



IBM WebSphere Application Server delivers modular Java Enterprise Edition 7 Full Platform for Liberty profile

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At a glance

IBM[®] WebSphere[®] Application Server Liberty profile V8.5.5 is a lightweight, composable, fast-starting platform that is optimized for modern application workloads, such as cloud and mobile. It is designed for enhanced developer productivity, high-scale and resilient production deployments, and simple integration into modern DevOps workflows. Liberty profile delivers the latest in Java[™] Standards, which are certified to the Java EE 7 Web Profile and Java EE 7 Full Platform and supports their deployment across the widest spectrum of cloud environments and container-virtualization technologies.

Enhancements to WebSphere Application Server Liberty profile include:

- Java EE 7 full-platform certification that allows deployment of any Java EE 7 based application that uses the latest industry standards
- Updated certification to the Java EE 7 Web Profile that provides for the latest standards and supports a right fit runtime for the application
- Two times improvement in throughput for WebSockets
- Java EE 7 technologies that improve application productivity and support for the modern web apps, batch processing, and improvements in dependency injection
- Powerful administration capabilities that deliver simple, intuitive platform capabilities to manage a range of server topologies from a simple single server with a few applications to thousands of servers in a collective and cluster management environment
- Superior end-to-end security for servers, applications, and backend services that allow enterprises to seamlessly extend, scale, and integrate back-end security features to cloud and mobile users
- Simple integration into an end-to-end DevOps toolchain that enables a smarter development lifecycle to support delivery of continuous and rapid responses to changing business requirements
- WebSphere Application Server Developer Tools that provide flexibility to develop, deploy, test, and debug applications for either on-premise or off-premise cloud environments
- Extremely fast start-up time and light memory footprint that is highly optimized for throughput performance and policy-driven autonomic scaling to enable efficient resource utilization, significantly improve developer productivity, and lower the cost of ownership.
- Lower migration costs to future versions of WebSphere Liberty by eliminating migration of existing Java EE applications and configuration files

- Greater modular installation flexibility through WebSphere Liberty Repository enhancements that offers an offline, on-premise repository to share inhouse, open source, and Liberty features that enable greater governance and foster better collaboration among developers

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

Overview

Cloud, mobile, and social are the new engagement models with mobile and social options as the primary means of communication for everyone - customers, employees, and partners. To take advantage of this emerging engagement model requires organizations to reach out to the right people and provide an interaction that meets or exceeds their expectations for speed, agility, and user friendliness. While these changing market dynamics provide growth opportunities for businesses, to capitalize on them requires a new approach to delivering application infrastructure.

Key to success is to provide the ability for continuous delivery of new features, shorten product innovation time to market, and bring the business value chain closer to customers, partners, and employees. This must be accomplished by the development of engaging and responsive applications that provide a seamless omni-channel experience so consumers can move effortlessly from one channel to another.

To compete successfully in the new era of computing, traditional IT organizations need to tackle the dual challenge of maintaining the stability of existing IT infrastructure services while simultaneously providing new infrastructure capabilities that require the speed, agility, quality, and resilience for fast paced customer-facing cloud and mobile applications. Existing IT infrastructure services come at slower speed, but are critical for risk and regulatory compliance management and for core transactional activities. Balancing the transformation of the transactional architecture with the development of new high-speed architectures, which are often based around lightweight and independently scalable microservices, is forcing businesses to deploy an IT architecture that can operate at multiple speeds.

The WebSphere Application Server product offerings include two profiles of the server:

- WebSphere Application Server full profile
- WebSphere Application Server Liberty profile

These two profiles help companies to rapidly develop their customer-facing capabilities with Liberty profile, while maintaining the pace for traditional workloads with WebSphere Application Server full profile. Liberty profile is designed and optimized for fast-paced deployments of applications that deliver business value through continuous integration and delivery.

For developers and IT administrators, Liberty profile enhancements offer support for the DevOps ecosystem tool chains of many Open Source and third-party offerings, as well as commercial solutions like IBM UrbanCode™ Deploy. Ease of integration of the DevOps ecosystem for app development and deployment empowers both IT developers and administrators with greater flexibility to offer and consume compute resources as services. This is accomplished by automating time-consuming and error-prone tasks of provisioning, managing, and scaling onto either on premise or hybrid clouds during peak or unpredictable workloads. The focus of the Liberty profile DevOps ecosystem toolchain is to provide enhancements in the following areas:

- Designing new products and applications
- Building new products for web, enterprise, cloud-ready, and mobile-ready applications

- Running applications where availability of production-like systems, flexibility, fast time to value, low cost, and deployment both on and off-premise is critical to speed innovation and cost control
- Managing apps and the underlying infrastructure lifecycle to ensure 24x7 availability and responsiveness
- Delivering end-to-end security to protect assets (systems and information) through prevention, detection, and response to improper access from within and outside the enterprise
- Optimizing middleware infrastructure availability through analytics, with actionable insights to help discover, isolate, and predict outages that will ultimately result in higher customer satisfaction

For IT operations managers, availability of Liberty profile tools and runtimes across on-premise and several cloud environments provides freedom to compose new business models with best-of-breed business services (inside and outside of the organization) and to open and exploit new business opportunities-quickly. Liberty profile is an enterprise Java application platform that provides separation of concern and independence from the target hosting environment. This may include on-premise bare metal hardware, hypervisors or lightweight container (Docker for virtualized environments), on-premise cloud offerings (IBM Pure Application Systems), several infrastructure as a service (IaaS) providers (SoftLayer[®], Amazon AWS, and Microsoft[™] Azure), and platform as a service (PaaS) providers (BlueMix, Cloud Foundry, OpenShift, and Heroku).

For independent software vendors (ISVs) and IBM Business Partners, Liberty profile offers an ideal, premier Java runtime that allows them to start quickly and start small. It also offers a no-cost development offering that provides the flexibility to choose a correctly sized solution as they grow. These solutions can be enhanced as their business expands. This allows them to adopt the latest open standards offerings from the ecosystem that surrounds WebSphere Liberty to cater to new market needs.

For business leaders that are focused on growth, Liberty profile offers the ideal platform to provide a seamless, omni-channel experience so consumers can move effortlessly from one channel to another.

- Easily integrate applications with big data and advanced analytics to better understand customer behavior to help improve customer experience and increase sales through more effective cross-selling and up-selling.
- Improve capabilities in automating operations and integrating composable business services to enable quicker customer response times while cutting operating costs.

Planned availability date

June 26, 2015

Description

The new era of e-commerce and social networks and the rapid growth of mobile, cloud, and analytics is setting new expectations for speed, agility, and user friendliness. This challenges traditional businesses across a large spectrum of industries, such as banking, finance, insurance, health, retail, and telecommunication to deliver enriched customer experiences. Liberty profile delivers the industry's most composable container for delivering the high-speed, customer-centric, front-end applications as well as the transaction-focused back-end. It provides tools, runtime, and a rich ecosystem of partner offerings that shorten the time to value and also an optimized application lifecycle.

In addition, it adds flexible deployment options for hybrid cloud integration. These capabilities enable on-demand scalability, end-to-end security, and autonomic

operations that avoid time-consuming and costly activities, such as provisioning, configuration, and integration work.

Continuing the iterative delivery of new capabilities that build upon WebSphere Application Server V8.5.5, the new features offer enhancements to the WebSphere Application Server Liberty profile for development and production environments. The set of component technologies included in the Java EE 7 feature set are optionally installable either as individual features or as a single bundle from the WebSphere Liberty Repository. These new features can be used along with those previously available through WebSphere Liberty Repository.

Production-ready Java EE 7 certified environment

Liberty profile support for Java EE 7 Full Platform expands the successful Java EE 6 offering that was first available in Liberty profile V8.5.0. The continuous delivery model has incrementally provided selected Java EE 7 features through the Liberty Repository that culminates in this final, compliant delivery of Java EE 7 Full Platform. The three major themes for Java EE 7 include:

- Developing HTML5 applications

Liberty profile's support for WebSockets 1.0/1.1 and JSON-P 1.0 provides the ground work for low-latency data exchange and standardized JSON document parsing, respectively. Adding in the updates for Servlet 3.1 and JAX-RS 2.0 allows Liberty profile developers to create dynamic, scalable, and high-performance web applications. The ability of JSF 2.2 to support HTML5 markup provides a more complete framework for building application user interfaces.

- Increasing developer productivity

Java EE 7 continues the developer productivity improvements started in Java EE 5. More boilerplate code was removed with the introduction of additional annotations and default resource processing. The key technologies that benefited from these improvements include Java Message Server (JMS) 2.0 and the JAX-RS 2.0 Client API. The use of default resources across several Java EE 7 technologies simplified and improved the initial customer experience. Also, the pruning of several older technologies, such as Container-Managed Persistence (CMP) Entity Beans demonstrates the commitment to staying current.

- Meeting the demands of enterprise customers.

Led by IBM Java Batch 1.0 specification, Java EE 7 continues to recognize the demands of IBM enterprise customers. Customers can now write Java batch applications by using a standardized API. The Concurrency Utilities 1.0 feature allows for multithreaded applications, while still maintaining the Java EE qualities of service, such as reliability, scalability, and security.

Ease of installing the Java EE 7 certified environment

Liberty profile enables simple installation by providing unzip packages for both Java EE 7 Web Profile and Full Platform. Simply download, unzip and go. Liberty profile also provides an in-place edition upgrade for users of the no-charge and no-support option.

For many years, WebSphere Application Server has provided a no-charge runtime for use in a development environment. Liberty profile now adds a no-charge and no-support option for web-centric applications for usage in test and production environments, which is limited to 2 GB of memory across all instances of application servers for the licensee.

Production use beyond 2 GB of heap size requires purchase of license entitlements. Liberty profile provides a mechanism for in-place upgrade. It allows you to move up the product editions as your requirements change, without needing a reinstall from no-charge edition to purchased entitlement. Starting from WebSphere Application Server Liberty Core and seamlessly moving to the enhanced capabilities available with WebSphere Application Server, or WebSphere Application Server Network Deployment, Liberty profile grows with your applications.

High-performance threading model

Liberty profile delivers a new, high-performance threading model that provides a significant performance boost for highly concurrent workloads. It minimizes I/O costs to support larger numbers of concurrent clients with fewer server instances. The new threading model significantly improves the scalability of Web Socket and high transactional workloads, which reduces the latency. The high-performance threading model contributes to improved workload throughput. This helps to maximize businesses competitiveness while minimizing total cost of ownership.

Significant performance improvements with IBM Java 8 for Liberty profile

Liberty performance is improved across startup, footprint, and runtime with IBM JDK 8 for multiple workloads. Performance is optimized across multiple platforms, which are supported by IBM JDK that include Power Systems™ and Intel™ systems through optimizations to JIT, GC, and other JDK sub systems.

Enhanced WebSphere Application Server Developer Tools

The WebSphere Application Server Developer Tools for Eclipse are updated to support Java 8 and the full range of programming models available on Liberty profile, that include the Java EE 7 Full Profile. (notably WebSockets, CDI, and Batch) and SIP.

Working with Liberty profile from within the tools is easier than ever, with improved repository and proxy server support to install additional features, enhancements to the server configuration editor, and support for deploying applications and configuration straight from a developer's desktop to remote Liberty servers on all platforms supported by Liberty profile, which include z/OS^(R).

Simplified scaling and management

Enhancements to Liberty profile auto-scaling allows deployment of scaling policy to be specified within the server package during deployment, greatly simplifying integration with DevOps tool chain.

Enhanced WebSphere Liberty Administration Center (Admin Center)

Enhancements include new capabilities to allow for easier management of large deployments, as well as providing more information about servers and applications within a collective. Additional enhancements include:

- Ability to customize the resource monitoring view, which includes multiple graphs for application statistics, allows administrators to view only the data they are interested in. The customized view is saved for each user and device, giving each administrator a personalized view of servers and application metrics.
- Administrative metadata in the form of tags, owner, contacts, and notes can now be set for servers, clusters, and applications through Admin Center. Tags allow admins to easily search for resources and to create custom groupings to help manage a collective topology.
- Auto-complete suggestions that make searching easier and quicker to find resources in a topology.
- Performance enhancements that enable the Admin Center to manage larger-scale collective environments while maintaining a responsive user experience.

Liberty Repository enhancements

The WebSphere Liberty Repository delivers a composable install experience for Liberty profile, which provides everything from an entire, Java EE 7 compliant server to individual, fine-grained server features, open source integration packages and sample administrative configuration snippets. A new Open Source Liberty Asset Repository Service enables anyone to stand up their own repository and populate it with features from the WebSphere Liberty Repository, third-party features, or features that are created inhouse. Each install client (Installation Manager, Command Line, and WebSphere Developer Tools) can be configured to federate

across any number of repositories. That same Liberty Repository experience can be achieved without the need to step outside the corporate firewall. Development and Operation teams can share features, that foster greater collaboration and reuse.

<https://developer.ibm.com/wasdev/downloads>

Security enhancements

WebSphere Liberty Repository already contains additional security features beyond Java EE 7:

- The Simple and Protected GSSAPI Negotiation Mechanism (SPNEGO) to enable single sign-on (SSO) mechanism for Liberty profile in Kerberos environments. This feature provides capabilities similar to those available for the WebSphere Application Server full profile
- OpenID and OpenID Connect protocols to help simplify the task of authenticating and authorizing mobile and cloud centric applications
- Open Trusted Technology Provider Standard (OTTP-S) Accreditation. WebSphere Application server is now the leading OTTP-S accredited application server provider. WebSphere Application Server incorporated secure engineering practices, which empower businesses to build security and integrity into their end-to-end supply chains, mitigating the risk of maliciously tainted and counterfeit technology components or products

http://securityintelligence.com/open-group-ottps-trust-software-hardware-vendor/#.VUe_I fIViko

Docker enhancements that include:

- Ease of configuring Liberty profile server into a Docker container and run it anywhere. Liberty profile images are available as an official repository on Docker Hub. For more flexibility, you can easily build a custom image using the Dockerfiles from the open source GitHub repository on WASdev.net .
- Ease of upgrading images for test and production with simple, in-place edition upgrade.

https://registry.hub.docker.com/_/websphere-libe

Extended migration tools

The WebSphere Application Migration Toolkit is extended with a set of JPA rules to highlight differences in application code when using OpenJPA and EclipseLink. The Migration Toolkit for Application Binaries (Technology Preview) includes new rules to help move applications from WebSphere Application Server full profile to Liberty as well as moving between different versions of Java SE.

NoSQL database support

Liberty profile now supports CouchDB in addition to MongoDB. Both are scalable, well performing, and easy-to-use document-style NoSQL database.

Accessibility by people with disabilities

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

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

Section 508 of the US Rehabilitation Act

WebSphere Application Server V8.5.5 is capable as of June 26, 2015, when used in accordance with associated IBM documentation, of satisfying the applicable requirements of Section 508 of the Rehabilitation Act, provided that any assistive technology used with the product properly interoperates with it.

Product positioning

WebSphere Application Server Liberty profile, an integral part of the WebSphere Application Server family, offers a highly composable, fast to start, and production-ready, Java EE 7 compliant runtime that is optimized for developer and operational productivity for web, cloud, and enterprise applications. The modular architecture of Liberty profile offers unparalleled flexibility to incrementally add standardized programming models, consistent Java runtime across on-premises bare metal or virtualized environments, and cloud and mobile environments. At the same time, Liberty profile provides a higher quality of service to applications as business needs change, without the cost of rearchitecting, reprogramming, or migrating to different technology bases. Liberty profile, which previously offered Java EE 6 compliant technologies, now offers an easy upgrade path to adopt Java EE 7 programming models and increasingly higher qualities of service through its continuous delivery model.

Liberty profile, available with various WebSphere Application Server editions, can now be upgraded through the continuous delivery model to a Java EE 7 certified environment by installing Version 9 bundle for Java EE 7 from WebSphere Liberty Repository. These editions support 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.

Configuration options for Java EE 7 compliant Liberty profile through continuous delivery

No-charge and no-support option

WebSphere Application Server Liberty profile provides a no-charge and no-support option for web-centric applications for usage in test and production environments. Usage in test and production environments is restricted to a maximum of 2 GB of JVM heap size across all instances of application servers for the licensee. IBM provides an in-place option to upgrade from a no-charge, no-support to other WebSphere Application Server editions.

WebSphere Application Server Liberty Core V8.5.5 with Version 9 bundle for Java EE 7

WebSphere Application Server Liberty Core V8.5.5, a lightweight and dynamic offering of WebSphere Application Server, previously certified to the Java EE 6 Web Profile, can be easily upgraded to the Java EE 7 Web Profile runtime environment. Composed entirely of the developer-friendly Liberty profile, the WebSphere Application Server Liberty Core edition enables rapid development and deployment of web-centric and mobile-centric applications, that enable businesses to quickly respond to enterprise and market needs. Liberty profile servers can be members of collectives that enables them to be managed by a collective controller from a Network Deployment installation. The capabilities that are provided in the Liberty Core edition are a subset of the capabilities provided in the WebSphere Application Server and Network Deployment editions. Highlights of the new Liberty Core offering include:

- Extremely lightweight offering, composed of a subset of the Liberty profile that is certified for the Java EE 7 Web Profile
- An excellent development and production runtime for web applications
- Fast time-to-value. Small download, small footprint, and fast startup easily package applications (includes configuration) for deployment
- Extensible through Liberty features SPI

WebSphere Application Server - Express^(R) V8.5.5 with Version 9 bundle for Java EE 7

Consistent with WebSphere Application Server full profile, Liberty profile offers a Java EE7 compliant environment that provides an affordable, ready-to-go application foundation for single-server and smaller-scale deployments of dynamic web applications. These can be effortlessly migrated to more advanced versions of the WebSphere Application Server family. Liberty profile that is included in the WebSphere Application Server - Express is limited to single-server implementations and up to a maximum of 480 Processor Value Units per server. Larger servers that represent more than 480 PVUs may be segmented into smaller virtual servers, but Express may not be installed on more than 480 PVUs on a single (physical) server. Liberty profile servers can be members of collectives, which enable them to be managed by a collective controller from a Network Deployment installation.

WebSphere Application Server for Developers V8.5.5 with Version 9 bundle for Java EE 7

Liberty profile, which is included in the WebSphere Application Server for Developers, is licensed for development use. It 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 who build in WebSphere Application Server environments. Customers with an active support contract for their production WebSphere Application Server (V8.5 or later) are entitled to support for WebSphere Application Server for Developers.

WebSphere Application Server V8.5.5 with Version 9 bundle for Java EE 7

Liberty profile, which is included in WebSphere Application Server, along with full profile is tailored for single server to moderately sized configurations of departmental or large-scale, dynamic web applications that require web tier clustering and failover across application server instances, and a variety of pricing alternatives. The Liberty Profile capabilities include a superset of those found in WebSphere Application Server Liberty Core, providing additional programming models such as Web Services, Full EJB and Java Message Service. Liberty profile can be members of collectives, enabling it to be managed by a collective controller from a Network Deployment installation. It enables load balancing across servers, and includes WebSphere eXtreme Scale with support for session caching and DynaCache.

WebSphere Application Server Network Deployment V8.5.5 with Version 9 bundle for Java EE 7

Liberty profile, which is included in the WebSphere Application Server Network Deployment edition, offers enterprises near-continuous availability, advanced management, and automated performance optimization for their mission-critical applications. Liberty profile capabilities include a superset of those found in WebSphere Application Server Liberty Core, and WebSphere Application Server configuration. Liberty profile, which is included in the WebSphere Application Server Network Deployment, offers:

- World-class, clustering and high-availability management to help eliminate the cost of system downtime
- Auto-scaling, auto-routing, and Internet-scale clustering for intelligent and efficient management of compute resources
- Enterprise-level, Java batch capabilities, such as parallel job processing, job checkpoints and restart, workload management, and shared OLTP and batch processing, to support batch modernization and modern batch projects
- 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

- High performance that maximizes business competitiveness while minimizing total cost of ownership
- Liberty profile collective cluster administration that improves resiliency of server and provides high availability for mission-critical application
- Distributed caching through WebSphere eXtreme Scale that provides responsiveness to enterprise, cloud, and mobile application

WebSphere Application Server for z/OS^(R), V8.5 with Version 9 bundle for Java EE 7

Liberty profile, which is included in WebSphere Application Server for z/OS, offers all the capabilities that are available in the Liberty profile in WebSphere Application Server Network Deployment. In addition, it takes advantage of the unique qualities of service of IBM z SystemsTM hardware and the z/OS operating system, such as policy-driven workload management, advanced transactional integrity, unsurpassed scalability and availability, built-in enterprise security capabilities, and more. Also, Liberty profile in WebSphere Application Server for z/OS includes z/OS-specific features that large enterprise customers can appreciate, such as z/OS Connect and WebSphere optimized local adapters.

WebSphere Application Server Tools Editions with Version 9 bundle for Java EE 7

Liberty profile, which is included in Tools editions in the following three bundles, enables accelerated development and delivers 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

WebSphere Application Server for Developers and the WebSphere Application Server Developer Tools for Eclipse, which is a subset of Rational^(R) Application Developer plug-ins and can easily be installed on top of the customer's existing Eclipse environment, provide support for the development of simple applications. This includes WebSphere Application Server support, and core application programming support (Java EE, OSGi, and Web 2.0) to quickly deploy to a Liberty profile environment. The content of this bundle is offered as a no-charge download with an optionally purchased support package.

Statement of general direction

Consistent with the previously announced statement of direction, it remains the intent of IBM to certify WebSphere Application Server full profile to Java EE 7 Full Platform. For details, refer to Software Announcement [215-084](#), dated February 17, 2015.

IBM intends to enable web single sign-on (SSO) support with the Security Assertion Markup Language (SAML) standard on WebSphere Application Server Liberty profile. SAML facilitates exchanging authentication and authorization data between security domains. SAML support for SSO is already available for WebSphere Application Server full profile.

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 our products remain at our sole discretion.

Reference information

For information about WebSphere Application Server for z/OS, V8.5 continuous delivery, refer to Software Announcement [215-278](#), dated June 9, 2015.

For information about Application Server on Cloud, refer to Software Announcement [215-274](#), dated June 9, 2015.

For information about WebSphere Application Server V8.5.5 continuous delivery, refer to Software Announcement [215-084](#), dated February 17, 2015, and Software Announcement [214-445](#), dated October 1, 2014.

For information about WebSphere Application Server for z/OS, V8.5 continuous delivery, refer to Software Announcement [215-098](#), dated February 17, 2015.

Availability of national languages

All supported languages are available.

Program number

Program number	VRM	Program name
5724-J08	8.5.5	WebSphere Application Server
5725-L29	8.5.5	WebSphere Application Server Liberty Core
5724-I63	8.5.5	WebSphere Application Server -Express
5724-H88	8.5.5	WebSphere Application Server Network Deployment
5724-H89	8.5.5	WebSphere Application Server for Developers
5725-F49	8.5.5	WebSphere Application Server - Tools Edition
5725-F51	8.5.5	WebSphere Application Server Network Deployment - Tools Edition
5725-F50	8.5.5	WebSphere Application Server for Developers - Tools Edition for Eclipse

Publications

The latest product documentation for WebSphere Application Server V8.5.5 is found in IBM Knowledge Center at

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

IBM Knowledge Center is the home for IBM product documentation as it brings IBM's technical publications together in a single location. IBM Knowledge Center simplifies the user experience, improves search, and refines the overall experience with other enhancements. Locate the desired WebSphere Application Server offering from the product list to obtain the product documentation. To learn more about how to use the WebSphere Application Server documentation in IBM Knowledge Center, see

<https://www.youtube.com/watch?v=-qFEFCm0Stg>

You can find information on installing the continuous delivery features in the WebSphere Application Server product documentation. No hardcopy publications are

shipped with this product. Using IBM Knowledge Center, users can define collections and produce custom PDF documents for their collections.

For optimal viewing of this documentation, browser support for JavaScript™ and related technologies is required.

Services

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/>

Technical information

Specified operating environment

Software requirements

For WebSphere Application Server V8.5.5 software requirements, refer to Software Announcement [212-109](#), dated April 24, 2012.

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.

Limitations

For additional information, refer to the [Terms and conditions](#) section of this announcement, or to the license information document that is available on the IBM Software License Agreement website

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

Planning information

Packaging

This offering is delivered through the Internet. There is no physical media.

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.

Ordering information

This product is only available via Passport Advantage^(R). It is not available as shrinkwrap.

These products may only be sold directly by IBM or by authorized IBM Business Partners for Software Value Plus.

For more information about IBM Software Value Plus, visit

http://www.ibm.com/partnerworld/page/svp_authorized_portfolio

To locate IBM Business Partners for Software Value Plus in your geography for a specific Software Value Plus portfolio, visit

<http://www.ibm.com/partnerworld/wps/bplocator/>

For WebSphere Application Server V8.5.5 ordering information, refer to Software Announcement [213-137](#), dated April 23, 2013.

Charge metric

For ordering information, which includes charge metrics, refer to Software Announcement [212-109](#), dated April 24, 2012.

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 (socket). 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.

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.

This product is only available via Passport Advantage.

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. Part number products only, offered outside of Passport Advantage, where applicable, are license only and do not include Software Maintenance.

This software license includes Software Subscription and Support (also referred to as Software Maintenance).

Agreement for Acquisition of Software Maintenance

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License Information number

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

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Limited warranty applies

Yes

Limited warranty

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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 (1) for programs acquired under the IBM International Passport Advantage offering, this term applies only to your first acquisition of the program and (2) 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

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Software Subscription and Support applies

Yes. Software Subscription and Support (also referred to as Software Maintenance) is included with licenses purchased through Passport Advantage and Passport Advantage Express. Product upgrades and Technical Support are provided by the Software Subscription and Support offering as described in the Agreements. Product upgrades provide the latest versions and releases to entitled software and Technical Support provides voice and electronic access to IBM support organizations, worldwide.

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Other support

Passport Advantage

System i Software Maintenance applies

No

Variable charges apply

No

Educational allowance available

Not applicable.

Statement of good security practices

IT system security involves protecting systems and information through prevention, detection, and response to improper access from within and outside your enterprise. Improper access can result in information being altered, destroyed, or misappropriated or can result in misuse of your systems to attack others. Without a comprehensive approach to security, no IT system or product should be considered completely secure and no single product or security measure can be completely effective in preventing improper access. IBM systems and products are designed to be part of a comprehensive security approach, which will necessarily involve additional operational procedures, and may require other systems, products, or services to be most effective. IBM does not warrant that systems and products are immune from the malicious or illegal conduct of any party.

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Prices

The prices are unchanged by this announcement.

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Corrections

(Corrected on September 1, 2015)

The Program number section is revised.