IBM WebSphere Application Server V8.5 delivers a faster, more flexible development environment along with new intelligent management capabilities for enhanced resiliency

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At a glance

IBM® 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 V8.5:

- The new Liberty profile option is a highly composable, fast to start, and ultra lightweight profile of the application server and is optimized for developer productivity and web application deployment.
- Application Edition Management enables interruption-free application rollout. Applications can be upgraded without incurring outages to your end users.
- Health Management monitors the status of your application servers and is able to sense and respond to problem areas before end users suffer an outage. Problem areas include increased time spent on garbage collection, excessive request timeouts, excessive response time, excessive memory, and much more.
- Intelligent Routing improves business results by ensuring priority is given to business critical applications. Requests are prioritized and routed based upon administrator defined rules.
- Dynamic Clustering can dynamically provision and start or stop new instances of application server Java™ Virtual Machines (JVM) based on workload demands. It provides the ability to meet Service Level Agreements when multiple applications compete for resources.
- Enterprise Batch Workload support leverages your existing Java online transaction processing (OLTP) infrastructure to support new Java batch workloads. Java batch applications can be executed across multiple Java Enterprise Edition (Java EE) environments.
- IBM WebSphere SDK Java Technology Edition V7.0 as an optional pluggable Java Development Kit (JDK).
- Web 2.0 and Mobile Toolkit provides an evolution of the previous Feature Pack.
- Updated WebSphere Tools bundles provide the "right-fit" tools environment to meet varied development and application needs.

For ordering, contact your IBM representative, an IBM Business Partner, or IBM Americas Call Centers at 800-IBM-CALL (Reference: YE001).

Overview

Your business requires fast, flexible, and efficient application development solutions paired with leading service-oriented architecture (SOA) runtime environments to succeed in today's dynamic and increasingly competitive marketplace. IBM WebSphere Application Server has provided industry leading solutions for the past 14 years. WebSphere Application Server V8.5 continues that tradition with breakthrough advances in developer productivity and application server resiliency.

For developers and businesses that need a lightweight, simple to use and yet powerful application server for increased developer productivity and for use as a lightweight production server for application workloads, WebSphere Application Server V8.5 includes the Liberty profile, a simplified and lightweight runtime for web applications. Extremely fast restart times coupled with its small size and ease of use make the Liberty profile a great option for building web applications that do not require the full Java Enterprise Edition (Java EE) environment of traditional enterprise application server profiles. It is also a great option for production servers where minimizing resource utilization is a primary requirement. Highlights for developers include:

- The new lightweight Liberty profile
- Developer tool options to match project development needs
- Support for Java 7 and OSGi
- Enhanced Migration Toolkit support
- Support for the Web 2.0 and Mobile Toolkit

For administrators and businesses that need better total cost of ownership through management efficiency and performance, the ability to respond quickly to changes in the business, or achieve simplicity and flexibility in evolving to next generation application server environments, WebSphere Application Server V8.5 delivers new Intelligent Management capabilities that extend the traditional application server with technologies such as enhanced resiliency, virtualization, and enterprise level batch processing. Autonomic capabilities are provided that are designed to sense and respond to problems within the application server and autocorrect or route around these problems before end users experience an outage. Highlights for administrators include:

- Application Edition Management
- New Intelligent Routing capabilities
- Application server Health Management
- Dynamic Clustering
- WebSphere Batch enhancements

For businesses needing an end-to-end solution, WebSphere offers multiple tooling bundles that provide developer tools to maximize productivity and flexibility in building new applications. The IBM WebSphere Application Server for Developers - Tools Edition for Eclipse provides users with a lightweight desktop development environment to build applications for WebSphere Application Server. Other bundles include an unlimited number of licenses of IBM Rational® Application Developer providing organizations with a complete solution to develop, deliver, and manage high-quality enterprise applications.

For businesses that 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

Refer to the Hardware requirements and Software requirements section.

Planned availability date

- June 15, 2012 - Electronic delivery
- July 13, 2012 - Media packs

Description

IBM WebSphere Application Server is a proven, high-performance transaction engine that can help you build, run, integrate, and manage dynamic business applications. WebSphere Application Server V8.5 introduces exciting new options for the development community with the new lightweight Liberty profile option and a broad range of development tooling options. Operations are significantly enhanced with new Intelligent Management capabilities that minimize end-user outages and maximize operations monitoring and control of the production environment.

Fast, flexible, and simplified

WebSphere Application Server V8.5 delivers breakthrough new options for application development and smaller simpler production server deployments. Developers gain a significant advantage with WebSphere Application Server profiles tailored specifically to the developer experience as well as enablement of a broad range of industry-standard tooling options.

New Liberty profile: a lightweight application foundation

WebSphere Application Server includes the Liberty profile which is optimized for developer productivity and web application deployment. Its incredibly fast restart time, small size, and ease of use makes the Liberty profile a great option for developers building applications that do not require the full Java Enterprise Edition (Java EE) environment of traditional enterprise application server profiles.

The Liberty profile

Liberty profile provides a simplified and lightweight development and application-serving environment for web, OSGi, and mobile applications. Key benefits include, but are not limited to, the following capabilities:

- Free and frictionless download for development purposes.
- Ultra lightweight modular runtime environment, with a download size of under 50 MB.
- Extremely fast startup. Liberty profile is designed to start up in under five seconds.
- Simplified configuration for quick time to productivity.
- Java and OSGi application deployment support for web applications.
- LDAP registry support.
- Deployment as a package of an application and configured server.
- Managed, centralized deployment to many nodes of a packaged application and server.
- Availability of Eclipse plug-ins for broad tooling support.
- Platform support for distributed platforms, z/OS® , and Macintosh operating system (development only).
- Includes the capabilities that are needed by the application that it serves keeping each server small and agile.

Installation and deployment of the Liberty profile

The Liberty profile can be installed from the traditional IBM Install Manager or as an unzip format depending upon your requirements. To simplify end-to-end test, simple scripts are provided to create a "packaged server" consisting of an application, a Liberty profile server runtime, and its configuration in a single archive for "unzip" deployment of a complete solution. The Job Manager optionally provides the ability to centrally distribute and deploy packaged Liberty profile server applications, and provides lifecycle management of those servers. Administration through the Job Manager provides the following key features:

- Support for central administration through Job Manager. You can submit Job Manager jobs that support the full lifecycle of Liberty profile resource deployment from initial install, to updates, to uninstall. A Deployment Manager is not required, although you can use the Job Manager function available on a Deployment Manager to administer Liberty profile servers and their resources.
- Quick installation of the Liberty profile. You can extract the Liberty profile resource and simply run the install Liberty profile resource job. There is no requirement to run a formal installation tool, such as Installation Manager, to use Liberty profile server resources. Liberty profile resources are packaged as compressed files that are ready for use after extraction.
- Support for flexible sharing of resources such as a software development kit (SDK), runtime binary files, server configuration, and application binary files among many server instances.
- Non-destructive update enables easy installation of new versions of any resource. You can switch easily between old and new resources, or run concurrent versions of resources.
- No requirement for agent on target hosts, which reduces administration overhead costs.
- The Liberty profile is built on OSGi technologies, and runs on a wide range of supported Java Runtime Environments (JREs). For more information about supported Java environments, and where to get them, see "Minimum supported JDK levels" in the Information Center.

Integrated tools

- IBM WebSphere Application Server Developer Tools for Eclipse V8.5 is a lightweight set of tools for developing, assembling, and deploying Java EE, OSGi, Web 2.0, and mobile applications to WebSphere Application Server, including the Liberty profile.
- You can accelerate developer productivity through integrated and optimized developer tooling. Rational Application Developer V8.5, separately available or available in the WebSphere Tools bundles, provides a complete environment for enterprise development for Java , Java EE, web, web services, SOA, OSGi, and Portal applications. Designers and developers can use this environment to develop, assemble, and deploy your applications to WebSphere Application Server V8.5. You can also test your applications using a rapid-deployment feature in the V8.5 runtime environment.
- Easily migrate your existing applications from older WebSphere Application Server releases or even from non-IBM application servers, such as Tomcat, JBoss, and WebLogic Server, using the Application Migration Toolkit, which is separately available via web download. This tool programmatically scans your applications and identifies changes that are required. In many cases, the tool can automatically make the required changes to ease the migration process and speed time to value.
- In addition, the WebSphere Application Server Tools Editions are refreshed with the latest versions of the application server and associated tools. These packages provide a complete solution to develop, deliver, and manage high-quality enterprise applications. The bundles include an unlimited number of licenses of Rational Application Developer and WebSphere Application Server Developer Tools for Eclipse to be used only in support of the production server for which it was purchased, providing the greatest flexibility to match the needs of any organization.

Enterprise JavaBeans™ (EJB) support in OSGi applications

Take advantage of enhanced modular application development by assembling OSGi applications from reusable bundles that contain EJB assets. The enterprise beans in your OSGi bundles can be developed from scratch, or you can include existing EJB assets and migrate them to use OSGi modularity with minimal code changes. Stateful, stateless, and singleton enterprise beans are supported.

Your OSGi application can also contain message-driven beans. You deploy and configure an OSGi application that contains EJBs in a similar way to deploying and configuring a Java 2 Platform Enterprise Edition (J2EE) enterprise application, by using wsadmin or the administrative console.

Web 2.0 and Mobile Toolkit

The previous Feature Pack is now included within the core WebSphere Application Server product. This toolkit provides developers with ready-to-use components to extend service-oriented architecture (SOA) by connecting web services, SOA services, and Java EE objects into interactive desktop web and mobile web user interfaces. With this toolkit applications developed initially for desktop browsers can now be adapted and deployed to mobile devices such as smart phones and tablets.

Intelligent Management and enhanced resiliency

WebSphere Application Server V8.5 is designed to ensure industry-leading levels of resiliency and availability. New Intelligent Management capabilities deliver application availability, elasticity, and qualities of services programmatically instrumented and executed to ensure the highest possible levels of end user availability. Additional resiliency capabilities help to drive down total cost of ownership while improving overall qualities of service.

Intelligent Management

Intelligent Management capabilities extend the traditional application server with new technologies to enhance resiliency and virtualization capabilities. Autonomic capabilities are provided to sense and respond to problems within the application server and autocorrect or route around these problems before end users experience an outage. Previously, these enhanced resiliency capabilities were available separately by using WebSphere Virtual Enterprise. They are now included within the WebSphere Application Server Network Deployment itself.

Highlights:

- Application Edition Management enables interruption-free application rollout. Applications can be upgraded without incurring outages to your end users.
  - Upgrade applications without interruption
  - Deploy new applications without jeopardizing application or service availability
  - Coordinate activation of application versions and routing of requests to the application
  - Test final preproduction level of an application version with a select group of users
- Health Management monitors the status of your application servers and is able to sense and respond to problem areas before end users suffer an outage.
  - Proactively deal with application and application infrastructure issues before they become acute problems
  - Monitor health conditions of your infrastructure and execute associated corrective actions
- New Intelligent Routing improves business results by ensuring priority is given to business-critical applications. Requests are prioritized and routed based upon administrator defined rules.
  - Manage in-bound transaction (workload) requests in real time
  - Route work to the application server that can do it best

- Streamline processing through the system for higher priority requests
- Ensure that in-bound requests do not overwhelm backend application resources
- Dynamic Clustering can proactively provision, and start or stop new instances of application server Java Virtual Machines (JVMs) based on workload demands. It provides the ability to meet Service Level Agreements when multiple applications compete for resources.
  - Allows workloads to be classified, prioritized, and intelligently routed
  - Enables application performance monitoring
  - Can make resource adjustments, if needed, to consistently achieve service policies

Messaging infrastructure resiliency enhancements

- Improvements to the recovery of messaging engine errors. When a recoverable database error is detected by the High Availability Manager, the messaging engine is stopped and the standby messaging engine is started automatically. The other applications running in the application server are not affected by the failure of the messaging engine.
- Enables the messaging engine to restart after a failure. When a messaging engine fails due to recoverable database problems, it is disabled and fails over to another messaging engine in the cluster.
- Improvements to service integration bus performance; improved messaging engine startup time by loading the destinations concurrently in a multicore architecture.
- Recovery of the messaging engine confirmation from the message store. With the new recoverMEConfig command, the recovery of the persistent data of the messaging engine from the message store is made possible if the configuration data on which the previous messaging engine was running is not available.

Enhanced memory leak detection and protection

WebSphere Application Server provides top down pattern-based memory leak detection, prevention, and action by watching for suspect patterns in application code at run time. WebSphere Application Server has a robust means of protection against memory leaks when stopping or redeploying applications. It monitors application and module activity, and performs diagnostic actions when an application or an individual module stops. This feature helps by increasing application server availability.

Improved operations, security, and control

New and improved capabilities in WebSphere Application Server V8.5 include:

- **Support for IBM WebSphere SDK Java Technology Edition V7.0**

  IBM Software Development Kit (SDK) provides a full-function SDK for Java that is compliant with the Oracle Java Platform, Standard Edition (Java SE) 7 application programming interfaces (APIs). With IBM WebSphere SDK Java Technology Edition V7.0, you can develop and deploy Java applications at the Java 7 API level and continue the "write once, run anywhere" Java paradigm at the Java API level. The SDK contains the Java application Runtime Environment and other tools that enable developers to create Java applications.

  WebSphere Application Server supports IBM WebSphere SDK Java Technology Edition V7.0 as a pluggable JDK. Java 6 EE is installed with the product and used by default. You can optionally install and enable Java 7 support.

- **Automatic Resource Management (ARM) with Java V7.0**

  ARM is a set of features in Java V7.0 in which the Java framework will automatically close statements and connections to external resources for you, which can alleviate problems with error handling and resource control

in your applications. As a result, your applications can focus less on resource management tasks, and you can optimize their logic for meaningful transactions.

- **WebSphere Batch enhancements**

  WebSphere Batch offers an enterprise level managed batch execution environment that enables the entry, execution, and management of Java batch processing. It provides an infrastructure for batch processing to allow sharing of business logic with online transaction processing (OLTP) applications. This helps to lower cost by reducing risk and management effort, supplies an "always-on" business experience by eliminating offline batch windows, and delivers enterprise qualities of service required by mission-critical batch applications. Batch jobs and online transaction processing can execute concurrently. Previously, these enhanced WebSphere Batch capabilities were available separately by using WebSphere Compute Grid. They are now included within the WebSphere Application Server itself. WebSphere Batch highlights include:

  - End-to-end batch management of jobs running across disparate execution environments
  - An optimal OLTP uptime experience through continuous interleaving of batch and interactive (OLTP) processes
  - Parallel processing using Parallel Job Manager, where large problems can be partitioned, governed, and processed in parallel across a collection of server resources while hiding the complexities of multithreading and management
  - Near real-time batch processing with ad-hoc and event-driven batch invocation, in addition to scheduled batch invocation
  - Integration with enterprise schedulers, such as Tivoli® Workload Scheduler
  - Goal oriented Service Level Agreement (SLA) management via workload manager integration

- **Configuring bean security in the OSGi Blueprint XML file**

  You can configure bean security in the Blueprint XML file by including an *access-constraint* element in a bean declaration. Only users that are in the role specified by the *access-constraint* element can access the methods of the bean.

- **High Performance Extensible Logging (HPEL) log viewer tool enhances filtering using log and trace record extensions**

  Use the LogViewer command-line tool to filter records based on the content of log and trace record extensions. The application server automatically creates an appName extension for each log and trace record related to a Java EE application, indicating the name of that application. The application server also automatically creates a request ID extension when cross component trace is enabled for each log and trace record created during the processing of certain types of requests (for example, HTTP or JMS requests), indicating the unique ID of that request. You can add custom extensions to HPEL log and trace entries using the LogRecordContext API.

- **Cross Component Trace (XCT)**

  XCT enables correlation of log and trace entries. Use the cross component trace facility to identify the root cause of problems across components. XCT annotates log and trace entries so that log entries that are related to a request that is serviced by more than one thread, process, or even server are identified as belonging to the same unit of work. This enhancement enables administrators and support teams to follow the flow of a request from end-to-end as it traverses thread or process boundaries.

- **Improved troubleshooting using IBM Support Assistant Data Collector**

  The IBM Support Assistant Data Collector for WebSphere Application Server tool focuses on automatic collection of problem data. It also provides symptom analysis support for the various categories of problems encountered by IBM software products. Information pertinent to a type of problem is collected to help identify the origin of the problem under investigation. The tool assists you by reducing the amount of time it takes to reproduce a problem with the proper RAS tracing levels set, as well as by reducing the effort required to send the appropriate log information in to IBM Support.

- **Enhanced administrative audit options**

  WebSphere Application Server V8.5 enables you to audit any changes made to your application server configuration using repository checkpoints. When enabled, a security audit record is created for every change to your configuration. Repository checkpoints represent saved images of the repository before configuration changes are made. You can configure a checkpoint to back up copies of files from the master configuration repository. A full checkpoint is a complete copy of the entire configuration repository. A delta checkpoint is a subset snapshot of the configuration repository that is made when you change a product configuration. Use a checkpoint to restore the configuration repository back to a prior state.

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

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

Section 508 of the US Rehabilitation Act

WebSphere Application Server V8.5 is capable as of June 15, 2012, 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.

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 projects with no upfront budget, to simple administration of a single server environment, to a clustered, highly available, high-volume environment with Intelligent Management services.

WebSphere Application Server V8.5 configurations are built on a common server foundation that delivers the same Java EE and broad programming model support, and proven transactional engine, with increasingly higher qualities of service available across product configurations. Furthermore, the new Liberty profile is included across the various configurations delivering a highly composable, fast to start and ultra lightweight profile of the application server optimized for developer and operational productivity for web applications. 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

WebSphere Application Server - Express® V8.5

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.

WebSphere Application Server for Developers V8.5

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 for developers building for WebSphere Application Server environments.

WebSphere Application Server V8.5

This application foundation is 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 V8.5

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
- New Intelligent Management capabilities deliver breakthrough levels of resiliency and reliability (including capabilities formerly available from WebSphere Virtual Enterprise)
- 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 , V8.5

This application foundation is 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 .

WebSphere Application Server Tools Editions

You get three new bundled offerings that accelerate development and deliver high quality, innovative applications for WebSphere Application Server:

- WebSphere Application Server - Tools Edition
- WebSphere Application Server Network Deployment - Tools Edition
- WebSphere Application Server for Developers - Tools Edition for Eclipse

The WebSphere Application Server - Tools Edition and WebSphere Application Server Network Deployment - Tools Edition bring together a server version of WebSphere Application Server (the leading open standards-based application foundation offering), and IBM Rational Application Developer (the industry leading and top rated development environment) to provide organizations with a complete solution to develop, deliver, and manage high-quality enterprise applications.

WebSphere Application Server for Developers introduces WebSphere Application Server Developer Tools for Eclipse, which is a subset of Rational Application Developer plug-ins that can easily be installed on top of your existing Eclipse environment and provides a lightweight set of tools for developing, assembling, and deploying Java EE, OSGi, Web 2.0, and mobile applications to a WebSphere Application Server environment. The content of this bundle is offered as a no-charge download with an optionally purchased support package.

Related products

WebSphere Application Server Hypervisor Edition

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, 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.

WebSphere Application Server Community Edition V3.0

WebSphere Application Server Community Edition V3.0 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 you receive assistance and timely problem resolution from the IBM team of expert support professionals and developers. Simple socket-based pricing is also optionally available.

WebSphere Adapters

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 includes enhanced adapters for SAP software, Siebel Business Applications, Oracle E-Business Suite, JD Edwards EnterpriseOne, and PeopleSoft Enterprise.

A development and unit testing license for WebSphere Adapters is provided with WebSphere Application Server to speed application integration and development. A separate license entitlement for the appropriate WebSphere Adapter must be purchased when deploying WebSphere Adapter components to WebSphere Application Server for production use.

WebSphere Real Time

WebSphere Real Time is a Java Runtime Environment (JRE) designed to provide more consistent performance for Java applications. It enables you to develop applications with low latency and highly predictable response times. A development and unit testing license for WebSphere Real Time is provided with WebSphere

Application Server. A separate license entitlement for WebSphere Real Time must be purchased to use the Real Time capability in a production environment.

Rational Application Developer

Rational Application Developer is the development environment that is optimized for WebSphere Application Server V8.5 and the Liberty profile, to help improve the productivity of your development team, from novice developers just getting up to speed, to experienced senior professionals.

Rational Application Developer provides capabilities to accelerate development of applications that leverage the latest programming models, such as Java EE 6, Java 7, SOA, OSGi, Cloud, Web 2.0, Mobile Web, Portal, SCA, and WebSphere Batch, and includes tight integration with application server test environments to test, debug, fix, and maintain in an environment that mimics your production systems.

Rational Application Developer also provides developer test and analysis tools to ensure delivery of high-quality applications that are easily maintained to provide value and time savings across the entire lifespan of your software projects.

Reference information

For information about WebSphere Application Server for z/OS V8.5 environments, refer to Software Announcement 212-106, dated April 24, 2012 .

For product information about IBM Rational Application Developer V8.0.3, refer to Software Announcement 211-204, dated May 31, 2011 .

For information about WebSphere Application Server Community Edition V3.0, refer to Software Announcement 211-083, dated September 27, 2011 .

For information about WebSphere Application Server Hypervisor Edition V8.5 refer to Software Announcement 212-164, dated April 24, 2012 .

For information about the WebSphere Application Server Family, visit

http://www.ibm.com/software/webservers/appserv

Program number

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Program                     Program
number        VRM           name

5724-J08      8.5.0         WebSphere Application Server
5724-I63      8.5.0         WebSphere Application Server - Express
5724-H88      8.5.0         WebSphere Application Server Network Deployment
5724-H89      8.5.0         WebSphere Application Server for Developers
5725-F49      8.5.0         WebSphere Application Server - Tools Edition
5725-F51      8.5.0         WebSphere Application Server Network Deployment
                              - Tools Edition
5725-F50      8.5.0         WebSphere Application Server for Developers -
                              Tools Edition for Eclipse
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Offering Information

Product information is available via the Offering Information website

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

Also, visit the Passport Advantage® website

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

Publications

The primary delivery and latest product documentation for WebSphere Application Server V8.5 can be found in the online information center available from the library web page at

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

No hardcopy publications are shipped with this product. You can find links to information on installing and getting started with WebSphere Application Server in the readme file (readme.html) located in the readme directory on the root of the installation image; for example, the readme file is located at

  /readme/readme.html

Help for the WebSphere Application Server administrative console is shipped with the product. The total set of product documentation is available in HTML and PDF format from the following web page

  http://www.ibm.com/software/webservers/appserv/library.html

For optimal viewing of this documentation, browser support for JavaScript™ and related technologies is required. For more information about compatible browsers, refer to the Software requirements section of this document.

Technical information

Specified operating environment

Hardware requirements
AIX®

For AIX (32-bit WebSphere Application Server)

- IBM POWER® family of processors supported by the corresponding release of AIX
  - Supported hardware for AIX V6.1
  - Supported hardware for AIX V7.1
- Minimum 2 GB (web installation) to 5 GB (local installation) of available disk space
- Minimum 1 GB of physical memory recommended

HP-UX

For HP-UX (64-bit WebSphere Application Server)

- Intel™ Itanium™ 2 processor
- Intel Itanium processor 9300 Series
- Minimum 2 GB (web installation) to 5 GB (local installation) of available disk space
- Minimum 1 GB of physical memory recommended

Linux™

For Linux (32-bit WebSphere Application Server)

- Intel Pentium™ IV or later processor at 1.2 GHz, or faster
- Intel x86-64 or AMD x86-64 processor at 1.2 GHz, or faster

- IBM POWER family of processors supported by the Linux distribution
- Any IBM System z supported by the required Linux operating systems
- Minimum 2 GB (web installation) to 5 GB (local installation) of available disk space
- Minimum 1 GB of physical memory recommended

For Linux (64-bit WebSphere Application Server)

- Intel x86-64 or AMD x86-64 processor (64-bit kernel support only)
- Any IBM System z supported by the required Linux operating systems
- IBM POWER family of processors supported by the Linux distribution
- Minimum 2 GB (web installation) to 5 GB (local installation) of available disk space
- Minimum 1 GB of physical memory recommended

Solaris

For Solaris (32-bit WebSphere Application Server)

- Oracle Solaris operating environment compatible SPARC workstation at 1.0 GHz, or faster
- Minimum 2 GB (web installation) to 5 GB (local installation) of available disk space
- Minimum 1 GB physical memory

For Solaris (64-bit WebSphere Application Server)

- Oracle Solaris operating environment compatible SPARC workstation at 1.0 GHz, or faster
- Intel x86-64 or AMD x86-64 processor at 1.2 GHz, or faster
- Minimum 2 GB (web installation) to 5 GB (local installation) of available disk space
- Minimum 1 GB of physical memory recommended

Windows™

For Windows (32-bit WebSphere Application Server)

- Intel Pentium IV or later processor at 1.2 GHz, or faster
- Intel x86-64 or AMD x86-64 processor at 1.2 GHz, or faster
- Minimum 2 GB (web installation) to 5 GB (local installation) of available disk space
- Minimum 1 GB of physical memory

For Windows (64-bit WebSphere Application Server)

- Intel x86-64 or AMD x86-64 processor at 1.2 GHz, or faster
- Minimum 2 GB (web installation) to 5 GB (local installation) of available disk space
- Minimum 1 GB of physical memory recommended

IBM i

For IBM i series (32-bit and 64-bit WebSphere Application Server)

- Minimum 2 GB (web installation) to 5 GB (local installation) of available disk space
- Minimum 1 GB of physical memory recommended

For more information on WebSphere Application Server, visit

Software requirements

Supported operating systems

For each supported platform, WebSphere Application Server Base and WebSphere Application Server Network Deployment editions are available in both a 32-bit and 64-bit version. The 32-bit versions are supported on a 64-bit version of the listed operating systems. On HP-UX IA64 and Solaris x86, only a 64-bit version is provided.

- AIX V6.1 TL4 POWER System (1)
- AIX V7.1 POWER System (2)
- HP-UX 11i V3 IA64
- HP-UX 11i V2 IA64
- IBM System i® V7.1 POWER System
- IBM System i V6.1 POWER System
- Macintosh OS 10.6 Snow Leopard and 10.7 Lion (4)
- Asianux Linux 3.0 x86-32
- Asianux Linux 3.0 x86-64
- Red Hat Enterprise Linux (RHEL) 5.0 Update 6 Advanced Platform POWER System
- Red Hat Enterprise Linux (RHEL) 5.0 Update 6 Advanced Platform System z
- Red Hat Enterprise Linux (RHEL) 5.0 Update 6 Advanced Platform x86-32
- Red Hat Enterprise Linux (RHEL) 5.0 Update 6 Advanced Platform x86-64
- Red Hat Enterprise Linux (RHEL) 5.0 Update 6 Desktop editions x86-32 (3)
- Red Hat Enterprise Linux (RHEL) 5.0 Update 6 Desktop editions x86-64 (3)
- Red Hat Enterprise Linux (RHEL) 6.0 AS/ES POWER System
- Red Hat Enterprise Linux (RHEL) 6.0 AS/ES System z
- Red Hat Enterprise Linux (RHEL) 6.0 AS/ES x86-32
- Red Hat Enterprise Linux (RHEL) 6.0 AS/ES x86-64
- SUSE Linux Enterprise Desktop (SLED) 10.0 SP3 x86-32 (3)
- SUSE Linux Enterprise Desktop (SLED) 10.0 SP3 x86-64 (3)
- SUSE Linux Enterprise Desktop (SLED) 11.0 x86-32 (3)
- SUSE Linux Enterprise Desktop (SLED) 11.0 x86-64(3)
- SUSE Linux Enterprise Server (SLES) 10.0 SP3 POWER System
- SUSE Linux Enterprise Server (SLES) 10.0 SP3 System z
- SUSE Linux Enterprise Server (SLES) 10.0 SP3 x86-32
- SUSE Linux Enterprise Server (SLES) 10.0 SP3 x86-64
- SUSE Linux Enterprise Server (SLES) 11.0 POWER System
- SUSE Linux Enterprise Server (SLES) 11.0 System z
- SUSE Linux Enterprise Server (SLES) 11.0 x86-32
- SUSE Linux Enterprise Server (SLES) 11.0 x86-64
- Solaris 10 x86-64
- Solaris 10 SPARC
- Windows 7 Enterprise x86-64 (3)
- Windows 7 Enterprise x86-32 (3)
- Windows 7 Professional x86-64 (3)
- Windows 7 Professional x86-32 (3)
- Windows 7 Ultimate x86-64 (3)
- Windows 7 Ultimate x86-32 (3)

- Windows Server 2008 Datacenter Edition x86-32
- Windows Server 2008 Datacenter Edition x86-64
- Windows Server 2008 R2 Datacenter Edition x86-64
- Windows Server 2008 Enterprise Edition x86-32
- Windows Server 2008 Enterprise Edition x86-64
- Windows Server 2008 R2 Enterprise Edition x86-64
- Windows Server 2008 Standard Edition x86-32
- Windows Server 2008 Standard Edition x86-64
- Windows Server 2008 R2 Standard Edition x86-64
- Windows Vista Business x86-32 (3)
- Windows Vista Business x86-64 (3)
- Windows Vista Enterprise x86-32 (3)
- Windows Vista Enterprise x86-64 (3)
- Windows Vista Ultimate x86-32 (3)
- Windows Vista Ultimate x86-64 (3)
- Windows XP SP3 Professional x86-32 (5)
- Windows XP SP3 Professional x86-64 (5)

(1) AIX V6.1 recommended minimum maintenance package - 6100-00-04. Clients are 32-bit applications only.

(2) AIX 7.1 recommended minimum maintenance package - 7100-01-02.

(3) Supported on client. Server supported for application design, development, and testing; no support for production use.

(4) Macintosh is only for development use with the IBM WebSphere Application Server Liberty profile.

(5) Windows XP will only be supported as described under the "Other configuration support statement" here

   http://www-01.ibm.com/support/docview.wss?rs=180&uid=swg27004311

WebSphere Application Server - Express is only supported on 32-bit systems.

Supported databases

- Apache Derby 10.8 and future releases, modification levels, and fix packs
- DB2® 9 for z/OS V9.1 and future releases, modification levels, and fix packs
- DB2 10 for z/OS V10.1 and future releases, modification levels, and fix packs
- DB2 Enterprise Server Edition 9.1 and future releases, modification levels, and fix packs
- DB2 Express 9.1 and future releases, modification levels, and fix packs
- DB2 for i5/OS® V5R4 and future releases, modification levels, and fix packs
- DB2 for i V6.1 and V7.1 and future releases, modification levels, and fix packs
- DB2 pureScale® Feature for Enterprise Server Edition 9.8 and future releases, modification levels, and fix packs
- DB2 UDB for z/OS V8.1 and future releases, modification levels, and fix packs
- DB2 Workgroup Server Edition 9.1 and future releases, modification levels, and fix packs
- IBM Informix® Dynamic Server 11.10 and future releases, modification levels, and fix packs
- Microsoft™ SQL Server Enterprise Server Edition 2008 and future releases, modification levels, and fix packs

- Oracle Database 11g Standard and Enterprise Editions Release 1 and future releases, modification levels, and fix packs
- Sybase Adaptive Server Enterprise 15.0.3 and future releases, modification levels, and fix packs

JDBC drivers

- Apache Derby 10.8 and future releases, modification levels, and fix packs
- DataDirect Connect for JDBC SQL Server Driver 4.2 and future releases, modification levels, and fix packs
- DB2 Connect™ Enterprise Edition 9.1 and future releases, modification levels, and fix packs
- IBM Data Server Driver for JDBC and SQLJ V3.4 and V4.2 and future releases, modification levels, and fix packs
- IBM Developer Kit for Java JDBC driver V5.4.x, V6.1.x, V7.1.x, and future releases, modification levels, and fix packs
- IBM Toolbox for Java and JTOpen JDBC Drive V6.0 and V7.0 and future releases, modification levels, and fix packs
- Informix Java Database Connectivity Driver 3.10.JC1
- Microsoft SQL Server JDBC Driver V2.0 and V3.0, and future releases, modification levels, and fix packs
- Oracle JDBC Driver 11g 11.1 and future releases, modification levels, and fix packs
- Sybase jConnect 6.05 EBF 14466 and future releases, modification levels, and fix packs

JMS providers

- WebSphere MQ V6.0.2 and V7.0 and future fix packs
- WebSphere MQ for z/OS , V6.0 and V7.0 and future fix packs

LDAP servers

LDAP servers using Federated Repository Configuration:

- IBM Lotus® Domino® LDAP Server 7.0 and future releases, modification releases, and fix packs
- IBM Tivoli Directory Server V6.2 and future releases, modification releases, and fix packs
- IBM Tivoli Directory Server for IBM System i V6.1, and V7.1 and future releases, modification releases, and fix packs
- IBM z/OS Integrated Security Services V1.8 and future releases, modification releases, and fix packs
- IBM z/OS .e Integrated Security Services V1.8 and future releases, modification releases, and fix packs
- Microsoft Active Directory 2008 and future releases, modification releases, and fix packs
- Novell eDirectory 8.7.3 SP9 and future releases, modification releases, and fix packs
- Sun Java System Directory Server 6.1 and future releases, modification releases, and fix packs

LDAP servers using Stand Alone LDAP Registry Configuration:

- IBM Lotus Domino LDAP Server 7.0 and future releases, modification releases, and fix packs
- IBM Tivoli Directory Server V6.2 and future releases, modification releases, and fix packs
- IBM Tivoli Directory Server for IBM System i V6.1 and V7.1 and future releases, modification releases, and fix packs

- IBM z/OS Integrated Security Services V1.8 and future releases, modification releases, and fix packs
- IBM z/OS .e Integrated Security Services V1.8 and future releases, modification releases, and fix packs
- Microsoft Active Directory 2008 and future releases, modification releases, and fix packs
- Microsoft Active Directory Application Mode (ADAM) 1.0 SP1 and future releases, modification releases and fix packs
- Novell eDirectory 8.7.3 SP9 and future releases, modification releases, and fix packs
- Sun Java System Directory Server 6.1 and future releases, modification releases, and fix packs

Security

- IBM Tivoli Access Manager for eBusiness V6.0 and V6.1 and future fix packs

Virtualization support

AIX

- IBM PowerVM™ Hypervisor (LPAR, DPAR, Micro-Partition) any supported version and future fix packs
- Live Application Mobility (LAM) for Workload Partition (WPAR) AIX V6.1, and V7.1 and future modification levels, and fix packs
- Application Workload Partition (WPAR) AIX V6.1, and V7.1 and future modification levels and fix packs
- WPAR: Product installed in System Workload Partition AIX V6.1 and V7.1 and future modification levels and fix packs

IBM i

- IBM PowerVM Hypervisor (LPAR, DPAR, Micro-Partition) any supported version and future fix packs

Windows

- VMware ESXi V4.0 and future releases, modification levels, and fix packs
- VMware ESX V4.0 and future releases, modification levels, and fix packs
- VMware ESXi V4.1, V5.0 and future modification levels, and fix packs
- VMware ESX V4.1 and future modification levels, and fix packs
- Red Hat KVM as delivered with Red Hat Enterprise Linux (RHEL) 5.4, 5.5, and 6.0 and future modification levels, and fix packs
- KVM in SUSE Linux Enterprise Server (SLES) 11

Linux

- IBM z/VM® Hypervisor V5.4, V6.1 and future 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 and future fix packs
- Red Hat KVM as delivered with Red Hat Enterprise Linux (RHEL) 5.4, 5.5, 6.0, and future modification levels, and fix packs
- KVM in SUSE Linux Enterprise Server (SLES) 11
- VMware ESXi V4.0 and future releases, modification levels, and fix packs
- VMware ESX V4.0 and future releases, modification levels, and fix packs
- VMware ESXi V4.1, V5.0 and future modification levels, and fix packs
- VMware ESX V4.1 and future modification levels, and fix packs

Solaris

- Sun and Oracle Logical Domains (LDoms) any version and future fix packs X86-64
- Sun Solaris 10 Global and Local Zones (x86-64) 10 and future modification levels, and fix packs X86-64

Web browsers

- Microsoft Internet Explorer 8.0, 9.0, and future fix packs
- Mozilla Firefox ESR 10 and future modification levels and fix packs

Web servers

- Apache Server 2.2 and future modification levels, and fix packs
- Domino 8.0 and future fixpacks
- Microsoft Internet Information Services 6.0, 7.0, 7.5, and future modification levels, and fix packs
- Sun Java System Web Server 6.1 SP12 and 7.0 Update 1 and future modification levels, and fix packs
- IBM HTTP Server for i5/OS any version and future releases, modification levels, and fix packs
- IBM HTTP Server V8.5 and future modification levels and fix packs

Java

Java SDK 6.0.1 (J9 2.6) and future modification levels, and fix packs

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.

Companion products

IBM Tivoli Composite Application Manager for WebSphere Application Server is offered as a separate download for WebSphere Application Server V8.5.

IBM Tivoli Composite Application Manager for WebSphere Application Server, which was formerly provided within the application server offering, is now made available as a separate web download from the Integrated Service Management Library as follows

https://www-304.ibm.com/software/brandcatalog/ismlibrary/

It provides additional request-based PMI metrics to help you understand the performance of your application server and more quickly identify issues. Also, because it uses the same data collector used by IBM Tivoli Composite Application Manager for Application Diagnostics, which provides advanced monitoring and deep diagnostics capability, it makes upgrade quick and easy for licensed users of that product, and provides further integration with Tivoli's Application Performance Monitoring solutions.

Limitations

The following features are either not supported by WebSphere Application Server V8.5 or are being deprecated in V8.5:

- CEI is being deprecated.
- Intelligent Management and some WebSphere Batch features are not available for the System i platform at this time. Refer to the Information Center for further details.

- Support for WebSphere Virtual Enterprise Nodes is provided by WebSphere Application Server Network Deployment V8.5, but is being deprecated.
- Dynamic Scripting Feature Pack is not supported in V8.5.
- IBM Tivoli Composite Application Manager for WebSphere Application Server, which was formerly provided within the application server offering, is now being made available as a separate web download.

Planning information

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.

WebSphere Application Server Express planning information

Processor Value Unit (PVU) license

The maximum allowed PVU capacity on a single server is 480 PVUs. WebSphere Application Server Express is eligible for Virtual Capacity Licensing, so virtual partitions of up to 480 PVUs could be allocated on a physical server with greater then 480 PVU capacity to enable use of WebSphere Application Server Express on that physical server. Server capacity available to WebSphere Application Server Express on any one physical server cannot exceed 480 PVUs. WebSphere Application Server Express PVU licenses can be utilized on any number of servers.

20 Intranet User licenses

Intranet User licenses are acquired in packs of 20 authorized (named) users and those users are authorized for that specific WebSphere Application Server Express server. The server maximum PVU capacity considerations above apply to WebSphere Application Server Express implementations acquired via Intranet User licenses. Multiple Intranet User packs can be purchased for a single server to increase the server capacity beyond 20 authorized users. However, there is a limitation of a single WebSphere Application Server Express server acquired via the Intranet User option per customer location.

WebSphere Application Server V8.5 planning information

Web 2.0 and mobile

The functionality delivered as the Web 2.0 and Mobile Feature Pack is delivered for WebSphere Application Server V8.5 as the Web 2.0 and Mobile Toolkit and included as an option within the base product itself.

Direct customer support

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

http://www.ibm.com/support

Packaging

WebSphere Application Server V8.5 contents:

- Quick Start
- IBM WebSphere Application Server
- IBM WebSphere SDK Java Technology Edition V7.0
- IBM WebSphere Application Server supplements (includes IBM HTTP Server, Web Server Plug-ins, Application Client, Pluggable Application Client, and WebSphere Customization Toolbox)
- IBM Installation Manager V1.5.2 - includes IBM Packaging Utility V1.5.2
- IBM Rational Agent Controller V8.3.5
- IBM Tivoli Directory Server V6.3
- IBM Tivoli Access Manager for e-business V6.1.1
- IBM DB2 Workgroup Server Edition Limited Use V9.7
- IBM DB2 Enterprise Server Edition Limited Use for Linux on System z V9.7
- IBM Rational Application Developer for WebSphere Software Trial, V8.5
- IBM Assembly and Deploy Tools for WebSphere Administration V8.5
- IBM WebSphere Application Server Web 2.0 and Mobile Toolkit V1.1.0.2
- IBM WebSphere Adapters V7.5.0.1
- Mozilla Firefox V3.5.13 (AIX 64 bit)

WebSphere Application Server - Express V8.5 contents:

- Quick Start
- WebSphere Application Server - Express
- IBM WebSphere SDK Java Technology Edition V7.0
- WebSphere Application Server Supplements (includes IBM HTTP Server, Web Server Plug-ins, Application Client, Pluggable Application Client, and WebSphere Customization Toolbox)
- IBM Installation Manager V1.5.2 - includes IBM Packaging Utility V1.5.2
- IBM Rational Agent Controller V8.3.5
- IBM Tivoli Directory Server V6.3
- DB2 Workgroup Server Edition Limited Use V9.7
- DB2 Enterprise Server Edition Limited Use for Linux on System z V9.7
- IBM Rational Application Developer for WebSphere Software Trial, V8.5
- IBM Assembly and Deploy Tools for WebSphere Administration V8.5
- IBM WebSphere Application Server Web 2.0 and Mobile Toolkit V1.1.0.2
- WebSphere Adapters V7.5.0.1
- IBM Installation Manager V1.5.2

WebSphere Application Server for Developers V8.5 contents:

- Quick Start
- IBM WebSphere Application Server
- IBM WebSphere SDK Java Technology Edition V7.0
- IBM WebSphere Application Server Supplements (includes IBM HTTP Server, Web Server Plug-ins, Application Client, Pluggable Application Client, and WebSphere Customization Toolbox)
- IBM Installation Manager V1.5.2 - includes IBM Packaging Utility V1.5.2
- IBM Rational Agent Controller V8.3.5
- IBM Tivoli Directory Server V6.3
- IBM Tivoli Access Manager for e-business V6.1.1
- IBM DB2 Workgroup Server Edition Limited Use V9.7
- IBM DB2 Enterprise Server Edition Limited Use for Linux on System z V9.7
- IBM Rational Application Developer for WebSphere Software Trial, V8.5
- IBM Assembly and Deploy Tools for WebSphere Administration V8.5
- IBM WebSphere Adapters V7.5.0.1
- Mozilla Firefox V3.5.13 (AIX 64 bit)

WebSphere Application Server Network Deployment V8.5 contents:

- Quick Start
- WebSphere Application Server Network Deployment
- IBM WebSphere SDK Java Technology Edition V7.0
- WebSphere Application Server Supplements (includes IBM HTTP Server, Web Server Plug-ins, Application Client, Pluggable Application Client, and WebSphere Customization Toolbox)
- IBM Installation Manager V1.5.2 - includes IBM Packaging Utility V1.5.2
- IBM DMZ Secure Proxy Server
- IBM WebSphere Edge Components: Load Balancer for IPv4 and IPv6, Load Balancer for IPv4 and Edge Caching Proxy
- IBM Rational Agent Controller V8.3.5
- IBM Tivoli Directory Server V6.3

- IBM Tivoli Access Manager for e-business V6.1.1
- IBM DB2 Workgroup Server Edition Limited Use V9.7
- IBM DB2 Enterprise Server Edition Limited Use for Linux on System z V9.7
- IBM Rational Application Development for WebSphere Software Trial, V8.5
- IBM Assembly and Deploy Tools for WebSphere Administration V8.5
- IBM WebSphere Adapters V7.5.0.1
- Mozilla Firefox V3.5.13 (AIX 64 bit)

IBM WebSphere Application Server - Tools Edition V8.5 contents:

- IBM WebSphere Application Server Quick Start
- IBM Rational Application Developer for WebSphere Quick Start
- IBM WebSphere Application Server
- IBM WebSphere Application Server Developer Tools for Eclipse
- IBM Rational Application Developer for WebSphere Software
- IBM Assembly and Deploy Tools for WebSphere Administration
- IBM WebSphere SDK Java Technology Edition V7.0
- IBM WebSphere Application Server Supplements (includes IBM HTTP Server, Web Server Plug-ins, Application Client, Pluggable Application Client, and WebSphere Customization Toolbox)
- IBM Installation Manager V1.5.2 (includes IBM Packaging Utility V1.5.2)
- IBM Tivoli Directory Server V6.3
- IBM Tivoli Access Manager for e-business V6.1.1
- IBM DB2 Workgroup Server Edition Limited Use V9.7
- IBM DB2 Enterprise Server Edition Limited Use for Linux on System z V9.7
- IBM WebSphere Adapters V7.5.0.1
- Mozilla Firefox V3.5.13 (AIX 64 bit)

IBM WebSphere Application Server for Developers - Tools Edition for Eclipse V8.5 contents:

- IBM WebSphere Application Server for Developers Quick Start
- IBM WebSphere Application Server Developer Tools for Eclipse Quick Start
- IBM WebSphere Application Server for Developers
- IBM WebSphere Application Server Developer Tools for Eclipse
- IBM WebSphere SDK Java Technology Edition V7.0
- IBM WebSphere Application Server Supplements (includes IBM HTTP Server, Web Server Plug-ins, Application Client, Pluggable Application Client, and WebSphere Customization Toolbox)
- IBM Installation Manager V1.5.2 (includes IBM Packaging Utility V1.5.2)
- IBM Tivoli Directory Server V6.3
- IBM Tivoli Access Manager for e-business V6.1.1
- IBM DB2 Workgroup Server Edition Limited Use V9.7
- IBM DB2 Enterprise Server Edition Limited Use for Linux on System z V9.7
- IBM WebSphere Adapters V7.5.0.1
- Mozilla Firefox V3.5.13 (AIX 64 bit)

IBM WebSphere Application Server Network Deployment - Tools Edition V8.5 contents:

- IBM WebSphere Application Server Network Deployment Quick Start
- IBM Rational Application Developer for WebSphere Quick Start
- IBM WebSphere Application Server Network Deployment

- IBM WebSphere Application Server Developer Tools for Eclipse
- IBM Rational Application Development for WebSphere Software
- IBM Assembly and Deploy Tools for WebSphere Administration
- IBM WebSphere SDK Java Technology Edition V7.0
- WebSphere Application Server Supplements (includes IBM HTTP Server, Web Server Plug-ins, Application Client, Pluggable Application Client and WebSphere Customization Toolbox)
- IBM Installation Manager V1.5.2 (includes IBM Packaging Utility V1.5.2)
- IBM DMZ Secure Proxy Server
- IBM WebSphere Edge Components: Load Balancer for IPv4 and IPv6, Load Balancer for IPv4, and Edge Caching Proxy
- IBM Tivoli Directory Server V6.3
- IBM Tivoli Access Manager for e-business V6.1.1
- IBM DB2 Workgroup Server Edition Limited Use V9.7
- IBM DB2 Enterprise Server Edition Limited Use for Linux on System z V9.7
- IBM WebSphere Adapters V7.5.0.1
- Mozilla Firefox V3.5.13 (AIX 64 bit)

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 V8.5 provides automated authorization checking and a strong security implementation for authentication and authorization. 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

This product is only available via Passport Advantage . It is not available as shrinkwrap.

Product name/title	Product group	Product category
WebSphere Application Server	Application Integration Middleware	WebSphere
WebSphere Application Server Network Deployment	Application Integration Middleware other	Application Integration

		Middleware other
WebSphere Application Server for Developers	Application Integration Middleware other	Application Integration Middleware other
WebSphere Application Server - Express	Application Integration Middleware	WebSphere
WebSphere Application Server - Express Developer	Application Integration Middleware	WebSphere
WebSphere Application Server - Express Intranet Option	Application Integration Middleware	WebSphere
WebSphere Application Server - Tools Edition	Application Integration Middleware	WebSphere
WebSphere Application Server Network Deployment - Tools Edition	Application Integration Middleware	WebSphere
WebSphere Application Server for Developers - Tools Edition for Eclipse	Application Integration Middleware	WebSphere

Charge metric

Program name	PID number	Charge metric
WebSphere Application Server	5724-J08	Processor Value Unit (PVU)
WebSphere Application Server	5724-J08	Limited Use Socket
WebSphere Application Server	5724-J08	Processor Day
WebSphere Application Server Network Deployment	5724-H88	Processor Value Unit (PVU)
WebSphere Application Server Network Deployment	5724-H88	Processor Day
WebSphere Application Server for Developers	5724-H89	Authorized User
WebSphere Application Server - Express	5724-I63	Processor Value Unit (PVU)
WebSphere Application Server - Express	5724-I63	Processor Day
WebSphere Application Server - Express Developer	5724-I63	Authorized User
WebSphere Application Server - Express Intranet Option	5724-I63	20 Authorized Users
WebSphere Application Server - Tools Edition	5725-F49	Processor Value Unit (PVU)
WebSphere Application Server Network Deployment - Tools Edition	5725-F51	Processor Value Unit (PVU)
WebSphere Application Server for Developers - Tools Edition for Eclipse	5725-F50	Authorized User

Authorized User

Authorized User is a unit of measure by which the program can be licensed. An Authorized User is a unique person who is given access to the program. Licensee must obtain separate, dedicated entitlements for each Authorized User accessing the program in any manner directly or indirectly (for example, via a multiplexing program, device, or application server) through any means. An entitlement for an Authorized User is unique to that Authorized User and may not be shared, nor may it be reassigned other than for the permanent transfer of the Authorized User entitlement to another person.

Note: Some programs may be licensed where devices are considered users. In that case, the following applies. Any computing device that requests the execution of or receives for execution a set of commands, procedures, or applications from the program or that is otherwise managed by the program is considered a separate user of the program and requires an entitlement as if that device were a person.

Limited Use Socket (LU Socket)

LU Socket is a unit of measure by which the program can be licensed. A Limited Use Socket is an electronic circuitry that accepts a processor chip that meets the maximum processor cores per socket authorized use terms and conditions in the IBM Express and Middleware Licensing Guide at

   ftp://ftp.software.ibm.com/software/smb/pdfs/LicensingGuide.pdf

If the program is eligible for sub-capacity licensing, Licensee may be permitted to license less than all Sockets on the Server. Sub-capacity licensing terms, conditions and eligibility requirements for LU Socket-licensed programs are described in the Sub-capacity Guide at

   ftp://ftp.software.ibm.com/software/smb/pdfs/SubcapacityGuide.pdf

Processor Value Unit (PVU)

PVU is a unit of measure by which the program can be licensed. The number of PVU entitlements required is based on the processor technology (defined within the PVU table by processor value, brand, type, and model number at the website below) and the number of processors made available to the program. IBM continues to define a processor, for the purpose of PVU-based licensing, to be each processor core on a chip. A dual-core processor chip, for example, has two processor cores. The PVU table can be found at

   http://www.ibm.com/software/lotus/passportadvantage/
   pvu_licensing_for_customers.html

Licensee can deploy the program using either full capacity licensing or virtualization capacity (sub-capacity) licensing according to the Passport Advantage Sub-Capacity Licensing Terms (refer to the web page below). If using Full Capacity licensing, Licensee must obtain PVU entitlements sufficient to cover all activated processor cores* in the physical hardware environment made available to or managed by the Program, except for those servers from which the Program has been permanently removed. If using Virtualization Capacity licensing, Licensee must obtain entitlements sufficient to cover all activated processor cores made available to or managed by the Program, as defined according to the Virtualization Capacity License Counting Rules at

   http://www.ibm.com/software/lotus/passportadvantage/
   Counting_Software_licenses_using_specific_virtualization_technologies.html

* An activated processor core is a processor core that is available for use in a physical or virtual server, regardless of whether the capacity of the processor core can be or is limited through virtualization technologies, operating system commands, BIOS settings, or similar restrictions.

Notes:

- Some programs may require licenses for the program **and** what is being managed. In that case, the following applies. In addition to the entitlements required for the program directly, licensee must obtain PVU entitlements for this program sufficient to cover the processor cores managed by the program.
- Some programs may be licensed on a managed basis only. In that case, the following applies. Instead of the entitlements required for the program directly, licensee must obtain PVU entitlements for this program sufficient to cover the processor cores managed by the program.
- A few programs on an exception basis may be licensed on a referenced basis. In that case, the following applies. Rather than obtaining entitlements for the activated processor cores available to the program, licensee must obtain PVU entitlements for this program sufficient to cover the environment made available to the referenced program as if the program itself were executing everywhere the referenced program was executing, independent of the basis on which the referenced program is licensed.
- Deployment Manager component: If you install the Deployment Manager component on a machine to administer your system topology, you must have a WebSphere Application Server Network Deployment Program license for each machine on which the Deployment Manager Component is installed.

Passport Advantage

```
                                                       Part
Program name/Description                               number

WebSphere Application Server

Per Processor Value Unit
 License + SW Subscription & Support 12 Months         D55W8LL
 Annual SW Subscription & Support Renewal              E025QLL
 SW Subscription & Support Reinstatement 12 Months     D55W9LL

WebSphere Application Server

Per Limited Use Socket
 License + SW Subscription & Support 12 Months         D0GUSLL
 Annual SW Subscription & Support Renewal              E0AT3LL
 SW Subscription & Support Reinstatement 12 Months     D0GUULL

WebSphere Application Server for Developers

Per Authorized User
 License + SW Subscription & Support 12 Months         D51JXLL
 Annual SW Subscription & Support Renewal              E00HHLL
 SW Subscription & Support Reinstatement 12 Months     D51JZLL

WebSphere Application Server Network Deployment

Per Processor Value Unit
 License + SW Subscription & Support 12 Months         D55WJLL
 Annual SW Subscription & Support Renewal              E025SLL
 SW Subscription & Support Reinstatement 12 Months     D55WKLL

WebSphere Application Server - Express

Per Processor Value Unit
 License + SW Subscription & Support 12 Months         D582CLL
 Annual SW Subscription & Support Renewal              E02HKLL
 SW Subscription & Support Reinstatement 12 Months     D582DLL

WebSphere Application Server - Express Developer

Per Authorized User
 License + SW Subscription & Support 12 Months         D522PLL
 Annual SW Subscription & Support Renewal              E00MQLL
 SW Subscription & Support Reinstatement 12 Months     D522RLL
```

```
    WebSphere Application Server - Express Intranet Option

    Per 20 Authorized Users
      License + SW Subscription & Support 12 Months        D522LLL
      Annual SW Subscription & Support Renewal             E00MPLL
      SW Subscription & Support Reinstatement 12 Months    D522NLL


    WebSphere Application Server - Tools Edition

    Per Processor Value Unit
      License + SW Subscription & Support 12 Months        D0LTLLL
      Annual SW Subscription & Support Renewal             E0D11LL
      SW Subscription & Support Reinstatement 12 Months    D0LTMLL

    WebSphere Application Server Network Deployment -
     Tools Edition

    Per Processor Value Unit
      License + SW Subscription & Support 12 Months        D0LTFLL
      Annual SW Subscription & Support Renewal             E0D0ZLL
      SW Subscription & Support Reinstatement 12 Months    D0LTGLL

    WebSphere Application Server for Developers -
     Tools Edition for Eclipse

    Per Authorized User
      License + SW Subscription & Support 12 Months        D0LTCLL
      Annual SW Subscription & Support Renewal             E0D0YLL
      SW Subscription & Support Reinstatement 12 Months    D0LTDLL
```

Passport Advantage trade-up

Below is a list of precursor products for which you must have already acquired a license, in order to be eligible to acquire equivalent licenses using the trade-up part numbers.

```
                                                          Trade-up
    Precursor product           Trade-up product          part number

    WebSphere Application Server WebSphere Application Server   D0GUWLL
     100 Processor Value Units    per Limited Use Socket
                                  Trade-up License + SW S&S 12 Mo


    WebSphere Application Server WebSphere Application Server   D0GUYLL
     100 Processor Value Units    per Limited Use Socket
     Linux on System z            Linux on System z
                                  Trade-up License + SW S&S 12 Mo


    Qualified Competitor         WebSphere Application Server   D55WDLL
                                  Processor Value Unit
                                  Trade-up License + SW S&S 12 Mo


    WebSphere Application Server WebSphere Application Server   D55WBLL
     - Express                    Processor Value Unit
                                  Trade-up License + SW S&S 12 Mo


    WebSphere Application Server WebSphere Application Server   D55WALL
     Standard Server              Processor Value Unit
                                  Trade-up License + SW S&S 12 Mo


    Qualified Competitor         WebSphere Application Server   D55WILL
                                  Processor Value Unit,
                                  zEnterprise™ BladeCenter
                                  Extension (zBX) Linux on System z
                                  Trade-up License + SW S&S 12 Mo


    WebSphere Application Server WebSphere Application Server   D55WHLL
     - Express                    Processor Value Unit,
                                  zEnterprise BladeCenter
                                  Extension (zBX) Linux on System z
                                  Trade-up License + SW S&S 12 Mo


    WebSphere Application Server WebSphere Application Server   D55WGLL
```

```
   Standard Server                Processor Value Unit,
                                  zEnterprise BladeCenter
                                  Extension (zBX) Linux on System z
                                  Trade-up License + SW S&S 12 Mo

   Qualified Competitor           WebSphere Application Server      D55WLLL
                                  Network Deployment
                                  Processor Value Unit
                                  Trade-up License + SW S&S 12 Mo

   WebSphere Application Server   WebSphere Application Server      D55WMLL
    Advanced Single Server        Network Deployment
                                  Processor Value Unit
                                  Trade-up License + SW S&S 12 Mo

   WebSphere Application Server   WebSphere Application Server      D55WNLL
                                  Network Deployment
                                  Processor Value Unit
                                  Trade-up License + SW S&S 12 Mo

   WebSphere Application Server   WebSphere Application Server      D55WSLL
    Advanced Single Server        Network Deployment
                                  Processor Value Unit
                                  Linux on System z
                                  Trade-up License + SW S&S 12 Mo

   Qualified Competitor           WebSphere Application Server      D55WULL
                                  Processor Value Unit,
                                  zEnterprise BladeCenter
                                  Extension (zBX) Linux on System z
                                  Trade-up License + SW S&S 12 Mo

   WebSphere Application Server   WebSphere Application Server      D55WTLL
    Linux on System z             Processor Value Unit,
                                  zEnterprise BladeCenter
                                  Extension (zBX) Linux on System z
                                  Trade-up License + SW S&S 12 Mo

   Qualified Competitor           WebSphere Application Server      D582FLL
                                  - Express
                                  Processor Value Unit
                                  Trade-up License + SW S&S 12 Mo

   WebSphere Application Server   WebSphere Application Server      D582ELL
    - Express                     - Express
    20 Intranet Users             Processor Value Unit
                                  Trade-up License + SW S&S 12 Mo
```

Consult your IBM representative if you have any questions.

Passport Advantage customer: Media pack entitlement details

Customers with active maintenance or subscription for the products listed are
entitled to receive the corresponding media pack.

```
Media packs
description                                            Part number

WebSphere Application Server V8.5 for                  BA146ML
 Multiplatforms Multilingual DVD Media Pack

WebSphere Application Server Network Deployment V8.5   BA148ML
 for Multiplatforms Multilingual DVD Media Pack

WebSphere Application Server - Express V8.5 for        BA147ML
 Multiplatforms Multilingual DVD Media Pack

WebSphere Application Server for Developers V8.5       BA149ML
 for Multiplatforms Multilingual DVD Media Pack

WebSphere Application Server - Tools Edition V8.5      BA144ML
 for Multiplatforms Multilingual DVD Media Pack
```

```
WebSphere Application Server Network Deployment -       BA143ML
 Tools Edition V8.5
 for Multiplatforms Multilingual DVD Media Pack

WebSphere Application Server for Developers - Tools     BA142ML
 Edition for Eclipse V8.5
 for Multiplatforms Multilingual DVD Media Pack
```

Cross-platform product for use on System z Integrated Facility for Linux (IFL) engines

Order the part numbers that follow when the product is intended to run on the Linux operating system on System z IFL engines. If the product is not intended to run on the Linux operating system on System z IFL engines, order from the other set of part numbers in this announcement. This set of part numbers provides the identical supply and authorization as the other set in this announcement.

```
                                                       Part
Program name/Description                               number

WebSphere Application Server

Per Limited User Socket
Linux on System z License + SW S&S 12 Months           D0GUTLL
Linux on System z Annual SW S&S Renewal                E0AT4LL
Linux on System z SW S&S Reinstate 12 Months           D0GUVLL

WebSphere Application Server

Per Processor Value Unit, zEnterprise BladeCenter
 Extension (zBX)
Linux on System z License + SW S&S 12 Months           D55WELL
Linux on System z Annual SW S&S Renewal                E025RLL
Linux on System z SW S&S Reinstate 12 Months           D55WFLL

WebSphere Application Server Network Deployment

Per Processor Value Unit, zEnterprise BladeCenter
 Extension (zBX)
Linux on System z License + SW S&S 12 Months           D55WQLL
Linux on System z Annual SW S&S Renewal                E025TLL
Linux on System z SW S&S Reinstate 12 Months           D55WRLL

WebSphere Application Server - Tools Edition

Per Processor Value Unit (PVU)
 Linux on System z License + SW S&S 12 Months          D0LTNLL
 Linux on System z Annual SW S&S Renewal               E0D12LL
 Linux on System z SW S&S Reinstatement 12 Months      D0LTPLL

WebSphere Application Server Network Deployment -
 Tools Edition

Per Processor Value Unit (PVU)
 Linux on System z License + SW S&S 12 Months          D0LTILL
 Linux on System z Annual SW S&S Renewal               E0D10LL
 Linux on System z SW S&S Reinstatement 12 Months      D0LTJLL
```

On/Off Capacity on Demand (CoD)

```
Part
number      Description

ASQQ3LL     WebSphere Application Server Processor Day
             On/Off CoD Temporary Use Charge

ASQJ8LL     WebSphere Application Server Network Deployment
             Processor Day On/Off CoD Temporary Use Charge

ASQR9LL     WebSphere Application Server - Express Processor Day
             On/Off CoD Temporary Use Charge
```

Processor Value Unit (PVU) sub-capacity licensing

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http://www.ibm.com/software/lotus/passportadvantage/subcaplicensing.html

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License Information form number

```
Program name                       LI form number


WebSphere Application Server -      L-JTHS-8R873Q
 Express V8.5

IBM WebSphere Application Server    L-JTHS-8R85W2
 Network Deployment V8.5

WebSphere Application Server V8.5   L-JTHS-8R4NAR

WebSphere Application Server for    L-JTHS-8R3PZD
 Developers V8.5
```

```
IBM WebSphere Application Server          L-JTHS-8SF4Y8
 Network Deployment -
 Tools Edition V8.5

IBM WebSphere Application Server          L-JTHS-8SF4VP
 for Developers -Tools Edition
 for Eclipse Bundle V8.5

IBM WebSphere Application Server -        L-JTHS-8S8PD2
 Tools Edition V8.5
```

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

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- OS/400® V5R1, or later, running on an IBM System i
- Linux running in an LPAR under AIX 5L V5.1, OS/400 V5R1, or in a partition on an equivalent partition-capable operating system and server

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- Install available updates to the operating system and eligible products such that license use can be accurately managed.
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Corrections

(Corrected on May 14, 2012)
Changes made in the Passport Advantage and Software requirements sections.