server.

Security

- Overall security hardening enhancements including, security updates defined in the Java Servlet 3.0 specification (JSR 315), Java Authentication SPI for Containers (JSR 196), and additional security features enabled by default and enhanced security configuration reporting to achieve a more complete view of server security settings.
- Enhanced security configuration flexibility and ease of use when configuring federated repositories through the addition of multiple security domain support for federated repositories. Administrators can now configure multiple federated repositories with a different repository configuration per application.
- Enhanced security and auditability for applications requiring distributed and z/OS system access through the ability to use z/OS System Authorization Facility (SAF) security to associate a SAF user ID with a distributed identity. When you use this feature, you can maintain the original identity information of a user for audit purposes and have less to configure in WebSphere Application Server.
- Enhanced security and ease of use through the simplified exchange of user identity and attributes in Web Services using Security Assertion Markup Language (SAML) Token through WS-Security SAML Token Profile 1.1. This feature allows customers to securely exchange client identify and other security information across security domains.
- Faster time-to-value when delivering single sign on web services- based applications though ability to generate SAML tokens, request SAML tokens from an external Security Token Service (STS) and propagate SAML tokens in SOAP messages using the web services security application programming interfaces (WSS API). This is an alternative solution to using policy set attachments with web services clients.
- Improved component reuse and agility through ability to configure a web service application to interoperate with multiple endpoint services, each with potentially different configuration requirements, through specifying multiple policy sets and bindings specific to each endpoint service.
- Improved security and interoperability through ability to generate and consume tokens using WS-Trust Issue and WS-Trust Validate requests for JAX-WS web services that use web services security. As a result of these requests, the login module issues, validates, or exchanges tokens with a WS-Trust Security Token Service, such as the service that is provided with the IBM Tivoli® Federated Identity Manager.
- Enhanced browser attribute for single sign-on applications to prevent client-side applications from accessing cookies to reduce cross-site scripting vulnerabilities using HTTPOnly attribute in the cookie.
- Ease-of-use, administration, and security enhancements for Java API for XML Web Services (JAX-WS) based applications.

Improved operational efficiency and reliability

WebSphere Application Server V8.0 can help businesses reduce costs through industry leading performance, operational efficiency, and reliability. Companies can take advantage of WebSphere Application Server's high performance to consolidate workloads and administrative overhead to reduce total cost of ownership without sacrificing system reliability. WebSphere Application Server's proven transactional support helps companies maintain transaction integrity and overall reliability to minimize the likelihood of lost business opportunities due to failed transactions or system down time.

New and improved capabilities in WebSphere Application Server V8.0 include:

- End-to-end performance improvements including faster product installations, server startup, application server creation, and application installations for large applications.
- New performance improvements through JPA 2.0 optimizations with DynaCache and JPA Level 2 cache offer total cost of ownership reduction for modern applications.
- Improved transactional integrity through support for shared database locks between transaction branches and integration of new programming models with WebSphere Application Server's proven transaction engine.
- High availability enhancements for Optimized Local Adapters include support for resource failover of J2C connection factory when primary connection factory becomes unavailable.
- Improved support for calls to IMS™ applications include OLA OTMA support for multi-segment messages, allowing WOLA applications to send message and receive responses greater than 32K.
- Improved availability through automatic detection of failures in back-end resource managers leading to assorted recovery actions to improve high availability in a clustered server environment. Recovery actions include the ability to fail over to a back up resource manager with automatic fail-back when the primary resource manager is available.
- Improved high-availability support when using WebSphere MQ with service integration bus (SIBus), offering the new capability for SIBus to reconnect to a standby gateway queue manager when an active gateway queue manager fails or becomes unavailable.
- Enhanced performance and lower processing requirements by optionally disabling WebSphere MQ functionality within WebSphere Application Server when not being used by the application server or an application client.
- Improved reliability and application performance through support for both client affinity and client reroute for applications that use IBM DB2® databases. Use client affinity functions to control the order of servers that are tried during initial connection processing or the client reroute functions to specify alternate server locations when connections to a database server fail.
- Improved performance and reliability through new location transparency for EJBs using DB2 connections. Multiple EJBs on different servers can share visibility/locks to data within a distributed transaction.
- Improved reliability and performance JCA data source and connection factory failover and subsequent failback to a predefined alternate resource.
- Enhanced administrator and developer flexibility to select amongst supported Java SDK releases to access new innovations and performance enhancements for use with WebSphere Application Server V8.0.
- Continued support for optionally installable WebSphere Application Server Feature Packs, including the Web 2.0 and Mobile Feature Pack, enable developers to access the latest in technology innovations while providing administrators the ability to maintain stability in their production environments.
- Enhanced deployment efficiency and flexibility through the ability to connect existing and new applications to the latest versions of a wide variety of industry-leading databases and Java Database Connectivity (JDBC) drivers including IBM DB2, IBM Informix®, Microsoft® SQL Server, Oracle Database, Sybase Database, and the DataDirect Connect for JDBC driver.

Accessibility by people with disabilities

The following features support use by people with disabilities:

- Operation by keyboard alone
- Optional font enlargement and high-contrast display settings
- Screen readers and screen magnifiers tested for use by people with visual impairment

A US Section 508 Voluntary Product Accessibility Template (VPAT) containing details on the products accessibility compliance can be requested via IBM's website at the following website

http://www.ibm.com/able/product_accessibility/index.html

Section 508 of the U.S. Rehabilitation Act

WebSphere Application Server for z/OS, V8.0 is capable as of June 17, 2011, when used in accordance with IBM's associated documentation, of satisfying the applicable requirements of Section 508 of the Rehabilitation Act, provided that any assistive technology used with the product properly interoperates with it.

Value Unit-based pricing

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

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

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

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

- Determine the required license capacity, in MSUs
- Aggregate the MSUs across the enterprise
- Convert the total MSUs to Value Units, using the applicable Value Unit Exhibit
- Multiply the price per Value Unit by the total number of Value Units to determine the total cost

To simplify conversion from the designated measurement to Value Units or vice-versa, use the Value Unit Converter Tool. For additional information or to obtain a copy of the Value Unit Converter Tool, visit the Value Unit Converter Tool website

<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 [Technical information](#) section.

Product positioning

The WebSphere Application Server family offers multiple configuration options and support for multiple business models and deployment platforms. It also supports a wide range of scenarios, from open source-based projects and projects with no up-front budget, to simple administration of a single server environment, to a clustered, highly available, high-volume environment with edge-of-network services.

WebSphere Application Server V8.0 configurations are built on a common server foundation that delivers the same Java EE 6 and broad programming model support, and proven transactional engine, with increasingly higher qualities of service available across product configurations. This offers unparalleled flexibility to incrementally add higher quality of service to applications as business needs change without the cost of rearchitecting, reprogramming or migrating to different technology bases.

Configuration options include:

WebSphere Application Server - Express® V8.0

An affordable, ready-to-go application foundation for single server, smaller scale deployments of dynamic web applications which can be effortlessly migrated to more advanced versions of the WebSphere Application Server family as business needs change. Centralized administration of WebSphere Application Server - Express is available through the Flexible Management feature of WebSphere Application Server Network Deployment. WebSphere Application Server - Express is limited to single-server implementations and up to a maximum of 480 Processor Value Units per server or virtualized partition.

WebSphere Application Server for Developers V8.0

The optimal development environment for building and testing applications on a developer's desktop which will eventually run on WebSphere Application Server in production. Licensed for development use, WebSphere Application Server for Developers offers functional equivalence to the core WebSphere Application Server configuration to help developers reduce testing effort, develop with confidence and deliver innovative applications faster. This configuration is also available at no charge, with optional paid support, in order to lower the barrier to entry for developers building for WebSphere Application Server environments.

WebSphere Application Server V8.0

An application foundation tailored for single server to moderately sized configurations of departmental or large-scale, dynamic web applications requiring web tier clustering and failover across up to five application server instances, and a variety of pricing alternatives, including socket-based pricing. Centralized administration of WebSphere Application Server is available through the Flexible Management feature of WebSphere Application Server Network Deployment.

WebSphere Application Server Network Deployment V8.0

For enterprises that need near-continuous availability, advanced management, and automated performance optimization for their mission-critical applications, WebSphere Application Server Network Deployment delivers an environment that is highly available, dynamically scalable, and easily managed. Building on the core WebSphere Application Server configuration, WebSphere Application Server Network Deployment offers:

- World-class clustering and high-availability management to help eliminate the cost of system downtime
- Edge components, which offer sophisticated load balancing, caching, and centralized security for enhanced performance at the edge of the network
- Advanced centralized management and administration to make management of more complex environments less time-consuming and resource-consuming
- Enterprise proven leading security capabilities to safeguard your business
- Industry leading performance that maximizes business competitiveness while minimizing total cost of ownership (TCO)

WebSphere Application Server for z/OS, V8.0

An application foundation optimized to take advantage of the unique qualities of service of IBM System z hardware and the z/OS operating system. WebSphere Application Server for z/OS offers functional equivalence to WebSphere Application Server Network Deployment, along with additional capabilities such as prioritized workload management, advanced transactional integrity, intense scalability, and data and workload collocation, made possible through tight integration with IBM System z and z/OS.

Related products

WebSphere Application Server Hypervisor™ Edition V7.0

WebSphere Application Server Hypervisor Edition includes all the robust features of WebSphere Application Server and is optimized to run in server virtualized environments. Designed to reduce installation and configuration time, WebSphere Application Server Hypervisor Edition helps reduce time-to-value during development, test, and production of WebSphere based applications.

Each WebSphere Application Server Hypervisor Edition offering is a preconfigured package that integrates WebSphere Application Server and associated feature packs, IBM HTTP Server, and an operating system compatible with each supported hypervisor. Enhanced operational cost reduction and business agility can be gained through the use of WebSphere Application Server Hypervisor Edition with IBM Workload Deployer, a cloud computing appliance that manages IBM products in a cloud environment. It dispenses patterns of virtual images into a pool of virtualized resources running a supported hypervisor. The optimization for deployment speed and agility enables an entirely new usage paradigm for WebSphere Application Server, built around rapid setup and teardown. Test cases can be based upon a standardized deployment that is destroyed and reinstalled after each execution.

WebSphere Application Server Community Edition V2.1

Delivers a lightweight Java EE application server built on open-source Apache Geronimo technology. WebSphere Application Server Community Edition is backed by optionally available, world-class support from IBM, ensuring that customers receive assistance and timely problem resolution from the IBM team of expert support professionals and developers. Simple socket-based pricing is also optionally available. For a Statement of Direction (SOD) regarding future content of WebSphere Application Server Community Edition, refer to the SOD section.

WebSphere Application Server Feature Pack for Dynamic Scripting V1.0

Speed the development and delivery of situational applications using dynamic scripting languages. Key capabilities include the ability to:

- Utilize the PHP and Groovy dynamic scripting languages to quickly address application requirements
- Leverage Web 2.0 technologies, such as Asynchronous JavaScript and XML (AJAX), representational state transfer (REST), Atom, JavaScript object notation (JSON), and Really Simple Syndication (RSS) to unleash and reuse enterprise content
- Develop and deploy application components supporting the iWidget specification that can be incorporated into WebSphere Portal and IBM Mashup Center-based applications

- Run WebSphere sMash V1.1.1 applications unchanged in a WebSphere Application Server deployment
- Provide community-supported browser-based tooling and an Eclipse plug-in for application developers, available at no charge on the Project Zero community website
- Allow community-supported, centralized management and deployment -- sMash Enterprise Packager -- available on the Project Zero community website
- Supports WebSphere Application Server V8.0, V7.0, and V6.1 on hardware and software configurations at:

<http://www.ibm.com/software/webservers/appserv/was/featurepacks/dynamicscripting/reqs/index.html>

WebSphere Adapters V7.5

WebSphere Adapters help accelerate business integration projects with rapidly deployable, enterprise-ready connections based on best practices. The WebSphere Adapters portfolio provides a comprehensive set of capabilities to reuse and extend your packaged and legacy applications. IBM WebSphere Adapters V7.5 includes enhanced adapters for SAP Software, Siebel Business Applications, Oracle E-Business Suite, JD Edwards EnterpriseOne, and PeopleSoft Enterprise.

The Adapter for Oracle EBS is enhanced to provide support for additional interfaces namely: XML gateway using JMS and Oracle Advanced Queue, thus providing a consistent approach for accessing/storing information in Oracle E-Business Suite. The Adapters for SAP and Siebel are enhanced for additional data type support.

A separate license entitlement for the appropriate WebSphere Adapter must be purchased when deploying WebSphere Adapter components for SAP, Oracle EBS, Siebel, PeopleSoft, or JD Edwards to WebSphere Application Server V8.0 or WebSphere Application Server V7.0 for production use.

Version-to-version comparison

Benefits of migrating to WebSphere Application Server V8.0

IBM WebSphere Application Server V8.0 is designed to deliver significant improvements in performance, usability, and security that reduce risk, total cost of ownership (TCO), and time-to-value enabling businesses to meet their needs quickly and efficiently. With more than 1,000 companies participating in the early program for WebSphere Application Server V8.0, and concurrent availability of migration tooling, customers can confidently migrate to WebSphere Application Server V8.0 at an accelerated pace.

Key benefits include:

- Lower TCO through end-to-end performance improvements across the development, test, production, and maintenance lifecycle
- New revenue opportunities and rich user experiences enabled by extending enterprise applications to mobile devices
- Faster migrations with less risk of down time through improved automation and tools, including a no-charge Migration Toolkit for migrating version-to-version and from competition
- Improved developer and administrator productivity through new and improved features such as
 - Improved developer productivity through monitored directory install, uninstall, and update of Java EE applications to accelerate the edit-compile-debug development lifecycle
 - Enhanced administrator productivity through automated cloning of nodes within clusters, simpler ability to centrally expand topologies and to locate and edit configuration properties
 - Faster problem determination through new binary log and trace framework

- Simpler and faster product install and maintenance with new automated prerequisite and interdependency checking across distributed and z/OS environments
- Deliver better user experiences faster by aligning programming model strengths with project needs through WebSphere's leadership in the breadth of programming models supported:
 - Java EE, OSGi Applications, Web 2.0 and Mobile, Java Batch, XML, Service Component Architecture (SCA), Communications Enabled Applications (CEA), Session Initiation Protocol (SIP), and Dynamic Scripting
 - Integration of WebSphere Application Server V7 feature packs to simplify access to new programming models
 - Lower risks through end-to-end security hardening enhancements including security updates defined in the Java EE 6 specifications, additional security features enabled by default and improved security configuration reporting
 - Deliver single sign on (SSO) applications faster through new and improved support for SAML, WS Trust, and WSS API specifications

Statement of direction

As part of the family of products, WebSphere Application Server includes a lightweight application server built on open-source Apache Geronimo technology. This part of the portfolio is WebSphere Application Server Community Edition which streamlines the creation of applications on a lower-cost, open source Java EE platform. IBM intends to update WebSphere Application Server Community Edition to support:

- Java EE 6
- OSGi enterprise application programming model based on Apache Aries
- Additional best-of-breed open source technologies from the Apache and Eclipse projects
- Custom Assembly improvements
- Usability enhancements

All this while providing continued support for a lightweight, small footprint development and runtime environment. IBM also intends to improve migration of applications from your open-source environment to the open-standards based WebSphere family.

Socket-based support pricing will continue to be available to meet your deployment and configuration needs.

IBM's statements regarding its plans, directions, and intent are subject to change or withdrawal without notice at IBM's sole discretion. Information regarding potential future products is intended to outline our general product direction and it should not be relied on in making a purchasing decision. The information mentioned regarding potential future products is not a commitment, promise, or legal obligation to deliver any material, code or functionality. Information about potential future products may not be incorporated into any contract. The development, release, and timing of any future features or functionality described for IBM's products remains at IBM's sole discretion.

Reference information

For information on WebSphere Application Server V8.0 for non-System z environments, refer to Software Announcement [211-139](#), dated April 5, 2011.

For information on WebSphere Application Server Community Edition V2.1, refer to Software Announcement [208-254](#), dated July 29, 2008.

For information on the web

- WebSphere Application Server Family, visit
<http://www.ibm.com/software/info1/websphere/index.jsp?tab=products/appserv>
- For specific information on WebSphere Application Server for z/OS, visit
http://www.ibm.com/software/webservers/appserv/zos_os390/

The WebSphere Application Server zone of Developer Domain has valuable information. Visit

<http://www7b.boulder.ibm.com/wsdd/zones/was/>

- The Washington Systems Center Techdocs site has valuable information. Visit
<http://www.ibm.com/support/techdocs/atmastr.nsf/Web/Techdocs>
- z/OS Internet library, visit
<http://www.ibm.com/servers/eserver/zseries/zos/bkserv/>
- z/Series and S/390® e-business Internet -- For a wide range of information including the latest announcements, customer success stories, and technical information, visit
<http://www-03.ibm.com/systems/z/>

Availability of national languages

Description	Availability date	Language
WebSphere Application Server for z/OS, v8.0	June 17, 2011	English/Japanese

Program number

Program number	VRM	Program name
5655-w65	8.0.0	WebSphere Application server for z/OS
5655-F81	1.1.0	WebSphere Application Server for z/OS - Software Subscription and Support

Product identification number

Program PID number	Subscription and Support PID number
5655-w65	5655-F81

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).

<https://www.ibm.com/partnerworld/mem/sla.jsp?num=211-117>

Services

WebSphere Architecture and Design Workshop for z/OS

This is a five-day workshop where IBM consultants will work with your architects and subject-matter experts to develop a conceptual model for a solution based on an integrated WebSphere architecture. For more information, visit

<http://www.software.ibm.com/wsdd/services/services.html#z>

IBM Implementation Services for WebSphere Application Server for z/OS

IBM Implementation Services for WebSphere Application Server for z/OS is designed to provide a quick implementation of WebSphere Application Server in a z/OS or S/390 business environment. Installation, configuration, customization and basic instruction on operation and management of the WebSphere Application Server is also provided for your customer's staff. This service offers customers who need a competitive e-business solution a quick, cost-effective efficient way to capitalize on Internet business growth.

For more information, visit

<http://www-935.ibm.com/services/us/index.wss/offering/its/a1029893>

Performance and testing services

Helps to optimize the performance and availability of a customer's IT infrastructure. For more information, visit

<http://www.ibm.com/services/ism/pmts>

WebSphere Proof of Concept for z/OS

The objective of this offering is to rapidly build and demonstrate a limited working prototype of an On Demand solution based on a real customer On Demand problem. For more information, visit

<http://www.software.ibm.com/wsdd/services/services.html#z>

For information on the following offerings visit

<http://www.software.ibm.com/wsdd/services/services.html#z>

WebSphere z/OS V7.0 Application Migration

This offering's objective is to migrate applications from previous versions of WebSphere Application Server for z/OS to V8.0, or from WebSphere Application Server distributed to WebSphere Application Server for z/OS, V8.0.

WebSphere for z/OS High Availability Design Workshop

This offering creates a detailed plan to help optimize availability for your 7 by 24 web-serving environment. Consultants explore workload balancing, back up and recovery, and design an environment to maximize your capabilities. A detailed workbook is created for implementing recommendations.

WebSphere for z/OS High Availability Health Check

This workshop offers a chance to have your design and implementation reviewed by experts who make recommendations to help improve the availability of your network and web applications.

WebSphere for z/OS Infrastructure Security Design Workshop

This offering creates a detailed plan for your operating system, network and application for end-to-end security. The consultants explore all options, share best practices, and create a detailed workbook to implement recommendations.

WebSphere for z/OS Infrastructure Security Health Check

The Security Health Check helps assess if your z/OS network has the best currently available security measures in place and makes recommendations for improvements where necessary.

WebSphere for z/OS Professionals

This training capitalizes on your investment in z/OS development, programming or operations by introducing you to the WebSphere product.

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, refer to the website and search on the product name

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

Skill-based roadmaps can be found at

<http://www-03.ibm.com/certify/news/20040916.shtml>

IBM Global Services, IT Education Services, provides education to support many IBM offerings. Descriptions of courses for IT professionals and managers are on the IBM IT Education Services website.

<http://www.ibm.com/services/learning/>

Refer to the IBM IT Education Services website for information on course locations and availability dates.

Call IBM Global Services, IT Education Services at 800-IBM-TEACH (426-8322) for catalogs, schedules, and enrollments.

Offering Information

Product information is available via the Offering Information website

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

Publications

The primary delivery and latest product documentation for WebSphere Application Server for z/OS, V8.0 can be found in the online information center available from the Library web page at

<http://www.ibm.com/software/webservers/appserv/was/library/>

PDF versions of the documentation are also available from the preceding Library web page as well as from the IBM Publications Center at

<http://www.ibm.com/shop/publications/order>

Title	Order Number
WebSphere Application Server for z/OS, V8.0 Overview	SA38-0659
WebSphere Application Server for z/OS, V8.0 End-to-end paths	SA38-0660
WebSphere Application Server for z/OS, V8.0 Installing your application serving environment	GA32-0897
WebSphere Application Server for z/OS, V8.0 Setting up the application serving environment	GA32-0898
WebSphere Application Server for z/OS, V8.0 Developing and deploying applications	SA23-1356
WebSphere Application Server for z/OS, V8.0 Migrating WebSphere applications	GA32-0899
WebSphere Application Server for z/OS, V8.0 Securing applications and their environment	SA23-1357
WebSphere Application Server for z/OS, V8.0 Administering applications and their environment	SA23-1358
WebSphere Application Server for z/OS, V8.0 Troubleshooting and support	GA32-0900
WebSphere Application Server for z/OS, V8.0 Setting up intermediary services	SA23-1359
WebSphere Application Server for z/OS, V8.0 Tuning guide	SA23-1360
WebSphere Application Server for z/OS, V8.0 Tuning various types of applications	SA38-0663
WebSphere Application Server for z/OS, V8.0 Administering WebSphere applications	SA23-1361
WebSphere Application Server for z/OS, V8.0 Establishing high availability	SA23-1362
WebSphere Application Server for z/OS, V8.0 Establishing high availability services for applications	SA38-0664
WebSphere Application Server for z/OS, V8.0 Migrating, coexisting, and interoperating	GA32-0901
WebSphere Application Server for z/OS, V8.0 Scripting the application serving environment	SA23-1363
WebSphere Application Server for z/OS, V8.0 Scripting various types of applications	SA38-0661

WebSphere Application Server for z/OS, v8.0 Securing WebSphere applications	SA23-1364
WebSphere Application Server for z/OS, v8.0 Developing WebSphere applications	SA23-1365
WebSphere Application Server for z/OS, v8.0 Monitoring	SA23-1366
WebSphere Application Server for z/OS, v8.0 Monitoring various types of applications	SA38-0662
WebSphere Application Server for z/OS, v8.0 Troubleshooting WebSphere applications	GA32-0902

The Publications Center is a worldwide central repository for IBM product publications and marketing material. Payment options for orders are accepted with a credit card (in the U.S.) or customer number for 20 countries. A large number of publications are available online in various file formats, and they can all be downloaded by all countries free of charge.

News of many publications may be subscribed to through Mysupport.

<https://www-1.ibm.com/support/mysupport/us/en/?OpenDocument>

The following publications are available with your order, through the IBM Publications Center, and on the Library web page at

<http://www.ibm.com/software/webservers/appserv/was/library/>

Title	Order Number
WebSphere Application Server for z/OS, v8.0 Program Directory	GI11-9850
IBM Installation Manager for z/OS, v1.4.3 Program Directory	GI11-9852
IBM Tivoli Composite Application Manager for IBM WebSphere Application Server v7.2	GI11-8919

Technical information

Specified operating environment

Hardware requirements

For z/OS (31- and 64-bit WebSphere Application Server)

- Any hardware that supports z/OS V1.10, or later
- Minimum 3.5 GB (web installation) of available disc space
- Minimum 7 GB (local installation using Installation Manager) to 9 GB (local installation using SMP/E deliverables) of available disc space
- Minimum 1 GB of central storage; 1 GB per running application server recommended

For more information on WebSphere Application Server, for z/OS, visit

<http://www.ibm.com/support/docview.wss?rs=180&uid=swg27012284>

IBM System z Application Assist Processors (zAAP)

zAAPs are attractively priced specialty engines that provide a strategic z/OS Java execution and XML parsing environment on z/OS. zAAP can help you strategically integrate and run new Java and XML-based applications with core z/OS business applications and back-end database systems, increasing overall system productivity,

and ultimately lower the overall cost of computing for running Java technology-based workloads on the platform.

Although not a hard requirement, WebSphere Application Server for z/OS V7.0 offers full support for zAAPs for its Java-based applications.

The IBM Java Virtual Machine (JVM) processing cycles can be executed on the configured zAAPs with no anticipated modifications to the Java applications. Execution of the JVM processing cycles on a zAAP is a function of the IBM Software Developer's Kit (SDK) for z/OS, z/OS, and Processor Resource/Systems Manager™ (PR/SM™).

When configured with general-purpose processors within logical partitions running z/OS, zAAPs may help increase general-purpose processor productivity and may contribute to lowering the overall cost of computing for z/OS Java technology-based applications. zAAPs are designed to operate asynchronously with the processors to execute Java programming under control of the IBM JVM. This can help reduce the demands and capacity requirements on general-purpose processors which may then be available for reallocation to other mainframe workloads.

The amount of general-purpose processor savings varies based on the amount of Java application code executed by zAAP. This is dependent upon the amount of Java cycles used by the relevant applications and on the zAAP execution mode that you select.

IBM does not impose software charges on zAAP capacity. Additional IBM software charges apply only when additional general-purpose central processing capacity is used. You are encouraged to contact your specific ISVs/USVs directly to determine if your charges will be affected.

For more details, see the zAAP Redbook at

<http://www.redbooks.ibm.com/abstracts/sg246386.html?Open>

Software requirements

Operating system

- z/OS 1.12 System z (31- and 64-bit)
- z/OS 1.11 System z (31- and 64-bit)
- z/OS 1.10 System z (31- and 64-bit)

Databases

- DB2 UDB for iSeries® V5.3
- DB2 for i5/OS® V5R4
- DB2 UDB for z/OS, V8.1 and future modification levels and their fix packs
- DB2 for i V6.1
- Apache Derby 10.3
- IBM Informix Dynamic Server 11.50
- Informix IDS 10.00.xC6
- Microsoft SQL Server 2005 SP2
- Oracle Database 10g Standard Edition Release 1 10.1.0.41
- Oracle Database 10g Enterprise Edition Release 2 10.2.0.2¹
- Oracle Database 11g Enterprise Edition Release 1 11.1.0.6
- Oracle Database 11g Standard Edition Release 1 11.1.0.6
- DB2 Enterprise Server Edition V9.1 and future fix packs²
- DB2 Enterprise Server Edition V9.5 and future fix packs³
- DB2 Information Integrator V8.2 and future releases, modification levels, and fix packs⁴

- IBM Informix Dynamic Server Express Edition 11.10
- Sybase Adaptive Server Enterprise 12.5.4
- Sybase Adaptive Server Enterprise 15.0.2
- DB2 Enterprise Server Edition V9.7 and future fix packs⁵
- DB2 UDB for Unix/Linux and Windows® V8.1 and future fix packs⁵ FP11a, FP12, FP13, FP14 and FP15
- DB2 UDB for Unix/Linux and Windows V8.2 (V8.1 + FP7) and future fix packs⁵
- DB2 Universal Database™ Express Edition V8.1⁵
- DB2 Universal Database Express Edition V8.2 and future fix packs⁵
- DB2 Express V9 9.1 and future fix packs⁵
- DB2 Express Server Edition V9.7 and future fix packs⁵
- DB2 Express Edition V9.5 and future fix packs⁵
- DB2 Universal Database Workgroup Server Edition V8.1 and future fix packs⁵
- DB2 Universal Database Workgroup Server Edition V8.2 and future fix packs⁵
- DB2 Workgroup Server Edition V9.1 and future fix packs⁵
- DB2 Workgroup Server Edition V9.5 and future fix packs⁵
- DB2 Workgroup Server Edition V9.7 and future fix packs⁵
- DB2 9 for z/OS, V9.1 and future modification levels and their fix packs
- Microsoft SQL Server 2008
- Oracle Database 10g Standard Edition Release 2 10.2.0.2¹
- Oracle Database 10g Enterprise Edition Release 2 10.2.0.1¹
- Oracle Database 10g Standard Edition Release 2¹
- Oracle Database 10g Enterprise Edition Release 1 10.1.0.4¹
- IMS 9
- IMS 10
- CICS® Transaction Server for z/OS, V2.3
- CICS Transaction Server for z/OS, V3.1
- CICS Transaction Server for z/OS, V3.2
- DB2 Enterprise Server Edition V9.1 and future releases, modification levels, and fix packs
- DB2 UDB for z/OS, V8.1 and future releases, modification levels, and fix packs
- DB2 for i V6.1 and future releases, modification levels, and fix packs
- IBM Informix Dynamic Server Express Edition 11.10 and future releases, modification levels, and fix packs
- Microsoft SQL Server Enterprise Edition 2005 and future releases, modification levels, and fix packs
- Sybase Adaptive Server Enterprise 15.0.2 and future releases, modification levels and fix packs
- Oracle Database 11g Standard/Enterprise Editions Release 1 and future releases, modification levels, and fix packs
- Oracle Database 10g Standard/Enterprise Editions Release 1 and future releases, modification levels, and fix packs
- IBM Derby SDK 10.5 and future releases, modification levels and fix packs

JDBC drivers

- DB2 Universal JDBC Driver (type 2/4) 2.10.72 and future fix packs
- DataDirect Connect for JDBC 4.0 (type 4)
- Apache Derby 10.3 JDBC 3.0
- IBM Data Server Driver for JDBC and SQLJ 3.51
- IBM Data Server Driver for JDBC and SQLJ (type 4) 4.1

- Microsoft SQL Server 2005 JDBC Driver 1.2
- Oracle JDBC Driver 11g 11.1.0.6
- DB2 Driver for JDBC and SQLJ (type 2/4) 3.4.65
- Informix JDBC 3.00.JC3 and future modification levels and their fix packs
- IBM Toolbox for Java/JTOpen JDBC Driver 6.0 (Type 4)
- Sybase jConnect (type 4) 5.5 EBF 13904
- Sybase jConnect (type 4) 6.05 EBF 14466
- IBM OS/400® Native JDBC (XA) Driver Any
- IBM DB2 Connect™ V8.2 and future fix packs
- DB2 Connect Enterprise Edition V9.1 and future fix packs
- DB2 Connect Enterprise Edition V9.5 and future fix packs
- Apache Derby 10.3 JDBC 4.0
- Informix Java Database Connectivity Driver 3.10.JC1
- Informix Java Database Connectivity Driver 3.50.JC1
- Microsoft SQL Server JDBC Driver 2.0
- IBM Application Connectivity to DB2 for z/OS, Feature Version
- DB2 UDB for z/OS, V8.1
- DB2 9 for z/OS, V9.1
- IBM IMS JDBC Connector V9
- IBM IMS JDBC Connector V10
- IBM IMS TM Resource Adapter V10
- IBM IMS TM Resource Adapter V9.1.0.2
- DB2 Connect Personal Edition V9.1 and future releases, modification levels, and fix packs
- DB2 Driver for JDBC and SQLJ (type 2/4) 3.4.65
- IBM OS/400 Native JDBC (XA) Driver Any
- IBM Toolbox for Java/JTOpen JDBC Driver 6.0 (Type 4)
- Informix JDBC 3.00.JC3 and future modification levels and their fix packs
- Oracle JDBC Driver (XA) 10g any, 10.1.0.5, or 10.2.0.3
- Oracle JDBC Driver (XA) 11g any, 11.1.0.6, or higher required
- Sybase jConnect (type 4) 5.5 EBF 13904
- Sybase jConnect (type 4) 6.05 EBF 14466
- DataDirect Connect for JDBC 4.1 and future releases, modification levels, and fix packs
- IBM DB2 Universal JDBC Provider from DB2 z/OS Version and future releases, modification levels, and fix packs
- IBM Derby SDK 10.5 and future releases, modification levels, and fix packs
- Microsoft SQL Server JDBC Driver 2.0 and future releases, modification levels, and fix packs
- Microsoft SQL Server JDBC Driver 3.0 and future releases, modification levels, and fix packs
- IBM Data Server Driver for JDBC and SQLJ 3.51 and future fix packs

JMS providers

- WebSphere MQ for z/OS, V6.0⁶
- WebSphere MQ V6.0.2⁶
- WebSphere MQ V7.0⁶
- WebSphere MQ for z/OS, V7.0⁶
- IBM MQ Integrated JMS Client V7
- WebSphere MQ for z/OS, V6.0⁶

- WebSphere MQ V6.0.2⁶
- WebSphere MQ V7.0⁶
- WebSphere MQ for z/OS, V7.0⁶

LDAP servers using Federated Repository Configuration

- IBM Lotus® Domino® LDAP Server V7.0 and future releases, modification levels, and fix packs
- IBM Tivoli Directory Server V6.0 and future releases, modification levels, and fix packs
- Sun Java System Directory Server 6.0
- Microsoft Active Directory 2003 and future releases, modification levels, and fix packs
- Novell eDirectory 8.7.3 SP9 and future releases, modification levels, and fix packs
- IBM z/OS Integrated Security Services V1.8 and future releases, modification levels, and fix packs
- IBM z/OS.e Integrated Security Services V1.8 and future releases, modification levels, and fix packs
- IBM Lotus Domino LDAP Server V7.0 and future releases, modification levels, and fix packs
- IBM Tivoli Directory Server V6.0 and future releases, modification levels, and fix packs
- Sun Java System Directory Server 6.0
- Microsoft Active Directory 2003 and future releases, mod levels, and fix packs
- Novell eDirectory 8.7.3 SP9 and future releases, mod levels, and fix packs
- IBM z/OS Integrated Security Services V1.8 and future releases, mod levels, and fix packs
- IBM z/OS.e Integrated Security Services V1.8 and future releases, mod levels, and fix packs

LDAP servers using stand alone LDAP Registry Configuration

- Microsoft Active Directory Application Mode (ADAM) 1.0 SP1 and future releases, modification levels, and fix packs
- IBM z/OS.e Integrated Security Services V1.8 and future releases, modification levels, and fix packs
- IBM z/OS Integrated Security Services 1.8 and future releases, modification levels, and fix packs
- Novell eDirectory 8.7.3 SP9 and future releases, modification levels, and fix packs
- Microsoft Active Directory 2003 and future releases, modification levels, and fix packs
- Sun Java System Directory Server 6.0
- IBM Tivoli Directory Server V6.0 and future releases, modification levels, and fix packs
- IBM Lotus Domino LDAP Server V7.0 and future releases, modification levels, and fix packs
- Microsoft Active Directory Application Mode (ADAM) 1.0 SP1 and future releases, modification levels, and fix packs
- IBM z/OS.e Integrated Security Services V1.8 and future releases, modification levels, and fix packs
- IBM z/OS Integrated Security Services V1.8 and future releases, modification levels, and fix packs
- Novell eDirectory 8.7.3 SP9 and future releases, modification levels, and fix packs
- Microsoft Active Directory 2003 and future releases, modification levels, and fix packs
- Sun Java System Directory Server 6.0

- IBM Tivoli Directory Server 6.0 and future releases, modification levels, and fix packs
- IBM Lotus Domino LDAP Server 7.0 and future releases, modification levels, and fix packs

Security

- IBM Tivoli Access Manager for e-business V6.0
- IBM Tivoli Access Manager for e-business V6.1

Security server

- IBM Tivoli Access Manager for e-business V6.0
- IBM Tivoli Access Manager for e-business V6.1

Third-party ORBs

- Borland VisiBroker 6.5
- Iona Technologies Orbix Enterprise Edition 6.3
- Sun Java SDK/JRE/JDK 1.4.2
- Sun Java SDK/JRE/JDK 5.0/1.5
- Borland VisiBroker 6.5
- Iona Technologies Orbix Enterprise Edition 6.3
- Sun Java SDK/JRE/JDK 1.4.2
- Sun Java SDK/JRE/JDK 5.0/1.5

Virtualization

- IBM PR/SM any version
- IBM z/VM® Hypervisor V5.1
- IBM z/VM Hypervisor V5.2
- IBM z/VM Hypervisor V5.3
- IBM z/VM Hypervisor V5.4
- IBM PowerVM™ Workload Partitions Manager™ for AIX® V1.2
- IBM PowerVM Workload Partitions Manager for AIX V1.2.1
- IBM PowerVM VIOS, any version
- VMware ESXi V3.5
- VMware ESXi V4.0
- IBM z/VM Hypervisor V6.1
- VMware ESX V3.5
- VMware ESXi V4.0 and future releases, modification levels, and fix packs
- IBM z/VM Hypervisor V6.1 and future releases, modification levels, and fix packs
- IBM PR/SM, any version and future releases, modification levels, and fix packs
- IBM PowerVM Hypervisor (LPAR, DPAR, Micro-Partition), any supported version
- Live Application Mobility (LAM) for Workload Partition (WPAR) AIX V6.1 and future releases, modification levels, and fix packs - minimum level of AIX V6.1 TL4 SP2
- Application Workload Partition (WPAR) AIX V6.1 and future releases, modification levels, and fix packs - minimum level of AIX V6.1 TL4 SP2 SP™
- VMware ESX V4.0 and future releases, modification levels and fix packs

¹ When using an Oracle 10g Database with Websphere Application Server Version 7.0, the Oracle 11g JDBC Driver is required. Requires Websphere Application Server 7.0.0.7 or higher.

² FP1, FP2, FP3, and FP4

V9.1 also refers to V9

For information on supported levels and editions, visit

<http://www.ibm.com/support/docview.wss?uid=swg21237405>

3 FP1, FP2, FP3, and FP4

For information on supported levels and editions, visit

<http://www.ibm.com/support/docview.wss?uid=swg21237405>

4 Supports WebSphere Information Integrator V8.2 FP8, V9.1 FP3, or V9.5 FP2.

5 For information on supported levels and editions, visit

<http://www.ibm.com/support/docview.wss?uid=swg21237405>

6 Information about using WebSphere MQ as the JMS Provider for WebSphere Application Server V7.0.

Prerequisites for WebSphere Application Server for z/OS, V8.0

Java technology

- IBM Java SDK for z/OS, V6.0.1

Web browsers

- Mozilla Firefox 1.5
- Mozilla Firefox 1.7.8
- Mozilla Firefox 2.0
- Mozilla Firefox 3.0
- Microsoft Internet Explorer 6.0 SP1
- Microsoft Internet Explorer 6.0 SP2
- Microsoft Internet Explorer 7.0
- Microsoft Internet Explorer 8.0
- Microsoft Internet Explorer 9.0
- Microsoft Internet Explorer for XP SP2

Web servers

- Microsoft Internet Information Services 7.5 and future fix packs
- IBM HTTP Server V8.0

Web servers on 32-bit kernel

- Apache Server 2.0.58
- Apache Server 2.2
- IBM HTTP Server V6.1
- IBM HTTP Server V7.0
- IBM HTTP Server for i5/OS any
- Domino 7.0.2
- Domino 8.0
- Microsoft Internet Information Services 6.0
- Microsoft Internet Information Services 7.0
- Sun Java System Web Server 6.1 SP8
- Sun Java System Web Server 6.1 SP12
- Sun Java System Web Server 7.0 Update 1

- Web Server Plug-Ins 7.0

Web servers on 64-bit kernel

- Apache Server 2.0.58
- Apache Server 2.2
- IBM HTTP Server V6.1
- IBM HTTP Server for i5/OS any
- IBM HTTP Server V7.0
- Domino 7.0.2
- Domino 8.0
- Microsoft Internet Information Services 6.0
- Microsoft Internet Information Services 7.0
- Microsoft Internet Information Services 7.5
- Sun Java System Web Server 6.1 SP8
- Sun Java System Web Server 6.1 SP12
- Sun Java System Web Server 7.0 Update 1

The program's specifications and specified operating environment information may be found in documentation accompanying the program, if available, such as a README file, or other information published by IBM, such as an announcement letter. Documentation and other program content may be supplied only in the English language.

Planning information

WebSphere Application Server for z/OS, V8.0 can be installed independently and will coexist with prior versions of WebSphere Application Server for z/OS.

Standby or backup systems

For programs running or resident on backup machines, IBM defines three types of situations: cold, warm, and hot. In the cold and warm situations, a separate entitlement for the copy on the backup machine is normally not required and typically no additional charge applies. In a hot backup situation, the customer needs to acquire another license or entitlements sufficient for that server. All programs running in backup mode must be solely under the customer's control, even if they are running at another enterprise's location.

As a practice, the following are definitions and allowable actions concerning the copy of the program used for backup purposes:

Cold

A copy of the program may reside, for backup purposes, on a machine as long as the program is not started. There is no additional charge for this copy.

Warm

A copy of the program may reside for backup purposes on a machine and is started, but is idling, and is not doing any work of any kind. There is no additional charge for this copy.

Hot

A copy of the program may reside for backup purposes on a machine, is started, and is doing work. The customer must acquire a license or entitlements for this copy and there will generally be an additional charge.

Doing work, includes, for example, production, development, program maintenance, and testing. It also could include other activities such as mirroring of transactions,

updating of files, synchronization of programs, data or other resources (for example, active linking with another machine, program, database, or other resource, and so on), or any activity or configurations that would allow an active hot switch or other synchronized switch over between programs, databases, or other resources to occur.

In the case of a program or system configuration that is designed to support a high availability environment by using various techniques (for example, duplexing, mirroring of files or transactions, maintaining a "heartbeat," active linking with another machine, program, database, or other resource, and so on), the program is considered to be doing work in the hot situation and a license or entitlement must be purchased.

Non-IBM WebSphere back end servers

Edge Components: Users seeking to use Edge Components with non-IBM WebSphere back-end servers may be entitled to warranty support for such usage, provided the problem is common to both the IBM WebSphere and non-IBM WebSphere back-end servers or, if otherwise, you agree to recreate the problem in an IBM WebSphere Application Server environment.

Proxy Server Components: Users seeking to use Proxy Server components and DMZ Secure Proxy Server components with non-IBM WebSphere back-end servers may be entitled to warranty support for such usage provided the problem is common to both the IBM WebSphere and non-IBM WebSphere back-end servers or, if otherwise, you agree to recreate the problem in an IBM WebSphere Application Server environment.

Assembly and Deploy Tooling

IBM Assembly and Deploy Tools for WebSphere Administration is provided with WebSphere Application Server to rapidly assemble and deploy applications to WebSphere Application Server environments. These tools replace the previously available IBM Rational Application Developer Assemble and Deploy function and are restricted to assembly and deployment usage only.

World Type Fonts

The World Type Fonts package has been removed from WebSphere Application Server V8.0 as this font package is no longer required to support a WebSphere Application Server deployment. The World Type Fonts package was initially included with WebSphere Application Server when the administrative console was a thick client application prior to WebSphere Application Server V5.0. The administrative console has been a browser-based web application since WebSphere Application Server V5.0. The font support within a supported web browser renders the World Type Fonts package unnecessary for the administrative console to function as designed.

Direct customer support

Direct customer support is provided by IBM Operational Support Services - SoftwareXcel. This fee service enhances your productivity by providing voice and electronic access into the IBM support organization. IBM Operational Support Services - SoftwareXcel helps 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>

or contact your IBM representative for additional assistance at 1-800-IBM-SERV (800-426.7378), option #2 for software.

This product delivers functionality, Application Client Container, IBM Assembly and Deploy Tools for WebSphere Administration (IADT), Tivoli Access Manager (TAM), and WebSphere Edge Components on CD-ROM or DVD 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 for z/OS, V8.0.

The IBM Rational Application Developer Standard Edition for WebSphere Software (RAD SE) trial product is delivered on DVD. It is intended for deployment on distributed (non-z/OS) systems. This application is provided as a trial program only. The website below describes trial support for RAD SE. Visit

<http://www.ibm.com/developerworks/downloads/r/radse/>

Packaging

Program components are delivered by traditional z/OS fulfillment:

- CBPDO
- ServerPac

All formal publications are delivered via the web.

WebSphere Application Server for z/OS customers will be given an option through ShopSystem z of how to receive the software. Choices include internet delivery, or receiving 3590 tape cartridges and a choice of CDs or DVDs as boxed media. When electronic delivery is selected, the customer will have the same window of time, two weeks, in which to download the CD/DVD images as the electronic images of the z/OS components.

Packaging of the z/OS software is as follows:

WebSphere Application Server for z/OS - CD/DVD offering:

- WebSphere Application Server Supplements V8.0
- WebSphere Customization Toolbox V8.0
- WebSphere Edge Components: Load Balancer for IPv4 and IPv6 V8.0
- Tivoli Access Manager for e-business V6.1.1
- Tivoli Composite Application Manager for IBM WebSphere Application Server V7.2
- IBM Rational Application Developer Standard Edition for WebSphere Software V8.0.3 Trial
- IBM Assembly and Deploy Tools for WebSphere Administration V8.0.3
- WebSphere Adapters V7.5
- IBM Installation Manager V1.4.3
- Mozilla Firefox V3.5.8 (AIX 64-bit)
- IBM DMZ Secure Proxy Server V8.0
- IBM Rational Agent Controller V8.3.3

This program, when downloaded from a website, contains the applicable IBM license agreement and License Information, if appropriate, and will be presented for acceptance at the time of installation of the program. For future reference, the license and License Information will be stored in a directory such as LICENSE.TXT.

Security, auditability, and control

WebSphere Application Server for z/OS, V8.0 provides automated authorization checking and a very strong security implementation for authentication and authorization. It is also designed to provide authentication and authorization

service to clients, automatically checking security credentials of all clients accessing WebSphere Application Server for z/OS services. The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communication facilities.

Software Services

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

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

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

Ordering information

Charge metric

Program name	Part number or PID number	Charge metric
WebSphere Application Server for z/OS, V8.0	5655-w65	Value Unit

WebSphere Application Server for z/OS, V8.0 is priced per Value Unit.

Software Subscription and Support

The annual price of Software Subscription and Support for WebSphere Application Server for z/OS, (5655-F81) depends on the number of Value Unit license entitlements purchased.

Serverpacs

WebSphere Application Server for z/OS, V8.0 can be ordered in ServerPac, which can include other software products, and WebSphere Application Server for z/OS, V8.0 can also be ordered in Serverpac alone, with no additional software products.

Production of WebSphere Application Server for z/OS, V8.0 orders will begin on the planned general availability date, June 17, 2011. Production of ServerPac and SystemPac® orders will begin on June 24, 2011. Ship dates for orders will be based on order sequence, Customized Offering selected, production capability, and customer-requested arrival date. Shipments of CBPDO orders will begin one week after general availability. Due to the amount of customization of ServerPac orders, shipments will begin approximately two weeks after general availability. Due to the amount of additional customization of SystemPac orders, shipments will begin approximately four weeks after availability in SystemPac. In all cases, no delivery commitments are to be made to the customer until confirmed arrival dates are in ESW.

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

Program Number	Program Name	Value Unit Exhibit
5655-w65	websphere Application Server for z/OS, v8.0	VUE007

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

- the System z IPLA program you select
- the applicable Value Unit Exhibit
- the applicable Terms
- whether your current mainframes are full-capacity or sub-capacity

Value Unit exhibit VUE007

	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 System z 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

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 website at

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

5655-W65 webSphere Application Server for z/OS, V8.0
 5655-F81 webSphere Application Server for z/OS -
 Software Subscription and Support

Basic license one-time charge

Basic license

On/Off CoD

WebSphere Application Server for z/OS, V8.0 is eligible for On/Off CoD with a temporary use charge calculated based on MSUs per-day usage.

Program name: webSphere Application Server for z/OS, V8.0
 Program PID: 5655-W65

Entitlement identifier	Description	License option/Pricing metric
S016MLD	webSphere Application Server for z/OS, V8.0	Basic OTC, Per MSU-day TUC

Translation from MSUs to value Units

	MSUs	Value Units/MSU
Base	1-3	1.00
Tier A	4-45	0.45
Tier B	46-175	0.36
Tier C	176-315	0.27
Tier D	316+	0.20

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

Program name: webSphere Application Server for z/OS, V8.0
 Program PID: 5655-W65

Entitlement identifier	Description	License option/Pricing metric
S016MLD	webSphere Application Server for z/OS, V8.0	Basic OTC, per Value Unit

Orderable supply ID	Language	Distribution medium
S016MHR	English	3590 Tape Cartridge

Subscription and Support PID: 5655-F81

Entitlement identifier	Description	License option/Pricing metric
S00V3BC	webSphere Application Server for z/OS S&S	Basic ALC, per Value Unit SW S&S No charge, decline SW S&S Per MSU SW S&S registration

Orderable supply ID	Language	Distribution medium
S00V3BF	English	Hardcopy publication

Subscription and Support

To receive voice technical support via telephone 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. This offering:

- Includes and extends the support services provided in the base support to include technical support via telephone.
- Entitles you to future releases and versions, at no additional charge. Note that you are not entitled to new products.

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

The combined effect of the IPLA license and the Agreement for Acquisition of Software Maintenance gives you rights and support services comparable to those under the traditional ICA S/390 and System z license or its equivalent. To ensure that you continue to enjoy the level of support you are used to in the ICA business model, you must order **both** the license for the program **and** the support for the selected programs at the same Value Unit quantities.

Single version charging

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

Customized Offerings

Product deliverables are shipped only via CBPDO, ServerPac, SystemPac.

CBPDO and ServerPac are offered for Internet delivery in countries where ShopzSeries product ordering is available. Internet delivery reduces software delivery time and allows you to install software without the need to handle tapes. For more details on Internet delivery, refer to the ShopzSeries help information at

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

You choose the delivery method when you order the software. IBM recommends Internet delivery. In addition to Internet and DVD, the supported tape delivery options for CBPDO, ServerPac, and SystemPac, include:

- 3590
- 3592

Most products can be ordered in ServerPac and SystemPac the month following their availability on CBPDO. z/OS can be ordered via all three offerings at general availability. 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

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

Licensing

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

Agreement for Acquisition of Software Maintenance

The IBM Agreement for Acquisition of Software Maintenance (Z125-6011) applies for Software Subscription and Support (Software Maintenance) and does not require customer signatures.

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

License Information form number

License form number: L-EBAN-8DDRZ4

The program's License Information will be available for review on the IBM Software License Agreement website

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

Note: Carefully read the WebSphere Application Server for z/OS, V8.0 IBM International Program License Agreement (GA22-7908), a copy of which is included with the order (hardcopy or electronic format). It may contain terms that supersede the licensed terms included with this program component.

Limited warranty applies

Yes

Limited warranty

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

IBM provides you with access to IBM databases containing information on known program defects, defect corrections, restrictions, and bypasses at no additional charge. For further information, consult the *IBM Software Support Handbook* found at

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

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

Program support

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

Money-back guarantee

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

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

Volume orders (IVO)

No

Passport Advantage applies

No

Software Subscription and Support (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 Software Subscription and Support (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 offering, visit

<http://www.ibm.com/services/sl/products>

IBM Operational Support Services - SoftwareXcel

Yes

Other support

SoftwareXcel

System i Software Maintenance applies

No

Variable charges apply

No

Educational allowance available

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

Sub-capacity terms and conditions

For each System z IPLA program with Value Unit pricing, the quantity of that program needed to satisfy applicable IBM terms and conditions is referred to as the

required license capacity. Your required license capacity is based upon the following factors:

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

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

Program number	Program name
5655 w65	webSphere Application Server for z/OS, v8.0

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 machines where the System z IPLA program executes.

For more information on mainframe MSU-rated capacities, visit

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

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 LPARs 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 machines 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 monthly license charge (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 machines where the System z IPLA program executes.

For more information on mainframe MSU-rated capacities, refer to *The IBM System z Machines Exhibit, Z125-3901*, or visit the *Mainframes* section of the *System z Exhibits website*

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

For more information on sub-capacity System z IPLA terms and conditions, refer to Software Announcement [204-184](#), dated August 10, 2004.

For additional information for products with reference-based terms, System z IPLA sub-capacity programs with reference-based terms adds value to the parent

program across the environment, regardless of where in the environment the System z IPLA program executes.

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

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

-
- That meets the criteria defined in Hardware Announcement [198-001](#), dated January 13, 1998
- Where MLC pricing is aggregated across the sysplex

Sub-capacity eligibility

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

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

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

<http://ibm.com/zseries/swprice>

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

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

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

IBM Getting Started Sub-capacity Pricing for z/OS IPLA Software applies.

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 (CoD)

To be eligible for On/Off CoD pricing, you must be enabled for temporary capacity on the corresponding hardware, and the required contract, Attachment for IBM System z On/Off Capacity on Demand (Z125-7883) must be signed prior to use.

Prices

Information on charges is available at

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

Choose the option entitled Purchase/upgrade tools.

Program Name: WebSphere Application Server for z/OS, v8.0
Program PID: 5655-W65

Entitlement Identifier	Description	License Option/Pricing Metric
S016MLD	websphere Application Server for z/OS, v8.0	Basic OTC, Value Units Basic OTC, per MSU-day TUC

For additional information and current prices, contact your local IBM representative.

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, from both 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.

Financing from IBM Global Financing helps you preserve cash and credit lines, enables more technology acquisition within current budget limits, permits accelerated implementation of economically attractive new technologies, offers payment and term flexibility, and can help match project costs to projected benefits. Financing is available worldwide for credit-qualified customers.

For more financing information, visit

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

Order now

To order, contact your local IBM representative or your IBM Business Partner.

To identify your local IBM Business Partner or IBM representative, call 800-IBM-4YOU (426-4968). For more information, contact the Americas Call Centers.

Phone: 800-IBM-CALL
Fax: 800-2IBM-FAX

For IBM representative: callserv@ca.ibm.com

For IBM Business Partner: pwswna@us.ibm.com

Mail: The Americas Call Centers
P.O. Box 2690
Atlanta, GA 30301-2690
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.

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